SCHILLER & MERTENS

SCIENTISTS NEED MORE

Seminar
"Creativity in Science"

English - online

Trainer: Dr. habil. Alexander Schiller
Priv.-Doz. at Friedrich-Schiller-Universität Jena
Member of the „Berufsverband für Trainer, Berater und Coaches"
www.schiller-chemistry.de

Venue:
Center for Materials Research (ZfM/LaMa)
of Justus Liebig University Gießen

Date:
September 14, and
September 15, 2020
9:00 – 15:00

Target group:
max. 15 Ph.D. Students or Postdocs from the research groups organized in the ZfM/LaMa

Setting: This workshop takes place as an online workshop using ZOOM. It includes two full days with one trainer. Registered participants will be invited by the trainer.

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

PD Dr. Alexander Schiller
PD Dr. Daniel Mertens

BDVT Der Berufsverband für Training, Beratung und Coaching

„As scientists we focus on the results – as trainers we focus on the process!"

www.schillermertens.de

OBJECTIVES AND METHOD

Our thinking, left to itself, is in danger to be biased, distorted, partial, uninformed, or downright prejudiced. Yet, the quality of scientific evidence and that of what we produce, make, or build depends precisely on the quality of critical thinking. Critical thinking encompasses six vital skills: problem solving, analysis, creative thinking, interpretation, evaluation, and reasoning.

OBJECTIVES – To provide Ph.D. students and postdocs with an opportunity to build their understanding, skills and confidence in scientific creativity and critical thinking. Take home messages are given as "Four Laws of …".

Creativity

- Beware of assumptions
- Exploit the driving force of boredom
- Side projects and hobbies help to de- and re-focus
- Creativity arises from limitation and subtraction

Self-awareness

- Know what you are feeling
- Anticipate how feelings will affect your behavior
- Decide on appropriate responses
- Act with attention to individuals

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.

SCHEDULE

DAY 1 Creativity	DAY 2 Critical Thinking
Interactive lecture: Creativity for Scientists Creativity tests Creativity techniques and exercises Creativity roles Creativity threats Collaboration in science, part 1	Critical thinking: convergent, divergent, lateral thinking, reasoning Observation errors in science: confirmation bias, halo, primacy, recency, … Flow and recharge Collaboration in science, part 2