

CURRICULUM VITAE OF CHUN-HSIUNG (WILLIE) HSIA

ADDRESS

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EDUCATION

Ph.D. in Mathematics, Indiana University, 2006

Thesis: *Bifurcation and stability in fluid dynamics and geophysical fluid dynamics*

Thesis advisor: Shouhong Wang

M.S. in Mathematics, National Taiwan University, 1999

Thesis: *Travelling wave solutions of reaction-diffusion equations and the method of continuity*

Thesis advisor: Chiun-Chuan Chen

B.S. in Mathematics, National Taiwan University, 1997

RESEARCH INTERESTS

- nonlinear partial differential equations
- hydrodynamic stability and geophysical fluid dynamics
- bifurcation theory
- water waves problems

EMPLOYMENT

Visiting/Research Assistant Professor, Department of Mathematics, Statistics, and Computer Science, University of Illinois at Chicago 8/06 - present

Associate Instructor, Department of Mathematics, Indiana University 9/01 - 08/06

Instructor of Calculus and Precalculus, IUPUI Upward Bound Program 6 - 7/04

Lieutenant and Mathematics Instructor, 7/99 - 3/01
Chung Cheng Armed Forces Preparatory School, Mandatory military service, Taiwan

Teaching Assistant, Department of Mathematics, National Taiwan University 7/97 - 6/99

AWARDS, HONORS AND FELLOWSHIPS

William B. Wilcox Mathematics Award 04
Indiana University

Graduate student Summer Fellowships 02 - 05
National Science Foundation and Office of Naval Research

Dr. Chou Hong-Jing Memorial Scholarship 98
Institute of Mathematics, Academia Sinica, Taiwan

Dr. Hu Ta-Kai Memorial Scholarship for Algebra 97
National Taiwan University, Taiwan

Silver Medal 94
35th International Mathematics Olympiad

PUBLICATIONS

1. On a Burgers' type equation, DCDS, B6 (2006), No 5, pp 1121-1139 (with Xiaoming Wang).
2. Stratified rotating Boussinesq equations in geophysical fluid dynamics: Dynamic bifurcation and periodic solutions, J. Math. Phys. 48, 065602 (2007)(with Tian Ma and Shouhong Wang).
3. Attractor bifurcation of three-dimensional double-diffusive convection, ZAA - Zeitschrift für Analysis und ihre Anwendungen, to appear (with Tian Ma and Shouhong Wang).
4. Bifurcation and stability of two-dimensional double-diffusive convection, Communications on Pure and Applied Analysis, to appear (with Tian Ma and Shouhong Wang).
5. Structural stability and bifurcation for 2-D incompressible flows with symmetry, submitted (with Jian-Guo Liu and Cheng Wang). .
6. Stability of the Hopf Bifurcation for Two-Dimensional Doubly-Diffusive Convection, in preparation (with Jerry L. Bona, Tian Ma and Shouhong Wang).

INVITED TALKS

Recent Advances in Classical and Geophysical Fluid Dynamics, The 2008 Spring Central Section Meeting in Bloomington, IN.	04/08
SIAM Conference on Analysis of Partial Differential Equations (PD07), Hilton Phoenix East/Mesa Mesa, Arizona.	12/07
Graduate Student Colloquium, Department of Mathematics, Statistics and Computer Science, The University of Illinois at Chicago, Chicago, IL.	10/07
Partial Differential Equations Seminar, National Taiwan University, Taiwan.	07/07
A Mini-course on Bifurcation Theory and its Applications, Taida Institute of Mathematical Sciences, Taiwan.	07/07
NCTS 10 Years Anniversary Mini-Workshop on PDE National Center for Theoretical Sciences, Taiwan.	07/07
Special Session on Theoretical and Numerical Issues in Fluid Dynamics, The 2007 Spring Central Section Meeting in Oxford, OH.	03/07
A special session on Recent Developments in Analysis and Numerics of Geophysical Fluid Dynamics Problem, The Joint AMS Mathematics Meetings, New Orleans, LA.	01/07
A workshop on theory and applications of Fluid Mechanics The University of Cincinnati, Cincinnati, OH.	12/06
A special session on Fluids and Waves Recent Trends in Applied Analysis, The University of Memphis, TN.	05/06

A special session on Recent Developments on Fluid and Geophysical Fluid Dynamics, 04/06
AMS 2006 Spring Southeastern Meeting, Miami, FL.

Partial Differential Equations Seminar, 10/05
Department of Mathematics, Indiana University, Bloomington, IN.

COMPUTER SKILLS

Programming Language: **JAVA, C++, MATLAB.**

Math Software: **MATHEMATICA, MAPLE, TEX.**

REFERENCES

Jerry L. Bona

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Kevin Zumbrun

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