

## Annual Meeting of the Swiss Physical Society

# 3<sup>rd</sup> Women in Physics Career Symposium

10 September 2024, ETH Zürich

### Mentors

Below you will find a list of currently available mentors, who can be chosen by the mentees upon registration. The list will be updated continuously as soon as further mentors register.

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#### Ana Akrap

I am an experimental condensed matter physicist, looking for signatures of relativistic-like physics in crystals through a study of topological materials. In my work I use light—from deep infrared to far ultraviolet—to understand the low energy properties of these topological materials. Currently I am an SNF Professor at the University of Fribourg, and I lead a group called "Light Fermion Spectroscopy".

I received my PhD from EPFL, and followed this with a postdoctoral stay at Brookhaven National Lab, USA. I then worked at the University of Geneva, first as an Excellence Fellow, and later with an Ambizione Fellowship. I love doing scientific outreach, and creating links to the broader audience. Having personally benefited from mentoring, I strongly believe in giving back to the physics community.



#### Laura Bégon-Lours

Recently appointed assistant professor at the Department of Electrical Engineering and Information Technology at ETH Zürich, my academic path started by graduating from an Engineering School in Paris, France (the Ecole Supérieur de Physique et de Chimie de la ville de Paris). I also hold a MSc degree from the French "Ecole Polytechnique".

I always navigated between academia and industry: I pursued my PhD in a joint public/private lab between CNRS and Thales. After two years in academia, I came back to industry for four years at IBM Research Zurich. The objective of my research is to develop hardware which could support the deployment of artificial intelligence. The core of my expertise is materials sciences, I developed a ten year expertise on ferroelectric oxides.

Mentoring and networking is one of the key elements in establishing scientific collaborations and writing successful proposals. In 2019, I received a Marie Curie Individual Fellowship to pursue my research on artificial "synapses". During my stay at IBM, we wrote three successful proposals for international collaboration. Finally in 2023, I received a SNF Starting Grant: I am eager to discuss the ingredients that personally helped me towards successful proposals.



#### Lea Caminada

As an experimental particle physicist I explore the energy frontier by studying proton-proton collisions at the CERN Large Hadron Collider (LHC) with the CMS experiment. I am an SNF Eccellenza Professor at the Physics Institute of the University of Zurich and the group leader of the High-Energy Physics group of the Laboratory of Particle Physics at the Paul Scherrer Institute (PSI).

I obtained a PhD in physics from ETH Zürich in 2010 and then received an SNF fellowship for prospective researchers to work as a postdoctoral fellow (2010-2014) at the Lawrence Berkeley National Laboratory (LBNL), California USA. In 2014 I joined University of Zurich as a scientist and since 2016 I hold a joint position with PSI LTP. During my career I have been working on three high-energy physics experiments, ATLAS and CMS at CERN and H1 at DESY (Hamburg, DE). My research focuses on precision measurement of Standard Model processes including heavy quarks, gauge bosons or the Higgs boson. In order to observe these processes at the LHC, I am playing an active role in the design and construction of high-precision silicon pixel detectors, the innermost sensitive layers of the ATLAS and CMS detectors.

Besides my research activities I am engaged in University teaching and in outreach activities to share my excitement about particle physics with scholars, students and the general public.



## Claire Donnelly

I am an experimental condensed matter physicist, specialising in three-dimensional systems, which I study with synchrotron X-rays. Specifically, I study how the three-dimensionality influences the physics of these systems – and how by we can design and control the properties by patterning at the nanoscale. Since September 2021, I have been leading my group [Spin3D](#) at the Max Planck Institute for Chemical Physics of Solids in Dresden.

I obtained my PhD at the Paul Scherrer Institute and ETH Zurich in 2017 for my work on X-ray imaging of 3D magnetic systems, which was recognised by a number of prizes including the APS Richard Greene Dissertation Award, the Werner Meyer-Ilse Memorial Award, the ETH Medal, and the SPS Award for Computational Physics. Following a one year postdoc at the ETH Zurich, I moved to the University of Cambridge and the Cavendish Laboratory as a Leverhulme Early Career Research Fellow to work on the dynamics of 3D magnetic nanostructures. During my time there, I was awarded the L’Oreal For Women In Science Fellowship, and the European Magnetism Association Young Scientist Award. Since September 2021 I am a Lise Meitner Group Leader at the Max Planck Institute for Chemical Physics of Solids in Dresden, Germany. Our group studies the behaviour of three-dimensional magnetic systems – both "bulk" and "nano" – making use of the experimental methods we have developed over the last few years.

As well as doing excellent science, I find it crucial that we enjoy what we do. As a result, I am keen to foster an open and welcoming atmosphere both in my group, and in our wider international collaborations.



## Ellen Fogh

I study quantum magnetic materials using neutron scattering techniques in combination with extreme conditions of high pressure, high magnetic fields and low temperatures. I enjoy the varied nature of my work including hands-on experimental tasks, programming for analysis and modelling, interpretation, student supervision and teaching. I love in particular that I get to work together with people from many different backgrounds and nationalities.

I currently work as a postdoc at the École Polytechnique Fédérale de Lausanne and come with a PhD in physics from the Technical University of Denmark. In my spare time you will often find me doing stuff in the mountains, either alone, with friends or with my kids. Having myself felt the invaluable support from various mentors (and still do), I wish to pass on the experience to younger scientists and help them find their own paths.



## Janine Haase

I have always been fascinated by science and technology and asked myself – how does this work? Following my interests, I studied physics at the University of Constance, Germany, and spent one semester at Uppsala University, Sweden, for my bachelor’s thesis on magneto-optical nanostructures. After my master’s thesis on single photon micro-photoluminescence spectroscopy of colloidal quantum dots, I was very excited to continue in research and started a PhD at ETH Zürich, Switzerland, in the group of Prof. Faist. Here, I studied the fascinating world of ultra-strongly coupled Landau-level transitions in 2D electron gases to THz metamaterials and had the chance to meet many exciting researchers around the world.

Confronted with the decision to stay in academia or get in touch with industry, my interest in technology sparked my start at Sensirion, a sensor company with a wide range of technologies which are integrated in the automotive, consumer, industrial, and medical market. I started in 2019 as R&D engineer and project manager for medical gas flow sensors utilized in medical lung ventilators and learned what it takes to develop a product from feasibility studies to industrialization. In the beginning of 2024, I got promoted to become program director for Sensirion’s humidity sensors. I have technical and operational responsibility for our humidity sensor portfolio with a multi-million sensor production and in a team of three business unit leaders, we strategically position Sensirion’s humidity sensors to be competitive in a complex market environment.



## Nicole Hiller

I am a group leader at Paul Scherrer Institute (PSI) for the group SwissFEL Operation. While studying physics at the Karlsruhe Institute of Technology (KIT), I was introduced to particle accelerators and ended up doing both my master thesis, and afterwards my PhD at the electron storage ring ANKA (now KARA) at the KIT. I started my career working on longitudinal electron beam diagnostics. From the beginning on, I loved the interdisciplinary character of accelerator physics and enjoyed the collegial and welcoming atmosphere in the accelerator community world-wide. When PSI was starting the commissioning of the Swiss free-electron laser (SwissFEL) in 2016, I took the opportunity to join the team there. Since then, my focus has shifted more towards the operational aspects & optimisation of particle accelerators and I became a group leader three years ago which brought along many new, interesting challenges.



## Marc Janoschek

I am an experimentalist who uses large-scale research facilities to explore the fascinating properties of quantum matter using neutron, muon, and photon probes. During my master and PhD work at the Technische Universität München, I held appointments at three European neutron sources (Institute Laue Langevin, Paul Scherrer Institute, and Heinz-Maier-Leibnitz Zentrum), where I developed novel instrumentation. After postdoctoral appointments at the Universität zu Köln and University of California, San Diego, I became a scientific staff member at Los Alamos National Laboratory, where I led the neutron scattering efforts of the Condensed Matter & Magnet Science group. Since 2018 I am the head of the Laboratory for Neutron and Muon Instrumentation (LIN) at the Paul Scherrer Institute, and since 2021 also a professor of experimental physics at the University of Zurich. Large-scale facility experiments require collaborating in large and diverse teams, which I enjoy immensely.

Besides my research and teaching, I also enjoy engaging in community and outreach efforts. For example, I am the president of the Swiss Neutron Science Society, am carried out workshops for the Kinderuniversität Zürich, and have experience as a mentor across several career levels starting from students up to leadership positions. Finally, I have also initiated and organized the Women in Physics Career Symposium.



## Johanna K. Jochum

I conducted my Bachelor and Master studies at ETH Zurich, where I did my master thesis in the group of Prof. Bertram Batlogg on "Transport properties in SmFeAs(O,F)". After a year as a research assistant at the laboratory of metal physics and technology at ETHZ, where I investigated the biocompatibility of bulk metallic glasses, I moved to Belgium and started my PhD on "Interface phenomena in magnetic nanostructures" at the KU Leuven. During my PhD I studied the vibrational and magnetic properties of nanostructures using X-ray and neutron scattering techniques at large scale facilities.

In 2018 I started my position as an instrument scientist at the Research Neutron Source Heinz Maier-Leibnitz in Garching, Germany, where I am responsible for the resonant spin-echo spectrometer RESEDA. My research interests are superconductivity and magnetic phenomena as well as neutron instrumentation. My background in nanostructures drives me to push the capabilities of RESEDA beyond bulk samples and towards spectroscopy on the nanoscale.



## Christine Klausner

I am an experimental physicist who specializes in neutron instrumentation, in particular optics. After my physics studies at at EPFL and University of Waterloo, I obtained a PHD from Technical University of Vienna in the field of high precision particle physics studying neutron decay. My passion for instrumentation led me to join PSI as a PostDoc in 2015 in the group of neutron optics. In 2018, I have become tenure-track staff leading a small team that operates the sputtering lab of PSI/LIN. My research interests are the development of advanced neutron optical devices. Here, I focus on two main areas, namely using neutron optical devices to improve signal-to-noise on neutron instruments and designing new polarizing optics that will allow a widespread use of polarization analysis. These are key developments for allowing experiments that are not feasible to date. I particularly enjoy that my work requires the skillsets of both a physicist and an engineer.



## Andreas Läuchli

more info coming soon

## Marianne Liebi

Marianne Liebi is Tenure-Track Assistant Professor at EPF Lausanne and group leader at PSI. She has been appointed in 2021 at EPFL where she is part of the Institute of Materials within the School of Engineering. Marianne Liebi studied Food Science at ETH Zurich where she also obtained her PhD in 2013. As a Postdoc in the coherent X-ray scattering group at the Swiss Light Source she worked from 2013-2016 on method development in SAXS tensor tomography. In 2016 she moved to Sweden where after a short period at the NanoMAX beamline, MAXIV Laboratory, Lund she started her own research group in 2017 as Assistant Professor at the Chalmers University of Technology, Gothenburg, and became Docent in Physics in spring 2020. She kept her affiliation at Chalmers University of Technology, where still part of her group is located when moving back to Switzerland in 2020 where she was Scientific Group Leader in the Center for X-ray Analytics at Empa, St.Gallen, before joining PSI in November 2021. The focus of Marianne Liebi's research is in the development of advanced X-ray imaging techniques and their application towards materials with hierarchical structures. For more details on the research see [www.psi.ch/smam](http://www.psi.ch/smam). Creating a collaborative and supportive atmosphere within her research group and keeping the fun of exploring alive is thereby an important goal.



## Tracy Northup

Tracy Northup is a professor of experimental physics at the University of Innsbruck, Austria. Her research explores quantum interfaces between light and matter, focusing on trapped-ion and cavity-based interfaces for quantum networks and quantum optomechanics. She received her PhD from the California Institute of Technology in 2008 and then held an appointment as a postdoctoral scholar at the University of Innsbruck, where she was the recipient of a Marie Curie International Incoming Fellowship and an Elise Richter Fellowship. She became an assistant professor at the University of Innsbruck in 2015 and has been a full professor since 2017; she held an Ingeborg Hochmair Professorship from 2017 to 2022. In 2016, she received the START Prize, the highest Austrian award for young scientists, from the Austrian Science Fund.



## Angela Papa

I am a particle physicist. I love math and physics.

Particle physics aims at understanding the nature of the fundamental particles that constitute matter and their interactions, and unveiling the most in-depth mechanisms of the Universe.

Different experimental approaches are pursued to address not yet answered fundamental physics questions. My research is based on muon-physics experiments. Searching for new "not known yet" physics and contributing to unlocking the secrets of the Universe, thinking about and performing very sensitive and elegant experiments, are a few of the main motivations that drive my research.

Listening to the knowledge desire of the new generation, sharing my experience, and contributing to a better world for everyone are the reasons I am here. "It is great if you are the first but do not be the last".



## Daniel Pearce

I am a theoretical physicist working on a range of problems in active, soft and living matter. My current interests include how we can learn how to control active materials by understanding living organisms. This would provide a route to designing functional soft robots based on the same principles.

I received my PhD from Warwick University in the UK before postdoctoral positions at Leiden University in the Netherlands, University of Geneva and MIT. I am currently an SNF Professor at the University of Geneva where I started the Theory of Active and Living matter group in 2023. I am interested in becoming a mentor as a chance to support the physics community and a chance to help young scientists.



## Cinthia Piamonteze

I'm an experimental physicist working in the area of condensed matter. More specifically I have specialized on using x-ray spectroscopy for the investigation of novel magnetic materials, as oxide heterostructure and 2D materials. My whole carrier I have spent in different synchrotron radiation laboratories in different parts of the world.

I have done my undergraduate, masters and PhD in Brazil, University of Campinas. For my post-doc I moved to the Advanced Light Source in the Lawrence Berkeley National Laboratory, at Berkeley, CA, USA where I stayed close to 3.5 years. After that I was hired as a scientist in PSI.

Since 2022 I'm a senior scientist in PSI. I was hired in 2007 as responsible for the construction of a new beamline dedicated to x-ray magnetic circular dichroism (XMCD) and x-ray linear dichroism (XLD). This beamline is in operation since 2009. XMCD and XLD are the techniques I use the most in my scientific projects, but I also have used other synchrotron techniques in a variety of different systems.

What I most enjoy about being a scientist are the multi-faceted aspect of this job. The opportunity to supervise students, create new instrumentation and think of new scientific questions. I was for a long time in the committee of equal opportunities in PSI. Through the committee I was in close contact with questions and actions involving gender equality in science as well as outreach events to bring the fascination for science to the young generations.



## Ekaterina Pomjakushina

I am a chemist and my scientific interests lay in the field of solid state chemistry and topics, which are at the moment in the focus of solid state physics. I am an expert in crystal growth and materials engineering of compounds with novel electronic properties. I have graduated from the Moscow D. I. Mendeleev Institute of Chemical Technology, Russia in 1988, and have been working for many years as a research scientist at the Joint Institute for Nuclear Research, Dubna, Russia. I have obtained my PhD in 1996 at the same university I was graduated for. In 2002, our family has moved from Russia to Switzerland, because my husband (physicist) has got an instrument scientist position at the Laboratory for Neutron Scattering (LNS) PSI. Since 2003 I have been working as a research scientist in the Group of Material Synthesis at PSI. In 2017, I became a leader of the Solid State Chemistry Group at the Laboratory for Multiscale Materials Experiments PSI.



## Heidi Potts

I am an experimental physicist working at Zurich Instruments, a test and measurement company that makes cutting-edge instrumentation including lock-in amplifiers and quantum control systems. During my Bachelor and Master studies in Nanoscience at the University of Basel, I became excited about the properties of nanoscale devices and decided to pursue a PhD on semiconducting nanostructures at EPFL. I then continued my research with an SNFS Early PostDoc Mobility Fellowship at Lund University in Sweden, where I investigated spin states of coupled quantum dots. While I very much enjoyed the challenges of fundamental research, I also wanted to experience the work environment of the private sector and so joined Zurich Instruments in 2021. As an application scientist, I support researchers working in a variety of fields with their measurement challenges; I am excited to learn about different experiments every day, and I enjoy meeting researchers with different backgrounds. In my free time, I like to be outdoors and spend time with my family.



### Aline Ramires Neves de Oliveira

Aline Ramires obtained her Ph.D. from Rutgers University, USA, in 2015. She was an ITS Fellow at ETH Zurich, Switzerland, and a Distinguished Postdoctoral Fellow at the MPI-PKS, Germany. Since 2020, Aline Ramires has been an Ambizione Fellow in the Condensed Matter Theory group at the Paul Scherrer Institute, Switzerland. She was the recipient of the Nevill F. Mott Prize in 2022 for her theoretical work on unconventional superconductivity and strongly correlated systems



### Philipp Schmidt-Wellenburg

My principal scientific interest is testing fundamental concepts of matter and interactions using methods and techniques of low energy high precision particle physics. After my diploma in physics at the Technische Universität München, I moved to Grenoble, France for my PhD thesis. There I also met my wife sharing the same interest in climbing and hiking. Together we have three children, the first born in France, the two others in Switzerland.

After my defense, I was hired on a tenure track position at the Paul Scherrer Institute (PSI) for the search for the neutron electric dipole moment. This project permitted me to develop my scientific and social capacities by engaging and leading the international collaboration and fostering young students and post-docs during their early careers.

Outside science, I always was engaged in projects supporting the development of young people. During university, I worked as a volunteer youth guide for the German alpine club and funded with friends the NGO "Commit to partnership" to foster exchange between German students and societies of the global south. Today, I am committed to pushing for equal opportunities and fair participation as a member of the municipal council of my village.



### Anna Sfyrla

Anna Sfyrla is a high energy physicist and associate professor at the University of Geneva. She works at the ATLAS and FASER experiments of the CERN LHC and searches for physics beyond the Standard Model. Besides her research, she is engaged in actions related to education, outreach and promotion of equal opportunities in academia.

