Material Culture in the History of Physics

VI. International Seminar funded by the Wilhelm and Else Heraeus Foundation

Deutsches Museum Munich, 4-8 March 2024

What is 'material culture'?

Historians usually work in archives with historical documents trying to reconstruct theories or the social and cultural context of physics. However, not everything about the history of physics is recorded in textual form: objects and architecture contain much information about the production of scientific knowledge. Therefore, we try to gain new insights into the history of physics by analysing scientific instruments. Material aspects of science in the historical narrative can greatly enrich our knowledge of how science works. This seminar introduces standard approaches to the analysis of unknown objects as well as practical work at the Deutsches Museum.

Structure and Content of the Seminar

The seminar consists of three parts: a theoretical part, a practical part, and individual follow-up work.

Theoretical Section (Workload 130h)

In this first section, participants will explore the theoretical concepts of instrument studies that form the basis of our seminar: The Winterthur Model, the biography of objects, and experimental history of physics. Working in groups, participants will study one theoretical approach and prepare presentations on their findings. These presentations will be discussed on the first day of the practical section at the Deutsches Museum in Munich.

Practical Section (Workload 40h)

The practical part of the seminar requires a one-week stay at the Deutsches Museum in Munich. During this week, we will work intensively with various material objects from the holdings of the Deutsches Museum. The sessions will also include activities that demonstrate the principles and value of experimental history of science as well as visits to the restoration workshop of the Deutsches Museum. The exhibitions of the Museum will be examined and discussed in terms of different display concepts. At the end of the seminar, participants will research an unknown object using the Winterthur model, and then will write a biography of the object. This research will form the basis for the essay that serves as examination.

Follow-Up Section (Workload 130h)

In the follow-up to the seminar, participants reflect on the experiences they have made during the seminar. They write a biography of one of the objects they studied in Munich.

Details

- Who can apply? Masters and PhD students in the following fields: History of Science, Physics, Physics Education, as well as trainees in science museums. A strong historical interest is a prerequisite for consideration.
- Location: The seminar includes an online component at the beginning and an attendance section at the Deutsches Museum in Munich.
- Dates: The online section starts on 15th January 2024, and the attendance section in Munich extends five days from 4 to 8 March 2024 (arrival on Sunday 3 March 2024).
- ECTS and Workload: The workload is 300hours, which means that participants will receive 10 ECTS for successful participation. They will get a certificate, which allows them to transfer the credits to their home university.
- Module examination: The module examination is an individual essay of 25,000 – 30,000 characters. The essay is due on 15th July 2024.
- How to apply? Please send a short CV (up to one page) and a letter explaining why you want to participate in the workshop (up to one page) as one PDF file to julia.bloemer@uni-flensburg.de before **9th December 2023.**
- Funding: The support from the Heraeus Foundation covers accommodation (five nights) at the Kerschensteiner Kolleg in Munich and travel expenses of up to €80 for participants from Germany, up to €300 for participants from Europe, and up to €1000 for participants from overseas.

Lecturers

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