

# CURRICULUM VITAE

## DR. TIBOR TÖRÖK

### EDUCATION

University of Potsdam, Germany: Ph.D. (magna cum laude), 2004, Astrophysics  
Humboldt University Berlin, Germany: Diploma, 1999, Physics

### EXPERIENCE

Dr. Tibor Török is a research scientist at Predictive Science Incorporated (PSI), an employee-owned science and technology company. He has ten years of experience in the development and application of magnetohydrodynamic (MHD) simulations to problems in solar and plasma physics. Dr. Török received his diploma degree in physics from the Humboldt University in Berlin, Germany, where he worked on the calculation of critical exponents in phase transitions, using Monte Carlo simulations. In 2000, he started his Ph.D. thesis at the Astrophysical Institute Potsdam, Germany, where he worked on MHD simulations of flux rope instabilities in solar eruptions. After receiving his Ph.D. degree, Dr. Török joined the Mullard Space Science Laboratory (University College London, United Kingdom) in 2004, where he spent three years as a postdoctoral research fellow. In 2007, Dr. Török joined the Paris Observatory, France, where he worked as a postdoctoral researcher until 2010, funded by the European research training network SOLAIRE and by the European research consortium SOTERIA. During these two employments, he continued working on the physics of solar eruptions and extended his work to various other dynamic phenomena in the solar corona. In 2010, Dr. Török joined PSI, where he works mainly on the numerical modeling of coronal mass ejections and their propagation through interplanetary space.

### SELECTED PUBLICATIONS:

- Török, T., M. A. Berger, and B. Kliem, “The writhe of helical structures in the solar corona”, *A&A* **516**, A49 (2010).
- Aulanier, G., T. Török, P. Démoulin, and E. E. DeLuca, “Formation of torus-unstable flux ropes and electric currents in erupting sigmoids”, *ApJ* **708**, 314 (2010).
- Török, T., G. Aulanier, B. Schmieder, K. K. Reeves, and L. Golub, “Fan-spine topology formation through two-step reconnection driven by twisted flux emergence”, *ApJ* **704**, 485 (2009).
- Schrijver, C. J., C. Elmore, B. Kliem, T. Török, and A. M. Title, “Observations and modeling of the early acceleration phase of erupting filaments involved in coronal mass ejections”, *ApJ* **674**, 586 (2008).
- Archontis, V., and Török, T., “Eruption of magnetic flux ropes during flux emergence”, *A&A* **493**, L35 (2008).
- Török, T., and B. Kliem, “Numerical simulations of fast and slow coronal mass ejections”, *AN* **328**, 743 (2007).
- Kliem, B., and T. Török, “Torus Instability”, *PRL* **96**, 255002 (2006).
- Török, T., and B. Kliem, “Confined and ejective eruptions of kink-unstable flux ropes”, *ApJ* **630**, L97 (2005).
- Williams, D.R., T. Török, P. Démoulin, L. van Driel-Gesztelyi, and B. Kliem, “Eruption of a kink-unstable filament in NOAA active region 10696”, *ApJ* **628**, L163 (2005).
- Török, T., B. Kliem, and V. S. Titov, “Ideal kink instability of a magnetic loop equilibrium”, *A&A* **413**, L27 (2004).
- B. Kliem, V. S. Titov, and T. Török, “Formation of current sheets and sigmoidal structure by the kink instability of a magnetic loop”, *A&A* **413**, L23 (2004).
- Török, T., and B. Kliem, “The evolution of twisting coronal magnetic flux tubes”, *A&A* **406**, 1043 (2003)