



European Platform of Women Scientists

INTERVIEWS

**Woman Scientist of the Month
2018-2020**





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Table of Contents

Foreword of EPWS President _____	5
Acknowledgements _____	6
EPWS Compact _____	7
Interviews of Women Scientists	
Marina Kvaskoff France Epidemiology _____	15
Beáta Nagy Hungary Sociology _____	20
Anna Fontcuberta i Morral Switzerland Physics _____	22
Anne Kahru Estonia Biology _____	25
Jocelyn Bell Burnell United Kingdom Astrophysics _____	28
Silvana Badaloni Italy Information engineering _____	30
Ilva Nakurte Latvia Chemistry _____	34
Lígia Amâncio Portugal Social science _____	40
Anne Goldberg Belgium Physics _____	43
Jana Valdrová Czech Republic Linguistics _____	49
Elisa Lorenzo García France Mathematics _____	53
Cathrine Holst Norway Sociology _____	58
Mineke Bosch The Netherlands History _____	64
Marija Brajdić Vuković Croatia Sociology _____	67
Yvonne Buckley Ireland Zoology _____	71
Irene Sciriha Aquilina Malta Mathematics _____	75
Petra Rudolf The Netherlands Physics _____	79
Costanza Bonadonna Switzerland Earth science _____	84
Katja Matthes Germany Climate _____	90
Ioanna Tzoulaki Greece Epidemiology _____	94
Gabriele Abels Germany Political Science _____	97
Cornelia Braicu Romania Biology cancer _____	100
Denitsa Teofanova Bulgaria Biology _____	104
Alphabetic Index by Discipline of the Interviewed Women Scientists _____	109

Foreword



The European Platform of Women Scientists EPWS was founded in 2005, following a decision of the Directorate General Research of the European Commission to complete its top-down action in favour of women scientists with a bottom-up approach: EPWS is an umbrella association of associations and networks committed to the promotion of women scientists and the gender dimension in research in Europe and beyond, with also individual members. Altogether, the Platform is representing the voice of 12.000 women scientists in the European Research Policy debate.

The promotion of gender equality and the integration of the gender dimension in research and innovation are at the core of EPWS and its member associations and networks – an objective recently underlined by the European Commission in its Communication “[A new ERA for Research and Innovation](#)” .

To showcase and highlight the activities of its member associations in the field, in September 2015 EPWS began to publish interviews of its member associations under the heading “Association of the month. The interviews published since then have been collected in two booklets: a first one printed in 2017, gathering the interviews of 27 EPWS full member associations until 2017, and a second one published in 2019, with the interviews of additional 14 full and associate member associations between 2017 and 2019

Associations and networks are composed of individual women scientists. These women do not only have a voice, carried by EPWS, but they also have faces and biographies as well as messages to forward to new generations of women scientists. Since September 2018, therefore, EPWS has given the floor to individual women scientists in a new interview series on its website entitled “Woman Scientist of the Month”. The portrayed women scientists, EPWS members or not, are distinguished members of their scientific community, recognised by their academic work; they also have in common a commit-

ment to gender and European issues; they are at different stages in their career and come from various disciplines and countries. Their path, the origin of their passion for science, their research topic are sources of inspiration for other women.

In this booklet, their portraits are ordered according to the date of the interview first published on the EPWS website. The country in which they held their professional affiliation at the time of being interviewed may not correspond to their nationality. The selection that you find in the following pages is a set of true role models! Of course, numerous other remarkable women scientists working in Europe are not in the booklet; however, other interviews have been published in the EPWS website during 2020 and others will follow, and we hope to publish them in a new booklet.

To keep in contact with EPWS news and activities, visit the EPWS website www.epws.org, continuously updated, with a wealth of news concerning women scientists and research policy issues in Europe, as well as job advertisements in its Careers section. Also follow EPWS on our social media Facebook, LinkedIn and Twitter.

The EPWS Updates, our newsletter, can be received under free subscription at www.epws.org/subscribe/. This electronic publication presents recent events and activities of EPWS and its members as well as current news on gender equality and the gender dimension in research and innovation from European and international institutions.

A Young Facebook group at <https://www.facebook.com/groups/1252871578188573/> is liaising EPWS members.

...and finally, if you are not a member yet, it will be an honor and a pleasure if you join EPWS as an association, a network or as individual.

EPWS wishes you an inspiring reading of the present booklet!

Prof. Claudine Hermann
EPWS President

Brussels, January 2021

Acknowledgements

The EPWS President expresses her gratitude and her appreciation to all the persons involved in making this booklet: the Women Scientists interviewed, the EPWS Honorary President Dr. Brigitte Mühlenbruch, her colleagues from the EPWS Executive Committee Dr. Maria João Curto and Dr. Maren Jochimsen and from the Board of Administration, in particular Dr. Lucia Martinelli who helped in the making of this booklet.

The support of CNRS Mission for the Place of Women (France), a long-standing EPWS Supporting Organisation, for the realisation of this booklet is kindly acknowledged.

Yuri Sousa, the EPWS webmaster, coordinated the document and the design was performed by Marta Morais.

EPWS Compact

The European Platform of Women Scientists EPWS is an umbrella organisation bringing together networks of women scientists and organisations committed to gender equality and the integration of the gender dimension in science and research in all disciplines in the European Union (EU) and the countries associated to the EU Framework Programmes for Research and Technological Development.

EPWS was founded as an international non-profit making organisation under Belgian law (AISBL) in November 2005. This followed a European Commission open call for the creation of a European Platform of Women Scientists which in September 2003 was won by the Centre of Excellence Women and Science CEWS in Bonn, Germany. The EPWS Secretariat in Brussels began work in January 2006 and was supported by European Commission funding until October 2009. Despite the highly acknowledged quality of the Platform's work, EPWS since then has continued its activities and services on a voluntary basis, supported by its members and mainly financed by their annual contributions.

EPWS mission and activities aim, through dialogue with national, European and international institutions, to represent with democratic legitimacy and transparent decision-making structures the interests of women scientists at all stages of their career paths. EPWS addresses gender equality as well as the integration of the gender dimension in science and research. The numerous member organisations and individual members of the Platform provide a wide range of networking contacts all over Europe and beyond. EPWS has substantial experience in European Women and Science issues and the consequential research policy challenges. It is ready to share this expert knowledge with all stakeholders in the research and research-policy process.

EPWS mission is to:

- promote women scientists;
- represent the concerns, needs, ideas, aspirations and interests of European women scientists in all disciplines and at all stages of their career paths;
- coordinate support activities for women scientists to facilitate their active role in the European Research Area as researchers as well as participants in the research policy debate.

EPWS main goals are to:

- increase the participation of women scientists in European research policy and the shaping of the EU research agenda;
- enhance the participation of women in science and decision-making bodies, in both national and European research programmes; this especially applies to the EU Framework Programmes for Research and Technological Development;
- promote the understanding and the integration of the gender dimension in science and research.

EPWS main areas of action consist of:

- research policy making, aiming to give women scientists a voice in EU research policy;
- communication via the members' networks;
- public relations and information;
- increasing membership.

EPWS main activities in these areas are:

- participation in the research policy debate, through policy statements as well as responses to European Commission consultations;
- establishing contacts and increasing visibility of gender equality issues and the gender dimension in research and innovation among stakeholders;
- participation of EPWS members, as project leaders, participants or experts, in European projects dedicated to gender equality and the integration of sex and gender analysis in science and research;
- organisation, by the EPWS Executive Committee or the EPWS Board of Administration, of seminars and workshops on issues of gender equality and/or the gender dimension in science and research;
- invited presentations on the Platform's mission and activities as well as on European research policy issues at conferences and events throughout Europe and beyond, by members of the EPWS Executive Committee or Board of Administration;
- organisation of a yearly General Assembly, preferably coupled to a European scientific colloquium related to gender equality issues and/or the gender dimension in science and research in Europe, organised by EPWS or one of its member organisations;
- dissemination of information on EPWS activities and European news for women scientists through the regularly up-dated EPWS website www.epws.org and its blog, as well as through its social media;
- production of the EPWS Updates, the Platform's newsletter, published every second month and disseminated to more than 4000 subscribers;
- publication on the EPWS website of news and job advertisements from institutions committed to gender equality in research and innovation.

EPWS most recent and current activities, more specifically, include:

- inputs to the EU policy debate on the current and future EU framework programmes;
- an yearly European benchmarking report for the French Ministry of Higher Education, Research and Innovation; for example, in 2020, on the main results of the EPWS and Donne and Scienza Conference on 'Sexual Harassment in Higher Education and Research Institutions' (Pisa, Italy, September 2018) and on the Gender Dimension in Research;
- the organisation of the Conference 'Alone is not enough - Gender Equality and the Gender Dimension in EU Research and Innovation: shared challenges, joint achievements, mutual dialogue for future actions', Brussels, 25 September 2019;
- the promotion of the integration of the gender dimension in science and research through 'Ready for Dialogue', a joint initiative of EPWS and the Essen College of Gender Research, University of Duisburg-Essen, started in November 2015;
- the participation of EPWS members in European and international projects, such as

CHANGE, GENDERACTION, GENERA, GRECO, SPEAR and the delivery of gender trainings for Marie Curie Innovative Training Networks;

- the presentation of EU policy on gender equality in research and the gender dimension in science through a new interview series of EU research policy-makers on the EPWS website, inaugurated by that of Director-General, Directorate General Research and Innovation, Jean-Eric Paquet in December 2020;
- the enhancement of visibility of EPWS associations and of European distinguished women scientists through the interview series "Woman Scientist of the Month, published on the EPWS website and collected in the present booklet;
- the facilitation of the liaising among EPWS 'Young members' through a Facebook group;
- the promotion of science and technology for young people in general and girls in particular.

All current and forthcoming activities are announced on the EPWS website and in the EPWS Updates, which can be downloaded from www.epws.org.

Who is who in EPWS

Executive Committee:



- Honorary President: Dr. Brigitte Mühlenbruch (Germany)
- President: Prof. Claudine Hermann (France)
- Vice-President: Dr. Maren Jochimsen (Germany)
- Treasurer: Dr. Maria João Curto (Portugal)

Board of Administration:



- Dr. Katalin Balászi (Hungary)
- Prof. Colette Guillopé (France)
- Dr. Lucia Martinelli (Italy)
- Dr. Yasmin Robson (United Kingdom)
- Prof. Dalia Šatkovskiene (Lithuania)

EPWS Full members

Armenia:

- AWS, Armenian Women in Science

Baltic States:

- BASNET Forumas

Belgium:

- BeWiSe, Belgian Women in Science

Finland:

- HELWOR, Helsingin tutkijanaiset Helsingfors kvinnliga forskare r.y.
- SUNS, Sukupuolentutkimuksen seura/Sällskapet for genusforskning

France:

- AFDESRI, Association pour les Femmes Dirigeantes de l'Enseignement supérieur, de la Recherche et de l'Innovation
- CPED, Conférence Permanente des chargé-e-s de mission Égalité, Diversité ou mission assimilée, au sein des établissements d'enseignement supérieur et de recherche
- ÉCÉPIE, Égalité des Chances dans les Etudes et la Profession d'Ingénieur en Europe
- *femmes et mathématiques*
- Femmes & Sciences
- Femmes Ingénieurs
- Mnémosyne, association pour le développement de l'histoire des femmes et du genre
- Parité Science (APMST), Association pour la Parité dans les Métiers Scientifiques et Techniques
- REFH, Réussir l'Égalité Femmes-Hommes
- WiN (Women in Nuclear) – France

Germany:

- BuKoF, Bundeskonferenz der Frauenbeauftragten und Gleichstellungsbeauftragten an Hochschulen e.V.
- dib, Deutscher Ingenieurinnenbund
- Netzwerk Frauen- und Geschlechterforschung Nordrhein-Westfalen
- Netzwerk Vorsorgendes Wirtschaften e.V.
- NUT, Frauen in Naturwissenschaft und Technik e. V.

Hungary:

- NaTE, Nők a Tudományban Egyesület

Italy:

- ASDO - Assemblée delle Donne per lo Sviluppo e la Lotta all' Esclusione Sociale
- Donne e Scienza
- Società Italiana di Fisica, Comitato Pari Opportunità

The Netherlands:

- LNVH, Landelijk Netwerk Van Vrouwelijke Hoogleraren

Portugal:

- Amonet, Portuguese Association of Women in Science

Spain:

- AMIT, Asociación de Mujeres Investigadoras y Tecnólogas

Switzerland:

- IDEAS - Inclusion, Diversity and Equality Association of Swiss Universities

United Kingdom:

- Daphnet
- Women in Physics Group of the Institute of Physics

EPWS Associate Members

Austria:

- IFZ, Interdisziplinäre Forschungszentrum für Technik, Arbeit und Kultur

Czech Republic:

- National Contact Centre for Gender and Science

Germany:

- gFFZ, Gender- und Frauenforschungszentrum der hessischen Hochschulen

Ireland :

- TCGEL, Trinity Centre for Gender Equality and Leadership

The Netherlands:

- DEWIS, Delft Women in Science
- WO&MEN@VU network

Poland:

- Zespół ds. Dobrych Praktyk

Spain:

- IUIEG, Instituto Universitario de Investigación de Estudios de Género, Alicante

Sweden:

- WINGS at Lund University

United Kingdom:

- Daphne Jackson Trust

Europe:

- eument-net, European network of Mentoring Programmes for Women in Academia and Research
- European Physical Society

In addition to the above Full and Associate Members EPWS includes Individual Members and Supporting Organisations.

If you are not yet an EPWS member, you are welcome to join us! Visit EPWS website to know how to proceed (www.epws.org/become-a-member)

INTERVIEWS

Woman Scientist of the Month

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Marina Kvaskoff

FRANCE



credit: Razak

Epidemiology

Marina Kvaskoff is an epidemiologist and tenured scientist at Inserm, “the only public research organization in France entirely dedicated to human health”. She is also the founder of the mentoring programme for female PhD students and postdoctoral fellows in South Paris (Paris-Saclay) area, welcoming over 50 mentors-mentees pairs in 2020.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

When I was a child, I was very curious about health and disease. It fascinated me that something as small as a virus could cause such health consequences in humans, and I remember always asking my parents about different conditions and their symptoms. I wanted to understand what caused them, and why some people were sick and some were not.

The first time I heard about epidemiology – the discipline that explores risk factors for diseases – it felt like a calling. After studying biology and biochemistry during my undergrad, I did a Master’s in epidemiology and public health, then a PhD in epidemiology.

I was very interested in cancer and started to work on this theme. After an internship in Brisbane, Australia in 2005, I became particularly interested in cutaneous melanoma – a lethal cancer that represents a major public health threat in this country, in which melanoma reaches the highest incidence worldwide. It was when I explored the

influence of sexual hormones on melanoma during my PhD that I first heard about endometriosis, a hormone-dependent gynaecological condition on which little is known. As my PhD research progressed, I became increasingly aware of the importance of this disease and of its considerable impact on the lives of millions of women worldwide, and I developed a passion for endometriosis.

What do you work on? How important is your research topic for science development or society?

Over the years, I continued to develop my two research areas: today I am working on cancer, particularly skin cancers, and on endometriosis.

Skin cancers are the most common cancers worldwide and their incidence is rising. Unfortunately, this rise is likely to be intensified over the next decades due to climate change. Melanoma is the least frequent but deadliest form of skin cancer; while survival rates are high for thin tumours, they are particularly low for metastatic disease. Non-melanoma skin cancers are associated with lower mortality rates, but their treatment (surgery mostly in sun-exposed

areas such as the face) importantly impact quality of life. Prevention is key to reducing the burden of these cancers, and we need to identify individual risk profiles, beyond what is known on sun exposure, in order to inform public health strategies and prevent the disease and its progression in melanoma patients.

Endometriosis is a chronic inflammatory condition in which tissue resembling the lining cells of the uterus grows in external locations, mainly the pelvic cavity and ovaries, but sometimes in remote areas such as the lungs or brain. The external implants respond to ovarian hormones during the menstrual cycle and bleed as they would in the uterus, causing inflammation, scarring, and adhesions between organs, which lead to debilitating pain (during periods, sexual intercourse, urination, defecation), chronic fatigue, and infertility. Endometriosis affects 10% of women of reproductive age (~180 million women worldwide) and has a deep impact on women's quality of life and mental health. It is also associated with remarkable healthcare costs (10 billion €/year in France). However, current knowledge on the causes and natural history of the disease is exceptionally poor. Much remains to be done to understand the disease in order to improve treatment options and patients' quality of life, and to ultimately develop endometriosis prevention.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

One great memory of success was the award of a Marie Skłodowska-Curie Fellowship from the European Commission in 2011. This grant enabled me to pursue research work in endometriosis epidemiology and to be trained by the World's top scientists in this field at Harvard University in the US (Prof. Stacey Missmer's Group) during my postdoc.

As a tenured scientist at Inserm, I also have remarkable memories of the day I was selected for this position and the day I passed my research habilitation. Today, I am extremely proud of the students and fellows I am supervising, and very proud to lead an amazing group of people!

In which country/countries have you been doing research?

Over the past ~15 years, I have been doing research mainly in France. During my PhD and postdoc I also worked in Australia (1.5 years) – I did a joint PhD between the University of Paris (France) and the University of Queensland (Australia), where I had the chance to be trained by internationally-recognized scientists in skin cancer research (Profs. David Whiteman and Adèle Green's Groups at QIMR in Brisbane). During my postdoc, I also spent 3.5 years in Boston in the US to work on endometriosis.

These experiences of living abroad have helped me to gain new skills, both technical and 'soft', to understand different research policies and cultures across several continents, and to broaden my horizons. They also led me to better know myself, to improve my English language, and to expand my network internationally.

What is your agenda for the coming months?

Since 2005, I have been developing my research on the epidemiology of cancer and of endometriosis. Considering the tremendous gaps in knowledge on endometriosis, and the important contrast between current knowledge, allocated funds, and the impact of the disease, I am planning to devote most of my research in the coming years to improving our understanding of endometriosis.

My vision for the coming months and years is to develop epidemiological research on endometriosis in France, to contribute to move the field forward and discover the causes and different forms of the disease.

For this, I am working with patients, clinicians, and other scientists to develop innovative projects that will help tackle some of the challenges posed by the disease. For instance, I am coordinating a e-cohort of patients, ComPaRe-Endometriosis, which is the endometriosis-specific cohort of ComPaRe, a platform of participatory research that will follow people with chronic diseases for at least 10 years.

experience. I am passionate about mentoring, and it is very important to me to support the career development of my students and fellows.

It was in the US that I really became aware of the importance of mentoring in scientific careers. During my postdoc in Boston, I participated as a mentor in a mentoring programme organized by the Massachusetts Chapter of the Association for Women in



With some members of my group during a consortium meeting at the International Agency for Research on Cancer in Lyon (from left to right: Yahya Mahamat-Saleh, Anita Kowal, Iris Cervenka, Marina Kvaskoff)

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

Certainly – I think that potentially every scientist, particularly women scientists, meet barriers at some point in their career. This is an important stage during which to seek mentors, in order to persist and overcome one’s challenges.

I benefited from the support and advice of many mentors throughout my career, and I am still seeking mentors’ help for various aspects of the current challenges I am facing today. In turn, now as a PI, I have a deep interest in sharing my knowledge and

Science (MASS-AWIS). We were 1-2 mentors and 4-5 mentees per circle, and each circle met every month to discuss the career objectives of the mentees, their conundrums, or the difficulties they encountered. I was very enthusiastic and impressed about this programme and the positive effect it had on both mentees and mentors. Following this experience, as a member of the Postdoctoral Association of the Brigham & Women’s Hospital BWH in Boston, I created a similar programme for postdoctoral fellows. The programme was continued by its prospective leaders and is still ongoing today with ~50 participants.

Upon my return to France in 2014, I wanted to import this mentoring culture, which has been little developed in our country so far. I contacted the association Femmes & Sciences and proposed to develop a mentoring programme for female scientists. At that time, May Morris, a Research Director at CNRS, was launching a similar programme in Montpellier. Based on our experiences, I developed a mentoring programme for female PhD students in the Paris Ile-de-France region. The pilot phase included 9 mentor-mentee pairs the first year, and we prepared the deployment phase, which extended the programme to the Université Paris-Saclay from 2019 with the support of the Collège Doctoral of the University.

The evaluation of the programme in Montpellier and the feedback from participants in both regions have been extremely positive. It is my hope that many young female scientists can get support through our programmes and beyond, for the benefit of their career development. Ultimately, these programmes, which are likely to further develop in other institutions around Europe over the upcoming years (see [EPWS eument-net association](#)), will help young women to remain in scientific careers and help promote gender equality in science.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

The field of epidemiology is mostly female in terms of absolute numbers. However, as for any other field, the proportion of women decreases as level of seniority increases.

There have been discussions about promoting gender equality in the institutions in which I have been working in France and

overseas; however, I am not aware of clear gender-equality policies in place, or it is perhaps too soon to appreciate their effects at the individual level. Such policies are crucial, however, to promote gender equality in all science fields and at all professional levels. It seems that for now we are still at the stage of raising awareness. For a successful implementation of gender equality in scientific institutions, policies should be introduced and inspired from top to bottom. The future is hopeful however; raising awareness can take time, but it will lead to concrete actions, one step at a time.



With my 4 PhD students at the PhD defence of Iris Cervenka (from left to right: Yahya Mahamat-Saleh, Thibault Fiolet, Marina Kvsakoff, Iris Cervenka, Marie Al Rahmoun)

Next to gender-equality policies at the institutional level, much can be done to empower women and foster gender equality in science at the individual level. Women may themselves seek mentoring and support networks, and help one another navigate their scientific career.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

I did experience networking with other women scientists, and it was each time extremely enriching and stimulating. Specifically, I had the opportunity to connect with many female scientists through 'women in science' associations, in France (Femmes & Sciences) and in the US (AWIS, MASS-AWIS). The framework of such associations makes it easier to meet other women interested to connect, who share similar values, of various position levels and various fields of work. Together, women scientists can be a support network for one another, and this can lead to a substantial boost in courage and confidence.

If you could start again your life, would you choose again to be a scientist? What would you change?

I think I would. And I wouldn't change a thing!

Could you give a message to young European women scientists?

Connect with other women scientists – you will often meet women who share similar values, concerns or experiences. You might also either find mentors or make new friends (see above).

Volunteer/get involved in professional societies (such as your national or local 'women in science' association) – you will experience new adventures, naturally expand your network, and build new competences that will look good on your resume!

Seek mentors – talk to potential mentors about your needs. Chances are that you will find someone who has been through similar challenges or conundrums at some point in their career, and you can learn from them.

Think big – and regularly step out of your comfort zone. If it is scary, then you will learn something new and grow.

When difficulties arise, be kind to yourself. Do your best, keep going, and seek mentors. #ShePersisted

Interview published in October 2018 and updated in October 2020

www.femmesetsciences.fr

www.compare.aphp.fr

www.eument-net.eu/

www.inserm.fr/en

twitter.com/

www.sciencemag.org/tags/blog

<http://blogs.nature.com/>

www.nature.com/collections/fyfvkbpisf



La science pour la santé
From science to health

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Beáta Nagy

HUNGARY



Sociology

Professor Beáta Nagy is an outstanding Hungarian sociologist with a special competence in Gender Studies including Women in Science.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

One of my professors suggested starting investigation on female managers, as he experienced in the US that it was a popular topic. As I first started to investigate the issue of women's special situation in society, it was not a widespread and supported field in my country.

What do you work on? How important is your research topic for science development or society?

Next to teaching I carry out several investigations on gender equality. The most relevant topic for EPWS might be my book on the gender order of a university teaching IT and engineering students. I explored the very traditional and stereotypical perception regarding male and female students.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

I received the "Master of teaching" award based on my teaching activity.

Could you share the memory of a great personal satisfaction during your research career with us?

I'm very proud of my students I work with. We have also published several articles together.

In which country/countries have you been doing research?

Mainly in Hungary, but earlier I also had fellowship in Germany.

What is your agenda for the coming months?

My research group is in the middle of a sociological investigation preparing qualitative interviews. Moreover, we are also working on the preparation of a Hungarian-Japanese comparison of gender regimes.





Beáta Nagy with her students after a successful project

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

I met structural barriers around the promotion to full professorship. Gender studies are not very welcome in the previous generations of researchers and evaluators.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

Hungary has never been a forerunner of gender equality, as the country can be characterized by traditional gender roles. This situation has actually worsened in the last some years.

What do you suggest for a better implementation of gender equality in science?

If we look at Hungary, there should be gender equality policies in order to recognize the problem, i.e. women's limited participation and appreciation in science.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

Yes, the Hungarian Association of Women in Science is a great place to support each other.

If you could start again your life, would you choose again to be a scientist? What would you change?

Yes, but I would be more decisive and direct.

Could you give a message to young European women scientists?

Be prepared that there are biases even in academic fields, and support each other!

Interview published in November 2018

The Hungarian association of Women in Science (NáTE)

-website in Hungarian: <http://nokatud.hu/>

-presentation in English : <https://epws.org/?s=Hungarian+Women+in+Science>

NáTE is participating in the EFFORT EU project <https://www.effort.eu/>



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<http://web.uni-corvinus.hu/szoc/>

Anna Fontcuberta i Morral

SWITZERLAND



Physics

Professor Fontcuberta i Morral is an outstanding Spanish physicist at Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland, with a special competence in Solid State physics. She was awarded the Emmy Noether Distinction for Women in Physics of the European Physical Society in Spring 2015.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I am curious and I loved math and physics from a very early age. Physics was for me the natural choice as I wanted to follow my passion. As usual, a teacher woke up this in me. My math and science teacher from age 11 to 14 taught me how fun math are. He was a great teacher and also had a good sense of humor that inspired us all. Among the classmates we still talk about him, he made a great impact on all of us (even those who did not pursue science).

What do you work on? How important is your research topic for science development or society?

My area of research is semiconductor materials. The center of our research is finding new materials and nanostructures that provide advanced optical and electrical properties. The applications are in next generation computing and solar cells. We have shown how the use of nanostructures brings high savings in use of costly materials and at

the same time an increase in functionality. Currently, we are investigating a new material that could be extremely performing for solar cells and still be made of elements highly abundant in the earth crust. In this sense, we try to contribute to sustainability of technology by providing solutions that save in resources but that also contribute to renewable energy harvesting.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

I am proud of my students and of achieving an environment where they collaborate on a daily basis with trust, sympathy and great synergy. I love the fact that $1+1>2$ in team work.

Could you share the memory of a great personal satisfaction during your research career with us?

The "Eureka" moments are great: in a short instant you finally understand something and the implications. These moments happen sparsely in time but stay with you forever. In addition, seeing present/

former group members getting recognition and becoming great scientists/professionals gives me great satisfaction.

In which country/countries have you been doing research?

In France, the United States of America, Germany and Switzerland.

What is your agenda for the coming months?

The agenda is extremely full, one has to be extremely well organized to do this job. On the work side there are classes, scientific discussions with the students, deadlines for articles and proposal submissions, attendance and organization of conferences, chairing and active participation in meetings at my own institution and in the Swiss National Science Foundation... On the private side there is time with my family, reading and physical exercise.

There are barriers from all kinds and I met them. I have also suffered mobbing. These experiences have made me stronger and they help me in supervising and advising younger generation scientists.

I did benefit a lot from mentoring and from fantastic role models from which I got inspired and I am very thankful. Unfortunately never from a woman, as they were extremely few in leading positions.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

There have been advances, but we are not yet in a fair situation. Statistics show that there is a drop in female scientists pursuing an academic career after the PhD. As far as I know, this happens in all countries. .



Anna Fontcuberta i Morral in front of the Molecular Beam Epitaxy equipment used for growing her samples.
Photo: Lucas Güniat

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

Each country has different bias and culprits. It would take a whole page to elaborate on this... I will only mention that I personally enjoyed the US, where sexist comments/

actions are strictly forbidden. In the institution I was, I never felt I was being treated as a woman but just as a normal human being.

What do you suggest for a better implementation of gender equality in science?

This is a topic many people do research on, my opinion here is very humble. I believe the future is the youngest generations, we need to go to schools and encourage girls that are good at math and science to continue being good. We need to pass the message that there is no such thing as a job for a particular gender. We also need to understand that both men and women are in the same boat and we win by working together. Mentoring should be provided at all stages (for both genders).

Also we all need to provide awareness on unconscious bias to those that are already in place. We also need to speak up when unfair situations arise.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

Yes, at EPFL we organize female faculty lunches on a monthly basis during the academic year. These are great occasions to network and to learn/discuss many aspects of the academic life.

In 2006, a group of female professors created the WISH foundation (Women In Science and Humanities). There we try to provide mentoring and networking occasions to female students and we also give them fellowships to perform their master thesis abroad. This allows them to further gain independence and self-awareness.

If you could start again your life, would you choose again to be a scientist? What would you change?

Yes, I would do it again. I am happy about my path, I would not change much, maybe I would take more chances for scientific adventure.

Could you give a message to young European women scientists?

Go ahead, follow your passion.

Also, you do not have to adopt typical masculine attitudes to become successful, follow your own style. Only being truly yourself you can succeed and find your job and your life very fulfilling.

[Interview published in December 2018](#)

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Anne Kahru

ESTONIA



Biology

Dr. Kahru is an outstanding Estonian biologist with a special competence in Ecotoxicology of nanomaterials.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I think that I went into science due to curiosity: to see how things are working in the living world, how chemistry works in living organisms, how the complicated processes in living creatures are regulated. And I was most curious about the invisible world – microorganisms. That provoked my interest in science.

What do you work on? How important is your research topic for science development or society?

My current work is connected with safety evaluation of chemicals and/or (nano)materials. It goes without saying that this topic is very important for sustainable development of novel technologies and thus for the benefit of the society. My lab addresses three questions: (i) Safe or toxic? ; (ii) If toxic, why toxic? ; (iii) How to evaluate the toxicity rapidly and cost-efficiently? My lab follows 3R's principles (Replacement, Reduction and Refinement) and therefore we are not

performing bioassays on vertebrate organisms. Our test organisms are bacteria, protozoa, water fleas, algae – mostly organisms relevant for ecotoxicological research.



Pori COST meeting - with colleagues and Santa

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

I think that my greatest success as a researcher is connected with my idea on the reason for toxic effects of metal-based

nanomaterials: many of them (CuO, ZnO) were initially claimed insoluble or only slightly soluble. Namely, about 10-15 years ago I was wondering whether they (metal-based nanomaterials) have to be much soluble to show toxic effects to aquatic organisms since Cu ions and Zn ions are toxic to such organisms at very low concentration. The idea was very timely and stemmed into a lot of interesting research: up to now more than 10 doctoral theses from my lab have been defended on (eco)toxicological effects of metal-based nanomaterials.

with several international teams during FP7 projects OSIRIS, MODERN and NanoValid. And, of course, within various COST actions.

What is your agenda for the coming months?

The most important is that next spring I and my lab will have to write scientific proposals to the National Research Agency, to ask for funding for the next 5 years. That is a big challenge and practically involves the whole lab, since our whole salary money is project-based and the proposals success rate



Flowers to the academician

There are two very important things that happened this year: (i) I and two persons from my team (Angela Ivask and Kaja Kaseemets) were included in the top 1% most cited scientists list worldwide by Clarivate Analytics for 2018 and (ii) the most recent event – on Dec 05, 2018, I was elected as a member of the Estonian Academy of Sciences. Importantly, now we are 7 women academicians out of a total number of 78.

In which country/countries have you been doing research?

Mostly in Estonia but I also had some short research periods in Finland, in the company BioOrbit OY, to develop a bacterial toxicity test; that occurred more than twenty years ago. I have, though, collaborated

is about 20%. Thus there will be a lot of brainstorming but also stress, as always in science.

I assume that additional activities will be related to my role as an academician.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

I have been the speaker for equal opportunities in Estonian science for already a long time, starting with my participation in EU WIRDEM study (2008) 'Getting more women to the top in research' where I was representing Estonia and wrote a text into the book on gender balance in research decision-making positions in Estonia. The meeting with the WIRDEM group then – about ten years ago

- was an eye-opening moment for me as for the equal opportunities and gender issues.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

In the biology labs most of the people are women; quite often in the chemistry labs too, not to mention the medical ones. That does not necessarily mean that the Head of the lab is a woman.

Thus, being a woman and having a lab consisting of mostly women, I try to be a role model and to support the PhD students and early career researchers (that are mostly women) as much as I can in their career. And I encourage my team not to give up even if things are difficult.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

I definitely see the importance of women networks, either on the level of being members of decision-making commissions or boards. Women often support other women.

If you could start again your life, would you choose again to be a scientist? What would you change?

Most probably yes. What would I change? Perhaps nothing since without these experiences I would not have achieved so much.



Team seminar break - going for mushrooms

Could you give a message to young European women scientists?

Keep going, no need to be such perfectionists, no need to suffer too much if something goes wrong - one has to keep trying. And - most important - value kindness and real friends.

[Interview published in January 2019](#)

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Jocelyn Bell Burnell

UNITED KINGDOM



credit: Courtesy of the Royal Society of Edinburgh

Astrophysics

Professor Bell Burnell is an outstanding British astrophysicist. She was awarded the “Special Breakthrough Prize In Fundamental Physics” in September 2018 for her discovery of pulsars. She gave the whole of the £2.3m prize money to help women, ethnic minority, and refugee students become physics researchers.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

When I entered secondary school (age 12) my parents promised me I’d get to do science. So I was disappointed that, without discussion, the boys went to science class but the girls were sent to cookery and needlework! My parents told the school I had to do science, and indeed ultimately there were three girls as well as all the boys in my science class. We did physics in the first term and I came top of the class; next term was chemistry which was OK and the third term we did biology which I found boring. I continued to be good at physics (and maths) throughout my school career and since it looked as if I would do a physics degree I began to think what kind of physics I would do ultimately. My father brought home some astronomy books from the public library and I read those and decided I would be an astronomer. Then I realized that doing astronomy involved working all night, and I knew that I needed my sleep so could not do that. Ultimately I heard about radio astronomy (which is done day and night) and decided that

would be my aim. So I left school knowing I wanted to be a radio astronomer.

What do you work on? How important is your research topic for science development or society?

I am now age 75, (supposed to be) retired, and no longer research active. However through being a Visiting Professor in Oxford I keep up (I believe) with developments in the field of pulsars and of transients. Since I do a lot of public outreach lectures and afterwards can get questions on any branch of astrophysics, I have to broadly keep up with the whole field.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

The discovery of the first four pulsars.

Could you share the memory of a great personal satisfaction during your research career with us?

Later I worked in X-ray astronomy and, on behalf of my lab, was in charge of the observing programme and the data from the

Ariel V satellite. It was a hugely successful satellite, with many new discoveries (many of which came in on a Friday afternoon, I recall!).

In which country/countries have you been doing research?

The UK, with a short period in Princeton, USA.

What is your agenda for the coming months?

To survive the tidal wave of emails, requests and invitations that have come in the wake of the Breakthrough Prize.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

No mentors, no mentoring.

Yes, many, many barriers, obstructions, steep hills! Starting with heckling as the lone female in the undergraduate physics class, through to issues with organisations which hadn't considered married women or mothers in setting up their structures, to those which considered the male career the norm and

couldn't envisage any other career pattern.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

Women are seriously underrepresented in my field. I am too old to have experienced gender equality policies, but I did help create some, through founding the Athena SWAN programme with a few other senior women in science. This is now a big programme in the UK, has extended beyond the Sciences to Arts, Humanities etc. and been exported to Ireland, Australia and Canada.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

I created networking opportunities for other (often younger) women scientists.

[Interview published in February 2019](#)

breakthroughprize.org/News/45
www.ox.ac.uk
www.washingtonpost.com/science



Contact:
Oxford University website:
www.ox.ac.uk

Silvana Badaloni

ITALY



Information engineering

Silvana Badaloni is Associate Professor of Artificial Intelligence at the Department of Information Engineering at the University of Padua, Italy. In the field of Gender in Science, she was the scientific coordinator of the Unit University of Padova (Padua), partner of the FP7 EU GenderTIME (2013-2016) project.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I started out on my scientific path when I decided to study Physics. I have always preferred scientific subjects. Probably both my father and my sister, even though not directly, influenced my attraction for maths and science.

What do you work on? How important is your research topic for science development or society?

I developed my research under the sign of change, in three main steps:

I started my work at the School of Engineering, dealing with physical models of electrical discharges in the air and I became an outstanding expert spectroscopist of the plasma of discharges.

Motivated by my growing interest in Artificial Intelligence (AI), I took a DEA/Master at Ecole Nationale des Ponts et Chaussées (ENPC, a high level engineering school), Paris, in 1984, and since then I have experienced a new season in my scientific journey aimed at researching and teaching AI.

Due to my increasing gender awareness, the third step brought me to Gender in Science and to lead the FP7 European Project GenderTIME on behalf of the University of Padova in 2013. The acronym TIME stands for Transferring Implementing Monitoring Equality. The project, coordinated by Yvonne Pourrat (ECEPIE), sought to promote structural changes in Academic Institutions from a gender point of view.



The keywords that have guided my scientific adventure are: curiosity about the novelty, passion, autonomy, interest in social issues and, of course, scientific method.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

Change has also crossed my mind: I have dealt with the representation of change in a logical-symbolic framework. To do this, I have studied how to represent the notion of time in Intelligent Autonomous Systems. Moreover, in real applications, time is affected by vagueness and uncertainty. The most important work that I developed on this subject concerned the fuzzy extension of a temporal reasoning system. A great personal satisfaction for me was its publication in an excellent international journal^[1].

Information and Communication Technology. In a recent work, I addressed the problem of including the gender dimension within the content of Science, trying to answer the following questions: how can we develop a new Science that takes into account the gender dimension? How can we formulate new scientific questions, now that there is greater awareness that another science is possible?

Using the logical rules of argumentation, I have demonstrated that in order to produce new gendered innovation in all fields it is not enough merely to apply the “pinking” method, i.e. the stereotypical feminization of products. Rather it is necessary to radically change the underlying assumptions. Only a complete redefinition of method and research models, with new applications, new



GenderTIME meeting at the University of Padua (2013)

In which country/countries have you been doing research?

Mostly in Italy, even though working in the framework of a European project means sharing research all over Europe.

What is your agenda for the coming months?

In my agenda, in the near future, there is the study of gendered innovations in the field of

ways of observation, newly reformulated questions, can re-design science from a gender perspective.

A second problem concerns the fairness of algorithms. Are the tools, the algorithms and technologies that Computer Science develops and uses really gender-neutral? I analyzed Machine Learning algorithms to see whether they are fair from a gender point of view; I found many examples that revealed

that these kinds of algorithms, because they are conceived as learning systems of classification, can often upload the gender biases endemic in the society. The problem arises mainly because little attention is paid to how data are collected, processed and organized, thus any bias is, substantially, a data-driven bias.



Reasoning about time

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

Working in a School of Engineering, where the predominantly male, engineering population remains closed inside its self-referential old-boys' network, I came up against many barriers, both visible and invisible. This situation of perceived personal under-representation encouraged me to address the problem of the under-representation of women in Science in a more general way, analyzing gender statistics, promoting equal opportunities in scientific careers and challenging gender balance in decision-making bodies, seeking to create a Science that is no longer based on the myth of the universal neuter-male scientist, but rather is a gendered Science.

Mentoring? That can only be useful if there is at least one mentor!

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

The problem of promoting gender equality in Academia can be addressed if, and only if, Institutions adopt severe and effective Gender Equality Plans (GEP) to reduce the under-representation of women in Science and to favour a different wellness in workplaces for everybody. The positive experience of the Athena SWAN Charter in the UK, which constrains institutions to do so, should also be adopted in Italy to change the situation, but at the moment this still seems to be a long way away from happening.



A virtual snapshot

In the framework of GenderTIME, we addressed the problem of measuring Gender Equality in Academia. To do this, the efforts of our multi-disciplinary research group at the University of Padua were devoted to outlining a composite indicator of gender equality, UNIPD-GEI, specifically tailored to deal with the environment of Universities and Research Institutions. Based on the population index of EIGE (European Institute for Gender Equality), our conceptual model

was defined in terms of seven domains: work, money, knowledge, time, space, power and health and was declined for Academic Institutions to drive data collection. Some of the indicators, such as those in the domains of knowledge and money, but mainly power, had values that revealed high levels of gender discrimination in scientific career paths. Methodological issues and results are reported in [2].

This Gender Equality Index could be disseminated at the European level for comparing Academic Institutions on the basis of a ranking that measures the gender equality item (not only the H-index).

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

Of course, I experienced networking between women scientists, and I believe this is fundamental for a woman scientist. I have belonged to the Italian Association Women and Science - Donne e Scienza - for many

years. Currently, I am a member of the Advisory Board.

From 2009 to 2013 I was on the Board of Administration of the EPWS.

If you could start your life again, would you still choose to be a scientist? What would you change?

Without any doubt I would choose to be a scientist. It's a wonderful job. Even though I have recently retired, I am still continuing to do research with great passion and interest.

Could you give a message to young European women scientists?

To young women scientists I suggest to be fully themselves, avoid adopting typically male models and just totally follow their curiosity, and passion. They should be proud of being women scientists.

[Interview published in March 2019](#)

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Ilva Nakurte

LATVIA



Chemistry

Dr. Nakurte is an outstanding Latvian chemist who was awarded a L'Oréal Baltic Fellowship in 2018.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

In my family I am the first who chose the direction of natural sciences. I was born in the last century in a post-Soviet Union territory. Although at that time the chemist profession was one of the most prestigious ones in the Soviet Union, neither my childhood nor my school years were inclined to the direction of natural sciences. I wanted to do work "related with people" – I dreamed to be an actress or TV narrator, etc. During elementary school I was actively dancing, singing, playing piano, playing theater, did sport activities.

I've always done school work well, I've easily captured everything, but when Chemistry started I found it very complicated. I knew there was something more serious about it, not only the periodic table of chemical compounds. I was completely blown away by the fact that Chemistry was in each of us and all around us and I was slowly beginning to catch up with this discipline. My teachers at school and later my university lecturers played a big role in my professional development, they saw this chemist spirit in me. My basic education has been obtained

in Chemistry, but for the last 15 years I have called myself a chromatographer, because I developed my career in the field of chromatography, that is the most popular and versatile method that enables the separation, identification, and purification of components of a mixture for qualitative and quantitative analysis.

I started in the largest pharmaceutical company of the Baltic States, Joint Stock Company Grindeks, with five interesting and experience-rich years of work in the field of quality control. Thanks to this experience, I realized that the key to success was not always innate, the motivation and passion for my work must be the key. Although the work in the pharma industry is never monotonous, I realize that chromatography is not only a leading analytical method, but has applications in every branch of the chemical, physical, medical and biological sciences. The academic and scientific environment called me back and in 2007 I returned to University of Latvia, Department of Chemistry.

What do you work on? How important is your research topic for science development or society?

I have started to work at University of Latvia in 2007. My work responsibilities was divided into two important positions. First there

was an academic responsibility – work with students, reading lectures, leading seminars, supervising theses. My work second part was the science of Chemistry. Since March 2018 I joined a fantastic team of the Institute for Environmental Sciences (IES) and moved to Cesis, which is located about 100 km from the Latvia capital, Riga. Right now I am employed as Leading Researcher in the Laboratory of Chemistry on Medicinal and Aromatic Plants. Our research activities are focused on testing medicinal and aromatic plants, essential oils, floral waters, natural flavors, etc. Our facilities are modern, well-equipped and versatile, based on the latest requirements of modern analytical methods such as UV/visible spectroscopy, gas chromatography, liquid chromatography and mass spectrometry.



Right now I am working on the project “Growing Genetic Diversity of Medicinal and Aromatic Plants (MAPs)”, which is financed by the European Regional Development Fund ERDF. The research project intends to develop an innovative methodology for selection and organic cultivation of high value MAPs, such as valerian (*Valeriana officinalis* L.),

chamomile (*Matricaria recutita*), black samson echinacea (*Echinacea angustifolia*), common dandelion (*Taraxacum officinale*), and siler (*Saposhnikovia divaricata*) for further use in the fields of medicine, condiments, food and cosmetics.

This research topic is very important for both science development and society. We are obtaining and collecting the knowledge on the most appropriate genotypes as well as the organic production of MAPs in Latvian climatic conditions. My aim is to determine the quality of the raw material, the stability of the experimental garden yield and the composition of active substances in the researched MAPs. At the end of project we will announce the most appropriate genotypes and organic production of MAPs that are also the most suitable for biological agriculture farmers, biological animal farmers, pharma, food and cosmetics companies and households use.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

I have been awarded several times during my scientific activities, but one award is the most important for me: I am very proud to be awarded with L’Oréal for Women in Science fellowship 2018. Receiving this award means invaluable degree of confidence: for my work, choices and life. This fellowship is a great support and privilege to tell the society about my research and work and hopefully inspire young boys and girls to join the field of science. I am so grateful for the recognition I have received for my work, because I am very sure that there are lot of women in science in Latvia as capable of receiving it. After the award, I received congratulations from my colleagues, relatives, friends, and from my former and current students. It gave me new strength and confidence that I had to keep going in the same way. These emotions will be hard to beat.

In which country/countries have you been doing research?

Mostly in Latvia, but I also had some research periods abroad. My first serious introduction to research and science was in 2003. I joined the big family of Erasmus student exchange program and spent 6 months in Belgium, Ghent University, Faculty of Agricultural and Applied Biological Sciences. I did studies in the field of food and nutrition and worked on my bachelor thesis "Determination of phenolic compounds in extra virgin olive oils using high-performance liquid chromatography", supervised by em. Prof. Dr. ir. Roland Verhé. The time spent in Belgium gave me a first great experience of science and life in general.

Six years later in 2009 I went to U.S., Pennsylvania State University within post-doctoral studies. But instead of two years I did my research in only 6 months, because my oldest daughter was born. I am very grateful to the team of Galleon Company (Dr. Scott L. Dax, Dr. Stephanie Pasas Farmer and other colleagues), who took care not only on me, but on my family (husband and one-year old daughter) as well.

Every day I went to laboratory and worked on the creation of new potentially active pharmaceutical ingredients. We did pharmacodynamics and pharmacokinetic studies. We developed methods for determination of active compounds for in vitro and in vivo studies (blood, plasma, brain, urine, lung, kidney) using chromatography and mass spectrometry methods. During this period, in cooperation with other specialists in the fields of biology and medicine I realized that there are no boundaries between chemistry and other sciences: in fact, we complement each other by strengthening our research areas. I realized that chromatography is my lifestyle and my hobby. At that time, I also understood I will link my future to research; I began to see myself more as a scientist who can contribute to important projects and research activities.

What is your agenda for the coming months?

In parallel to my work in the Institute, I participate in a different activity on educational competence-based activities related to the field of chromatography.

I am giving lectures on chromatography for experts in the State Agency of Medicines of Latvia.



With a laboratory coat in a field of chamomile, June 2018

In cooperation with the National Centre for Education of the Republic of Latvia I have been working with various schools for several years, advising pupils and teachers on the performance of research work, as well as supporting the use of research equipment and methods to perform research. For the last few years I have performed the duties of Chair of the National Conference on Pupils Scientific Research, Chemistry section, in Latvia. This conference has taken place every year during spring already for more than 40 years. This year I will continue to carry out these Chair duties in reviewing pupils' scientific works. I have a scheduled trip to the U.S., Phoenix, in May, as the

accompanying person to the international school conference at Intel ISEF 2019 with three very talented pupils from Latvia.

In the near future, we plan to move to a new laboratory, which will have more space and will be more adapted to our scientific needs.

On 11 June, as a previous year awardee I am invited to the L'Oréal for Women in Science ceremony during which the 2019 Women in Science awards will be delivered.

especially my husband. It hasn't been easy for me to share my time between work in science and personal life. I have taken away a lot from my family during my scientific activities, attending conferences, writing articles and carrying out projects. I'm a mom for two kids. There have been slightly longer stages when I was forced to step back from the involved processes. There have been situations where you have to choose between a training trip and participation in a Mother's Day event in kindergarten... How to give lec-



Award Ceremony of the L'Oréal Baltic for Women in Science Fellowship 2018. From the right side – Dr. Ilva Nakurte; Mg. sc. Ing. Anna Fridrihsone; Mg. sc. chem. Margarita Baitimirova; Honorary Patroness of the Award Dr. Vaira Vike-Freiberga; Dr. Karin Kodermann; Dr. Giedre Motuzaitė-Matuzevičūtė; general manager L'Oréal Poland and Baltic HUB Wioletta Rosołowska. Photo: L'Oréal Baltic for Women in Science. Nils. Vilnis.

And, of course, I will have a lot of meetings with representatives from different sectors in the pursuit of new projects for the future.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

I won't deny, I met some barriers during my scientific research. Thanks to God, my family has always supported me as a scientist,

tures for students in the late evening without anyone taking care of your little child? In the field of work, overall I have had good leaders, but I have also suffered mobbing, because of my appearance or my competence. There are some people who do not want around them knowledgeable and intelligent people: I have always been a nuisance to them, I have felt an unwillingness to share knowledge and experience. Mostly, it's a matter of unhealthy competition. I've always wanted smart people around me.

I love to share my knowledge. I believe that only in this way can I ensure the growth of my laboratory and team.

I did benefit from mentoring, I have been personally and professionally encouraged from both males and females. I have felt the sharing of knowledge, expertise and experience. I am thankful to everyone who has touched my life in any way since I started my scientific path, each one of you has enabled me to bring the ideas into reality. I have gained strength to challenge myself and I am truly grateful for everything we have done together.



My family all together in a casual situation, 2015

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

In 2017 the Latvia's Gender Equality Index assessment was 57.9 points out of 100. The progress made was the same as the average in the EU's 28 countries and with this value Latvia took the 17th place in EU. (<https://eige.europa.eu/publications/gender-equality-index-2017-latvia>). If I need to describe the situation of gender equality in my working place, I would say it is more or less realised. Tendencies are very perspective, because some years ago this balance was only 1:3 (female/male). We have a lot of

female scientists doing their research in the field of natural sciences. I never felt negative aspects against working mothers. We have good support from our mentors and I want to believe our Institute will continue in this manner.

In my both trips for foreign experience, I'd cycled too much into the development of my own experience in science. Although both countries, Belgium and the United States, have had a gender equality policy long time ago, I did not experience their effects. I think it was because in these laboratories I worked for a limited time, not permanently. The time spent in these countries was emotionally positive. Talking about observations, I notice that in Belgium in leading scientific positions mainly men were dominant, while in the United States there was a gender balance. But nothing can be artificially created and implemented at this point, such processes require a series of conditions over a long period of time. The Baltic States were occupied for many years, there was no gender equality at all. Several generations have been raised in this way; in order to change something, a lot of activities focused on different social layers must be taken at the same time. Gender equality should be developed since birth, so at first in the family. It is satisfactory to see a positive development of gender equality trend in the field of science. But I see that still clever people often live in unwarranted stereotypes that are the biggest barrier to healthy development. It is good that we women can talk about these questions and we have been listened and supported. That is a progress as well.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

I must have been lucky because I've been working with a series of fantastic women in science since the beginning of my career. A rather large network of cooperation has developed over the years. Together with my female colleagues in science, we have carried out a series of projects, published a series of scientific articles. We continue to communicate with each other, support each other with tips and opinions on both science

and personal affairs. We are also pursuing this practice with female students. We are trying to involve young women scientists in research studies, supporting and motivating them. In 2017 together with two female students I took part in a very impressive event organized by the European Central Bank -open day for women in technical fields in Frankfurt, Germany. Thanks to this meeting, the girls returned back to University more confident about their choice of studying chemistry, particularly from the point of view that a chemist can work not only in a simple laboratory but even in a laboratory of the European Central Bank. I appreciate events like this one and I am proud to play important role in educating the new female generation in science.

If you could start again your life, would you choose again to be a scientist? What would you change?

Overall, I wouldn't change anything in my life. Although I often balance between emotional satisfaction and burning syndrome, I am very pleased with my choice. I've never had a routine in my job, I've never had two identical days at work. You must not stop, this direction drives you forward and makes you constantly grow. The only thing I would

do differently would be to use even more chances of learning.

Could you give a message to young European women scientists?

You should not be afraid of the various challenges of education and careers in your life, they must be accepted and tested. Currently there is a lot of opportunities for young women and they need to be used, while parents should not be afraid of supporting their offspring: it's very hard to judge things in which you're not and that you're not doing. Education and work are a good basis for everything. Being a woman scientist is a perfect, but very challenging, way to break down gender stereotypes. It is a perfect way to show that all brains in science are the same; everyone can do the same tasks, but in a different way. We can bring our specific senses and emotions in scientific processes such as being sympathetic, having sensitivity, care, responsibility and even being a wife and mother. Our strength has always increased in solving challenges and overcoming them. Do not stop doing it. We did this in the past, we are doing it now, and I believe we will be able to do so in the future.

Interview published in April 2019

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Lígia Amâncio

PORTUGAL



Social science

Professor Amâncio is an outstanding Portuguese social scientist with interest on gender issues.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

While my older sister decided to study biology, I thought that studying people was more interesting and decided to study psychology. I also had a very inspiring teacher of philosophy and psychology at school who contributed to my interest for psychology. The decision to go to science was a way to contribute to the development of my country. When I came back to Portugal after the end of the dictatorship, (it was impossible to study psychology or any other social science in Portugal at the time), universities needed teachers to respond to the huge demand for higher education.

What do you work on? How important is your research topic for science development or society?

Soon I decided to study the discrimination of women at work. This was a social issue largely ignored by social scientists in my country compared with the great interest for discrimination based on social class. My

PhD (in 1989) on this thematic became the first thesis on gender studies in Portugal. I have pursued my research interest in this area studying the discrimination of women in highly qualified professions, such as science, medicine, the magistrates, as well as politics.



SAGE (Systemic Action for Gender Equality) project team

My research highlights the co-existence of the trajectory of success Portuguese women have made in the field of education, qualifications and expertise, thus contributing to the process of modernization and democratization of our country, with the persistence of very traditional gender stereotypes that hamper women's careers and the recognition of their capacities. My studies can help

women understand that their qualifications are not enough in a gender inequality based society to understand how important policies against gender discrimination are.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

I am particularly proud of my PhD students who (all) concluded their thesis and took gender studies to other institutions of higher education and the private sector. I was also President of the Commission for Equality and Women's Rights (1996-1998) and member of the board of the funding agency (2006-2012) of Science at the ministry of science. The President of the Republic awarded me the Medal of Henry the Navigator in 2004 for the combination of science and politics in my career in the defense of women's rights.

My greatest personal satisfaction is the recent publication of an e-book with the contributions of my students (among other authors who shared with me some time of their lives) about the role I played in their lives. The preparation of this book came to their mind as I started planning my early retirement and kept secret until the end of last year when it was ready.

In which country/countries have you been doing research?

I only did research in Portugal

What is your agenda for the coming months?

In the coming months, until September, I will be busy with a H2020 project on gender equality in higher education (SAGE – Systemic Action for Gender Equality) for which I am the coordinator in Portugal.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

It was extremely difficult to raise a child and prepare a PhD at the same time in the 1980s. I did have opportunities of progressing in my career but was always part of the outer circle of my department. Hence, I did not benefited from any mentoring, something I tried at my best to guarantee to my students.



"Lígia Amâncio: gender as action on the world"

E-book published with the contributions of Prof. Amâncio's students.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

The influence of gender equality policies in the EU was very important in southern countries like mine. Unfortunately, gender equality has lost most of its centrality in European policies in the last years. Gender equality in science is practically what remains from previous years but this policy could still be improved: for example, by being much more assertive on the respect of European norms and regulations about gender equality in evaluation policies in general. In Portugal, we do not have any funding for gender studies since 2008 and the funding agency does not have any requirement regarding gender balance in research teams or evaluation panels.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

I did, in different contexts, and I find networking most important. For example, I participated in the foundation of the Portuguese Women Scientists Association (AMONET, EPWS full member), which was an outcry of Portuguese women scientists against male dominated commissions of evaluation. I also participated in international networks of researchers on gender studies, such as the group of "Women and Power" supported by the Maison des Sciences de l'Homme (House

of Human Sciences, France), which was extremely helpful to my research on women scientists in Portugal

If you could start again your life, would you choose again to be a scientist? What would you change?

Yes, I would. I would only change the values that became dominant in the last years and that have contributed, in my opinion, to decrease the social consciousness of scientists. The pressure they are under leads them to be more and more focused on their own personal interests. Apart from what is a global evolution of values, I do not think I would change anything.

Could you give a message to young European women scientists?

The problems women scientists face in the limitations of their careers and opportunities are global. The lack of gender equality is the most serious threat for central values in science ethics, such as merit and recognition. Hence, do not forget that more gender equality leads to better science.

[Interview published in May 2019](#)

www.amonet.pt

generomundo.tumblr.com

www.sage-growingequality.eu

Anne Goldberg

BELGIUM



Physics

Dr. Goldberg is an outstanding Belgian physicist working in the chemical industry. In the field of Gender in Science, she has created the Solvay- BeWiSe «Girls leading in science» (GirLS) contest with the support of a few stakeholders representatives, among others Hub.Brussels

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I have had always passion for French literature, music, ancient Greek philosophy and mathematics. At secondary school, I made a positive choice, as instead of selecting "Latin-Math" section (a lot of math, but no Greek), I preferred to select "Latin-Greek" (a lot of Latin and Greek but only a few math). The section "Greek-Math" didn't exist. In their philosophical journey, the ancient authors were the very first ones, in the humankind, to draw out the understanding of nature from the gods-based mythic explanations and introduce a rationale-based approach. This convinced me that studying physics at university would allow coming closer to these questions. Moreover, this was a big challenge in front of some of my family members who were successful in many topics including studying chemistry! At university, I was very much attracted by far-from-equilibrium systems, statistical physics and continuum mechanics. This led me to specialize in theoretical plasma physics for inertial fusion. Unfortunately, this direction couldn't develop further because it requested high power lasers that were at

stake because of American military secrets dealing with Reagan "star-wars" program. After the university, I never worked again in that field, but for a few teaching hours to engineers during a couple of years.

What do you work on? How important is your research topic for science development or society?

After 3 years in a public lab, I went to industry. Working in industry means that you change position on a regular basis. Though I have spent all my carrier in research and innovation, it can be broken down in 2 main parts. First, I have made researches in material science, setting up testing methods to understand solid state physics of polymers, especially fracture (Figs. 1 and 2), then trying to understand the so-called "structure-properties" relationships (Fig. 3); Second I have managed various portfolios of corporate research projects throughout the company, namely in the field of nanotechnology. It was a very intense period where I travelled a lot to Korea and India, coming in touch with start-ups. I had also the opportunity to represent my company at the board of the Nanotechnology Industry Association.

Those last years, I came back to my first loves, having mainly worked on the



Fig. 1 – A burst pipe with some other tested samples

development of a strategic roadmap for solid state of composites.

From the very beginning, humankind has been shaping and inventing materials. Just think of the denomination of ages like paleo- or neo-lithic periods, iron age, bronze age, etc. Materials are a key component of scientific and technologic progress, and nowadays part of the solution to address the big societal challenges, related to energy transition and climate change.

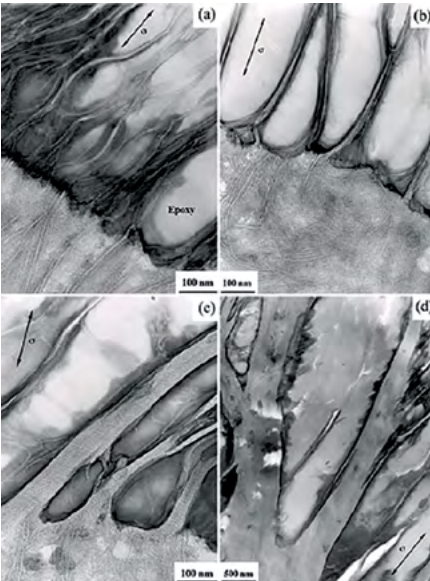
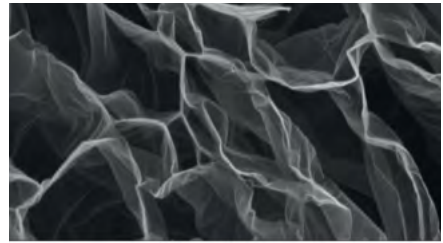


Fig.2 (from [1]) – TEM of a section through the HDPE fracture surface. Deformed crystal lamellae are clearly visible as well as fibrils.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

I can share 2 successes as researcher. The first one is related to my expertise in fracture mechanics of polymers. After the whole teamwork performed for the development of a new product, this specific competence was nevertheless instrumental in triggering the take off of one of our high added-value polymers for off-shore applications.



100 nm SHY = 2.00 kV WD = 2.8 mm 1200856-01-ph11.tif InLens Mag = 60.00 K X

Fig. 3 – (a) Microscope view of the platelet structure of graphene (from [2])

The second success dealt with another polymer, for pipe applications. In that type of applications that convey water or gases or effluents, you have to predict and overall guarantee the behaviour of your material until 50 years thanks to modeling. It is a big responsibility, and many tests were performed on pipes with traditional standards.

I could set-up and implement small scale accelerated tests to assess pipe resistance to pressure that saved a lot of time and material, and I discovered at the same time the fundamental importance of the chemical synthesis process on the polymer long-term solid-state properties.

One of my great personal satisfactions isn't a scientific one. I have organized during 10 years a series of scientific conferences with and for the researchers of my company, also with the help of the International Solvay Institutes to identify high level keynote speakers.

I have worked with a network of enthusiastic

colleagues, we had the privilege to listen to prestigious external speakers such as Nobel laureates in Physics and in Chemistry, and interact with them.



Fig. 4 – Mechanical testing (pressure on pipes and creep on tensile samples)

Our researchers, coming from all over the world, gave oral presentations in front of their peers and also in front of the management. This was a moment of intense work and a lot of emotions and satisfaction to see all these bright people share the result of their work.

In which country/countries have you been doing research?

I have made all my career in various positions but staying in Belgium (where I have also studied).

What is your agenda for the coming months?

Ah, this is a cumbersome question. I am currently preparing for early retirement, and I am progressively setting-up projects where I try to please myself, while giving back to the society what it has given to me when I was younger. I'd like to remain involved in my last societal project, targeting 16-18 years old pupils, especially girls, to encourage them studying STEM. The "Girls Leading in Science" project has become now a partnership between Solvay and BeWiSe, which makes me very happy.

I have started to teach at the Mons University,

2 classes about innovation and history of science/ideas.

I am fascinated by my readings about the birth of modern science and its link with Renaissance and with the political and religious context.

I will also keep my current activities in the European Industrial Research Management Association (EIRMA) task force on responsible innovation, in the Graphene Flagship strategic advisory board, and maybe at the board of Materia Nova, a very active R&D center specialized in material science in Wallonia.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

This is a complex question that I will try to answer at best.

At the end of my degree, I hesitated to complement my education as a physicist with a civil engineer diploma, because I thought I would be stronger once in front of a potential recruiter. Ultimately, I didn't, and started rather a PhD, because I was convinced by one of my professors to work with him. It turned out not to be a good idea, because I faced an increasing amount of hurdles – just as former female PhD students – and didn't finish my PhD. This shaped definitely my career, though it took me more than 25 years to have my eyes uncovered!



Fig.5 - The "Girls Leading in Science" participants

At the time I was hired by Solvay, female employees were around 25%, many of them

as administrative staff. The situation has considerably improved, and an objective of reaching gender equality by 2025 has been set. In this context, it is rather difficult to make the difference between not being lucky (needed for any circumstances of the life), not detecting unconscious biases and surviving to the successive changes of perimeters of the company.

I never benefited from any mentoring, and I am not indebted to anyone for what I have achieved throughout my career.



Fig. 6 – Responsible Innovation at EU REInEU 2016 conference in Bratislava

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

All along my professional life, including my studies at university, I have worked mainly with male colleagues, being very often the only woman in meetings, though it has never be an issue for me.

My observation is that in chemistry and biology research activities, gender equality is rather achieved, at least for young researchers. This is certainly not the case when considering both higher management positions, whatever the field, and material/polymer scientists in solid state physics.

In Belgium, I would say that there has been a tradition since the very beginning to be quite advanced regarding big social issues like

abortion and euthanasia. To my knowledge, the fighting for gender equality followed that trend, with for instance, the anti-discrimination law or the article 10 of the constitution that establishes the principle of equality between men and women [3].

About a better implementation of gender equality in science, I must acknowledge the momentum triggered at the European level, that allowed namely the creation of EPWS, but also the incorporation of gender aspects in science policy, and more especially in responsible research as defined in Horizon 2020[4].

As of 2012, a group of senior professionals whose companies were belonging to EIRMA launched a task force aiming at understanding what was behind the concept of “Responsible Research and Innovation” set up by the European Commission in Horizon 2020. We progressively identified, along the years, that the 5 criteria related to it[5] were matching very well the responsible research, but not at all responsible innovation, as innovation is definitely a different process than research, that has to be assessed on different criteria.

However, the «gender» criteria made us think further, and it appeared that it had a lot of indirect consequences, for research and also for innovation: women focus more on understanding the impact on people of what they develop, and this results in the development of other applications than men, less women are quoted in patents, less women are CEOs of technical start-ups, biases are present in the questions from investors, etc. Responsible innovation (RI) is about creating value for all the stakeholders, and not only the shareholders, while preventing negative



Fig.7 – EIRMA task force on Responsible Innovation at work [6]

impacts. Today, as it is more critical than ever to solve the societal challenges, implementing responsibility in (academic and industrial) research and in industrial innovation via the sustainable development principles and objectives has become mainstream^[7]. Gender equality is the 5th UN development goal, and applied both in public bodies^[8] as well as in private companies (on a volunteering base, for those that have embedded sustainability in their strategy^[9]).

So, we have the tools and the toolbox. Now, to make it occur, still a lot of work has to be done, men and women together, as I am convinced that, in that matter, it is important to go ahead with the men and not against them. Primarily people should be aware of the facts, reported by many regional, national or local authorities (see for ex.^[10],^[11],^[12]), and discuss them. What in my opinion is needed further is described in the last question below.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

I recognized gender issues 10 years ago, so quite late in my life, whereas I had put a lot of efforts in my work and in my family, evolving between both with a precarious balance. As I said above, being quite alone in my job, I decided to become a member of BeWiSe. I liked very much to make testimonials in front of students of secondary schools.

In my mind, ideally, we should have a balanced representation of the various stakeholders (public, academic, industry, etc.). I always appreciate discussing with other women, but with our way of life, it takes time to build close relations. I think that it is valuable to have room for “only female” discussions, but as I said, we should never forget our male counterparts, who will build with us the solutions of the future, and make stereotypes evolve. This is why our contest “Girls leading in science” was launched.

If you could start again your life, would you choose again to be a scientist? What would you change?

Definitely yes! Though it wasn’t easy every-day to be a physicist in a chemical company, I never regretted it. Working in research is a gift, whatever the type of question that you can meet. Once you’re bitten by science, it is like being bitten by a virus: you never recover.

If I had something to change, I would like to be more aware of unconscious biases and work on them.

I would also try to be daily earlier at home, which I more less succeeded with my eldest daughter, but not really with my son, especially when he was a teenager, staying alone too much because my husband and myself were working hard.



Fig.8 - The announcement of our 2019 Girls Leading in Science contest

Could you give a message to young European women scientists?

I would say 3 things. First, be aware of your unconscious biases in order to work on them: girls usually are perfectionist, and underestimate themselves. This prevents them for ex. to apply for positions where they think they don’t fulfill all the requirements, or to ask for a promotion. Fight against categorization based on gender everywhere, overall with the youngest

generation, and fight against yourself!
Second, feel confident that, whatever your age, there is always room to play a role model for younger girls and boys.
Third, the roots of stereotypes are going deep back in childhood. Identify all the simple rules that help changing the minds, such as: when teachers perform projects with their pupils or students, they should

be careful that girls don't take only roles in communication or facilitation but truly in "getting their hands dirty", i.e. coding, programming, building, screwing, etc.
Last but not least, overall, make your passion for science viral!

Interview published in June 2019 and updated in September 2020

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BeWiSe
Belgian Women in Science

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Jana Valdová

CZECH REPUBLIC



Linguistics

Dr. Jana Valdová is a Czech Gender linguist, specialist in German language.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

My interest in science began in 1995 when I read two Czech articles on sexism in German and English. To my contempt, both authors, Světlá Čmejrková and Jana Hoffmannová, downplayed the problematic subject. In her article, Čmejrková uses mocking remarks about languages such as English and German, which she phrases as “poor by gender”. In the opinion of Čmejrková, the Czech language system, which possesses three grammatical gender specificities, guarantees equal linguistic treatment of men and women, therefore any recommendations on gender-fair language would be pointless. My skepticism of the problem is not in the grammar system but rather in using language as the starting point for my research. At the time I started, there was no professional literature in Czech on this subject; nobody understood the problem, and nobody believed that the issue had a kind of purpose or future. The only exception was the famous Czech linguist Milan Jelínek who positively reviewed my work as

he declared “It’s good to have recommendations on gender-fair language ready when feminists come up with their demands.”

My inspiring models were foreign feminist linguists – Helga Kotthoff, Marlis Hellinger, Hadumod Bußmann and others. They gave me confidence and validations when the Czech professional linguists belittled my research reports. For these reasons and with these inspiring authors, I found the motivation I needed to become more passionate about the science of language.



What do you work on? How important is your research topic for science development or society?

For over twenty years, I have researched language from the gender point of view. A number of issues (health care inequality, pension reform, abortion, domestic violence, and the rising popularity of populism, racism, Nazism, sexism and LGBTQ discrimination and many others) have two basic components. The first component is acknowledging the problem itself; the second component is the presentation of the issue which includes how the facts are treated within the topic, the beneficiary of the topic, who is mandated to speak on the topic, and, conversely, the voices that are excluded from the topic. Language is in itself a patriarchal construct; it influences culture, society, politics. The topic of gendered and gendering language cannot be dismissed if any positive progress is to be made at any given place in the world.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

My greatest success as a researcher is the introduction of the concept of the problem with gendered and gendering language use. I am the first Czech linguist to publish a dissertation on the topic and demanded the gender-fair language use. My greatest personal satisfaction is watching the interest in this topic grow and the research more widespread. From my initial introduction over twenty years ago, there are now over nine hundred graduate and undergraduate students researching and writing on the topic of gender and language according to the student works database: www.theses.cz. Additionally, my monograph, *Reprezentace ženství z perspektivy lingvistiky genderových a sexuálních identit* (2018, 'Representation of femininity from the perspective of gender and sexual identities'), has had a positive

response. It was a pleasure to have recently led the training at the Ombudswoman's Office in the use of gender-fair language. Overall, it is quite gratifying for me to have the opportunity to continue to research, learn, and inspire others on the topic.

In which country/countries have you been doing research?

It was a pleasure to conduct research, lectures, workshops, and/or lessons on gender linguistics at universities in Germany, Switzerland, and Austria in addition to other cities and countries such as Luxembourg, Washington D.C. (U.S.A.), Khabarovsk (Russia), and Libreville (Gabon, Africa).



What is your agenda for the coming months?

As of now, my agenda includes researching the pragmatic effects of gender-fair language; and, in the autumn, I will participate in an international conference on gender issues at the University of Innsbruck. Furthermore, my next publication will focus on the methodology of gender-fair language use for the Ministry of Education. Additionally, my goal is to expand training courses

for administration and high school lectures in effort to introduce and/or familiarize this topic among people both young and old.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

From my beginning in 1998 until even now, my dissertation on language and gender stands alone. The barriers I have met took much effort to overcome, but I had and will always have resolution and determination to promote this idea and conversation. The hostility I met in the 1990s continued over a span of two decades; and in 2010, a team of fourteen linguistic department chairmen within the Czech Republic signed a petition addressed to the Czech Ministry of Education in effort to reject, dismiss, and deny my efforts, or any efforts, to identify and incorporate the topic of gender-fair language in education. Even now, the topic of Gender Linguistics meets opposition from professional magazine editors and grant committees. Only one student was admitted into the Gender Linguistics Ph.D. program two years ago, but the continued development is essential for the promotion of gender research of language.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

Gender equality in my field can certainly be improved and must be improved. In the Czech Republic, the Department of Gender and Science is housed within the Sociological Institute of the Academy of Sciences. This department helps promote female scientists and increases awareness of gender equality in science. The pool of experts at Gender Expert Chamber is an excellent resource for anyone interested in gender issues. (When

the Institute for Czech language discriminated me for my scientific focus on transgender names, the experts at the Gender Expert Chamber confirmed my professional competence.)



Better implementation of gender equality in science is not possible without supporting females as early as primary schools. Improving gender equality is crucial for female children to realize that the field of science is, in fact, a viable option for them. Finally, in the countries where I have worked, equality offices are established at each university, except in the Czech Republic. To progress in all areas of gender equality, I would suggest that similar supports are established in the Czech Republic.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

Through my work and experiences, I have found networking between female scientists of enormous strategic importance. For centuries, women could not participate in research and, therefore, could not network.

In her book, "Inferior: How Science Got Women Wrong and the New Research That's Rewriting the Story" (2017), Angela Saini states that contemporary science is still a male science in its priorities and, therefore, results in gender hierarchies. Fortunately, I experience efficient and effective networking through the Research Platform Gender Studies at the University of Innsbruck where female scientists can connect across disciplines. This networking benefits us all.

If you could start again your life, would you choose again to be a scientist? What would you change?

Without hesitation, I would undoubtedly choose again my area of study if I had to start my life over. To me, contributing to a field that promotes equality and diversity

has purpose and meaning. I would, however, start to look for inspiring models and find efficient networking much earlier in my career. This is also the advice I offer young people today.

Could you give a message to young European women scientists?

It is with pleasure I can give a message to young European women scientists. My message to them is perfectly expressed in a quote by Bohumil Trnka (1895–1984), a great Czech linguist, which states: "Knowledge rises only if many investigators work at it in mutual cooperation and control mediated by comprehensible language." To you, my dear sisters, I wish you much success!

[Interview published in July 2019](#)

www.uibk.ac.at/forschung/profilbildung/geschlechterforschung-identitaeten-diskurse-transformationen.html.en

genderaveda.cz

www.genderonline.cz

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Elisa Lorenzo Garcia

FRANCE



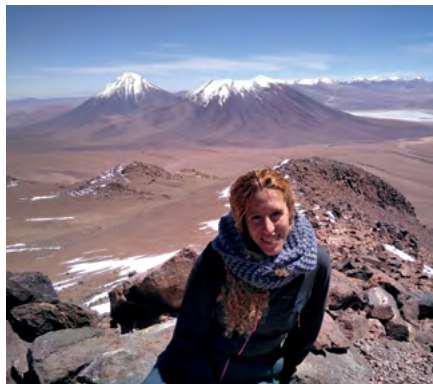
Mathematics

Dr. Elisa Lorenzo Garcia is a brilliant young Spanish mathematician now working in France, who was recently awarded the prize of the Young Woman Mathematician of the Spanish Academy of Sciences.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

When I was a little girl I was very good at school, especially in Sciences. I used to see myself in a Laboratory doing chemical experiments. But when I was 11 I started to take part in math contests. My school teacher, "Don Emiliano", encouraged me to participate. I was good. At 16 I was classified for representing Spain at the IMO (International Mathematical Olympiad). I took part in the IMOs of 2004 and 2005. My high school teacher, Azucena, also encouraged me a lot. During my last participation I got a bronze medal. I was very happy and proud of myself. At that moment I was thinking about studying some engineering: this is what good people at Sciences do (or used to do) in Spain. But luckily, and thanks to my Math Olympiads participations, I realized that what I really liked was Math. And even more, that I wanted to become a doctor (I think this was the influence of Indiana Jones movie's, when he is called Dr. Jones, I always wanted one day to be called Dr. Lorenzo!!), doing research all day long and of course,

the topic was clear: Number Theory. Problems in Number Theory are the most beautiful and difficult ones in the Olympiads!



Dr. Elisa Lorenzo Garcia in Chile

My parents are both scientists: my mother is a medical doctor and my father was a professor in engineering at the Universidad Politécnica de Madrid. I guess this also had a big influence on me.

What do you work on? How important is your research topic for science development or society?

Gauss said that Mathematic is the Queen of Sciences, and Hardy finished the sentences by saying that Number Theory is the treasure of the Queen.

I love Number Theory: it starts with divisibility properties and the complicated, and still not well understood, theory of prime numbers and finishes with Galois groups passing through elliptic curves and modular forms among others.

Hardy also used to say that part of the beauty of Number Theory was that there was no application in it. Unfortunately for Hardy, and fortunately for us, Number Theory has nowadays lots of applications: in particular to cryptography.

My research is in the interface of Number Theory, Algebraic Geometry and Arithmetic Geometry, and I always keep an eye on the cryptography applications. More precisely and for some years, I have been very interested in moduli spaces of abelian varieties and their reduction and arithmetic properties.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

A great moment of personal satisfaction is when I won a gold medal in the Spanish Math Olympiad and I got classified to the IMO in 2004. It was a great moment and I felt my efforts recognised. What also made the moment very special is that I shared this gold medal with two other wonderful women. Six people are classified every year in Spain to the IMO, and girls are not usually represented in the team. That year was very unique having the team with 3 girls in it. Of course, winning a bronze medal in the IMO of 2005 was also a moment of great personal satisfaction.

As a teacher now, and more particularly, as an Olympiad trainer, I'm very proud of lots

of my students, specially of those ones that got to win a silver medal in the IMO for Spain and open the way to many others to do it!

As a researcher, a good moment that pushed a lot my self-esteem, after the hard time during my PhD, was when I got an Associate Professor position in Leiden after only 10 months of postdoc. I'm really grateful to Leiden University and all the members of the Math Institute that always believed in me and supported my research.

And of course, as a teacher, as a researcher and as a scientist and in all the duties that it includes, I'm very proud of the prize Julio Peláez for Young Female Scientists I was recently awarded!



Dr. Elisa Lorenzo Garcia was recently awarded with the Julio Peláez prize for Young Female Scientists

In which country/countries have you been doing research?

I did my undergraduate studies in Mathematics at the Universidad Complutense de Madrid (Spain) and in Physics at the Universidad Nacional de Educación a Distancia (Spain). I followed a master and I got my PhD in mathematics at the Universitat Politècnica de Catalunya (Spain).

After that, I got a postdoc position in Leiden (The Netherlands). After 10 months I was moved up to Associate Professor. But 14 months later I moved (for personal reasons)

to the Université de Rennes 1 (France) as maitresse de conférences (an associate professor permanent position) and I am here since September 2016.

During my time as a PhD student and as a postdoc I realized some 2-3 months stays at:

travelling for visiting different collaborators (I had a half-delegation from the CNRS, so no teaching duties during the second semester).

So a quiet time in Rennes is going to be very good and productive for me.



Dr. Elisa Lorenzo Garcia's students won a silver medal in the IMO for Spain

Universiteit Groningen (The Netherlands), Università de Roma Tor Vergata (Italy) and San Diego University (USA).

And because of collaborations, conferences, and because I really love travelling, I've visited more than 45 countries all around the world!!!

What is your agenda for the coming months?

During the first semester I'm teaching a lot. Not as compared with the American system but yes for European standards. So, no many travels planned.

This is going to be good for my students since I'm starting co-advising three PhD students this year. I'm very excited about it!

I'm also planning to apply for different projects and I want to write down all the ideas I got during my last 9 months non-stop

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

Yes, I did. My PhD time was a very hard time. I did not find the support I needed. There are lots of studies talking about the mental problems graduate students suffer, e.g.: <https://elephantinthelab.org/mental-health-crisis-doctoral-researchers/>

Something that helped me a lot was taking part in the WIN-E (Women in Numbers Europe) conference in 2013 when I was finishing my PhD. Working in a nice environment and with people that just try to help and collaborate was very good and refreshing. I would like to take the occasion to thanks Irene Bouw and Kristin Lauter who were the leaders of the group in which I took part and who have supported me a lot during the last years.

Right now I cannot say that I meet barriers (besides some sexist comments from time to time), but less teaching and less bureaucracy would definitely help to my research.



Even more, now that I have less barriers and a more stable position, I like to help, as much as I can, people meeting different barriers: I am the president of the Commission for Women and Math of the Spanish Math Society and since last year I have participated in different CIMPA (International Centre of Pure and Applied Mathematics) schools and other schools in undeveloped countries.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

In Mathematics we do not have gender equality (we do not have it in our society and Math is not going to be different). Even more, in pure Math, and particularly in France (but I would say that also in many other countries), the percentage of female professors is the lowest one in all sciences (about 15%). In Spain it is slightly better, but women there are usually not in the highest positions. In The Netherlands, it was even worse, if I remember correctly, there were only 3 female Math professors in the whole country.

With these proportions, and even assuming everybody being feminist, at least you would feel in minority and wonder all the time if you belong to that community or not. Remove the assumption now and see what you get ...

I have been the president of the Commission of Women and Math of the Spanish Math Society since 2017. I believe we can change things and make the Math community more inclusive. We tried with different approaches and activities. I'm optimistic. But I'm also realistic, and this is a problem that it is not going to be fast solved.

It is just a starting point, but talking about it helps. Making people aware about the situation helps. There are people (especially men) that never even thought there was an issue. Explain it, and make them realise that there are some inequalities and that things may be improved.



Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

Yes, I did, and it was one of the best experiences I ever had!!

As I mentioned before, I took part in the conference WIN-E (Women in Numbers Europe) in 2013. Then in its second edition in 2016 and now I am one of the organisers for the third edition in 2019.

These WIN conferences are not only special for having only female participants, but also for being collaborative ones. This enables junior women in mathematics to create a strong collaboration network, to connect with important research directions and to meet research mentors.

If you could start again your life, would you choose again to be a scientist? What would you change?

Yes, definitely. I like Science, I like Math, I wouldn't have done any other thing.

Maybe, just maybe, I would have left Spain earlier, and I would have done my PhD

abroad. More international experience is always good.

Could you give a message to young European women scientists?

Do not let anyone discourage you to keep in Science just for being a woman! And do not let them to impose you the masculine way of doing Science! There are many ways of doing Science, and diversity is good and necessary for it!

We need you, Science needs you!

[Interview published in August 2019](#)

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www.egmo.org

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mym.rsme.es

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sites.google.com/site/elisalorenzo/home

www.youtube.com/watch?v=XeJB0xX1uis

www.innovaspain.com/elisa-lorenzo-garcia-premio-julio-pelaez-matematicas-rennes



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Cathrine Holst

NORWAY



Sociology

Prof. Cathrine Holst is Professor at Department of Sociology and Human Geography and Research Professor at ARENA Centre for European Studies, University of Oslo, Norway, and also connected to the Centre for Research on Gender Equality (CORE), Institute for Social Research in Oslo.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

From the very beginning, I loved school, and to do reading and writing. I think I also from rather early on was triggered by the intellectual environment and competition that school offered, that it was a place where I was judged more on the basis of merits and achievements than on the basis of conventions, looks and social skills. In my closest family, I think my mother's encouragement was immensely important. She told me early on, when she noticed my preoccupation with school and books, that I could be a university professor one day. I also had academics in my family, one of my uncles was a famous Norwegian social anthropologist, another one a distinguished cancer researcher. I think this helped putting ideas into my head about an academic career.

When I became a university student, I was also lucky to have professors that saw my interest and talent for academic work, and that encouraged and tutored me. I first studied history and philosophy, but ended up taking my master and PhD in sociology.

Both my theses had a rather cross-disciplinary profile, and I have continued enjoying myself the most at the interface between fields, such as sociology, political science and philosophy.

As for my general orientation, I took early on an interest in the relationship between academia and the public sphere, intellectual and political life. I am, on the one hand, a 'political animal', and believe academic work ought to contribute to improve human welfare and ways of living. Several of my intellectual concerns spring, I believe, from broader existential and political projects – I think it is like this for many committed academics. I have for example taken a special interest in gender perspectives. This is also a reflection of my own personal struggles and alienation as a woman entering the university. Academic life bears so much promise for human emancipation, but it has also been deeply entrenched in patriarchal traditions and ways of thinking. This still comes through even if 'gender equality' has become the official norm. On the other hand, I believe I find academic life so meaningful and worthwhile because of its ethos of impartial knowledge seeking. At universities, we are allowed, even obliged, to search

for significant truths, relatively independent from political trends and immediate use value. This role of academia cannot be over-estimated, and it worries me that intellectual and academic freedom is now under pressure in many countries, even in Europe.

What do you work on? How important is your research topic for science development or society?

I have broad interests but, were I to sum up, I think my research mostly circles around one of two topics. First, I work on the role of experts and expert knowledge in democracy and policy-making. I do empirical work on how knowledge is transmitted into public policy and new and old policy advice mechanisms, from expert commissions and science advice, to think-tanks and consultancy. I am interested in who those we refer to as 'experts' are, and why we give their knowledge authority as 'expert knowledge'. I am also interested in normative questions in this area: What characterize 'good' experts? Which are the better ways to organize the relationship between knowledge production and policy-making? When experts are delegated extra power in political processes, be it economists in the Central Bank, court lawyers, or science advisors in agencies and ministries – what are the implications for decision quality, and for democracy? How can we engage experts to ensure knowledge-based policies while at the same time respecting the participatory and representative credentials of democratic procedures?

Second, I do work on gender issues. I have a longstanding interest in feminist political philosophy, social theory and epistemology, but in recent years, my research has focused mostly on family and gender equality policy. My expertise is mostly on the policies and governance of the Nordic countries, including the so-called Nordic model of gender quality, its preconditions, features and effects. I have however also done work on policy-making in the EU, EU institutions and

European integration. A newly published book combines these interests: together with colleagues, I study how 'europeanization' has affected Nordic gender equality policy – and whether Nordic policies in the gender area have been uploaded to the European level. We find in our studies that EU law has contributed to strengthening Nordic anti-discrimination legislation significantly. At the same time, the Nordic work-life balance regime and women-friendly family policies do not travel easily to other EU countries and to the EU level. A well-known example is the failure of the proposed new maternity leave directive to win through.



Thus, the fact that my research topics have societal relevance goes, I guess, without saying. Both the relationship between experts and elites and 'the people', and the societal role of gender, are deeply contested issues, and I experience a lot of interest for my research among civil society actors, policy-makers, and in public debate. There are however also internal puzzles and unsolved problems in my fields that I hope

my research can contribute to shed light on. For example, how can it be that society and policy-making are increasingly 'expertized', in the sense that we allow ourselves to rely more and more on the guidance of professionals and the knowledgeable, while we at the same time see the rise of 'post-truth' politics, distrust in experts and populism?

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

Along with many others, I guess I have particularly warm memories of the many 'first times': The first time I got an article published in a good journal, the first time I received a research grant, the first time I got a position, the first time a distinguished scholar in my field quoted me, the first time I saw my research cited in the newspaper, when I received my professorship, etc. However, what I am maybe most proud of, is that I over time have become overall more self-confident and assertive. I think that I now, much more than some years ago, speak 'academic' in my own voice and with my own signature. It is hard to pinpoint any exact moment as a turning point; it is rather many small instances over time. These are personal victories such as stating my views despite opposition or disregarding an insult.

However, the instances I believe have brought me forward also include many disappointments; when a paper I had worked hard with or a grant application was firmly rejected, and I did not give up, but got up the next morning to make it better. As for the teaching, I think what makes me particularly proud is when bachelor students tell me in person, or in evaluations, that they like my lectures and seminars. It can be tough to get through to junior students, and among my most rewarding moments there is when I really feel that I connect.

In which country/countries have you been doing research?

I am from Norway, and I was educated at the University of Bergen, and have currently positions at the University of Oslo. I spent however a year at New School for Social Research in New York when I wrote my PhD. Later, I have been a guest researcher at Freie Universität in Berlin, at European University Institute in Florence, and at the Quality of Government Institute at Gothenburg University.

What is your agenda for the coming months?

The short answer, and high on the agenda, is to revise and submit several papers. Together with Hallvard Moe, I am just now finishing an article on the role of informational quality and expert users for online democracy to be published in Political Studies. Together with Mari Teigen, I write on an article on how 'gender equality' is relied on as 'national branding' in Norwegian foreign and security policy. Together with Eva Krick, I write on the relationship between 'governance by committees' and 'social democracy'. Together with Silje Långvatn, I write on descriptive representation of women in international courts for a special issue of Journal of Social Philosophy. Together with Johan Christensen, I am finalizing an article for a special issue in Scandinavian Political Studies on Norwegian think-tanks. Johan and I, together with Anders Molander, also write on a book with the working title 'Experts, policy and democracy'. So, I am not really short of deadlines in the months to come.

In addition, I spend a lot of time on supervising master and PhD students, and on bachelor and master level teaching. This fall I have lectures on two introductory courses to sociology and a theory course on social theory. Last week, I co-coordinated a PhD course in Paris on the methodology of normative political theory. I am also so lucky to be part of a Horizon 2020 project on Trust in governance starting up in 2020 and with

Dublin philosopher Maria Baghramian as PI. In 2020/2021 I will organize a research group at the Centre for Advanced Studies (CAS) in Oslo together with philosopher Jakob Elster on the topic 'what is a good policy?'

including female researchers, as belonging to their 'crowd', or to their male competitors' crowd. They cannot really understand that many female researchers are their 'own' and respect them on equal terms. Luckily,



Prof. Cathrine Holst with her family

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

I think I have generally been extremely lucky. I have been part of friendly environments and experienced a lot of encouragement throughout in my academic career. Still, the male domination of academic traditions has sometimes been overwhelming, and I have struggled with finding a place for myself and believing that I am 'good enough'. I have also experienced my share of 'mansplaining', and had the experience of being underestimated because I am a woman. For some men in academia it seems like only other men matter. They tend to see intellectual life as a competition between men and to consider the women around them,

these men are increasingly in minority, but they are still around. I experience also on a daily basis work-life balance issues. I have two children and a husband who is both a publisher and an active researcher. We both want to be present and available for our kids, but things do not always add up.

As for mentoring, I have not been part of any formal mentoring program, but I have profited from several informal mentors. Maybe of special importance have been more senior female scholars inside or outside my field, that I feel have been on 'my side' and that have inspired me greatly both intellectually and careerwise. I have however also had male supervisors and advisors that have been extremely important for my career and academic development. For sure, I would not

been a professor today, had not this bunch spotted me, recognized me and supported me during vulnerable phases.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

In my main discipline, sociology, women are well represented, while political science and philosophy are more male-dominated fields. This is connected, I think, to deep-seated cultural codes and to topical differences. Sociologists work with family-society relations, the welfare state, etc. Such questions maybe more easily attract women, and female researchers have been decisive for the development of many of the central sociological research areas. Philosophy was always an affair primarily for 'men only' and for 'geniuses' and 'the brilliant mind'. It requires a certain kind of self-perception and self-esteem to enter this area, and women have not been considered – or considered themselves – to have the right kind of 'rationality'. This is honestly bullshit, but it tends to stick. Recently, a Norwegian university offered ten – 10! – permanent positions in philosophy – and ten – 10! – men were hired. This is a serious problem for both intellectual life and our societies. To address it, you need cultural changes of a more radical sort, and this does not happen overnight.

Meanwhile, I think we need to think much harder to construct recruitment processes in academia that combine meritocratic criteria and pluralism. I am sure this can be done. I think many would agree that, when a discipline is dominated by one social category, then this is not only a 'political' problem but also a problem for adequate 'truth seeking' and for 'science'. In addition, I am a strong believer in mentoring and networking – and

in a healthy work-life balance regime. The latter requires family, welfare, and gender equality policies that make it possible for both women and men to pursue a career and have a family life at the same time. In this area, I have to say I am a strong 'Nordic model' fan. Our societal model combines central social justice and equal opportunities concerns with high levels of innovation and productivity. This is what happens when both halves of the population are given not only formal, but also material

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

I did, in a range of connections. For me, the informal support by other women, seniors and women at my own career stage, have been crucial. I also like to cooperate in pluralist research teams, where we come from different disciplines and have different backgrounds, including different genders. This being said, I have also experienced that women's network has developed into not-so-healthy 'female camps' or enclaves, where we hold each other down and emphasize 'sameness' and 'common experiences' in the wrong and claustrophobic kind of way. I think many female scientists have strong personalities and embrace a certain kind of individualism. We need forms of cooperation and support that take this better into account.

If you could start again your life, would you choose again to be a scientist? What would you change?

I would definitely choose my vocation as a scientist once again. I wake up almost every morning thinking I have to be one of the most privileged people in the world, being allowed to spend so much time on doing stuff I find so utterly meaningful. I love social science, but maybe, where I to choose again, I could easily have gone for

a different scholarly area, such as law or economics, maybe medicine or psychology, or a humanistic field, such as linguistics or antique history.

Could you give a message to young European women scientists?

I think we should take more space. My experience is that talents are relatively equally distributed between women and men. There is no good reason for women's underrepresentation in parts of academia and their lower average scores on excellence criteria. I believe in mentoring and networking among female scientists, but it is just as crucial that male academic leaders are able to spot and encourage female talents, and I think they could take on this responsibility much more strongly. Women should moreover challenge their own comfort zones more often, and

spread even more widely across academia. I cannot stand the idea that since we are women, we should stick to certain disciplines, methods or certain 'female' ways of thinking.

For women to step forward even more, requires certainly the right kind of intellectual and institutional culture, but as a policy scholar I cannot but also remind of the importance of the right kind of family and welfare policies. As for the latter, it is disappointing that the EU has not taken on more of a leading role, but maybe not so surprising, given the times we live in, with conservative, populist, euro-skeptic and anti-feminist trends unfortunately on the rise in many parts of Europe.

[Interview published in October 2019](#)

Mineke Bosch

THE NETHERLANDS



History

Prof. Mineke Bosch is Professor of Modern History at the Faculty of Arts, University of Groningen, The Netherlands.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I have always been an avid reader and I just knew I wanted to go to the university. My first choice was chemistry, even though I knew I also liked philosophy and history. But that I thought I could do at home, whereas for chemistry one needed a laboratory. In my first year, however, I discovered I did not really like the precise practical work, and after reading James Watson's autobiography on the discovery of the double helix, I decided to switch to history. Interestingly, I liked the book and did not notice his sexist treatment of Rosalind Franklin then. It was in 1973 (I think), two years before the UN's International Women's Year.

What do you work on? How important is your research topic for science development or society?

This last year I made a large national exhibition and a book on the struggle for women's suffrage in the Netherlands and internationally that attracted 120.000 visitors from all over the country. My aim was to have this

immensely important historical story included in textbooks for secondary schools and universities, or at least, to make it into a self-evident part of the history of the Netherlands and to raise what I have come to call 'suffrage literacy'.



Bosch lectures at the celebration of the Centenary of Dutch Women's suffrage at the Groningen Museum, May 9th, 2019. (Groninger Museum)

Before that I was involved (and will be again) in the study of gender and scientific persona, in which I analyze the way in which scholars and scientists 'perform' as scientists and scholars in order to make themselves recognized as reliable representatives of science and the humanities.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

If success is defined by media attention for my work, it definitely is the work I did for the exhibition and accompanying book... But I do value smaller moments of satisfaction perhaps even more, such as when students express their thankfulness for what they learned, or when one of my article or book is cited in an article or book I admire.



Banners room at the exhibition Struggle. 100 Years of Women's Suffrage (Groninger museum)

Could you share the memory of a great personal satisfaction during your research career with us?

My greatest success was the exhibition "Struggle: 100 Years of Women's Suffrage", and the accompanying book, which together had an enormous enthusiastic reception and a great spin off.

In which country/countries have you been doing research?

I have been doing research in various archives in the US, Great Britain, France, The Netherlands.

What is your agenda for the coming months?

My agenda consists of supervising eight PhD students, two of whom are earning their doctoral degrees in December 2019 and January 2020. I am also member of a PhD

assessment committee at the Central European University and will attend the promotion in January in Budapest. Besides I have a research course to teach, I have many lecture engagements and the deadline for an article in November. Moreover, I am editing a volume of L'Homme. Europäische Zeitschrift für feministische Geschichtswissenschaft on the various national commemorations of the centenary of women suffrage in Europe and the United States, for which I have to write a contribution and hold an interview with a colleague in the United States.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

I met many barriers during my career, a long time ago, but also very recently. I did a lot of mentoring myself, but nevertheless...

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

There is still far from gender equality in our field. As I am a bit older, I did not myself profit from systematic gender equality policies, although in my appointment as Professor of Modern History the fact that I was a woman played a positive role (but my appointment was compensated for almost immediately with the appointment of a male professor, so to speak, at the same chair, which made my position complicated).

For a better implementation of gender equality in science:

- Gender policies should be continuous and systematic, and supervised by a university-wide policy body.
- Gender policies should be about 'women in science' and 'gender in science'.

- Special programs for appointing women professors are the most helpful, but should be monitored.
- Appointed professors should always come from another university, or at least have worked elsewhere in the last 5 years
- The appointment committee should always have a 40% minimum of women members (student members not included).
- etc.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

As I have always been involved in gender studies and science and gender policies, I have always been active in women's networks. In particular I served in the EPWS founding Board of administration and was its first treasurer; now I am an EPWS individual supporting member.

If you could start again your life, would you choose again to be a scientist? What would you change?

I really don't know.



Procession at the occasion of Bosch' inaugural lecture and the opening of the Wiser Conference at Maastricht, October 4th, 2007 (Robertine Romeny)

Could you give a message to young European women scientists?

Do discuss with women's scientist peers the experiences that you have in your career. Ask questions about what surprises you or strikes you as questionable. Learn about the impact of gender on perceptions of women and men, their qualities and behaviors. Celebrate your successes, learn from your mistakes, try to keep your curiosity.

Interview published in November 2019

www.groningermuseum.nl/en/art/exhibitions/strijd-100-jaar-vrouwenkiesrecht

www.soomolearning.com/suffrage/ Bad Romance Women Suffrage

www.youtube.com/watch?v=35FwmIPE9tl : Rosalind Franklin vs. Watson & Crick – Science History Rap Battle

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Marija Brajdić Vuković

CROATIA



Sociology

Dr. Marija Brajdić Vuković is Senior Research Associate at the Institute for Social Research, Centre for Research in Social Inequalities and Sustainability / CRISIS, Zagreb, Croatia.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

During high school I had a literature teacher that was quite inspiring. It was the time of war in Croatia, but she was full of good un-hateful messages, has led us to (anti-war progressive) events with people from all around the world, we even travelled to other countries, met many interesting people. She strived to make us appreciate different people and cultures in times of vulnerability and hatred. When she left high school and teaching profession, she joined a feminist non-governmental organisation, and we kept in touch. Because of my experiences during that time, I thought that there is more to the researching of, and thinking about society than is usually seen and thought, and therefore I decided to study sociology. During my studies, I've learnt a lot about research methodology; I did my first independent research projects for the mentioned feminist NGO, related to the problems of women on the labour market and women and politics.

Later, when almost finishing my studies,

I worked on the documentary on the image of women in media, called 'distorted reflections', and had a chance to learn from the she-director how to ask various stakeholders relevant questions in the way to have them answered in much detail. It is through that experience and reading that I've become very eager to use qualitative methodology in research, and fell in love with it completely. After my studies, I thought there was no other profession that would do, than being a social scientist and research more, especially on the topics related to gender issues. My particular research field of study is science and technology studies, it suits me with its constructivist and interdisciplinary approaches to almost invisible and yet very much influential societal processes.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

During 2014-2015 I was a researcher in the project on academic profession development in the Croatian science system, managed by researchers from the University of Rijeka.

They put me in charge of something that turned out to be a complex qualitative study. What I've managed during this period was to teach my colleagues how to conduct such a study, how to analyse and interpret



At the Institute for Social Research Zagreb

results and how to write about a study. We had many long-hours meetings in person, and online, did a lot of collaborative coding and spent many hours in discussing results. Previously mainly quantitatively oriented, the whole team made a 'qualitative' turn in their methodological thinking and fell in love with the methodology. As a result of that we've published two books, and two doctoral students on the project decided to take qualitative methodology as the main approach in their dissertations. I feel quite inspired by that accomplishment.

Another thing is related to my students, I was previously employed as an assistant professor and taught various methodological courses

and Sociology of Science and Technology for 6 years at the University of Zagreb, at the department of Sociology. Inspired by the various subjects they researched throughout my mentoring, and generally by the activist nerve I was trying to evoke in them, my (female) students successfully organized the first March for Science and Zagreb two years in a row.

In which country/countries have you been doing research?

Mostly in Croatia, in various parts of the country. I also collaborate on at least two comparative international surveys, with teams from other countries.

What is your agenda for the coming months?

I've recently changed my affiliation from University of Zagreb to the Institute of Social Research, Centre for Research in Social Inequalities and Sustainability. In my research I have three parallel interests: one is related to the structural issues of academic systems and professions, the other to the research methodology applications and innovations, and the last one to the role of science and technology in the present and future social sustainability. My role in the centre will be to implement and work on the projects, mainly in the second and third topics. I will be developing two projects: one is related to the influence of technology uses on sustainable environmental values and behavior, and the other one to values (personal and societal ideologies) that are underpinning the development toward economic transition toward sustainability.

Did you meet any barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

Well, I have a specific experience because I have a child with special needs, which was born before I finished my PhD. When I was on my maternity leave and said that I would have to postpone my returning because my

child needs extra care, my supervisor from the project I worked on told me that she doesn't see how someone with such a child can be fit for a scientific profession, and said that I should probably quit. I don't think it would ever happen to a man. Of course, I stayed, finished my PhD and am having a nice career in science, mainly because

In Croatia there are no specific gender equality policies aiming at science, just the usual antidiscrimination act that has been prescribed through the Labour law. In my research I have often stumbled upon gender issues in science and higher education system. While researching careers of young scientists I have found out that women are



At the Institute for Social Research Zagreb

of familial support and support from my colleagues. I have benefited from a lot of different mentoring and peer mentoring relationships, from both men and women in my area of study. From my experience I would say that collaborations with different people can be a constant source of learning and support throughout career.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

less well mentored, have more problems during researching and writing for doctoral thesis, have higher teaching and administrative burden (workload). Policies aiming at gender equality should, in my opinion, be installed on institutional levels, and should tackle workload and promotion questions and, in the case of young researchers, questions of mentoring and support for doctoral research.

Did you experience networking between women scientists? Can you comment on your answer and explain why yes or not?

I did experience networking between women in my field of study, I do have a feeling that there is a lot of support and solidarity between women, in terms of both

inviting each other to projects, being familiar with the work of other women, recommending them often when appropriate. Among the younger generation of social scientists, I would say, there is this raised awareness of the need to support each other and, that way, to make things easier and better for women in profession.



At the Library of the Faculty of Humanities and Social Sciences, University of Zagreb

If you could start again your life, would you choose again to be a scientist? What would you change?

Actually I would choose the same profession, even the same field of study. I would maybe spend more time on mobility, and would like to work in a more interdisciplinary and international community of researchers.

Could you leave a message to young European women scientists?

In our research we have found out that women who have more diversified (strong relationships with colleagues from different institutions) career rewarding (supporting) networks have better professional outcomes. Mostly those networks are built by the effort of researchers themselves and through collaborations on different projects. It does seem that, nowadays, it is most important for women in science to have a network of supporting colleagues. That is the one thing that improves lives in science and that one can hopefully achieve individually.

Interview published in December 2019

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Yvonne Buckley

IRELAND



Zoology

Prof. Yvonne Buckley is Professor at Trinity College, Dublin, Ireland, at the Chair of Zoology and is Head of Discipline of Zoology in this institution.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

As a child I was always interested in animals and plants, I have a clear memory of collecting flies in a jar and my mum wanting to know what I wanted the flies for - I explained that I wanted to see how long they would live for. She did not approve and made me set them free, but I did get as many pets as I wanted so was surrounded by animals through my childhood. I recently did some work on the lifespans and life histories of hundreds of animal species so I finally managed to get somewhere with that question!

What do you work on? How important is your research topic for science development or society?

I am an ecologist, which means I work on where plants and animals live on the planet, why they live there and how they persist or go extinct. This work is important because we rely on nature to provide us with food, health and wellbeing, clean water and many other essential services. Without healthy, functional ecosystems we couldn't survive on this planet. We are currently seeing huge

changes in the diversity of life on the planet through human actions such as soil degradation, deforestation, poaching, over-fishing and pollution. Through overuse of the earth's resources we are undermining the sustainability of human life. The study of ecology is essential for finding solutions to the challenges that currently face humanity.

I work on finding sustainable nature-based solutions to global challenges through the understanding of fundamental ecological processes that determine where biodiversity occurs and how it is maintained. I am particularly interested in how we can maintain and enhance nature, in order to help us achieve reductions in greenhouse gas emissions and to help us reduce the impact of the climate change which is currently inevitable. Humans have never lived through such rapid and intense changes in earth systems and we need to ensure that our landscapes and seascapes will continue to provide us with life support systems through this uncertain future.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

I get the most satisfaction in my career from seeing the PhD students and post-docs that I mentor achieving things they hadn't thought possible before coming to my lab. I get joy from seeing their skills and problem-solving skills develop over the months and years that they work with me. This can be hard work (for all of us!) but seeing them change and improve the way they work and write is the best part of my job. One of my first PhD students was recently promoted to Full Professor and I got tremendous satisfaction knowing that our work together helped her to get to that position.

My greatest success as a teacher is managing to engage initially reluctant biology undergraduates with the essential quantitative skills they need to interpret the data on the natural world around them. As an ecologist I am used to dealing with complex and hyper-variable systems; without skills in statistics, computer coding and mathematics we would just be describing local patterns rather than being able to get to the processes and mechanisms that drive those patterns. Once students understand that quantitative skills and tools are needed to answer the interesting biological questions they want to ask, they readily pick up statistics and modelling.

In which country/countries have you been doing research?

I have published papers on plants or animals and ecosystems from my work in several countries including: Mexico, UK, Australia, New Zealand and Ireland. I currently work with databases that contain data from all over the world so I can now vicariously travel the planet through my data analysis: I coordinate a network of over 50 ecologists in 70 sites from 17 countries around the world that collect data on plant population dynamics and I'm immensely proud of the data that are being submitted from all my collaborators in these different sites. I'm lucky to get to work with international colleagues from so many different places.

What is your agenda for the coming months?

I have some really exciting papers to finish off on the shapes of European plant ranges



Yvonne Buckley collecting seeds of *Plantago lanceolata* in Ireland (photo Viv Buckley)

and how they vary in space, the effects of human land-use on plant occurrence and abundance, the effects of climate and environment on plant population persistence and how human action changes the genetic diversity of plant populations. I have a couple of PhD students due to finish their theses over the next 9 months and am looking forward to seeing them graduate. I manage the Zoology department at Trinity College Dublin and we have a big renovation project to provide new research facilities so I will be working with architects and engineers to ensure that this is progressed. I am planning some study leave that starts in June 2020 and I'm looking forward to writing up some of my research and starting up some new exciting projects. No two days are ever the same!

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

I am very aware that I have had a privileged route through academia, with access to the best universities in the world and the honour of working with brilliant male and female mentors and peers. Despite these advantages I always felt somewhat on the “outside”, which may be due to both my gender and my non-traditional background (I am from rural Ireland and went to university at Oxford and Imperial College Dublin). I remember reading about gender differences in grant success when I was finishing my undergraduate degree and found this very disheartening. I have experienced gender inequality in difficult meetings, interactions and experiences but have been lucky not to

equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

In my field of ecology there is gender equality at postgraduate and post-doc levels but I see early career female ecologists dropping out of the academic track after the post-doc phase. I see this in low ratios of women applying for Assistant Professor positions in my own unit as well as in other universities where I serve on appointment boards. Quite often there is a 60:40 or higher ratio of male to female applicants for even junior academic positions. This observation holds across Europe and Australia. This worries me as it shows that there is a “leaky pipeline” at work and we need to do more to ensure that



Yvonne Buckley in Burren, Ireland

have experienced any strong overt barriers. I definitely benefitted from kind and generous female mentors who have taken me under their wing, given me good advice and who, through their successes, have shown me what is possible.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender

good female post-docs get the resources and confidence they need to proceed through to academics positions.

Where I work now at Trinity College Dublin we have a really strong cohort of women who are at the most senior level of Professor (Chair), which is unusual in the field and across the university. I greatly appreciate this cohort effect and think that we can do a lot to ensure a supportive and facilitative

culture where we work.

I have benefitted in my career from generous maternity leave provisions in Australia where I received 6 months of fully paid leave for each of my two children as well as the ability to return to work part-time. I benefit from flexible working arrangements at my current position and also benefit from the normalization of caring responsibilities across all staff, male and female. It is not unusual for any member of staff to have to work from home or leave early to look after a family member needing care.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

I have always been very active in promoting networking opportunities between women scientists. As a PhD student at Imperial College London I set up a "Women's lunch" to enable women students, postdocs and staff to meet with visiting women seminar speakers. I try to ensure that I provide opportunities for women I work with to network with each other. These social networks are important for building trust and networks that enable us to help and support each other.

If you could start again your life, would you choose again to be a scientist? What would you change?

I would definitely choose to be a scientist and I don't think I would make any changes to my career path. I have been incredibly fortunate in that my choices and the serendipitous opportunities I have been lucky enough to get have worked out. Perhaps one piece of advice I would give my younger self is to stop and smell the roses a bit more. I was very driven as an early career researcher, probably related to an inferiority complex, now that I am in my ideal job I'd tell myself to take it a bit easier and have more fun! I'm a fundamentally optimistic and pragmatic person so I'm pretty sure that I'd be happy working in a range of different situations.

Could you give a message to young European women scientists?

There are so many ways that you can use science to contribute to a better world, that's what drives me. Science can be a collaborative and sociable endeavor that also enables you to work deeply on difficult problems with like-minded people. Science has enabled me to travel and see the world, meet amazing people and have experiences that most people don't get to experience. I love it!

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www.plantpopnet.com

www.tcd.ie/Zoology/research/groups/buckley/



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Irene Sciriha Aquilina

MALTA



Mathematics

Prof. Irene Sciriha Aquilina is Professor of Mathematics at the University of Malta and currently chair of this faculty's Research Ethics Committee.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I have always enjoyed discovering how concepts are connected and recognizing emerging patterns. I adopted this method in my studies, which I pursued with interest and curiosity for the unknown. As a result, my attitude to my interests became interdisciplinary. As a student, I used to love literary criticism. However the amazing deductive and predictive skills shown by the first scientists in the discovery of elements, crystals, subatomic particles, thermodynamics, electromagnetic waves, early generators of electricity and lever machines captured my imagination more. I chose to study science at a time when teachers of the subject were so scarce that I sat for certain O level exams through self-study.

From a very young age, as I leafed my limited family library, I realized that, to understand physical and chemical processes, versatility in mathematical skills was essential. To me mathematics was challenging and fun. Solving mathematical puzzles with my class mates was a passion that fulfilled my need for creativity and social interaction. My parents showed me they were proud of my interests. They invested in the Wonderland

of Knowledge encyclopaedia, received and paid for in monthly instalments. There I remember reading about the physicists Marie Curie and her husband and the mathematicians Ada Lovelace, Sofia Kovalevskaya and Emmy Noether. I suppose that it was my admiration for their achievements that inspired me to choose paths that were then not so conventional for women in Malta.

What do you work on? How important is your research topic for science development or society?

My research in mathematics is of the creative kind. It started with spectral graph theory which may be described as analytic geometry driven through abstract algebra and combinatorics. As I create new concepts and use them in an innovative way to discover new ideas or verify known results, I often feel like threading on very fragile ground and with trepidation I continuously search for some slight error that may cause all the theory based on my previous assertions to collapse like a house of cards. However, I persevere since the excitement and joy of creation experienced in the process is addictive. It was at a workshop held in Edinburgh in 2001 that a renowned theoretical chemist Patrick W. Fowler, since then elected FRS (Fellow of the Royal Society), invited me to join his team. He realized that my early

research work fitted his investigations at the time like a glove. My involvement with the University of Sheffield (UK) team, where Prof. Fowler leads his research group, enabled me to see the theories I have been creating clarify poorly understood physical occurrences in a fascinating way. Through my mathematics, we devised new models, prototypes and technologies. Together, we discovered underlying molecular structures in certain fullerenes and the electrical behavior of nano-molecules in circuits. Wires are connected to two atoms in a molecule across a small bias voltage. Carbon molecules were expected to be largely conductors because of their many delocalized electrons. It was surprising that the occurrence of omni-insulators was as likely as that of omni-conductors, where conduction or insulation, respectively, occurred for any pair of atom terminals. This proved to be convenient since connection of wires to a single atom is difficult. In nanotechnology, these molecules are being used in industry in the race to create increasingly smaller components. This is contributing to the exciting feeling that it will be possible to build any electronic device in little to no space.

Other areas where my original results were



applied were in computer science, social networks and statistical measures of central tendency. A remarkable side product is the new mathematics that the quest for the rationalizing of statistical, experimental

and simulated evidence generates. A great deal of my work was driven by the desire to express my results and that of others in a clear manner. As the mathematical language evolved, new problems emerged. Through my work, mathematics is feeding related sciences and in turn the latter are proving to be a fitting breeding ground for new mathematics.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

In my view, each of my original results contributes to a global success. I'll just mention one of the concepts that I created, one which I did not develop from the work of others. My underlying research topic is on the substructures that make a singular graph. A graph consists of vertices connected by edges. It is singular if its adjacency matrix is not invertible. This happens when one column of the matrix can be expressed as a sum of others. My major creation is the NUT graph, a singular graph with each column of the adjacency matrix being a combination of ALL the other columns. A larger construction packed with nut graphs is the NUCIFEROUS graph which was the subject of a flurry of computer searches by mathematicians, computer scientists and chemists. The nut graph turns out to represent extremal chemical, computer and social systems. It has natural connections with chemical theory in areas related to the electronic structure. And electron flow through molecules. As a teacher and supervisor, I challenge the students to go beyond the textbook. What gives me great satisfaction is the spark in the eyes of students as they understand a challenging notion.

A great satisfaction in my research on singular graphs was when in 2011, I found an expression for the eigenvalues of a vertex deleted subgraph that opened the door wide for research in diverse areas. It led to a novel proof of the famous Cauchy's interlacing theorem, it identified two extremal classes

of graphs (the uniform core graphs and the nuciferous graphs) and above all it inspired my chemist collaborators to search for basic theories on molecular conductivity.

In which country/countries have you been doing research?

Mostly in Malta. I have done joint research with researchers working at universities in England, Ireland and Scotland, France, America, Serbia and Croatia, Portugal, Brazil, Italy, Zahko in Kurdish Iraq and Israel.



Nov 2018: Irene Sciriha was elected to deliver the oration at the Jesuits' Church Valletta during the graduation of post graduate students (MSc and PhD)

What is your agenda for the coming months?

I have a plan to explore lacunae that surprisingly showed up in a recent study on networks that share the same number of walks along their edges. This promises to be of interest to programmers in designing web crawling search engines. Another idea I wish to explore is on a graph representation of machine learning. I am also writing a book with a previous PhD student of mine on an aspect of my research. I have recently been appointed on a committee to promote post graduate interdisciplinary connected fields of study at my university. I am also involved in reaching out at my university so as to attract women to mathematics and science. Within my faculty, I am the chair of the ethics committee that ensures that students and academics undergoing research abide

by Maltese and European law. I am also involved in voluntary work in my village. As you can see I shall keep myself quite busy.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

The challenges were significant. As an undergraduate, I was the only woman reading mathematics and physics. For many years I was the only woman academic in the faculty of science. The difficult challenge is to prove that a woman can achieve as much as any man. Legislation is gradually being enacted to annihilate the gap between the opportunities women and men have. However the stark reality is that society still expects women to take more responsibilities than men for the upkeep of their family. Statistics still show that the number of women in high positions remains stubbornly low.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

The situation is improving but at a very slow rate. Work as a campaigner is hard. Just as you think you have won, a change in personnel may take you back to a worse position than you had started with. We need to influence people in decision making. Unless laws are enacted and a budget is allocated to promote women excellence, it is all nice talk and no progress.

For over twenty five years I have been involved in national and international committees to promote women in STEM and now even in STEAM (science, technology, engineering, art and mathematics). As president/convenor of the European Women in Mathematics and Malta representative on the Helsinki group attached to the European Commission, I was instrumental for a number of measures to increase the chances for women to lead. For instance, calls for applications to fill vacancies even with the

European Commission used to stipulate that applicants had to be below 35 years of age. Through my insistence and that of others, who understood that this worked indirectly against women responsible for a young family, it was recognized that this was discriminatory and directives were issued to prohibit such practices.

Women work in a different way to men. They respond to a situation in ways specific to their way of thinking. This means that they do a task, traditionally done by men, in innovative ways. There are people, even nowadays, who assume that women can never rise to the occasion. People are more careful nowadays not to say this overtly. But we notice it is often implied. Lately I have been pleasantly surprised by comments said by men in authority acknowledging that the rule of men has led to a gloomy outlook on the global economic and environmental situation. Women need to be given a chance.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

As former president of European Women in Mathematics and representative for Malta on the Helsinki Group of the European Commission, I enjoyed networking with women scientists. At my university, as chair of the Gender Issues Committee, I mentored women scientists in my country to make progress in their career. I have even co-authored a number of original papers with women mathematicians.

If you could start again your life, would you choose again to be a scientist? What would you change?

I had decided that I wanted to do what I enjoy and I enjoyed challenges. I found my fulfilment in science and mathematics. So I would still choose to be a scientist. However, I would be bolder in taking certain decisions. Puritan constraints that used to be imposed on women by legislation and the norms of society are nowadays viewed with incredulity. I'm often surprised at myself that I used to tolerate certain attitudes towards women.

Could you give a message to young European women scientists?

If you see beauty in mathematics, science or technology, take up the challenge to overcome the initial hurdles. Ignore discriminatory legislation. That will change eventually. When the theories one invents fit to devise new technology, predict new behavior or develop virtual machines, one senses that one's contribution is worthwhile. It is said that every failure is a step to success. Scientific research is prone to be hard work interspersed with success. It is an exciting experience of joy in an ever changing occupation that never becomes routine work.

[Interview published in February 2020](#)

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Petra Rudolf

THE NETHERLANDS



Physics

Prof. Petra Rudolf is a Solid State physicist, Professor at the Zernike Institute for Advanced Materials, University of Groningen, The Netherlands. She is the current President of the European Physical Society, a long-standing EPWS Associate member.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I have always been interested in nature from when I was a little girl, recognizing plants or footprints of animals in the snow, observing black grouse in their courtship ritual or raising orphaned hedgehogs. I first realized that what you see in nature can be explained by models, when my 4th grade elementary school teacher made us look out of the window at the hills that characterize the Bavarian landscape and then showed us, with his arm representing a glacier in a box full of sand, how these hills had been formed.

In my perception, I took the decision to study physics when standing in front of the registration office of the University La Sapienza in Rome, but my high school classmates tell me that they knew I would become a physicist long before. In my second year of university I was fascinated by the PhD supervisor of my then boy-friend and I decided already at that time that I wanted to become a professor in condensed matter physics.

The choice for surface science came later when I was awarded a research fellowship to work at the TASC National lab in Trieste in 1987. My engagement for women in science was stimulated by Millie Dresselhaus, who always tried to meet up with young female physicists wherever she gave a talk.



Prof. Petra Rudolf at the Electron Energy Loss spectrometer, photo by Reyer Boxem

What do you work on? How important is your research topic for science development or society?

My research group pursues three lines, one on basic properties of thin films – there we are currently looking at the electronic properties of two-dimensional crystals and at materials, which might be suitable for neuromorphic computing; a second one on molecular motors and switches on surfaces, which is also purely curiosity driven; and a third one on layered materials. The latter is the most application-oriented line, for example we just published a paper about a pillared clay we made, which can eliminate herbicide residues from water.



Prof. Petra Rudolf at the Photoemission spectrometer, photo by Elmer Spaargaren, photographer of Groningen University

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

I do not see one particular discovery as the greatest success and my great moments of happiness are every time when, after sitting together with my students and/or collaborators and discussing new results, after a few

hours we finally understand what the data mean and at the same time we realise that we are the first people in the world, who have understood that particular property of a certain material. This is really a great sensation and worth all the frustrations you have to overcome when experiments don't work the way you thought, equipment breaks or your funding application does not get approved.

My greatest satisfaction comes from the careers of the students I have had the privilege to supervise in my group: seeing them now as dean in a South American University, professor in Spain, an inspiring high school teacher or leading an innovation department in a big company fills me with pride.

In which country/countries have you been doing research?

I started out in Italy, where I also did my physics studies; from there I went to AT&T Bell Labs, USA, where I was responsible not only for my own research but also took care of the users of Bell Labs' Dragon Beamline at the National Synchrotron Light Source at Brookhaven National Lab. I returned for a short period to Trieste, Italy, but the job market there was not very good at the time and no longer term employment was in sight. So I accepted an offer from the University of Namur in Belgium, where I worked for 10 years and where I also became the first female president of the Belgian Physical Society. 17 years ago I then moved to the Netherlands to take up my chair here at the University of Groningen. Funny enough, I have taught students about physics in 4 different languages, but never in my mother tongue.

What is your agenda for the coming months?

An important part of my time will go to research and to my seven PhD students, one postdoc and one master student. There, some highlights will be talking about our

results at conferences in Cuba, Australia and Argentina. I really like to give talks: seeing the smile appear on your audience's faces when they understand your story gives you a beautiful feeling.

Then there is the European Physical Society (EPS), where we are for example organizing the training of physicists all over Europe in



Prof. Petra Rudolf at the Electron Energy Loss spectrometer, photo by Reyer Boxem

how to speak with policy makers. We also promote career training for young physicists at all EPS-sponsored conferences. A highlight in the next months will be the celebration of 10 years of Young Minds, the project for BSc, MSc, PhD students and postdocs, who organize in sections all over Europe to learn about their professional possibilities as well as to do outreach, and enthuse children for physics. I shall also inaugurate new

EPS historic sites, namely places associated with an event, discovery, research or body of work that made important contributions to physics.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

Like probably all women of my generation, I have had to endure annoying situations, like a future employer asking me during negotiations of my salary why I insisted on a better pay when I obviously did not need it, given that I was married. Or being told that a male colleague was chosen for promotion despite having performed less well than I had, because he had just married and his wife was expecting a baby. I think these episodes are happening less nowadays, but now female scientists are told that they got certain a job or an invitation for a talk only because they are women. This is a way of implying that they did not deserve them and is therefore very offensive and certainly not true.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

In physics the number of female researchers varies among countries – in Italy where I studied, it is considered perfectly normal for a girl to do physics, while in Belgium and in the Netherlands girls are discouraged by their (mostly male) school teachers to undertake studies in the “hard” sciences.

I think the difference in Italy is linked to the large percentage of women who work, and those who love science often decide to go into teaching. Hence at high school there are many female science and math teachers

and no Italian girl will get the idea that these disciplines are mainly for boys. Instead in the Netherlands the large majority of science and math teachers are men. Moreover there is still the idea that it is bad for the children if their mother works full time; but on the other hand a study of promotions in the Dutch academic world showed that women who work part time are considered less ambitious and therefore less often chosen for a position or promoted.

Now all Dutch universities try to increase their percentages of female professors, even with very drastic measures: the TU Eindhoven opens all positions first only to women and only if after 6 months no suitable woman could be found, a man can be hired. My own

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

Of course there is networking among women scientists, like among our male colleagues and in mixed groups. I think an important aspect is to advise each other on professional decisions and give each other suggestions on how to deal with difficult situations, but we also propose each other for invited talks, make each other aware of career opportunities, nominate each other for prizes and distinctions and celebrate our successes. Talking only among women is sometimes very important because some situations are lived/experienced differently by men and women.



Andre Geim, Cristiane de Moraes Smith, Donna Strickland and Prof. Petra Rudolf after the Nobel dinner

university has started the Rosalind Franklin Fellowship program in 2002 within which, in seven different selection rounds, a total of 109 female tenure track assistant professors were hired on a career track, which foresees promotion to associate professor and full professor when satisfying certain criteria. In the Faculty of Science and Engineering, 35 Rosalind Franklin Fellows were hired, which importantly contributed to the fact that we have gone from 3 professors in 2002 (4%) to 21 in 2019 (19%).

If you could start again your life, would you choose again to be a scientist? What would you change?

Yes, I would do it again and I would not change a thing. However, I would have preferred if somewhere in my schooling and upbringing I had been better prepared to deal with the envy of colleagues. I always thought that if I don't take anything away from anyone, people would only appreciate what I do and I really did not put envy into the equation.

Could you give a message to young European women scientists?

My first message is "Choose your partner well" – a successful career is something that is difficult to do all on your own; a good partner who supports you and whom you support is very important to be able to cope with the inevitable difficult moments in professional and private life that you will encounter.

Secondly: "If you have chosen a partner who does the same thing as you do, diversify as soon as possible" – more than half of German women physicists are married to a physicist,

while only 9% of the men are in the same situation. If both partners do the same thing this limits enormously where you can apply for jobs. If both have academic careers, they will have to move to places where there is more than one university because hardly any university can afford two chairs in the same domain. Life is much easier if you have a partner who has a profession that can be done in many countries and that is different from yours – I chose to share my life with an artist, a painter.

Interview published in March 2020

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university of
 groningen

faculty of science
 and engineering

zernike institute for
 advanced materials

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Costanza Bonadonna

SWITZERLAND



Earth Science

Prof. Costanza Bonadonna is a Full Professor with the Department of Earth Sciences of the University of Geneva, Switzerland, vice-dean of the Faculty of Science and the Head of the Program for the Assessment and Management of Geological and Climate-Related Risk

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I have always been fascinated by nature since I was a little kid! One of my favourite games with my friends at elementary school was to play natural park rangers saving forests and animals from human attacks and poachers! In fact, I realised early on that there was something wrong with the way we live on our planet. Growing up, I decided to go into science with the idea to explore new ways of relating with nature. Being born and raised in Italy, I was also exposed to the importance of better managing our territory to face various natural risks, namely earthquakes, floods, landslides and volcanic eruptions.

In particular, I was always fascinated by the dynamic interplay between our communities and the raw expression of nature through volcanic eruptions that includes negative impacts (e.g. death and disruption) as well as beneficial aspects (e.g. fertilisation of soils and tourism). In this context, I realised the importance to develop strategies for a sustainable development of our planet where people and nature can coexist and support each other. On one hand, it is important

that our communities are better prepared to face natural hazards, but on the other hand we also need to establish brand new plans of actions to inhabit our planet that minimize our destructive impact on the ecosystem. These holistic strategies can only be based on a solid multi-disciplinary scientific approach.

My first role model that inspired me through life was my mother who taught me not to give up, even when faced with difficulties, resorting on a great inner strength, passion and enthusiasm. In addition, my father, also a geology professor, inspired me to pursue my studies as a way to gain freedom from conventional thinking and create my own personal outlook on life. My male primary school teacher also had an important role in supporting me to be myself and follow my aspirations regardless of societal expectations (such as playing football in a male dominated sport at that time in Italy!). However, the first input and inspiration to be involved in the science of risk reduction was provided by Prof. Franco Barberi who came to my high school in Pisa (Italy) describing the successful effort in mitigating the impact of lava flows associated with the eruptions of Mount Etna volcano in Italy. I also had the opportunity to attend his classes at the University of Pisa during pursuit of my

bachelor's degree. The University of Pisa was an excellent environment for exploring various aspects of physical volcanology and volcanic risk. There, thanks also to family support, I was inspired to study abroad to learn different languages and different cultures.

volcanic processes is, in fact, key to develop effective strategies of risk reduction. Part of my mission as a scientist is also to transfer key scientific knowledge to stakeholders involved in risk and crisis management in order to optimize risk reduction



CERG field trip to Vulcano (Italy) – Teaching on top of La Fossa volcano (May 2015)

What do you work on? How important is your research topic for science development or society?

I am a researcher in physical volcanology and professor of Geological Risks in the Department of Earth Sciences at the University of Geneva. My responsibilities include research and teaching (at Bachelor and Master levels), the supervision of doctoral students and postdoctoral researchers as well as the development, writing and coordination of international research projects. I am also the director of CERG-C program (Specialization certificate in the assessment and management of geological and climate-related risks; www.unige.ch/sciences/terre/CERG-C/) and vice-dean of the Faculty of Science of the University of Geneva.

The main objective of my research is the characterization and description of volcanic phenomena based on the integration of field, experimental and numerical approaches. A multi-disciplinary understanding of

strategies and contribute to the resilience of communities and a more sustainable development of our planet. In particular, I devoted most of my research to the modeling of particle dispersal and sedimentation from volcanic plumes and clouds, to the exploration of new methodologies for characterizing volcanic ash deposits and eruptive source parameters and to the development of probabilistic analysis for hazard and risk assessment. As an example, I contributed to the development of new strategies to mitigate the volcanic threat in the field of civil aviation following the 2010 eruption of Eyjafjallajökull volcano (Iceland) (www.unige.ch/hazards/international-conferences/workshop2) and to gain a better understanding of the widespread, long-lasting and impactful volcanic hazard associated with the remobilisation of volcanic ash by wind especially emphasized by recent eruptions (www.unige.ch/hazards/international-conferences/ash-remobilisation-2019).

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

The part that I like the most about my work, and that I also consider my greatest success, is the group I built at the University of Geneva, the research we carry out together, the interaction with my post-graduate students and postdocs and the collaboration with my colleagues on topics that have important implications for society, such as geological risk. This includes also the capacity building that we are promoting with the CERG-C program which allows me to work directly with scientists and risk reduction practitioners from all over the world and the outreach activities we carry out with children in various contexts and countries.



Field trip to Askja volcano, Iceland (August 2017) to study the pyroclastic deposits of the 1875 eruption

Being an academic mentor provides many opportunities of great personal satisfaction. Every time one of my students successfully defends her/his PhD/Master and/or acquires more self-confidence to go and be what she/he wants to be in life is a great personal satisfaction; every time one of the CERG-C participants obtains her/his certificate, grows as a scientist or practitioner and contributes to increasing the resilience of the community.... is a great personal satisfaction.

In which country/countries have you been doing research?

I obtained my bachelor's degree in Italy and completed my master and PhD projects in UK. Then, I moved to Hawaii for my post-doctoral research as a SOEST Young-Investigator, to Florida for a position of Assistant Professor and to Geneva, Switzerland, where I am now Full Professor. My research was first based in the Caribbean on Montserrat and in New Zealand during my PhD, and Hawaii and Central America during my post-doctoral research. My active projects are currently mostly in South America, Iceland and Italy. All these projects gave me the opportunity to work with scientists and stakeholders from international to local level. On several occasions, I worked with communities exposed to risk, gaining useful insights not only into volcanic phenomena but also into how people live with risk.

What is your agenda for the coming months?

Unfortunately, my research agenda, as is the agenda of most academics these days, has been seriously affected by the outbreak of the COVID-19 virus. University buildings and labs are now closed, and international travels are banned, so it is currently very uncertain. All field trips, trainings and international conferences that were on my agenda of the next few months have been cancelled. Everything is working through Zoom and Skype. On the bright side, I have an opportunity to spend extra time supporting the Master students, PhD students and postdoctoral researchers in my group during these challenging times as well as brainstorm new effective educational and research strategies in this rapidly changing world.

Did you meet any barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

I did not meet many barriers during my path as a scientific researcher as I was open to travel to different countries and continents and to invent and reinvent my life every time. Even though I had a few disillusion in my early career due to inappropriate behaviour of some senior male scientists, I was also

fortunate to have a very supportive family and group of close friends, colleagues and mentors that helped along the way. In particular, I was largely inspired by my Master and PhD supervisor at the University of Bristol (UK), Professor Steve Sparks, an amazing person and an exceptional scientist who brought quantitative ways of thinking from

director of the CERG-C program, I quickly developed my interests in natural disasters by passing from the evaluation of volcanic hazards to other important aspects for the evaluation of natural risks, such as economic, social, physical and systemic vulnerability. Integrating all these aspects of risk assessment and management has been a real



Working with a radar doppler during the 2010 eruption of Eyjafjallajökull volcano (Iceland)

physics to the field of volcanology. With him I learned to conduct science applied to societal aspects, namely volcanic risks.

I also had the chance to do part of my PhD on the small island of Montserrat in the Caribbean during the eruption of Soufrière Hills volcano in the late 1990s. It was there that I acquired my first real disaster experience as a professional and I observed that volcanic disasters depend as much on social, cultural and political factors of the population as on the physical and chemical characteristics of the eruption. I then broadened my perspective on numerical modelling, physical volcanology and volcanic risk through the interaction with other key mentors during my early-career years, such as Prof. Gianni Macedonio and Prof. Mauro Rosi (University of Pisa, Italy), Prof. Bruce Houghton (University of Hawaii, USA) and Prof. Chuck Connor (University of South Florida, USA).

Since I arrived in Geneva to become the

challenge! However, it allowed me to develop solid and enriching multidisciplinary collaborations with operational agencies, such as civil protection agencies, international organizations, and local institutions dealing with risk reduction that inspired me and motivated me to go deeper in this path.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

There are several female volcanologists at the doctoral and postdoctoral level. However, with some variations depending on countries and cultures (Switzerland and Italy certainly being the case), it is more difficult for women to become a professor in the

geosciences due to a combination of factors. First, social conditioning and stereotypes often make women disbelieve in themselves and not to take positions of responsibility outside the household. In addition, gender stereotypes cause female students to be seen as less talented than male students in most scientific disciplines, and, in the context of geosciences, less fitted for physical work and long field campaigns. These implicit stereotypical beliefs clearly impact job and career opportunity both for men and women as well as their motivation and ambition to cover a counter-stereotypical domain (e.g. field geologist and/or professorship for a woman).

Second, the competitive university environment is typically more fitting for male scientists and success is measured in terms of everything that men do. Women are, therefore, invited to follow the image of stereotypical successful men instead of exploring and embracing alternative approaches and modalities. I believe that, in order to start a real work of integration, society needs to appreciate the intrinsic differences between men and women, even though these differences should not be magnified by gender stereotypes that are often used to justify social inequality.

Third, the most critical and delicate phase of the scientific career is just after completing the doctorate degree, and during the post-doc and tenure-track positions in the university. It is at this time when junior scientists are looking for permanent employment. Unfortunately, this phase involves a great need to publish, write research project grant proposals, and engage 100% in work to fast track the career, which normally coincides with the time when also women would like to build a family. In addition, an academic career normally requires many job and country changes, which also does not lend itself to building a traditional family. Society has unrealistic and sometimes unhealthy expectations regarding gender, and women often find themselves in a precarious situation. According to the consensus of society, women must “do everything”, which means “work-life balance” and the ability to multitask on many activities. This does not mean

that it is impossible for women to build a family and pursue an academic career, but it is certainly very demanding and requires a combination of attention to many aspects of detail, including thoughtful planning and building a supportive environment of friends and colleagues especially when far from the original family.



Field work at Sakurajima volcano with a high-speed camera to picture ash sedimentation, Japan (August 2013)

A better implementation of gender equality in science would, therefore, require a variety of radical shifts in the societal paradigm. With small differences, this is true in all countries where I have lived and worked (Italy, UK, USA and Switzerland).

First, we need to become aware of our unconscious bias and acknowledge the existence of gender stereotypes in the workplace that limit job opportunities, choices and ambitions for both men and women.

Second, we need a shift in mentality since early age of education to push both young men and women to think outside the box to be what they ultimately want to be, regardless of social and stereotypical expectations. Third, we should broaden the skill set required in stereotypical tasks of academic jobs to make them more attractive to both men and women.

Finally, more structured social support is needed to facilitate young scientists trying to build their career while also developing and raising a family (e.g. double parental leave is needed, as is access to state-funded nursery schools). Once more women will

occupy positions of both scientific and administrative responsibility in academia and will go beyond stereotypical expectations, the general work environment will naturally become more balanced and more inclusive. A successful, enriching and healthy work environment, in fact, can only be an inclusive environment where all differences (e.g. gender, cultural, religious) are embraced and integrated.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

Women networking is natural inside and outside the workplace. In a healthy environment, women naturally come together to support each other and grow together. I had the opportunity to support and be supported by many women friends and colleagues and I cannot imagine living my life without women networking and sharing. Nonetheless, my ideal work environment includes both men and women. In fact, I like to build and work within multi-gender and multi-cultural teams. I find it a lot more enriching, stimulating and inspiring.

If you could start again your life, would you choose again to be a scientist? What would you change?

I would certainly choose to be a scientist again because science allowed me to broaden my horizons, embrace different cultures and live and work in strong connection with nature. I would, however, strive to have a better balance between work and personal life. While this is often difficult to obtain in academia, young men and women scientists need to recognize the value for everyone in finding this balance.

Could you leave a message to young European women scientists?

Be the master of your own life! Enjoy being a woman, reach out to other women, never be afraid of being yourself (and therefore unique!), follow your intuitions and live your life with enthusiasm and passion beyond societal stereotypes!

Interview published in April 2020 and updated in September 2020

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volcanoes.usgs.gov/vhp/hazards.html
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Katja Matthes

GERMANY



Climate

Prof. Dr. Katja Matthes, GEOMAR Helmholtz Center for Ocean Research in Kiel and Christian-Albrechts-Universität zu Kiel, Germany, is coordinator of the Baltic Gender project.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I loved Mathematics, Physics and Geography in school and was always curious about Nature and how things work. During my last high school years, I once visited the Meteorological Institute of the Free University in Berlin and discovered my passion for meteorology. I knew from the beginning on that I wanted to work in research to understand the ongoing global warming and how the climate system works. This wish was further strengthened during my first study semesters. I was very much inspired by Karin Labitzke, a female professor at the institute, who became my PhD advisor. She was at that time the first and only female physics professor in Germany and had an internationally renowned working group that attracted a number of very successful female scientists. She supported my participation at international conferences early on (I attended my first EGU - European Geosciences Union- meeting with the results of my diploma thesis) and was always there to provide career guidance.

What do you work on? How important is your research topic for science development or society?

I work on understanding and quantifying natural climate variability and in particular the role of the Sun as one of the most important natural climate forcing agents beside volcanoes. Understanding natural climate variability is important to improve climate change predictions. Due to the periodicity of solar variability, in particular on a decadal scale,



09/2014: Opening a networking evening event of an ESWN (Earth Science Women's Network) workshop to support career chances of women. Photo: Tebke Bösch, University of Kiel

the Sun has the potential to improve decadal climate predictions. In times of global change and rapid changes to our environment, people are in particular interested in improved forecasts for the upcoming years on a regional scale. Therefore, my work on improving decadal climate predictions directly benefits society, which always has been and still is a big motivation for me.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

I was really proud to be asked to contribute to the upcoming 6th IPCC (Intergovernmental Panel on Climate Change) assessment report in two ways. I was responsible for

time and in which I involve the students actively, got the best grade in the German system (1.0) from the students afterwards. Again, it is personally very satisfactory that efforts and passion are recognized.

In which country/countries have you been doing research?

I have mostly worked in Germany. For my postdoc phase, I spent three years in the US, but I also spent some shorter time periods for research in Japan, France and the UK. I really enjoyed the intercultural exchange with colleagues in and from other countries and the work experience in other research systems. Something that we all miss during the current corona crisis! We try to overcome this with videoconference meetings, which works well for a while, but meeting in person at some point is also necessary.



Kiel Lighthouse for checking meteorological instruments, 08/2019 Photo: private

providing the solar forcing dataset for all the climate model simulations that have been conducted for the IPCC report and I am a contributing author to the chapter on natural forcings. It is personally very satisfactory if your own research is recognized in this way and you have the feeling that it is truly important for society.

As a teacher, I was very proud when my preferred course about Stratospheric Physics and Dynamics, that I do change and adapt with lots of efforts and motivation every

What is your agenda for the coming months?

I will prepare myself for the next step in my career and position myself for this new challenge: (see at the interview end).

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

After my PhD in a friendly and gender-balanced research group, I became aware of the gender-issue and unconscious bias at

several points during my career. I always had the impression that I needed to work more and harder than my male colleagues in order to be recognized. And I do think that women have to struggle more with combining work with a family, as they are the ones that give birth.

I remember that I kept my first pregnancy secret until very late (I was almost 8 months pregnant and it was getting difficult to hide) because I was afraid that my new Postdoc working contract could fail. It was unfortunate but I still believe that this was the right decision at the time since my German host was very critical about it. This was in contrast to my US host who warmly welcomed and supported me. I was further inspired during my time in the US by women working in science and being able to combine work and family. I attended a couple of networking events of the Earth's Science Women's Network (ESWN) in Boulder/Colorado – and

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equality policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

There is still a lack of women in leadership positions in marine science and this is only changing slowly, although there are enough female early career scientists in the field. Even though there are gender equality plans and gender measures in Germany and many European countries, the key to reach gender-equality are structural changes in the institutions. This will lead to an increase in women's participation in decision making and hence promote gender equality careers and finally also stimulate excellence in science and technology by integrating the gen-



K. Matthes with her working group 2015 on top of the GEOMAR roof Photo: Stefan Kolbe

it was completely normal to attend with a little baby (our second child that was shortly born after our first one in the US). The Postdoc time in the US was very inspiring scientifically and personally. After I returned to Germany, I participated in two mentoring programs for women, which were key to my career. Without attending those programs and having two very supportive (male) mentors as well as a very supportive husband, I would not be there where I am now.

der dimension in research.

Working in the US as a young postdoc was inspiring because I got to know the "stop-the-clock" concept for female early career scientists on a career ladder track. For the time women scientists were having and raising little kids, the counting of scientific achievements was stopped – this is something that is also slowly recognized in Germany and Europe and I really try to push this in tenure committees, etc. Funding agencies

in Germany and Europe are for example giving a 1.5 to 2-year bonus per child when calculating publication indices.

To overcome the unconscious bias and really work on gender balance and structural changes in marine sciences, I founded first a grass-root network at GEOMAR, the Women's Executive Board (WEB), in 2013 and then led in the past four years the EU project Baltic Gender.

I think we know the gender equality problem very well by now, it is time for implementation of what we have learned. It needs people that are ready to actively change the structures in the academic field as well as in the society!

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

Yes, I experienced this not only in the mentoring programs for women that I attended but also in the grass-root networks (ESWN, WEB, etc.). I think networking between women scientists is a real key if you want to stay in science, as it helps a lot to realize that there are other women with exactly the same challenges and feelings.

If you could start again your life, would you choose again to be a scientist? What would you change?

Yes, I would definitely choose to be a scientist again and wouldn't change anything!

Could you give a message to young European women scientists?

If you really love the science you are doing, keep on going, it's worth it. We need more women scientists in leadership positions in Europe! You need a long breath, a supportive partner and family, a good network and a mentor!

Recent information about Katja Matthes' prestigious new position:

From October 1st 2020, Prof. Dr. Katja Matthes became the first female Scientific Director of GEOMAR: the Board of Trustees of GEOMAR Helmholtz Centre for Ocean Research Kiel unanimously appointed her. For the first time, a female scientist will be taking over the scientific leadership of the Centre!

"I look forward to the challenge of continuing to assure a top international research environment at GEOMAR so that our ocean science can contribute to the development of sustainable solutions for the pressing issues of the future", says Professor Matthes.

Interview published in May 2020 and updated in September 2020

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Ioanna Tzoulaki

GREECE



Epidemiology

Dr. Ioanna Tzoulaki is a Population Health scientist with extensive expertise in Molecular Epidemiology and track record on precision medicine and prediction models. Assistant Professor in Epidemiology at the University of Ioannina (Greece), she was laureate of the Greek L'Oréal-UNESCO Award for Women in Science in 2019.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I was always excited by science, especially biology and physics and that was particularly stimulated by my high school teachers who taught these subjects in an engaging and attractive manner. My father is a mathematician and this has always been an additional stimulus to science for me. I have initially decided to pursue medicine, as a studious pupil I was strongly advised by my teachers to follow this path. However, I failed the exams to enter the medical school and rather studied biomedical sciences. It was an exciting discipline for me, the breadth of subjects covered was particularly attractive. Due to my inherent attraction to mathematics, once I graduated, I decided to pursue postgraduate studies on quantitative genetics and subsequently epidemiology.

What do you work on? How important is your research topic for science development or society?

I am currently working on molecular epidemiology methodologies for chronic diseases. I am investigating how biomarkers and several small molecules and genetic polymorphisms are related to complex diseases, such as cardiovascular diseases, in order to better understand the mechanisms of disease. I am interested in looking deep into the molecular pathways that link genotypes to phenotypes using complex and high-resolution data from population studies across the globe.



L'Oréal-UNESCO Award Ceremony 2019

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

It is difficult to isolate one achievement. Our recent publications on genetic risk score and genetic prediction for coronary heart disease published in JAMA (Journal of the American Medical Association) have been very rewarding. At the same time, the L'Oréal-UNESCO award for Women in Science in 2019 was a great achievement which I could share with my friends and family.

In which country/countries have you been doing research?

I have studied in Athens (Greece) and Edinburgh (Scotland) and then have worked in London (UK, Imperial College London) and in Greece (Ioannina, University of Ioannina).

What is your agenda for the coming months?

We have now launched new research projects on Covid-19 and understanding the links between cardiovascular disease and Covid-19 severity. We will employ the molecular epidemiology approaches to study the causal pathways that may link these two phenotypes.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

Academia is a challenging environment particularly for females and those with caring responsibilities. I had found it hard at times to keep work and life balance and to progress my career in an academic environment full of male-dominated networks. Mentoring has helped substantially as I realised that other colleagues have been facing similar difficulties. At the same time, professional development courses targeted at

female academics have helped me to boost confidence and learn to deal with particular behaviours.



What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

There are many female scientists working in my field but there are few that have leadership positions especially as you look into more prominent roles. The recent Covid-19 epidemic is a good example which shows that, despite the high number of excellent world-leading female epidemiologists, there are very few female voices in the media and very few female scientists promoted

as public communicators from different governments. In the UK, the ATHENA SWAN initiative for the advancement of women in science has been instrumental in raising awareness of gender inequalities in universities and in motivating them to implement action plans to tackle such inequalities

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

I often find it hard to take advantage of networking opportunities as I try not to travel for conferences and meetings where often these opportunities arise. Indeed, some senior women offer opportunities to more junior researchers.

If you could start again your life, would you choose again to be a scientist? What would you change?

Yes, I am still fascinated by my job and would again pursue a scientific career! You can never be bored being a scientist.

Could you give a message to young European women scientists?

You can do whatever you want, there are no stereotypes!

[Interview published in July 2020](#)

www.ecu.ac.uk/equality-charters/athena-swan



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Gabriele Abels

GERMANY



Political Science

Professor Gabriele Abels is professor for Comparative Politics and European Integration at the Institute of Political Science of the Eberhard Karls University, Tübingen, Germany. She holds a Jean Monnet Chair since 2011. She was president of the German Political Science Association DVPW from 2012-2015 and Director of the Jean Monnet Centre of Excellence PRRIDE from 2015-2018.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I have humble origins. Going to university and entering academia was therefore anything but a natural option for a girl like me. I got interested in politics in school and had friends who were passionate about politics. I then decided that I wanted to find out more about how politics really works and opted for studying political science. Without the German student loan system (BaFöG) I could never have done it. At university I was very involved in feminist politics, thus I got interested in gender studies and started to apply it to the EU. A friend of mine became my role model, when she opted for doing a doctoral thesis and after that was right on track for a professorship.

What do you work on? How important is your research topic for science development or society?

During my career I have worked on a number of topics. I am very much interested in European integration and democratization of the EU system. This includes a gender perspective, because any full-blown democracy

needs equal participation for both women and men. I am currently very interested in studying the new EU Commission under its first female president Ursula van der Leyen. Does that make a difference? Yes, it does. She has declared a "Union of Equality" as one of her key policy goals and published a Gender Equality Strategy 2020-2025 last March. Fighting violence against women – in fact, the most wide-spread human rights violation in the world and in the EU – is one of the top priorities. This is a most important but also very ambitious agenda. I am studying opportunities for achieving this goal – and the tremendous barriers of various kinds which are still existing. The societal implications of my research are obviously very important.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

Being awarded a Jean Monnet chair *ad personam* was certainly a very big success. It is a privilege to belong to the global community of Jean Monnet Chairs. I am also very proud of some of my book publications

which have made an impact on the field of EU gender studies and moved them forward. It gives me great satisfaction that I am still good friends with my co-editors, because co-editing and working on a major book project for two, three years can be a very difficult experience. Research is a collective endeavor and it is more fun and more productive to do it with people you hold in high esteem - as a co-worker and as a person.

What makes me proud as a teacher is if you see that you can inspire students and you see the igniting spark for academic work. For example, in 2018 I taught a course on the centennial of women's suffrage in Germany and we organized films, an exhibition, talks in addition to the "normal" seminar. That was a lot of fun and students loved it.

In which country/countries have you been doing research?

I have spent most of my academic career at different research institutions and universities in Germany. But I have also done teaching and research in the US, UK and in Russia.

What is your agenda for the coming months?

I am about to finalize the work on a major handbook on gender and EU politics. Together with my co-editors we want to celebrate this milestone - and advertise the book, present it at conferences, etc. We want to have it discussed also in mainstream academic journals in the field of EU studies. It is still hard work to get gender work recognized. Other than that I am happy to be on sabbatical in the winter and to work on my project on gender equality in the EU.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

A number of barriers - as a working class girl and as a woman. Besides money, the hardest part is to have trust in yourself that you can do it. Role models were certainly important throughout my career: people who were one or two steps ahead of me and who believed in me and supported my career.

I had fantastic colleagues and academic mentors when I was working at different institutions. I got a lot of support from previous superiors, professors I worked with.



Votes for women film series, 2019

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

In Germany in general and in political science in particular women scientists are still underrepresented. The higher the rank, the lower the share of women. The usual picture. I have served in various positions in the German political science association (also as its president from 2012-2015) and I have been involved in activities to promote women in the field via a range of instruments. I have also served as equal opportunity officer at various universities and I have acted as member on many search committees: I have seen a lot of sex discrimination. But I have also experienced that equality provisions (such as codes, legal rules, etc.) have an impact and make it more difficult to discriminate against women. Success is still slow, but during my career in the last three decades the number of female students, doctoral

students and professors (today about 25%) in political science is rising. Strict rules and their monitoring are important. And it still requires dedicated feminists – female and male.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

Networking is key. I have a strong network via the journal *Femina Politica* (a feminist political science one in German language) which I have established together with a group of colleagues in the mid-1990s. In those days all of us were still doctoral students, some were post-docs. Today, many of us are professors. There are also women and gender networks in the academic associations I am involved in. And I have expanded my network over the years to include European and international colleagues. We meet biannually at international conferences. They are very important for exchange of ideas, setting up projects and publications, and for having fun with colleagues who sometimes become friends as time goes by.

Previously I have also worked on gender and science and research policy in the EU.

Women scientist are still discriminated again in manifold, often subtle ways. It is important to lobby for their interests and to support them. Therefore, I joined the EPWS several years ago.

If you could start again your life, would you choose again to be a scientist? What would you change?

Absolutely. I love being a researcher and a teacher. It gives me a lot of satisfaction. The degree of self-determination in terms of issues you want to engage with is fabulous. Every day you learn new things.

Could you give a message to young European women scientists?

Choose a topic you are passionate about, build up a network by going to conferences, and co-author with more experienced colleagues. Develop ideas for projects. Don't be humble, it doesn't get you anywhere. But be a good colleague; find your role-model – and try to be one yourself for the next generation.

Interview published in August 2020



Cornelia Braicu

ROMANIA



Biology cancer

Associate Research Professor Cornelia Braicu is a distinguished researcher at the Research Center for Functional Genomics, Biomedicine and Translational Medicine, Iuliu Hatieganu University of Medicine and Pharmacy, 23 Marinescu Street, 400337 Cluj-Napoca, Romania. She was a L'Oréal-UNESCO laureate in 2012-2013 and from 2018 has been a Member of the Jury of L'Oréal-UNESCO Romania.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I strongly believe that my decision to go to science came almost purely through my learning and experiences during the PhD programme, when I found myself to be most interested in the field of cancer research. I met Prof. Dr. Ioana Berindan-Neagoe from Research Center for Functional Genomics, Biomedicine and Translational Medicine, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, and she became an inspiring model, and therefore I looked forward to attending all her workshops and seminars related to the functional genomics field. And in this way the amazing Prof. Dr. Ioana Neagoe-Berindan persuaded me to travel down the cancer scientific path as post-doctoral fellow and then as researcher.

What do you work on? How important is your research topic for science development or society?

Currently I am an Associate Research Professor at the Research Center for Functional

Genomics, Biomedicine and Translational Medicine, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, and have a PhD in Biotechnology (under the supervision of Prof. Carmen Socaciu, USAMV Cluj-Napoca). During the last years, I gained experience in cellular toxicology, transcriptomics, and also translational research, through activities carried out in the Laboratory of Pharmacology-Toxicology, INRA UR66, Toulouse, France, and at the Oncology Institute "Prof. Dr. I. Chiricuta" Cluj-Napoca, Department of Functional Genomics, Proteomics and Experimental Pathology. An important role in my carrier path was played by Dr. Isabelle Ostwald, head of the INRA Research Center in Food Toxicology, Toxalim in Toulouse, France, who offered me a fellowship (financed by EGIDE- "Réseau Formation Recherche") during my PhD program that completely changed my vision on research.

My background lies in biotechnology, the major field of interest remaining functional genomics. In the last years, I have been actively involved in the development of novel therapeutics strategies for cancer using natural phytochemicals as well as

small molecules, RNA interference or miRNA mimics/mimetics in different combinations, opening new horizons for personalized medicine. Many of these are the consequence of the profiling of coding and non-coding genes of solid tumors done on our patients, looking to the best options for their treatment and quality of life. Among these a major interest in my research focuses on the understanding and reversion of resistance to therapy. You may ask why this specific topic? Because for women breast cancer still represents a major threat. Even more some subtypes, like triple negative breast cancer, have no curable therapeutic options mainly due to therapy resistance.

The breast cancer incidence unfortunately continues to grow, despite the fact that great progress has been made, and a woman chance of getting breast cancer is 1 in 8. Therefore, open questions remain: how and why does it progress, and how can it ultimately be stopped?

The translational research - focusing on the connection between basic and clinical research - on breast cancer conducted worldwide is of high importance for better understanding of this complex disease, and research results are very useful for both patients and medical society and cannot be limited to an institution or a country. The development of translational concept will give us the possibility to dissect the complexity of tumor cell biology and to advance new personalized treatment strategies that will permit to increase the life expectation along with a better life quality.

The most important studies carried in the last years were related to translational science. Furthermore, all the efforts were focused on demand for a more effective translation of basic science discoveries into new clinical applications. In order to understand the full spectrum of pre-clinical research, including target identification and validation, compounds screening, in vitro and in vivo models of disease, leading to molecule

identification and optimization, performing the studies is required prior to initial clinical testing. This will allow to accelerate the comprehension of the multiple facets of the disease, considering that research is a never ending marathon.



Cornelia Braicu at the L'Oréal Award ceremony

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

Being awarded as L'Oréal-UNESCO laureate in 2012-2013 has been one of the greatest success for me as a woman scientist, and I am so proud of it! Also from 2018, I have been a jury member for this competition.

I perfectly identify myself within the motto: "The World needs Science, and Science needs Women", it represents the life motto for myself and I think that it should be the motto of every woman scientist I know: despite the fact that unfortunately our work rarely gains the recognition it deserves, we have to show the world that we are actively and equally involved in solving the great challenges.

In which country/countries have you been doing research?

Currently I am doing my research in one of the top research centers in Romania. But due to the present situation, we are facing recurrent problems in performing our research, related of the lack of money for reagents and consumable, in spite of the fact that we have a state of the art infrastucture. I also worked in France, as stated previously, for my PhD.



What is your agenda for the coming months?

My agenda for the coming months includes learning more about EU funding opportunities for my research area, and how to get funded through a European innovation project. I am still seeking to better understand the obstacles that keep potential grant applicants from Romania in winning applications, and what are the barriers in seeking external research funding, national ones as well. It is becoming more and more difficult to find partners to apply for EU funding opportunities, to be accepted as a consortium member being from Romania. We need to develop international collaborations, to perform excellent original studies, and publish in top journals. In life sciences Romania is still at the end of Europe, attracting very little money for research, and at national level there are very few competitions.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

When I met Prof. Dr. Ioana Neagoe-Berindan I knew that my future would relate to cancer field; I benefited from her mentoring and decided to further investigate and accumulate knowledge in oncology.

Of course, you always meet barriers during your career especially as a woman, but you need to have a true interest and passion for what you are doing: this is a good reason to go forward, making discoveries and creating new generations of young scientists.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

What do you suggest for a better implementation of gender equality in science?

In my translational research field, gender equality is still far away. Since the past decade, despite a positive trend toward equality, a substantial gendered difference is still persisting, at national and international level. As an example, the scientific/academic publications favour male first and last authors, and referring to leadership opportunities, in high-ranking positions there is a low female representation.

I would like to combat the theory according to which women want to spend more time at home, and I wish to promote and ensure gender equality in science, and actually in all fields. Nevertheless, when becoming a stay-at-home mom (maternity leave, medical leave, etc.), the duties performed as a mother may be translated into a job: "working mother as a woman with the ability to combine a career with the added responsibility of raising a child." A successful woman scientist is remaining focused on financial independence, and on working for maintaining an effective career. One of my recommendations is to be transparent and to avoid academic sexism first of all.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

In the era of male-dominated networks, it is very true that exchange of advices and key information are crucial for career advancement. However, networking seems to have fewer direct benefits for women's careers, in this way deriving professional advantages from any such networking group. We were lucky to have the opportunity to work together with many talented and clever women from different research fields, such as engineering, bioinformatics, biophysics, foodtech and so on. We have now been working for many years together and we hope to continue to develop our common interest for science and to attract national and international funding.

If you could start again your life, would you choose again to be a scientist? What would you change?

Yes, I would just repeat the process of growing up and experience life at each age,

the same course through life. The decision to become a scientist has been the best approach that all along I have made.

Could you give a message to young European women scientists?

"The aim of science is to seek the simplest explanations of complex facts. We are apt to fall into the error of thinking that the facts are simple because simplicity is the goal of our quest. The guiding motto in the life of every natural philosopher should be, seek simplicity and distrust it. "— Alfred North Whitehead In The Concept of Nature: Tarnier Lectures Delivered in Trinity College, November 1919 (1920), 163.

Fighting for each result, for each idea, for each study is the best way to become a good scientist. If you have the passion to do it, you will never complain, just go on.

[Interview published in October 2020](#)

www.eusaat-congress.eu/index.php/eusaat
eutranslationalmedicine.org

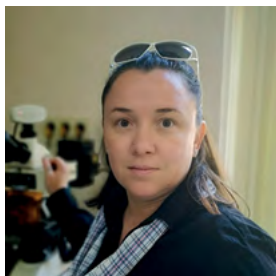


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Denitsa Teofanova

BULGARIA



Biology

Associate Professor Denitsa Teofanova is a researcher in the Department of Biochemistry of St. Kliment Ohridski University, Sofia, Bulgaria and was L'Oréal-UNESCO laureate in 2015.

What made you want to go to science? How did you decide to choose your discipline and your particular field of research? Did you have an inspiring model (parent, relative, teacher, literature, etc.)?

I can say that my interest in science dates back to the moment when the word "Biology" entered my vocabulary in elementary school. It developed and expanded with each step in my life: at the National High School of Natural Sciences and Mathematics with a profile in Biology; at Sofia University "St. Kliment Ohridski", Faculty of Biology; at the Bulgarian Academy of Sciences, where I worked on my PhD thesis; and even at the moment when I added teaching to my research activity, through which I try to "infect" other young people with a passion for science.

In each of these moments, there were wonderful teachers and colleagues next to me, who further encouraged and provoked interests of different nature. They showed and proved to me that it is science that can open a person's eyes to a completely different worldview, with which it is possible to open every door in life, no matter how tightly locked it may be. And "Biology"... it

is everywhere - in the enchanting nature, in the innumerable possibilities for the preservation of human health and quality of life, in unraveling the secrets of the origin and evolution.

Up till now I had the opportunity to practice in different research fields such as Genetics, Biochemistry, Molecular Biology, DNA Recombinant Technologies, Proteomics, Parasitology, Gene-Engineering Technologies, Biolistic Transformation Methods (delivery of DNA into plant cells by high velocity gold particles bombardment). I realized that what I'm most interested in is Molecular Taxonomy (genetic analyses to define the status of different individuals particularly at or below the species level and that enables understanding of the evolutionary processes and phylogenetic relationships in populations of different organisms), Phylogeny, Evolution and Origin. At the moment I'm integrating my abilities in that particular field into Plant Molecular Biology and Biochemistry.

My first inspiring model was my Biology teacher in elementary school. She was such a dedicated person and made the subject a pleasurable experience rather than a boring school class.

What do you work on? How important is your research topic for science development or society?

My present research topics cover two pretty distinct areas, on which our team in the Department of Biochemistry is working. The first one is concerning parasitic plants and in particular dodders, that can grow everywhere – from open-air fields and forests to domestic gardens. From one point of view,



Performing lab experiments

there are more investigations about their extermination, but less about the interrelations between them and their host plants (many agricultural crops such as alfalfa, asparagus, carrots, cranberries, onions, and potatoes, as well as many ornamental plants, including chrysanthemum, dahlia, helenium, impatiens, etc.) and about the effect of different stress conditions on them. Therefore our studies will provide detailed fundamental knowledge on this topic. On the other hand provided data will elucidate the “blanks” about the parasitic potential of these pretty invasive species and competitive relations regarding their ecological

(disruption of ecological balance among plant populations) and agricultural impact (infecting the agriculturally important plant species and minimizing their yield).

The second area, on which we are working on with my PhD student and a couple of undergraduates, concerns the recently popular topic of food and pollen allergies caused by various plants of the Cereal family. We study how they affect human health, whether a suitable diet can be selected to meet the health status of people suffering from various pathological and allergic conditions and whether the constantly changing conditions of our environment would have an impact on the allergenic and immunogenic potential of these plants.

What is your greatest success as a researcher (and as a teacher if you teach), the one you are most proud of?

Could you share the memory of a great personal satisfaction during your research career with us?

I could not distinguish my specific success. The constant development of my personal and scientific abilities in order to increase the visibility in the scientific community and the competitiveness of my entire team of young scientists and students is among my priorities and I am constantly working in this aspect. On the other hand, the upgrading of my knowledge and abilities as a researcher, with a positive effect, I also consider a success. Last but not least, I consider my L'Oréal-UNESCO award a serious success because it has given impetus to a new direction in my investigatory field, which I am currently working on. Also as a success from the point of view of a teacher, I can determine the fact that the team in our laboratory is constantly joined by young people with a passion for science, which makes me believe that I have managed to ignite the spark of love to knowledge in order to preserve and pass on my knowledge and abilities to future generations.

In which country/countries have you been doing research?

For a different time period I was in China, Greece, Russia, Germany and UK.

What is your agenda for the coming months?

We currently have several undergoing research projects, covering the topics I mentioned. In addition, the defense of my PhD student's thesis is forthcoming.

Did you meet barriers (personal/social/structural) during your career as a scientific researcher? Did you benefit from mentoring?

For a long time, Bulgaria belonged to the group of developing countries in which it was believed that research was not at the required level. This severely limited the possibilities for publishing the obtained research results. From another point of view, and to this day, the institutions that fund research projects in Bulgaria do not provide the necessary opportunities for large-scale research. Fortunately, the EU is opening up new options for this.

I believe that I did benefit from mentoring. Along my scientific way I had supervisors who supported me unconditionally and wholeheartedly.

What is the situation of gender equality in your working field? In the countries where you have been working, were there gender equalities policies and did you experience their effects?

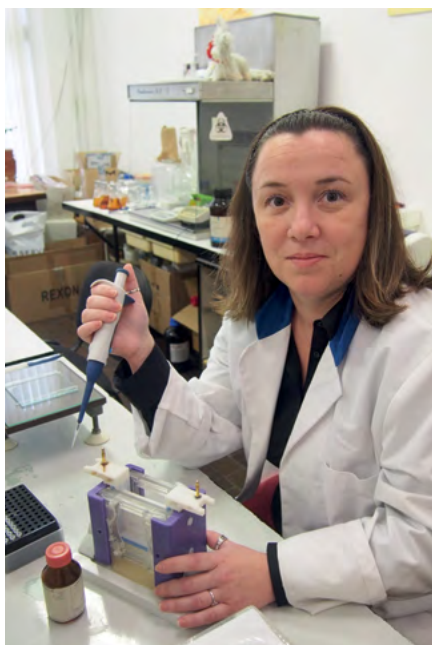
What do you suggest for a better implementation of gender equality in science?

In my scientific field and institutions where I have been working there are many female scientists, including in leadership positions. According to my own experience, I did not experience any situations of gender inequality. Still I believe that there are such in different scientific fields. I believe that every institution must have a policy in this regard,

as well as organizations in the country for the protection of women's rights and gender equality.

Did you experience networking between women scientists? Can you comment your answer and explain why yes or not?

In all the countries I have visited and worked in, I have been with women who have been heads of research projects and units in the particular institutions.



Performing lab experiments

If you could start again your life, would you choose again to be a scientist? What would you change?

I am completely satisfied with the choices I have made so far in terms of my career development in science. If I had to choose again, I would do the same again, albeit with a slightly more mature view of things.



Paper work is also an integral part of the activities in the "Laboratory of Plant Biochemistry and Molecular Biology"

Could you give a message to young European women scientists?

I will advise them to always follow their instincts, to fuel their scientific curiosity, not to give up their ambitions and to always believe in the unlimited possibilities for the development of the science they have chosen, as well as their own. My advice also includes not bowing to the obstacles and difficulties that constantly arise before them, and encouraging them to achieve their goals even more persistently, as well as never betraying the science they have chosen, fought for and sincerely wanted, as long as it is true.

Interview published in December 2020

International Parasitic Plant Society
www.parasiticplants.org/eutranslationalmedicine.org

International Association for Cereal Science and Technology
<https://icc.or.at/>

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Alphabetic Index by Discipline of the Interviewed Scientists

Astrophysics

Jocelyn Bell Burnell, United Kingdom _____ 28

Biology

Anne Kahru, Estonia _____ 25

Cornelia Braicu, Romania _____ 100

Denitsa Teofanova, Bulgaria _____ 104

Chemistry

Ilva Nakurte, Latvia _____ 34

Climate

Katja Matthes, Germany _____ 90

Earth Science

Costanza Bonadonna, Switzerland _____ 84

Epidemiology

Marina Kvaskoff, France _____ 15

Ioanna Tzoulaki, Greece _____ 94

History

Mineke Bosch, The Netherlands _____ 64

Information Engineering

Silvana Badaloni, Italy _____ 30

Linguistics

Janna Valdrová, the Czech Republic _____ 49

Mathematics

Elisa Lorenzo Garcia, France	53
Irene Sciriha Aquilina, Malta	75

Physics

Anna Fontcuberta i Moral, Switzerland	22
Anne Goldberg, Belgium	43
Petra Rudolf, The Netherlands	79

Political Science

Gabriele Abels, Germany	97
-------------------------	----

Sociology

Beáta Nagy, Hungary	20
Ligia Amâncio, Portugal	40
Cathrine Holst, Norway	58
Marija Brajdić Vuković, Croatia	67

Zoology

Yvonne Buckley, Ireland	71
-------------------------	----

The **European Platform of Women Scientists EPWS** is an umbrella organisation bringing together networks of women scientists and organisations committed to the promotion of gender equality and of the gender dimension in research. The goal of the Platform is to raise the voice of women scientists in the European research policy debate, representing women scientists from all disciplines throughout the European Union (EU) and the countries associated to the EU Programmes for Research and Technological Development.

To highlight the activities of EPWS member associations, from 2015 EPWS interviewed their representatives. These interviews, first posted on the EPWS website, have been collected in two booklets: a first booklet printed in 2017, and a second one published in 2019.

In 2018, the Platform has started a new interview series on its website entitled "Woman Scientist of the Month". The 23 interviews published since then are gathered in the present booklet. The portrayed women scientists are at different stages in their career and come from various disciplines and countries. They are recognised for their academic work and they share a commitment to gender equality in research and innovation in the European Research Area. Their biographies are a source of inspiration for fellow women scientists and an encouragement for the new generation of women scientists.



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