



Current positions

Director and Division Head “Stellarator Theory”, MPI for Plasma Physics, Greifswald (since 2007)
Scientific Member of the Max Planck Society (since 2006)
Professor of Theoretical Physics, University of Greifswald (since 2008)

Previous positions

Postdoctoral Researcher, Massachusetts Institute of Technology (1994-1996)
Research Scientist, UKAEA Culham Science Centre (1996-2006)

Scientific degrees

PhD in Plasma Physics, Chalmers University of Technology (1994)

Recent research topics

Most areas in the theory of magnetic plasma confinement, including kinetic transport theory, microinstabilities, turbulence, magnetohydrodynamics, general plasma physics

Awards, honors, memberships

Visiting Research Fellow, Merton College, Oxford University (2016)

Visiting Professor, Princeton University (2019)

Publications/Patents (5 most important)

- **P. Helander**, D. J. Sigmar, Collisional transport in magnetized plasmas, Cambridge University Press, 2002 (paperback edition 2005).
- **P. Helander**, Microstability of magnetically confined electron-positron plasmas, *Phys. Rev. Lett.*, 113, 135003 (2014) [doi:10.1103/PhysRevLett.113.135003](https://doi.org/10.1103/PhysRevLett.113.135003)
- **P. Helander**, Theory of plasma confinement in non-axisymmetric magnetic fields, *Rep. Prog. Phys.*, 77, 087001 (2014) [doi:10.1088/0034-4885/77/8/087001](https://doi.org/10.1088/0034-4885/77/8/087001)
- **P. Helander**, S. L. Newton, **A. Mollén** and **H. M. Smith**, Impurity transport in a mixed-collisionality stellarator plasma, *Phys. Rev. Lett.*, 118, 155002 (2017) [doi:10.1103/PhysRevLett.118.155002](https://doi.org/10.1103/PhysRevLett.118.155002)
- **A. Dinklage**, **C. D. Beidler**, **P. Helander**, **G. Fuchert**, **H. Maaßberg**, et al, Magnetic configuration effects on the Wendelstein 7-X stellarator, *Nature Phys.* 14, 855 (2018) [doi:10.1038/s41567-018-0141-9](https://doi.org/10.1038/s41567-018-0141-9)