

Tuesday late afternoon session Track D, Tuesday, Sep 23 2025, 16:00-17:45

Location: Seminar 3

Session: RI and AI

Chair: Tom Lindemann

OR-44

Ethical AI in Academic Research: A Novel Course Model for Upholding Research Integrity and Embracing Institutional Responsibility

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The rapid evolution of AI technologies has transformed higher education, disrupting traditional pedagogical practices and challenging the integrity of academic writing. While AI tools streamline the research and writing process, their unregulated use poses significant risks, including the potential for biased algorithms, opaque attribution, and the erosion of research integrity. As AI becomes an integral part of academic work, universities face a critical responsibility to equip students with the knowledge and skills necessary to navigate this new landscape ethically and responsibly.

This paper addresses a fundamental question: How can AI tools be ethically and responsibly integrated into academic writing to foster research integrity? A novel course model, "Scientific Writing with AI," was developed at HTW Dresden, which aims to balance the efficient use of AI in research with the need to uphold rigorous ethical standards. This pioneering course integrates AI-assisted writing with a strong focus on the ethical considerations that accompany the use of these technologies.

The course is designed to cultivate AI literacy among students while fostering a critical understanding of the ethical implications of AI in academic research. It encourages students to evaluate AI-generated content critically, ensuring proper attribution and addressing the risk of plagiarism. Through a combination of theoretical lessons and practical applications, the course emphasizes the prevention of misuse, such as plagiarism, and promotes awareness of AI's limitations, such as inherent biases in algorithms.

One of the key outcomes of this course is the development of responsible AI use and an enhanced commitment to research integrity. Students are taught not only how to use AI tools effectively but also how to engage with them critically, identifying potential risks and addressing them proactively. Post-course surveys show increased emphasis on ethical practices, with students prioritizing proper citation, and transparency in AI use. The importance of disclosing AI involvement increased significantly, from 2 mentions out of 28 students prior to the module to 15 mentions following its completion. This paper also discusses the importance of institutional responsibility in promoting research integrity through education. Universities must establish clear guidelines for the ethical use of AI in academic writing, ensuring that students understand how to responsibly incorporate AI tools into their work. HTW Dresden's initiative exemplifies a forward-thinking approach to this challenge, offering a replicable model for institutions worldwide.

In conclusion, the course presents a proactive solution to the challenges posed by AI in academic research. By embedding ethical AI use into the curriculum, higher education institutions can foster a generation of researchers who view integrity and innovation as interdependent. This model offers actionable strategies for balancing the adoption of AI technologies with a commitment to ethical accountability, ensuring that research integrity remains a cornerstone of AI-assisted academic work.