

# Curriculum Vitae of Yi-Min Huang

## Personal Information

- Research Scientist II, Space Science Center, University of New Hampshire
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## Education

- **Ph.D.** in Physics, Aug. 2004. University of Maryland, College Park, Maryland, USA.  
**Thesis:** Magnetohydrodynamic Equilibrium and Stability of Centrifugally Confined Plasmas  
**Advisor :** Professor A. B. Hassam
- **Graduate Study** in Physics (research readings in general relativity), National Taiwan University, Taipei, Taiwan. Aug. 1994-Aug. 1998.
- **B.Sc.** in Physics, June 1994. National Taiwan University, Taipei, Taiwan.

## Employment Background

- August 2008 – present : Research Scientist II, Space Science Center, University of New Hampshire, Durham, New Hampshire, USA.
- August 2004 – August 2008 : Research Associate, Department of Physics, University of Wisconsin, Madison, Wisconsin, USA.
- June 2000 – August 2004 : Graduate Research Assistant, Department of Physics, University of Maryland, College Park, Maryland, USA.
- August 1998 – June 2000 : Graduate Teaching Assistant, Department of Physics, University of Maryland, College Park, Maryland, USA.
- January 1995 – Aug 1998 : Graduate Research Assistant, Department of Physics, National Taiwan University.

- August 1994 – January 1995 : Graduate Teaching Assistant, Department of Physics, National Taiwan University.

### **Professional Associations**

- Member of American Physical Society and American Geophysical Union

### **Professional Service**

- Referee: Physics of Plasmas, Journal of Geophysical Research.

### **Research Interests**

- Analytic, numerical, and asymptotic methods for physics problems.
- Magnetohydrodynamic and sheared flow instability
- Current sheet formation and coronal heating
- Plasma astrophysics
- Plasma confinement and controlled thermonuclear fusion
- Numerical solution of partial differential equations

### **Computation Skills**

- Operating Systems : Mac OS X, Linux, MS Windows
- Programming Languages : Proficient in Fortran 77/90, Matlab, C, OpenMP (shared memory parallel programming), Mathematica; experienced with C++, Maple, R
- Numerical Libraries : FFTW3, HDF5

### **Publications in Refereed Journals**

1. M. L. Palotti, F. Heitsch, E. G. Zweibel, and Yi-Min Huang, “Evolution of unmagnetized and magnetized shear layers”, *Astrophys. J.*, **678**, 234 (2008).
2. Yi-Min Huang, Ellen G. Zweibel, and Carl R. Sovenic, “ $m = 1$  ideal internal kink modes in a line-tied screw pinch”, *Phys. Plasmas*, **13**, 092102 (2006).

3. Yi-Min Huang, Deepak Goel, and A. B. Hassam, "Ideal magnetohydrodynamic interchanges in low density plasmas," Phys. Plasmas, **12**, 3, 032107 (2005).
4. Daniel R. Sisan, Nicolas Mujica, W. Andrew Tillotson, Yi-Min Huang, William Dorland, A. B. Hassam, Thomas M. Antonsen, and Daniel P. Lathrop, "First experimental observation and characterization of the magnetorotational instability," Phys. Rev. Lett. **93**, 114502 (2004)
5. Yi-Min Huang and A. B. Hassam, "Resistive magnetohydrodynamic equilibrium and stability of a rotating plasma with particle sources," Phys. Plasmas **11**, 8, 3738-3747 (2004).
6. Yi-Min Huang and A. B. Hassam, "Magnetohydrodynamic stability of centrifugally confined plasmas," Phys. Plasmas **11**, 5, 2459-2465 (2004).
7. A. B. Hassam and Yi-Min Huang, "Thermoelectric rotating torus for fusion," Phys. Rev. Lett. **91**, 195002 (2003).
8. Yi-Min Huang and A. B. Hassam, "Magnetorotational and Parker instabilities in magnetized plasma Dean flow as applied to centrifugally confined plasmas," Phys. Plasmas **10**, 1, 204-213 (2003).
9. Yi-Min Huang and A. B. Hassam, "Velocity Shear Stabilization of Centrifugally Confined Plasma," Phys. Rev. Lett. **87**, 235002 (2001).