

Dr. Gabriel G. Plunk



Current position

Staff Scientist, MPI for Plasma Physics, Greifswald

Previous positions (two selected)

Max-Planck/Princeton Fellow (2012-2014)

Post-doctoral Researcher, University of Maryland, College Park, MD (2009-2012)

Scientific degrees

B.A. in Physics, Mathematics, College Scholar, Cornell University (2003)

PhD in Physics, University of California, Los Angeles, CA (2009)

Recent research topics

Instabilities and turbulence in stellarators, constructing optimized stellarator equilibria without numerical optimization

Awards, honors, memberships

Postdoctoral Scholarship, Wolfgang Pauli Institute (2008)

GAANN Fellowship, UCLA (2003)

Physics Bowl Champion, Cornell University (2000)

Publications (5 most important)

- T. Tatsuno, W. Dorland, A. A. Schekochihin, **G. G. Plunk**, M. Barnes, et al., Nonlinear Phase Mixing and Phase-Space Cascade of Entropy in Gyrokinetic Plasma Turbulence, *Phys. Rev. Lett.* 103, 015003 (2009) [doi:10.1103/PhysRevLett.103.015003](https://doi.org/10.1103/PhysRevLett.103.015003)
- I. G. Abel, **G. G. Plunk**, E. Wang, M. Barnes, S. C. Cowley, et al., Multiscale gyrokinetics for rotating tokamak plasmas: fluctuations, transport and energy flows, *Rep. Prog. Phys.* 76, 116201 (2013) [doi:10.1088/0034-4885/76/11/116201](https://doi.org/10.1088/0034-4885/76/11/116201)
- **G. G. Plunk**, S. C. Cowley, A. A. Schekochihin, T. Tatsuno, Two-dimensional gyrokinetic turbulence, *J. Fluid Mech.* 664, 407 (2010) [doi:10.1017/S002211201000371X](https://doi.org/10.1017/S002211201000371X)
- P. Xanthopoulos, H. E. Mynick, P. Helander, Y. Turkin, **G. G. Plunk**, et al, Controlling Turbulence in Present and Future Stellarators, *Phys. Rev. Lett.* 113, 155001 (2014) [doi:10.1103/PhysRevLett.113.155001](https://doi.org/10.1103/PhysRevLett.113.155001)
- **G. G. Plunk**, **P. Helander**, **P. Xanthopoulos** and J. W. Connor, Collisionless microinstabilities in stellarators. III. The ion-temperature-gradient mode, *Phys. Plasmas* 21, 032112 (2014) [doi:10.1063/1.4868412](https://doi.org/10.1063/1.4868412)