Evelyn M. Lunasin

CONTACT INFORMATION

Department of Mathematics
University of California, San Diego

Mobile Phone: (949) 278-3664
E-mail: elunasin@math.ucsd.edu
http://cam.ucsd.edu/~elunasin/

PERSONAL DETAILS

Date of birth: September 13, 1977
Place of birth: Noveleta, Cavite, Philippines
Present Citizenship: U.S.A.

RESEARCH INTERESTS

Partial differential equations, mathematical theory of Navier-Stokes equations, turbulence modeling, magnetohydrodynamics, and image inpainting.

EDUCATION

University of California, Irvine (UCI), Irvine, CA USA

Ph.D., Mathematics, March 2007

- Dissertation Topic: *Analytical and Computational Study of Certain Sub-grid Scale α-Models of Turbulence*
- Advisor: Professor Edriss S. Titi

M.S., Mathematics, March 2004

University of California, San Diego *Revelle College* (UCSD), La Jolla, CA USA

Bachelor of Arts in Mathematics and Computer Science, June 2001.

HONORS AND AWARDS

UCI: Kovalevsky Award – Outstanding Ph.D Thesis (2007), GAANN Fellowship (2006), Faculty Endowed Fellowship (2005), Dissertation Fellowship (2004), Eugene Cota-Robles Award (2001-2003), Physical Science Alumni Fellowship (2001)

UCSD: Graduated Cum Laude, completed honors thesis with High Distinction award, Phi Beta Kappa, McNair Post Baccalaureate achievement (2001).

RESEARCH AND TEACHING EXPERIENCE

University of California, San Diego
Teaching Visitor **September 2007 – July 2008**
Teaching appointments for Calculus (Math 20A, Math 20B, Math 10B), and Linear Algebra (Math 20F).

Postdoctoral Research **April, 2007 – present**
Postdoctoral research with UCSD Computational and Applied Mathematics group.

Los Alamos National Laboratory (LANL), Los Alamos, NM USA
Graduate Research **Summers of 2003-2006**
Center for Nonlinear Studies, Mathematical Modeling and Analysis Summer Program.
Research on mathematical and numerical theory of certain α sub-grid scale turbulence models.

University of California, Irvine
Instructor **July - September, 2007**
Taught Elementary Differential Equations (Math 3D) to a class of 50 students.
Instructor **September - December, 2006**
Taught pre-calculus to a class of 60 students.

Teaching Assistant **June, 2003 - June 2007**
Teaching assistant to various courses in Mathematics: Vector Calculus, Discrete Mathematics, Probability, Linear Algebra, and Mathematical Modeling and Analysis.

Undergraduate Research and Teaching Experience

University of California, San Diego

Undergraduate Honors thesis **June, 2001**
Group properties and Group Isomorphisms.

McNair Post Baccalaureate achievement program **June, 2000**

Teaching Assistant **June, 2000 - June 2001**
Teaching assistant to Calculus (Math 10A) and Linear Algebra (Math 20F)

Math Lab Tutor **June, 1999 - June 2000**
Tutored Calculus to undergraduate students.

Journal Publications

M. Ebrahimi, M. Holst and E. Lunasin, *The Navier-Stokes Voight for image inpainting, (to be submitted)*

E. Lunasin, S. Kurien and E.S. Titi, *Spectral scaling of the Leray-α model for two-dimensional turbulence*, Journal of Physics A: Math. Theor. **41**, (2008), 344014.

E. Lunasin, S. Kurien, M. Taylor and E.S. Titi, *A study of the Navier-Stokes-α model for two-dimensional turbulence*, Journal of Turbulence **8**, (2007), 751–778.

Y. Cao, E. Lunasin, and E.S. Titi, *Global well-posedness of viscous and inviscid simplified Bardina turbulence models*, Communications in Mathematical Sciences **4**, no. 4, (2006), 823–847.

A. Ilyin, E. Lunasin and E.S. Titi, *A modified-Leray-α sub-grid scale model of turbulence*, Nonlinearity **19**, (2006), 879–897.

Online Publications

Group Properties and Group Isomorphism –UCSD Honors Thesis
`http://math.ucsd.edu/~jwavrik/honors/manalo.pdf`

Parameter Study of the 2D NS-α Subgrid Scale Model of Turbulence–Mathematical Modeling and Analysis summer project
`http://math.lanl.gov/SummerPrograms/Reports2004/lunasin.pdf`

Numerical Study of the Two-Dimensional Navier-Stokes-Alpha Model of Turbulence
`http://math.lanl.gov/Research/Highlights/nsalpha.shtml`

Conference Presentations

APS-DFD 2007 (Salt Lake City, UT) – mini-symposium contributed talk	**November 2007**
ICIAM 2007 (Zurich, CHE) – mini-symposium invited talk	**July 2007**
D^2HFest (Lausane, CHE) – poster presentation	**July 2007**
SIAM GS07 (Santa Fe, NM)– mini-symposium invited talk	**March 2007**
Mathematical Modeling and Analysis (LANL)	**August 2006**
SIAM Annual Meeting (Boston, MA)– mini-symposium contributed paper	**July 2006**
MSRI Conference – poster presentation	**May 2006**
Women in Mathematics: *The Legacy of Ladyzhenskaya and Oleinik.* `http://topo.math.auburn.edu/pub/20lgas-proceedings/`	
Mathematical Modeling and Analysis (LANL)	**August 2005**
Mathematical Modeling and Analysis (LANL)	**August 2004**
UCSD Summer Research Conference	**July 2001**
UCSD Department of Mathematics Honors Presentation	**June 2001**
UC Berkeley Western McNair Scholars Symposium	**May 2001**

Summer School	NCAR/NSF Summer School on Applications of Advanced Mathematical and Computational Methods to Atmospheric and Oceanic Problems (MCAO 2003).
Organizations	Organizer: University of California, Irvine–Women Mathematician Noetherian Ring(2005-2007) Member of the organizing committee for the Women in Science and Engineering (WISE), UCSD (2008) Member: SIAM Member: AMS Member: APS
Computer Skills	• Mathematical Packages: Mathematica, Maple, Matlab. • Programming Languages: Forth, C, Fortran, Unix shell scripts. • Applications: LaTeX, common Windows database, Excel spreadsheet, and presentation software. • Algorithms: Pseudospectral method, Finite Difference • Operating Systems: Unix/Linux, Windows.
Reference	Available upon request