Curriculum Vitae

Personal Data

Title	Prof. Dr.-Ing. habil.
First name	Michael
Name	Schlüter
Current position	Full Professor (W3), head of institute, permanent position
Current institution(s)/site(s), country	Institute of Multiphase Flows, School of Process Engineering, Hamburg University of Technology, Germany
Identifiers/ORCID	https://orcid.org/0000-0001-5969-2150

Qualifications and Career

Stages	**Periods and Details**
Degree programme	Mechanical and Process Engineering, 1988-1994, University of Bremen, Germany
Doctorate	21.06.2002, Prof. Dr.-Ing. N. Räbiger, Environmental Process Engineering, Institute of Environmental Process Engineering, University of Bremen, Germany
Stages of academic/professional career	since 2009: Professorship "Fluid Mechanics for Multiphase Systems", Hamburg University of Technology, Germany 2010: Habilitation, University of Bremen, Germany, Mentor: Prof. Dr.-Ing. N. Räbiger, Title "Skalen-übergreifende Transportprozesse in Mehrphasen-strömungen " 2008: Fellow of the German-American Frontiers of Engineering Symposium 2008 (Alexander von Humboldt Foundation) 2000-2009: Head of the research group "Multiphase flows" and postdoctoral researcher, Institute of Environmental Process Engineering, University of Bremen, Germany 2002: Doctorate, University of Bremen, Germany, supervisor Prof. Dr.-Ing. N. Räbiger, Title: " Blasenbewegung in praxisrelevanten Zweiphasenströmungen ".

Engagement in the Research System

2014-2020 Coordinator of the DFG Priority Programme 1740 “Reactive Bubble Flows”

Since 2021 Member of DFG Review Board 404 “Fluid Mechanics, Technical Thermodynamics and Thermodynamics and Thermal Energy Technology”

since 2021 Member of the interdisciplinary DFG Commission on Pandemic Research

since 2017: Chair of the Working Party "Multiphase Fluid Flow" of the European Federation of Chemical Engineers (EFCE)

since 2010: Elected member of the ProcessNet Technical Committee “Multiphase Fluid Flow”

since 2009: Member of the Scientific Committee of the “International Conference on Multiphase Flows”

since 2006: Chair of the International Symposium on Multiscale Multiphase Process Engineering (formerly Japanese/German Bubble Column Symposium)

Supervision of Researchers in Early Career Phases

A total of 14 supervised doctoral theses. In the last 5 years:

2022: Dr.-Ing. Jürgen Fitschen (5 years) – jetzt Boehringer Ingelheim, Biberach
2021: Dr.-Ing. Simon Matthes (5 years) – jetzt Pfannenberg, Hamburg
2021: Dr.-Ing. Sven Kastens (5 years) – jetzt Aurubis, Hamburg
2020: Dr.-Ing. Simeon Pesch (5 years) – jetzt Ohly, Hamburg
2020: Dr. -Ing. Nicolai Szeliga (5 years) – jetzt Siemens, Frankfurt
2019: Dr.-Ing. Annika Rosseburg (5 years) – jetzt Ohly, Hamburg
2018: Dr.-Ing. Sophie Rüttinger (5 years) – jetzt BASF, Ludwigshafen
2018: Dr.-Ing. Jens Timmermann (5 years)

Scientific Results

Category A

1. Frey T.; Kexel F.; Dittmer K.R.; Bohne S.; Hoffmann M.; Trieu H.K.; **Schlüter M.** (2022). A Novel Approach for Visualizing Mixing Phenomena of Reactive Liquid-Liquid Flows in Milli- and Micro-Channels. Frontiers in Chemical Engineering. 4. 874019, https://doi.org/10.3389/fceng.2022.874019.
2. Maly, M.; Schaper, S.; Kuwertz, R.; Hoffmann, M.; Heck, J.; **Schlüter, M.** (2022). Scale-Up Strategies of Jet Loop Reactors for the Intensification of Mass Transfer Limited Reactions. Processes. 10. (8), https://doi.org/10.3390/pr10081531.
3. **Schlüter, M.**; Herres-Pawlis, S.; Nieken, U.; Tuttlies, U.; Bothe, D. (2021). Small-Scale Phenomena in Reactive Bubbly Flows: Experiments, Numerical Modeling, and Applications. Annual Review of Chemical and Biomolecular Engineering. 12 625-643, https://doi.org/10.1146/annurev-chembioeng-092220-100517.

4. Matthes,, S.; Merbach, T.; Fitschen, J.; Hoffmann, M.; **Schlüter, M.** (2021). Influence of counterdiffusion effects on mass transfer coefficients in stirred tank reactors. Chemical Engineering Journal Advances 8 100180, https://doi.org/10.1016/j.ceja.2021.100180
5. Frey, T.; Schlütemann, R.; Schwarz, S.; Biessey, P.; Hoffmann, M.; Grünewald, M.; **Schlüter, M.** (2021). CFD analysis of asymmetric mixing at different inlet configurations of a split-and-recombine micro mixer. *J Flow Chem*. https://doi.org/10.1007/s41981-021-00178-x
6. Fitschen, J.; Hofmann, S.; Wutz, J.; Kameke, A. v.; Hoffmann M.; Wucherpfennig T.; **Schlüter, M.** (2021). Novel Evaluation Method to Determine the Local Mixing Time Distribution in Stirred Tank Reactors. Chemical Engineering Science: X. 10, 100098 https://doi.org/ 10.15480/882.3551
7. Llamas, C.G.; Spille, C.; Kastens, S.; Paz, D.G.; **Schlüter, M**.; von Kameke, A. (2020). Potential of Lagrangian Analysis Methods in the Study of Chemical Reactors. Chem. Ing. Tech. 95 (5), 540-553. https://doi.org/10.1002/cite.201900147
8. Weiner, A.; Timmermann, J.; Pesci, C.; Grewe, J.; Hoffmann, M.; **Schlüter, M**.; Bothe, D. (2019). Experimental and numerical investigation of reactive species transport around a small rising bubble. Chemical Engineering Science: X 1, 100007. https://doi.org/10.1016/j.cesx.2019.100007
9. Timmermann, J.; Hoffmann, M.; **Schlüter, M**. (2016). Influence of bubble bouncing on mass transfer and chemical reaction, Chemical Engineering & Technology, 39(10), pp. 1955-1962, https://doi.org/10.1002/ceat.201600299
10. Kastens, S.; Hosoda, S.; **Schlüter, M**.; Tomiyama, A. (2015). Mass Transfer from Single Taylor Bubbles in Mini Channels, Chemical Engineering & Technology, 38(11), special Issue: "Multiscale Multiphase Process Engineering" (Editorial: Schlüter, M.; Bothe, D.; Terasaka, K.), pp. 1925-1932.

Category B

1. Kutschera, D.; Riener, F.-X.; Schlüter M.: Process for preparing chlorinated carbonyl compounds in jet loop reactors. United Stated Patent Application Publication, Pub. No.: US 2008/0114196 A1, Mai 2008.