



Current position

Staff Scientist at the Institute of Fluid Dynamics, HZDR (since 2006)

Previous position

Research Assistant at the Institute of Safety Research, HZDR (1995-2006)

Scientific degree

Dr.-Ing. (PhD) in Mechanical Engineering Technische Universität Dresden (2006)

Recent research topics

Liquid metal batteries, magnetohydrodynamics, electromagnetic flow control, inorganic electrolysis, optical flow measurement

Publications (5 most important)

- D. H. Kelley, **T. Weier**, Fluid Mechanics of Liquid Metal Batteries, *Appl. Mech. Rev.* 70, 020801 (2018) [doi:10.1115/1.4038699](https://doi.org/10.1115/1.4038699)
- **G. M. Horstmann**, **N. Weber**, **T. Weier**, Coupling and stability of interfacial waves in liquid metal batteries *J. Fluid Mech.* 845, 1 (2018) [doi:10.1017/jfm.2018.223](https://doi.org/10.1017/jfm.2018.223)
- **T. Weier**, D. Baczyzmalski, J. Massing, **S. Landgraf**, C. Cierpka, The effect of a Lorentz-force-driven rotating flow on the detachment of gas bubbles from the electrode surface, *Int. J. Hydrog. Energy* 42, 20923 (2017) [doi:10.1016/j.ijhydene.2017.07.034](https://doi.org/10.1016/j.ijhydene.2017.07.034)
- **N. Weber**, **P. Beckstein**, W. Herreman, **G. M. Horstmann**, C. Nore et al., Sloshing instability and electrolyte layer rupture in liquid metal batteries, *Phys. Fluids* 29, 054101 (2017) [doi:10.1063/1.4982900](https://doi.org/10.1063/1.4982900)
- **N. Weber**, **V. Galindo**, **F. Stefani**, **T. Weier**, Current-driven flow instabilities in large-scale liquid metal batteries, and how to tame them, *J. Power Sources* 265, 166 (2014) [doi:10.1016/j.jpowsour.2014.03.055](https://doi.org/10.1016/j.jpowsour.2014.03.055)