Selected Workshops for (Young) Scientists

A selection of highly interactive workshops which I offer. These can be further modified, combined or we can design a completely new concept together.

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

Format: 1-2 days, online or on-site

Generative AI is reshaping how research is conducted—from idea generation to publication. This interactive workshop explores how AI-based tools can enhance each stage of the research cycle, improving efficiency, creativity, and decision-making.

In this workshop, you will engage with cutting-edge AI applications*, including ChatGPT, DeepSeek, Claude, Perplexity.ai, you.com and GitHub Copilot to learn streamlining 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.

The specific learning goals and topics of the workshop are:

- 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: Employ AI as a writing assistant for structuring proposals, refining arguments, and improving clarity.
- Experimentation & Data Handling: Explore AI to structure data, assisting in survey analysis, and supporting decision-making.
- AI for Coding & Computational Research: Enhance programming skills with AI-based copilots, whether for refining existing workflows or starting 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.

Disclaimer: As you might expect, generative AI tools were used in parts of this workshop's development, including brainstorming, text refinement, and image production. However, no full sentences or larger passages were generated without my (Alex Britz) direct input and oversight.

"Scientific Presentations"

Format: 1.5-2 days, on-site

In the *Scientific Presentations* Workshop, you will gain essential skills to deliver impactful scientific presentations, for seminars, conferences, or a thesis defense. The workshop focuses on interactive, hands-on practice of newly acquired skills.

We will discuss general rules for effective scientific communication with a special emphasis on oral presentation skills. You will learn how to build appealing stories from your scientific results using structured storytelling and pitching techniques. Further, we will practice using body language and voice effectively. In partner activities you will train talking freely and without technical help, such as figures and slides, about arbitrary scientific topics. In breakout sessions you will further practice presenting your results in short presentations, in which you are allowed to use the technical help of your choice. Peer and trainer feedback will help you optimize your presentation further.

The specific topics and learning objectives of the workshop are:
- Understand and apply fundamental laws of effective professional scientific communication, with a spotlight on oral presentation skills.
- Learn to create compelling narratives from scientific results using structured storytelling and pitching techniques.
- Acquire skills to use body language and voice effectively.
- Understand how to use technical aid and design appealing slides.
- Hands-on practice of short presentations in breakout sessions.
- Utilize structured feedback to refine your presentations.

Please bring a short, e.g., 5-minute presentation or a poster for the active practice session. Overall, this workshop will empower you to confidently present your research to any audience.

Image source: Midjourney

"Creativity in Science and Academia"

Format: 1 day, online or on-site

Creativity is crucial in academic work in natural sciences, and creativity can be learned and trained systematically. We use techniques from design thinking and agile methods to increase our creativity and create a "Yes, and…" mindset. The specific concepts include structured brainstorming, mind mapping, pitching and storytelling and positive psychology. Using multiple tools we further discuss and train in group work how to develop for example novel scientific projects using these newly acquired skills.

The specific topics and learning objectives of the workshop are:
- Understand the role of creativity in natural sciences and how to systematically nurture it.
- Apply design thinking, positive psychology and agile methods to foster a "Yes, and..." mindset.
- Master structured brainstorming and mind mapping techniques.
- Develop pitching and storytelling skills for effective communication.
- Engage in group work to apply creative techniques in developing scientific projects.

Image source: Midjourney

"Scientific Writing"

Format: 2 days, online or on-site

In the *Scientific Writing* workshop, you will learn effective tools and techniques to write, e.g., convincing grant proposals as well as great peer reviewed papers.

You will learn about general laws of scientific communication and their application to all forms of dissemination. We will further discuss key factors that make a publication great: You will train creating appealing titles as well as structuring your text into exciting stories. Blank page anxiety is a common problem when starting with a new draft. You will learn strategies to overcome this blank page anxiety. We will practice this in an agile group exercise for research proposal abstract writing. As a group, we will gather easy-to-apply hacks for better texts. You will apply the newly acquired knowledge to your current project, such as a paper draft or thesis. Finally, you will reflect on the improvements of your projects in feedback rounds.

The specific topics and learning objectives of the workshop are:
- Learn general laws for effective scientific communication.
- Create appealing abstracts and titles.
- Get acquainted with storytelling to structure written scientific communication.
- Learn key factors of great figures and captions.
- Master techniques to overcome blank page anxiety.
- Work actively on your own project, e.g., a paper manuscript or your thesis.

Image source: Midjourney

"Grant Writing – How to Get Funded"

Format: 1-2 days, online or on-site

In the Grant Writing workshop, you will learn the most fundamental skills to write proposals to apply for grants, e.g., to travel to a conference as a PhD candidate or to fund your postdoc afterwards. You will work out general rules for grant writing: Where to find funding sources, how to get started with writing your application, advice on dos and don'ts. You will further learn easy-to-apply storytelling techniques and practice these in a collaborative abstract writing exercise. We will discuss simple text hacks to make your application clearer and more convincing. Finally, you will practice the newly acquired skills by working on an actual grant proposal draft in your respective field.

The specific topics and learning objectives of the workshop are:
- Familiarize yourself with the fundament requirements to apply for grants
- Formulate (S.M.A.R.T.) research goals and appealing titles
- Learn how to estimate timing and financial budget and demonstrate this in grant application
- Train structured storytelling and apply easy-to-use text hacks
- Gather Dos & Don'ts for grant applications
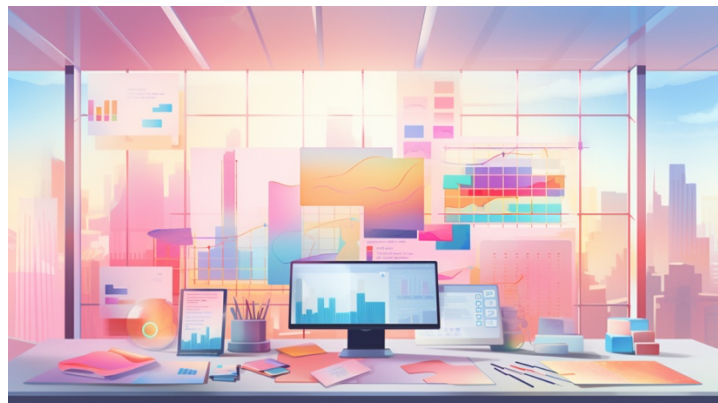- BONUS: Learn about risk analysis and/or start your own application

Image source: Midjourney

"Project and Time Management for Scientists"

Format: 1.5-2 days, online or on-site

In the *Project and Time Management for Scientists* workshop, you train fundamental skills to be efficient and effective as a young researcher.

In the first part of this workshop, we focus on self-management and time management techniques to be effective and work efficiently as a young scientist. The methods learned and practiced include the Eisenhower matrix, the Pareto principle, S.M.A.R.T. goal setting, and performance curves with the goal to learn effective prioritization and improve your decision-making skills.

The second part is about the project management of a PhD thesis and/or another scientific project, e.g., leading to a manuscript. You will discuss the complexity of a PhD project with the numerous stakeholders involved. Further, you will learn how to apply traditional project management techniques, such as Gantt charts, to your PhD, and we elaborate on where to use agile techniques in a PhD. The workshop closes with a discussion of risk management.

The specific topics and learning objectives of the workshop are:
- Learn effective prioritization using the Eisenhower matrix and ABC method.
- Acquire fundamental self-management, time-management and decision-making skills, with techniques including Pareto principle and Parkinson effect.
- Learn setting S.M.A.R.T. goals and effective milestones.
- Gain insights into managing complex scientific projects such as a PhD thesis or postdoc project.
- Learn to utilize traditional project management planning tools like Gantt charts.
- Understand when to apply agile techniques in science and academia.
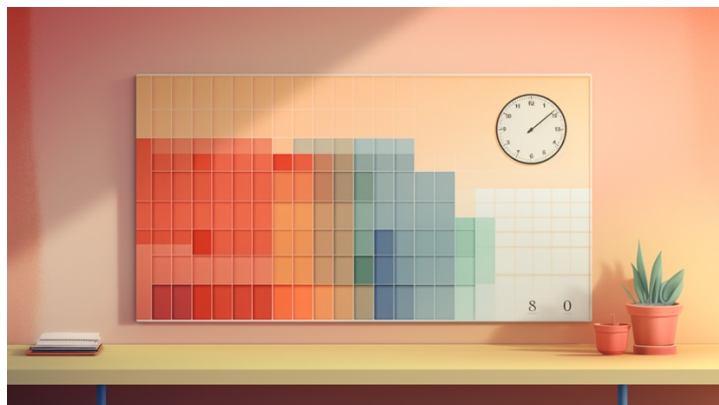- Learn how to manage risks, possible pitfalls, and stakeholder engagement.

Image source: Midjourney

"Leadership Skills for Scientists"

Format: 2 days, online or on-site

Advancing as a scientist, outside as well as inside academia, comes with increased leadership responsibilities. In this interactive workshop *Leadership Skills for Scientists*, you learn the essential leadership skills which are necessary to be successful as a PhD student or Postdoc and to later facilitate a successful transition to a senior position at a research institution or the dream job outside academia.

Effective leadership requires authenticity and starts with the leader itself. Therefore, we initiate the workshop with a series of self-management and self-leadership activities. In team scenarios, emotional intelligence is a key leadership capability. By bringing awareness to this, and through breakout sessions in which we practice changing the perspective, we increase our level of empathy. You further learn about the distinct leadership styles with their advantages and drawbacks, and we discuss how situational leadership can be applied. Clear and precise communication is another vital leadership skill, which we train in supervisor-supervisee role plays. Next to practicing "traditional" top-down leadership, you get acquainted with bottom-up leadership through these activities. Finally, we practice additional leadership and communication skills such as self-presentation, networking, pitching and storytelling techniques. To conclude the workshop, the group reflects on the essential traits of "a good leader".

The specific topics and learning objectives of the workshop are:
- Gain an understanding of "what is leadership?". (Day 1)
- Learn self-leadership with effective prioritization and goal setting.
- Experience leadership dynamics in an interactive student-supervisor role play.
- Practice giving and receiving constructive feedback.
- Identify core leadership competencies and skills.
- Explore different leadership styles and their applications. (Day 2)
- Learn effective team leadership and delegation strategies.
- Understand and practice conflict resolution and negotiation techniques.
- Acquire networking, pitching, and storytelling skills for enhanced communication.

Image source: Midjourney

"What's next? Career Development in or Outside Academia"

Format: 1-1.5 days, online or on-site

In the workshop *What's next? Career Development in or Outside Academia*, you will design a holistic career plan and craft a compelling job application. The aim is to facilitate your transition from PhD or postdoc to senior scientist or the dream job outside academia.

The workshop begins with a guided introspection, where you assess your personal values, interests, and learning objectives. You will also identify your unique strengths, skills, and personality traits. Using this information, you will set short-term and long-term career goals, which are then implemented into a comprehensive career development plan.

We discuss efficient job searching strategies and practice self-presentation, networking, pitching and storytelling techniques specific for career advancement. Lastly, you will apply these skills to create a convincing cover or motivation letter and CV that align with your career aspirations.

The specific topics and learning objectives of the workshop are:
- Self-Assessment: You will identify your strengths, values, interests, skills, and personality traits.
- Career Planning: You will learn how to set achievable short- and long-term goals and integrate them in a career development plan.
- Job Searching Skills: You will learn effective job search strategies, including networking and self-presentation.
- Self-Presentation Skills: You will train storytelling to present yourself in your application documents as well as during networking events
- Application Documents: You will master crafting compelling CVs and cover letters.

"Career Development Strategies: Mastering my Job Interview"

Format: 1-1.5 days, online or on-site

Are you currently working as Postdoc or finalizing your PhD? Do you plan to transition to a position outside of academia, potentially in industry, but you feel unprepared for searching and finding a new position? In this highly interactive workshop, you will learn and practice career development strategies with a focus on leaving a great impression in your job interview.

We will start with a brief introduction to efficient job searching strategies to get to the interview for the job of your dreams. Then we will train general presentation skills to sell yourself in a job interview. Knowing your strengths, but also your weaknesses, will allow you to express yourself authentically. We will further discuss what to expect from job interviews in general and gather a check list of what to do and what not. You will learn how to prepare to answer standard and non-standard questions and we will practice easy-to-use storytelling techniques for these situations. Furthermore, we will discuss how you can ask adequate questions yourself. We will practice all these newly acquired skills in breakout sessions and role plays. Finally, we will discuss methods to cope with anxiety but also possible failures.

The specific topics and learning objectives of the workshop are:
- Self-Assessment: You will start identifying your strengths, values, interests, skills, and personality traits.
- Job Searching Skills: You will learn effective job search strategies, including networking and self-presentation.
- Job Interview Preparation: You will familiarize yourself with a structured preparation for your job interview.
- Self-Presentation Skills: You will train storytelling to present yourself in job interviews and deal with questions.

"Career Development Strategies: From Deciding What's Next to Getting Hired"

Format: 2 days, online or on-site

Are you currently working as Postdoc or finalizing your PhD? Do you plan to transition to your next position in or outside of academia, but feel unprepared for the job hunt? In this highly interactive workshop, you will get a comprehensive set of career development strategies which will help you master this process. You will learn to decide what your next career step should be and how to be effective in the application process including compiling a convincing application and mastering the job interview.

The workshop begins with a self-guided introspection, where participants assess their personal values, interests, and learning objectives. You will also identify your unique strengths, skills, and personality traits. Using this information, you will set short- and long-term career goals, which are then implemented into a comprehensive career development plan.

We discuss efficient job searching strategies including effective self-presentation and networking. Further, we gather the characteristics of a convincing motivation or cover letter as well as of a CV and how to align these with our career aspirations. You will implement these into your application documents and use the power of peer-to-peer feedback to optimize further.

Building on the introspection, we will train general presentation skills to sell yourself in a job interview. We will further discuss what to expect from job interviews in general and compile a list of dos and don'ts. You will learn how to prepare to answer standard and non-standard questions and we will practice easy-to-use storytelling techniques for these situations. Furthermore, we will discuss how you can ask adequate questions yourself. You will practice these newly acquired skills in a simulated job interview in breakout sessions.

The specific topics and learning objectives of the workshop are:
- Self-Assessment: You will identify your strengths, values, interests, skills, and personality traits.
- Career Planning: You will learn how to set achievable short- and long-term goals and integrate them in a career development plan.
- Job Searching Skills: You will learn effective job search strategies, including networking and self-presentation.
- Application Documents: You will master crafting compelling CVs and cover letters.
- Job Interview Preparation: You will familiarize yourself with a structured preparation for your job interview.
- Self-Presentation Skills: You will train storytelling to present yourself in job interviews and deal with questions.

"Good Scientific Practice: How to Remain a Scientist"

Format: 1 day, online or on-site

Following rules of good scientific practice, for example the Guidelines for Safeguarding Good Research Practice by the German Research Foundation (DFG), helps preventing scientific misconduct and gives strategies on how to deal with a possible misconduct, if it occurs.

During this Workshop you will learn about and discuss the following topics: Introduction to Good Scientific Practice, the seven sins of academic behavior, handling data, publication process and authorship, supervision, reproducibility, conflicts of interest, and the ombuds system.

The workshop is highly interactive and includes hands-on activities and discussion rounds. For example, in group discussions you will gain a deeper understanding of good scientific practice and why we need rules for it. Furthermore, you will learn applying the rules for good scientific practice through study cases. Finally, we will invite an ombudsperson, your trusted contact in case of a suspected scientific misconduct, for a short introduction and Q&A session.

The specific topics and learning objectives of the workshop are:
- Gain an understanding of what good scientific practice is and why we need it
- Learn about the seven sins of academic behavior in the natural sciences
- Familiarize yourself with the *Guidelines for Safeguarding Good Research Practice by the German Research Foundation* and similar guidelines by your home institution
- Get to know your local Ombudsperson with Q&A session
- Apply rules for good scientific practice in study cases

Image source: Pixabay

"Breaking Barriers: Mastering Effective Communication and Managing Conflicts"

Format: 2 days, online or on-site

This engaging workshop offers a hands-on approach to enhancing your communication skills with peers and superiors while providing strategies to prevent and manage potential conflicts.

The two workshop days are highly interactive and build on experience-based learning: we train using example scenarios, breakout sessions, group discussions and study cases.

We begin by increasing our level of empathy through analyzing the different layers of communication and separating the distinct sides of a message. Understanding conflicts, which often originate from miscommunication, can be achieved through changing perspectives. Using example scenarios, we sensitize ourselves to possible sources of conflicts. You will learn strategies to prevent conflicts and further how to minimize their negative outcome if they occur. Effective communication can be considered a key leadership skill, and we interactively train communication in both top-down as well as bottom-up leadership scenarios. Here, special emphasis is also put on giving and receiving feedback. As part of conflict resolution strategies, you will learn how to use empathy effectively and we will further practice negotiation techniques, such as the Harvard principles. Additionally, you will learn how mediators and ombuds persons can help with conflicts that spiral out of control. Finally, we apply our newly acquired skills to resolve conflicts through example study cases.

The specific topics and learning objectives of the workshop are:
- Understand the concepts of interests, positions, and needs in communication.
- Learn about values and the four sides of a message.
- Familiarize yourself with Glasl's conflict escalation stages and resolution strategies.
- Learn the basic rules of Nonviolent Communication
- Practice effective communication in student-supervisor scenarios
- Train giving and receiving feedback constructively.
- Explore example cases of conflicts in academia and discuss potential solutions.
- Learn and practice negotiation techniques, including the Harvard model.

Image source: Midjourney