Meng Liu

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PROFILE

A curious and motivated researcher who interested in particle systems, i.e., microscale heat transfer in molecular system, dynamic behaviours in granular flow.

Current research interests are to model segregation and fingering instability in dense granular flow, and pursue better understandings of the relevant physical mechanism.

EDUCATION

Dr. Sc.	ETH, Zürich	Expected Sep.2022	Zürich, Switzerland
M. Sc.	Chinese Academy of Sciences	2015	Beijing, China
B. Sc.	North China Electric Power University	2011	Beijing, China

SKILLS

Molecular dynamic simulation(MD), Computational fluid dynamics (CFD), discrete element modelling (DEM), solid-gas flow simulation (CFD-DEM), Image analysis. Programming in Python, C++, Fortran. I am an open and fast learner of potential tools that required in research.

SUPERVISED THESIS

Mehrdad Kiani (now PhD student, EPFL)	École polytechnique fédérale de Lausanne (EPFL), Switzerland	
	Master thesis (2019)	Title : Segregation and Instabilities in Agitated Granular systems
Louis Girardin (now PhD student, UCL) (co-supervisor with Jens Metzger)	Polytech Marseille – Mécanique Energétique, France	
	Master thesis (2020)	Title: Simulation of A Granular Bubble Rising
Gisel Yannik (co-supervisor with Nicholas Conzelmann)	ETH Zürich, Switzerland	
	Bachelor thesis (2020)	Title: Packing Morphology of Sphericalcylinder mixtures

SELECTED PUBLICATIONS

M. Liu, et al., Fingering instabilities in binary granular systems, *Physical Review E* (under revision, 2022)

M. Liu, et al. Lift force acting on an intruder in dense, granular shear flows, *Physical Review E* **104**, 064903 (2022)

M. Kiani*, M. Liu*, CR. Müller, Accurate buoyancy and drag force models to predict particle segregation in vibrofluidized beds, *Physical Review E* **103,** 062903 (2021) (*contributed equally)

M. Liu, et al., Study on the thermal resistance in secondary particles chain of silica aerogel by molecular dynamics simulations, *Journal of Applied Physics* **116**, 093503 (2014)