

A PhD position on mechanical properties of granular metamaterials

is available at the

Institute for Multiscale Simulation
at the **Friedrich-Alexander-University Erlangen-Nürnberg**
www.mss.cbi.fau.de

environment At the MSS, we investigate the multiscale physics of particulate systems. The MSS hosts an interdisciplinary research team with a unique combination of scientists working numerically, theoretically and experimentally.

topic The mechanical properties of granular packings are mainly defined by the local interactions between the individual particles and, thus, by the shape of the particles. Significant deviations from spherical and convex particle shapes can induce so far unexplored properties of the granular packings and suggest a new family of granular material whose mechanical properties can be tuned by tailoring the shape of the constituting particles. The vision of this project is to derive a relation between the macroscopic mechanical properties of a granular packing and the geometry of the particles constituting the granulate. The project will be in close collaboration with Dr. Jonathan Barés (U Montpellier-CNRS) and Prof. Karola Dierichs (HU Berlin).

profile You are highly motivated and you are deeply committed to research. You are able to work independently and as part of a team. You are equipped with an analytical and critical mind-set and you communicate clearly and concisely.

qualification

- master's degree in physics or related
- background in computational physics
- programming skills (e.g. C++, Python, Matlab)
- experience in particle simulations (e.g. DEM)

application

- one single pdf including your research statement, your CV and, if applicable, a list of your publications
- Please send your application to
Prof. Thorsten Pöschel
mss-recruitment@fau.de
applications will be considered until
the position is filled.

