

**Current positions**

Responsible for the research field Vacuum Hydraulics at KIT/ITEP, Head of the mercury laboratory Karlsruhe (HgLab), Subproject Leader of the VACUUM part of the EUROfusion WP-TFV (Tritium, Matter injection and Vacuum) and the DEMO Fuel Cycle activity of the EUROfusion JET3 project

**Previous positions**

Ph.D. student at the chemical engineering faculty at KIT

**Scientific degree**

Dr.-Ing. (Ph.D.) in Process Engineering (2016)

**Recent research topics**

Fuel cycle and tritium technology, vacuum hydraulics, fuel cycle concepts for fusion power plants, isotope separation, mercury chemistry

**Awards, honors, memberships**

Recipient of the 1<sup>st</sup> European Prize for Innovation in Fusion Research, Vice President of the German Vacuum Society (DVG), Head of the vacuum section of the German Physical Society (DPG), Fellow of the Association of German Engineers (VDI)

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

- **T. Giegerich, C. Day**, Patent Nr. 3061098 in DE/FR/GB on a process for continuous reprocessing of fusion reactor exhaust gases
- **T. Giegerich et al.**, Advanced design of the DEMO relevant liquid ring pump train for JET DTE2, *Fusion Eng. Des.* 124 pp. 809-813 (2016) [doi:10.1016/j.fusengdes.2016.02.098](https://doi.org/10.1016/j.fusengdes.2016.02.098)
- **T. Giegerich, C. Day**, The KALPUREX-Process – A new vacuum pumping process for exhaust gases in fusion power plants, *Fusion Eng. Des.* 89 pp. 476-1481 (2014) [doi:10.1016/j.fusengdes.2014.03.082](https://doi.org/10.1016/j.fusengdes.2014.03.082)
- **C. Day, T. Giegerich**, Development of advanced exhaust pumping technology for a DT fusion power plant, *IEEE Trans. Plasma Sci.* 42 pp. 1058-1071 (2014) [doi:10.1109/TPS.2014.2307435](https://doi.org/10.1109/TPS.2014.2307435)
- **C. Day, T. Giegerich**, The Direct Internal Recycling concept to simplify the fuel cycle of a fusion power plant, *Fusion Eng. Des.* 88 pp. 616-620 (2013) [doi:10.1016/j.fusengdes.2013.05.026](https://doi.org/10.1016/j.fusengdes.2013.05.026)