Integrating Generative AI into the Research Cycle: Enhancing Discovery, Analysis and Dissemination

27 - 28 October 2025 (IAMO, CR 2) | 1,5 days

In this workshop, you will engage with cutting-edge AI applications*, including ChatGPT, DeepSeek, Claude, Perplexity.ai, you.com, and GitHub Copilot, to learn how to streamline your research processes. Through a mix of hands-on exercises, demonstrations, and discussions, this session will equip you with practical strategies for integrating AI into your work routines while maintaining good scientific practice.

This training aims at researchers with advanced knowledge and application experience who are interested in learning more about generative AI tools such as ChatGPT, GitHub Copilot, and beyond for scientific tasks such as programming or analyzing complex data. It also aims at curious researchers with little to no prior knowledge or application experience who want to make their research activities more efficient, impactful, and innovative with the help of AI tools.

Learning goals and topics

- **From Observation to Hypothesis:** Use AI to brainstorm, explore research questions, and refine ideas.
- **Literature Review & Knowledge Synthesis:** Leverage AI-driven search engines and research tools for deeper, more efficient literature exploration.
- **Proposal & Manuscript Writing:** Use AI as a writing assistant to structure proposals, refine arguments, and improve clarity.
- **Experimentation & Data Handling:** Explore using AI to structure data, assist in survey analysis, and support decision-making.
- **AI for Coding & Computational Research:** Enhance programming skills with AI-based copilots to refine existing workflows or start from scratch.
- **Publishing & Science Communication**: Utilize AI to craft compelling narratives for peer-reviewed publications and public engagement.
- **Ethical Considerations & Responsible AI Use:** Discuss the challenges of AI in research, including bias, hallucinations, and data privacy, within the framework of Good Scientific Practice.

*We will select specific tools just before the workshop to ensure the most current developments in this fast-evolving field are incorporated.

Requirements

For the **AI for coding** workshop part: Please bring a problem or work task you would like to solve to the workshop. It can be related to a scientific problem, but you can also think of other tasks (e.g., programming a website, game, etc.).

Terms & application

Time	27 October 9.30 a.m. -4.30 p.m. | 28. October 09.30 a.m.- 1 p.m.
Place	IAMO, conference room 2
Group size	Max. 15 persons
Target group	Doctoral researchers, postdocs
Workshop language	English
Registration	Per email to Franziska Hauff, hauff@iamo.de
DCPAE credits	1.5 CP (Soft Skills) for full course attendance

Trainer

Dr Alexander Britz is a communication and behavior trainer with an interdisciplinary chemistry, physics, and materials science background. He currently works as a trainer and coach for young scientists, offering workshops on communication, leadership, and innovation. He focuses on improving research efficiency and fostering sustainability, diversity, and community within academia.