

**Current positions**

Head of the Division (acting) “Thermal Process Engineering” at Institute of Engineering Thermodynamics, DLR (since 2018)

Head of Research Area “Thermal Power Plant Components” at Institute of Engineering Thermodynamics, DLR (since 2006)

**Previous position**

Head of Research Area “Thermal Power Plant Components” at Institute of Engineering Thermodynamics, DLR (2000-2002)

Research scientist, DLR-Institute of Technical Thermodynamics, Stuttgart, Germany (since 1991)

**Scientific degree**

Dr.-Ing. (PhD) in Mechanical Engineering, University of Stuttgart (2002)

**Recent research topics**

High-temperature thermal energy storage, Adiabatic compressed air energy storage (CAES), Thermal power plants, Numerical modeling of energy processes

**Awards, honors, memberships**

ETIP-SNET Working Group 2 “Storage technologies and sector interfaces”  
VDI (Association of German Engineers) expert committee “Energy Storage”  
ProcessNet Working Group “Thermal Energy Storage”

**Publications/Patents (5 most important)**

- **P. Bartsch, S. Zunft**, Granular flow around the horizontal tubes of a particle heat exchanger: DEM-simulation and experimental validation, *Solar Energy* (2019) [doi:10.1016/j.solener.2019.01.086](https://doi.org/10.1016/j.solener.2019.01.086)
- **P. Bartsch, S. Zunft**, Numerical investigation of dense granular flow around horizontal tubes: Qualification of CFD model with validated DEM model. *Solar Energy* (2019). [doi:10.1016/j.solener.2019.01.087](https://doi.org/10.1016/j.solener.2019.01.087)
- **J. Haunstetter, V. Dreißigacker, S. Zunft**, Ceramic high temperature plate fin heat exchanger: Experimental investigation under high temperatures and pressures, *Applied Thermal Engineering* (2019), 151, Seiten 364-372. [doi:10.1016/j.applthermaleng.2019.02.015](https://doi.org/10.1016/j.applthermaleng.2019.02.015)
- **T. Baumann, S. Zunft**, Properties of Granular Materials as Heat Transfer and Storage Medium in CSP application, *Solar Energy Materials and Solar Cells* 143 (2015) 38-47, [doi:10.1016/j.solmat.2015.06.037](https://doi.org/10.1016/j.solmat.2015.06.037)
- M. Finkenrath, **S. Zunft**, et al., System and method for reducing moisture in a compressed air energy storage system, (Application granted 2015) *European Patent* [EP2494170B](https://patent.google.com/patent/EP2494170B), *International Patent* WO: 2011059594