129th MSS-Seminar
Wednesday, September 18th,
15:30 hrs, Seminarraum (00.156),
Cauerstraße 3, Erlangen.

Programming Matter:

Designed Granular Materials for Architectural Construction

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Granular materials, in which the individual particles are defined in their geometry and their materiality, can be programmed to have specific novel characteristics. If granular materials consisting of such custom-designed particles are deployed, they can form self-supporting architectural structures and even spatial enclosures while remaining fully reconfigurable and reusable. The lecture will discuss these 'Granular Architectures' with respect to their innovations in the architectural discourse and introduce two full-scale architectural implementations of theses new construction materials.

Karola Dierichs is a research associate at the Institute for Computational Design and Construction (ICD) within the Cluster of Excellence Integrative Computational Design and Construction for Architecture. At the Institute for Computational Design and Construction (ICD) Karola Dierichs is conducting research on 'Granular Architectures', where she is developing designed granular materials in architecture. She has been engaged in transdisciplinary research collaborating nationally and internationally, among others with the Institute for Multiscale Simulation (MSS), Erlangen-Nürnberg, Germany and the Behringer Lab, Duke University, USA. She has published numerous articles in her field and lectured both within Europe and the USA. Her research on designed granular materials has been recognized with the „Holcim Acknowledgement Award Europe 2014“ and the „materialPREIS 2019 Acknowledgement Study and Vision“. Selected works have been included in the traveling exhibition “Hello, Robot.” starting 2017 at the Vitra Design Museum/Germany and the opening exhibition “Minding the Digital” of the Design Society in Shenzen/China.