THU 3: Arbeitskreis Chancengleichheit (AKC)

Time: Thursday 14:15–16:15 Location: ZHG003

Invited Talk THU 3.1 Thu 14:15 ZHG003

Reshaping the History of Quantum Physics: Paths to Gender Equality — •Andrea Reichenberger — TU Munich, Germany

We are all familiar with gender dynamics, biases, and stereotypes on the online platforms we visit, use, and co-create every day. They are ubiquitous in large language models (LLMs) and other generative AI technologies trained on large amounts of data. Their spillover effects are now well studied in scientific research. There is comparatively little research on how the history of physics is represented and practiced in today's online spaces. This talk will take you on a journey through the history of quantum physics, exploring new avenues for a gender-sensitive future of the history of physics. And it offers a critical insight into how expertise in the history of physics, science communication and public opinion influence and reinforce each other in the practice of digital history. Drawing on a series of case studies on women in the history of quantum physics, we examine the Matilda effect on online platforms and offer perspectives on how to successfully counteract this effect, which gives a name to the systematic misrecognition of women's contributions to science and technology.

Invited Talk THU 3.2 Thu 14:45 ZHG003

Women in the History of Quantum Physics — •Margriet van der Heijden — Eindhoven University of Technology (TU/e), The Netherlands

The narratives of the development of quantum mechanics are as "male-dominated" as this subfield of science itself, science historian Massimiliano Badino noted some nine years ago. The book Women in the History of Quantum Physics: Beyond Knabenphysik aims to challenge these conventional "all-male" narratives. In sixteen chapters, the authors – all members of the international and interdisciplinary working group Women in the History of Quantum Physics – analyse the work and lives of women who contributed to quantum developments in the twentieth century. Not the handful of famous women like Marie Skłodowska Curie, Maria Goeppert Mayer and Lise Meitner, but the women who remained in the shadows, had to interrupt their careers or whose work was overlooked. By analysing and comparing their lives and work, themes can be distilled that are relevant to understanding why women's participation in physics research remains low even today. I will explore some of these themes and illustrate them with the lives and experiences of some of the protagonists of the book chapters.

Invited Talk THU 3.3 Thu 15:15 ZHG003

Visibility, invisibility and hypervisibility of women in quantum technologies — Martina Erlemann, •Andrea Bossmann, and Tamar Grosz — Fachbereich Physik, Freie Universität Berlin, Deutschland

Quantum technologies are widely recognized as key technologies of the future. With their broad range of applications, they have the potential to address major societal challenges and contribute to the sustainable, future-oriented development of society. However, equal participation of highly qualified women in quantum technologies has not yet been achieved. Women remain significantly underrepresented in STEM fields that lead to careers in research and development within quantum technologies, such as physics, computer science, and certain branches of engineering. Additionally, high-achieving women in quantum technologies often receive less visibility than their male counterparts. This lack of visibility is evident both within the scientific community, in the form of fewer awards, recognitions, or leadership appointments, and externally, in public discourse, industry, politics, and the media. At the same time, women in these fields are hypervisible because of being part of a minority, which however doesn't lead to recognition, but rather to a higher level of being exposed and scrutinized. Here we will discuss the effects of these competing types of visibility and preliminary findings of our BMBF-funded research project WomenInQuantumTech: In/visibility of Women in Quantum Technologies - Development of effective strategies for better participation.

Invited Talk THU 3.4 Thu 15:45 ZHG003

Leadership, Cooperation and Conflicts in Physics: Research Leaders' Perspectives — •Maike Reimer — Bayerisches Staatsinstitut für Hochschulforschung und Hochschulplanung (IHF), Arnulfstraße 56, 80335 München

"Can Germany rein in its academic bullying problem?" This question was recently raised prominently in a nature article. Anecdotal evidence as well as systematic surveys among researchers indeed paint a bleak picture of research leadership and institutional structures for conflict prevention and management in research settings in Germany and its German-speaking neighbouring states. However, the perspectives and voices of senior researchers are conspicuously absent from this discourse. Therefore, in collaboration with the DPG, we conducted 11 interviews and a survey among all members with leadership experience, about one crucial aspect and challenge of leadership: dealing with conflicts in their research teams. Here, we will present results from the full report on the frequency, kind, antecedents and consequences of conflicts and the ways they were resolved with or without institutional support. In addition, we investigate gender specific patterns in conflict experience. We hope to contribute to a more nuanced discussion and ultimately an improvement in research institutions conflict management structures.