



Institut of Process Engineering Chair of Mechanical Process Engineering

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Kian Karimian studied Engineering Science (Physikalische Ingenieurwissenschaften) at the Technical University Berlin and graduated as Master of Science in 2020. His studies were mainly focused on fluid and solid mechanics as well as numerical simulation methods. Besides, he worked as a student research assistant at the Fraunhofer Institute for Production Systems and Design Technology and carried out experimental and modeling work in the field of electrical discharge machining. After his graduation, Kian joined the Institute of Solid Mechanics at the Technical University Braunschweig as a doctoral research assistant. During this time, he researched the micromechanical characterization and three-dimensional modeling of oocytes and gave exercises on Continuum Mechanics, Mechanics of Materials and Scientific Programming.

In 2022, Kian joined the Emmy-Noether Group for Dispersed Multiphase Flows at the Chair of Mechanical Process Engineering Magdeburg. His work is dedicated towards modeling the cultivation of human mesenchymal stem cells on microcarriers dispersed in a stirred tank reactor, elucidating the small-scale interaction between the prevailing flow field and the dispersion, proliferation and metabolic behavior of stem cells.

Since 2022

Research Assistant / PhD student

Emmy Noether Group for Dispersed Multiphase Flows

Otto-von-Guericke University Magdeburg

2020 – 2022

Research Assistant / PhD student

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Key words

- ▶ Population balances
- ▶ Large eddy simulation
- ▶ Stirred-tank bioreactors
- ▶ Dense particulate flows
- ▶ Stem cell kinetics