

A PhD position on homogenization of granular pipe flow

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 A fundamental problem in granular pipe flows is that they are intrinsically unstable, with the material transport being characterized by large variations in solid fraction (density waves) along the pipe. These waves induce potentially destructive pressure transients on the pipe's inner-wall and provide the mechanism responsible for the intermittent behavior of the flow. In this project we will apply particle-based simulations to design rules for combating the cause of flow intermittency that is the triggering mechanism of density waves.

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)
- and particle-fluid coupling is a plus

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.