



SCIENTISTS NEED MORE

Scientific Communication

English or German | 2 days

Trainer: Dr. habil. Alexander Schiller



Venue:

Center for Materials Research (ZfM/LaMa)
of Justus Liebig University Gießen
IFZ Building
Heinrich-Buff-Ring 26, 35392 Gießen
Seminar Room B 202

Date:

December 16, and
December 17, 2019
9:00 – 17:00

Target group:

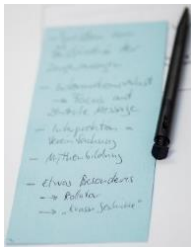
max. 15 Ph.D. students or Postdocs from the research groups organized in the ZfM/LaMa

Setting: The workshop includes two full days (8 hours per day) with one trainer

Registration: via e-mail to Martin Güngerich (martin.guengerich@lama.uni-giessen.de)

PD Dr. Alexander Schiller, PD Dr. Daniel Mertens





Science is mostly production of high quality data and conclusions. However, presentation of data is arguably of similar importance: after generation of results, you want to convey the information to your fellow scientists, be it in the form of talks and posters at conferences or in manuscript for great publications. Presenting to reviewers is of outstanding importance to receive the grant.

AIM – To provide Ph.D. students with an opportunity to build their understanding, skills and confidence in oral and poster presentations. This will enhance their overall effectiveness as they pursue their research studies and maximize success of their future careers. Take home messages are given as “Four Laws of ...”.

Presentation

- ❖ Adapt to the audience
- ❖ Maximize signal-to-noise ratio
- ❖ Use effective redundancy on multiple channels
- ❖ Tell a story

Brilliant talks

- ❖ Answer the audience most pressing question, “what's in it for me?”
- ❖ Don't think of it as a presentation. Think and plan on it being a facilitation of learning.
- ❖ Start with the end in mind. What do you want them to leave with.
- ❖ Tell them what you are going to tell them. Tell them. Tell them what you told them.

METHOD – A balanced and structured program of interactive lectures, challenging activities outside of the “comfort zone” and review sessions will provide a variety of first-hand learning situations allowing participants to identify and take away relevant lessons (e.g. with Practical Advice Cards). Facilitators are habilitated scientists and successful group leaders in the natural sciences. They are “Certified Facilitators” with the concept of www.thiagi.com.



MODULES

BASIC TOOLS IN COMMUNICATION – Here we will focus on psychological backgrounds and theory of presentations. We will identify the connection between behavior and emotions in the context of our role in presentation. Three main topics will be addressed and reflected in plenaries, activities and role plays: nonverbal communication (body language), paraverbal communication (voice), verbal communication (language and content). In addition, we will

introduce the “**4 laws of presentation**”: 1. Adapt to the audience, 2. Maximize signal-to-noise ratio, 3. Use effective redundancy on multiple channels, 4. Tell a story

KEY MESSAGE – Arguably, the most important part of communication, be it in publications, talks or posters, is identifying the **key message**. While this may be obvious, it is striking how frequently the key message is not well defined. Even though we scientists believe that we are capable of communicating effectively, hands-on experience of the participants shows how fast information can be lost or even falsified.

DATA VISUALIZATION – As a transition to oral and poster presentation, we will interactively optimize visualization of data of participants. This discussion will be initiated by a brief lecture on how much impact the proper presentation of numbers has on our peers: **processing of numbers, types of graphs, arrangement of sample order**, use of **colours, visualization** of standard deviation are key in conveying the message hidden in our data: unfortunately, the data does not speak for itself. This will lead into a discussion of examples of sets of data from participants, whose ideal presentation will be discussed in the plenary under our moderation.

ORAL AND POSTER PRESENTATION – One of the most intense means to convey scientific data and conclusions is the oral / poster presentation. Building on their previously established skills, the participants check whether in their own presentations the **key message and storyline** is sufficiently well established, data is **visualized most effectively** and **text and slide structure** is good. From this platform of expertise, we will then collectively optimize the nonverbal communication that is estimated to be up to 70% of the information we convey!

SCIENTIFIC SMALL-TALK AND NETWORKING – Networking is of outstanding importance for scientists. In order to get to “intense-talk” with a possible collaborator, colleague, principal investigator or reviewer small-talk should be used as a first start. However, scientists do not like small-talk because they think it is meaningless. This is a trap; small-talk means focusing on relationship which can lead then to successful intense-talk. This module will teach scientists powerful small-talk techniques leading to strong connections in a resilient scientific network.

At the end of the course, the participants will dispose of a personal toolbox that will allow them to communicate efficiently as scientists with reviewers, a skill that is key to success!