Working Group on Equal Opportunities
Arbeitskreis Chancengleichheit (AKC)

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Overview of Invited Talks and Sessions

(Lecture hall ZHG009)

Invited Talks

AKC 1.1	Thu	11:00–11:30	ZHG009	**Lucy Mensing: Forgotten Pioneer of Quantum Mechanics** — •Gernot Münster
AKC 1.2	Thu	11:30–12:00	ZHG009	**The Spectrum of He^+ as a Proving Ground for Bohr's Model of the Atom: A Legacy of Williamina Fleming's Astrophysical Discovery** — •Bretislav Friedrich
AKC 1.3	Thu	12:00–12:45	ZHG009	**Unethical Behavior in Academia: Forms, Causes, and Countermeasures** — •Daniel Leising

Sessions

AKC 1.1–1.3	Thu	11:00–12:45	ZHG009	**AKC**
AKC 2	Thu	12:45–13:45	ZHG009	**Women in Physics Lunch**

AKC 1: AKC

Time: Thursday 11:00–12:45 Location: ZHG009

Invited Talk AKC 1.1 Thu 11:00 ZHG009
Lucy Mensing: Forgotten Pioneer of Quantum Mechanics — •Gernot Münster — Universität Münster

In 1925 a young postdoc, Lucy Mensing, came to Göttingen to do research with the new matrix mechanics, which had just been formulated. In the following years she did groundbreaking work. She successfully made the first application of the new theory to diatomic molecules. As a by-product of this work, she was the first who found that, even though in general both integer and half-integer values are allowed for angular momentum, orbital angular momentum always takes on integer values. Pauli, being impressed by her clear and masterful treatment of the problem, invited her to work with him on the polarizability of gases. After that, she worked in Tübingen. In my contribution I will sketch the pioneering work of Mensing and give a brief account of her life. I will also discuss why she gave up her career, which ended in 1930 after she married and started a family.

Invited Talk AKC 1.2 Thu 11:30 ZHG009
The Spectrum of He^+ as a Proving Ground for Bohr's Model of the Atom: A Legacy of Williamina Fleming's Astrophysical Discovery — •Bretislav Friedrich — Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin

In 1896, Edward Charles Pickering (1846-1919), Director of the Harvard College Observatory (HCO), reported in a trio of publications the observation of "peculiar spectra" of the southern star zeta-Puppis, which he attributed to an "element not yet found in other stars or on earth." Supported by laboratory spectra obtained by Alfred Fowler (1868-1940), Niels Bohr (1885-1962) showed in 1913 that this "element" was in fact ionized helium, He^+. Its spectrum has become known as the Pickering Series, even though Pickering credited Williamina Fleming (1857-1911) for the discovery. Fleming was one of HCO's "computers" and the future Curator of Harvard's Astronomical Photographic Glass Plate Collection. The series of spectral lines associated with Pickering's name played a unique role on the path to quantum mechanics by serving as a proving ground for Bohr's model of the atom. Our examination of the discovery of the Pickering series relied on the records held at the Center for Astrophysics | Harvard & Smithsonian (the successor institution to HCO), especially the Notebooks and Diaries of Williamina Fleming and others as well as on the Center's Glass Plate Collection. Glimpses of the "peculiar sociology" of a research institution, half of whose staff were women employed on grossly unequal terms with men, are given in the course of the narrative.

Invited Talk AKC 1.3 Thu 12:00 ZHG009
Unethical Behavior in Academia: Forms, Causes, and Countermeasures — •Daniel Leising — Technische Universität Dresden

Recent years have seen a steady flow of media reports about cases of unethical behaviour in academia. Such behaviour seems surprisingly common, often causes great damage, and typically remains unsanctioned. In my talk, I will first introduce a number of concepts that are relevant to the discourse on this topic (e.g., power, abuse of power). Then I will discuss some key factors that may explain the emergence and the persistence of unethical behaviour in academia. Notably, some of these factors are properties of unethical actors themselves (e.g., psychopathic traits), some are properties of the people that surround unethical actors (e.g., fear), and some are properties of the organizational setup (e.g., incentives, hierarchies, lack of effective controls). Based on this analysis, I will present some recommendations for reforms of the academic system that may help reduce the frequency and severity of unethical behaviour in academia.

AKC 2: Women in Physics Lunch

Time: Thursday 12:45–13:45 Location: ZHG009

Female physicists of all career stages are cordially invited to join our meet-and-greet networking lunch or snack. Diverse and all kinds of interested colleagues are also welcome!