

*liv*MatS as Part of and Reaction to the Anthropocene

Today's artificial materials have largely static properties. In contrast, living nature has the greatest possible flexibility. The living, adaptive, energy-autonomous materials systems to be developed by *liv*MatS are designed to bring together the best of both worlds, the biological and the technological: from the biological world, they derive the abilities to adapt to changes in the environment, to extract the necessary energy from this environment, as well as that of mobility. At the same time, the materials systems to be developed go beyond biology insofar as they do not use biological cells and do not rely on moderate temperatures or the availability of water.

According to Paul Crutzen and Eugene Stoermer's 2000 diagnosis of a new geological age, the Anthropocene, man possesses technologies that are partly equivalent to the workings of nature and partly surpass it. Yet beyond this, the diagnosis claims that human beings, with their artefacts, also irreversibly inscribe themselves in nature or, more precisely, in the Earth's geological layers. Here, one can observe an intertwining of nature and man, of the natural and the man-made, which involves complex interactions between the two spheres and thus an almost undifferentiated unity of man and nature.

The development of life-like materials systems in *liv*MatS can on the one hand be regarded as a consequence and expression of technical progress in the Anthropocene insofar as the natural has already been surpassed and a union of the artificial and the natural has been achieved. On the other hand, the biomorphic nature of the technology in *liv*MatS can already be regarded as a reaction to the technomorphic transformation of nature in the Anthropocene: the life-like materials systems can be understood as 'actors' reacting to the Anthropocene and the problems that accompany it, insofar as they seek to provide answers to questions of sustainability issues and environmental ethics. In the course of the workshop, core topics of *liv*MatS will be presented and discussed controversially while considering the present as Anthropocene.

Workshop directors:
Prof. Dr. Lore Hühn and Prof. Dr. Andrea Kiesel

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Workshop August 1st and 2nd 2019

Cluster of Excellence
“living Materials Systems”
Area D “Societal Challenges”

Freiburg Center for Interactive
Materials and Bioinspired Technologies
(FIT), University of Freiburg
Georges-Köhler-Allee 105,
Ground Floor, Seminar Room



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Program

Thursday, August 1st, 2019

The Anthropocene in the context of current and historical perspectives

- 9:30-10:00 **Prof. Dr. Jürgen Rühle (Freiburg)**
Introduction
- 10:00-11:00 **Prof. Dr. Thomas Speck (Freiburg)**
Bio-inspired motile materials systems: blurring boundaries between living and life-like systems in the Anthropocene?
- 11:00-12:00 **Prof. Dr. Rainer Griebhammer (Freiburg)**
Dipl.-Ing. Martin Möller (Freiburg)
Anforderungen für Technikbewertung im Antropozän
- 12:00-13:30 Lunch Break
- 13:30-14:30 **Prof. Dr. Silvia Salardi (Mailand)**
What role can the law play in 'navigating the Anthropocene'? Some theoretical-legal outlines
- 14:30-15:30 **Prof. Dr. Jason Wirth (Seattle)**
Who is the Anthropos in the Anthropocene?
- 15:30-16:00 Coffee Break
- 16:00-17:00 **Dr. Jesper Lundsryd Rasmussen (Odense)**
Eine Frage des Timings? Eine Herausforderung für das Antropozän im Ausgang von Henrik Steffens' Naturgeschichte der Erde
- 17:00-18:00 **Prof. Dr. Henrieke Stahl (Trier)**
Weltoffenheit des Subjekts in der Gegenwartslyrik als Antwort auf die Herausforderung des Antropozäns
- 20:00 Joint dinner at Oberkirch Restaurant

Friday, August 2nd, 2019

The Anthropocene and livMatS

- 9:30-10:30 **Prof. Dr. Lore Hühn (Freiburg)**
livMatS and the philosophy of nature in the present age
- 10:30-11:30 **Dr. Philipp Höfele (Freiburg)**
The interweaving of nature and technology in the modern age. *livMats* as an actor in the Anthropocene?
- 11:30-12:30 **Dr. Olga Speck (Freiburg)**
Lessons learned from Nature: Damage control in biological materials systems
- 12:30-13:30 Lunch Break
- 13:30-14:30 **Prof. Dr. Andrea Kiesel (Freiburg)**
Predicting psychological acceptance for not (yet) existing living materials systems
- 14:30-15:30 **Prof. Dr. Andreas Walther (Freiburg)**
What is life in the materials system world?
- 15:30-16:00 Coffee Break
- 16:00-17:00 **Prof. Dr. Christoph Eberl (Freiburg)**
From mechanical beam ensembles to simple systems made from programmable materials with life-like behavior
- 17:00-18:00 **Prof. Dr. Harald Schwaetzer (Trier)**
„Natur! Wir sind von ihr umgeben und umschlungen“ – zur Natürlichkeit des Antropozäns
