FRANCESCO FEDELE
Assistant Professor
School of Civil and Environmental Engineering
Georgia Institute of Technology, Savannah Campus

I. EARNED DEGREES

2004 Ph.D. Civil & Environmental Engineering, University of Vermont, Vermont, USA

1998 Laurea Civil Engineering, University Mediterranea, Italy (magma cum laude)

II. EMPLOYMENT

1. 1/7/2007 – present: Assistant Professor, School of Civil and Environmental Engineering, Georgia Institute of Technology
2. 1/8/2009 – present: Adjunct Professor, School of Electrical and Computer Engineering, Georgia Institute of Technology
3. 6/1/2005 – 1/6/2007 : Postdoctoral Research Affiliate, NASA Goddard Space Flight Center, Greenbelt Maryland USA
4. 1/1/2005-5/31/2005: Postdoctoral Research Affiliate, Dept. of Mechanical Engineering, University of Vermont USA
5. 1/1/2000-12/31/2004: Graduate Research Assistant, Department of Civil Engineering, University of Vermont, Vermont, USA

III. TEACHING

A.) Individual Student Guidance

Ph.D. Student Guidance

Prasanna Sampath (CEE, Savannah campus)
Primary advisor: Dr. Francesco Fedele
Starting Term: Fall 2008
Dropped end of Spring 2009
Papers written with student: 1 (see section IV.B. 37)

Guillermo Gallego (ECE, Atlanta campus)
Co-advisor: Dr. Francesco Fedele, Primary advisor: Dr. Anthony Yezzi
Starting Term: Fall 2008
Qualification exam: completed Spring 2009
Completed: Fall 2010
Research: Stereo Variational Reconstruction Techniques of Oceanic Space-Time Patterns
Papers written with student: 6 (see section IV.B. 1,3,29,37,39,40)
Proposals written using student's research results: 2 (see section IV.E.a, grants funded by Chevron and ONR)

Daniel Cook (ECE, Atlanta campus and also at GTRI)
Primary advisor: Dr. Francesco Fedele, co-advisor: Dr. Anthony Yezzi
Starting Term: Spring 2008
Completion: Expected Fall 2012
Research: Adjoint Active Surfaces for Next-Generation Tomographic Imaging
Papers written with student: 1 (see section IV.B. 34)

Samuel Bignardi (Geophysics, University of Ferrara, Italy)
(*Exchange student at the Georgia Tech Atlanta campus in Spring 2009 and Spring-Summer 2010*)
Primary advisor: Prof, Giovanni Santarato, University of Ferrara
External advisor: Dr. Francesco Fedele, Georgia Tech
Starting Term: 2007
Completed: Expected Feb 2011
Research: Adjoint-Active Surfaces for next-generation wave surface testing
Proposals written using student's research results: 1 (see section IV.E.b)

Brittany Bruder (CEE, Savannah campus)
Primary advisor: Dr. Francesco Fedele
Starting Term: Spring 2010
Qualification Exam: expected Spring 2011
Research: Sustainable Energy for Coastal Georgia
Proposals written using student's research results: 1 (see section IV.E.b)
Papers written with student: 1 (see section IV.B. 30)
Awards: student admitted to the 2010 Summer Program in Earth System Science offered by the NASA Goddard Space Flight Center
Link: http://www.ce.gatech.edu/news/404/134/CEE-Grad-Student-Brittany-Bruder-Admitted-to-NASA-Summer-Program/

Ping-Chang Shih (ECE, Atlanta campus)
Primary Advisor: Dr. Francesco Fedele, Co-advisor: Dr. Anthony Yezzi
Starting Term: Summer 2010
Research: A sequential algorithm for a variational Wave Acquisition Stereo System

Undergraduate Research Student Guidance

Diana Quintero, **Nicholas Sigalas**, **Juan Sanchez**, **Garrett Klingensmith**, **Ethan Sommers**, **Sheila Sororian** (CEE, Savannah campus)
Primary advisor: Dr. Francesco Fedele
Term: Fall 2009
Research: Vortex-shedding-based devices for renewable energy from tidal streams in coastal Georgia

Juan Sanchez, **Alfredo Santos**, **Ethan Sommers**, **Gerald Jones**, **Aaron Traywick**, **John Jacobsen** (CEE, ME Savannah campus)
Primary advisor: Dr. Francesco Fedele
Term: Spring 2010
Research: Physical models of vortex-shedding-based devices for renewable energy in coastal Georgia

Other Student Guidance

Advisor for CREATE program

CREATE is a NSF funded REU summer research program located on the GTS campus for sophomores, juniors and seniors in engineering and engineering related disciplines.

Mark Sawyer
Primary advisor: Dr. Francesco Fedele
Term: Summer 2007
Research: The Prediction of Rogue Waves through Stereo Video Imagery

B) Teaching Activities

Undergraduate Courses
CEE3000 Civil Engineering Systems (SU07, FA07, FA08, FA09, FA10)
CEE 3770 Statistics and Applications (SP08,SP10)
CEE 3040 Fluid Mechanics (SP09)
CEE4801 Special Topics: Marine and Hydrokinetic Renewable Energy (FA10, co-taught with Dr. Stoesser, *new developed course*)

Graduate Courses
CEE 6811 Nonlinear Wave Mechanics (SP09, co-taught with Dr. Fritz, SP11)
CEE8813 Special Topics: Random fields (SP10, FA10, *new developed course*)

IV. SCHOLARLY ACCOMPLISHMENTS

B. Refereed Publications

Articles in Refereed Archival Journals (***Supervised PhD students are bolded and underlined***)

Submitted

1. Fedele F., **Gallego G.,** Benetazzo A., Yezzi A., Sclavo M., Bastianini M. and L. Cavaleri , Euler Characteristics and Maxima of Oceanic Sea States" Special Issue('s) of the *Journal Mathematics and Computers in Simulation* on "Nonlinear Waves: Computation and Theory"

2. Fedele F. Viscous Solitons in Axisymmetric flows, *Physica D*

3. **Gallego G.,** Yezzi A, Fedele F. and A. Benetazzo, 2010 A Variational Stereo Algorithm for the 3-D reconstruction of ocean waves *IEEE Transations on Geoscience and Remote Sensing*

4. Al-Khalidi M., Tayfun M.A. and Fedele F., 2010 Large wave heights: asymptotic distributions, conditional statistics and nonlinear effects, *Journal of Geophysical Research-Ocean*

Published

5. Fedele F. and Arena F. 2010 Long-term statistics and extreme waves of sea storms, *Journal of Physical Oceanography* **40**(5):1106-1117

6. Fedele F., Cherneva Z., Tayfun, A., and C. Guedes Soares 2010 NLS invariants and nonlinear wave statistics, *Physics of Fluids* **22**, 036601

7. Fedele F., 2009 On the statistics of oceanic waves, *Inter. Journal of Reliability and Safety* **3**(1-3):258-266

8. Fedele F., Tayfun, A., 2009 On nonlinear wave groups and crest statistics, *Journal of Fluid Mechanics* **620**, 221-239

9. Fedele F., 2008 Rogue wave in oceanic turbulence, *PHYSICA D* **237**(14-17):2127-2131

10. Tayfun, A., Fedele F., 2007 Wave height distributions and nonlinear effects, *Ocean Engineering* **34**,1631-1644

11. Fedele F., 2007 Explaining extreme waves by a theory of Stochastic wave groups, *Computer and Structures* **85**, 291-303

12. Fedele F., 2006 On wave groups in a Gaussian Sea, *Ocean Engineering* **33**(17-18):2225-2239

13. Fedele F and Hitt D. L., 2006. Transport, Growth and Stability of Disturbances in Weakly Rarefied Channel Flows, *J. Comp. Theo. Nanoscience* **3**, 1-9

14. Fedele F. 2006 Extreme Events in nonlinear random seas. *J. of Offshore Mechanics and Arctic Eng.* ASME **128**, 11-16

15. Fedele F. and D. Hitt, 2005 Linear Stability of Slip Flows in Microchannels. *Far East Journal Applied Mathematics* **21**(1):31-41

16. Fedele, F. 2005. Successive wave crests in Gaussian seas. *Probabilistic Engineering Mechanics* **20**(4):355-363

17. Fedele F. , Eppstein M. , Laible J.P.,Godavarty A. & Sevick-Muraca E.M. 2005 Fluorescence Photon migration by the Boundary Element Method. *J. Computational Physics* **210**(1):109-132

18. Fedele F., J. Yang & Z. Chen 2005 Defect modes in 1D Photorefractive Lattices. *Optics Letters* **30**(12):1506-1508

19. Fedele F., J. Yang & Z. Chen 2005 Properties of defect modes in light-induced photonic lattices. *Studies in Applied Mathematics* **115**(2):279-301

20. Fedele F. , Eppstein M. , Laible J.P.,Godavarty A. & Sevick-Muraca E.M. 2005 Fluorescence Photon migration by the Boundary Element Method. *J. Computational Physics* **210**(1):109-132

21. Arena F., Fedele F. 2005 Non-linear space-time evolution of a high wave crest. *Journal Offshore Mechanics and Arctic Engineering ASME* **127**(1) 46-51

22. Fedele F., Hitt D., Prabhu R.D. 2005 Revisiting the stability of Pulsatile pipe flow. *European J. of Mech. - B/Fluids* **24**(2):237-254

23. Fedele F., Arena, F. 2005 Weakly nonlinear Statistics of high Random waves. *Physics of fluids* **17**,026601

24. Fedele F., Melissa Mckay, G. F. Pinder and Guarnaccia J. 2004 A single-degree of freedom Hermite Collocation for multi-phase flow and transport in porous media. *Inter. journal Numerical methods in fluids* **44**,1337-1354

25. Eppstein M. , Fedele F., Laible J. P., Zhang C. , Godavarty A. & Sevick-Muraca E. M. 2003 A comparison of exact and approximate adjoint sensitivities in fluorescence tomography. *IEEE Transactions on Medical Imaging* **22**(10):1215-1222

26. Arena F. and Fedele F. 2003 Statistical Properties of Nonlinear Froude-Krylov Forces on Cylinders. *Inter. Journal of Offshore and Polar Engineering (IJOPE)* **13**(2):105-111

27. Arena F. and Fedele F. 2002 A family of narrow-band non-linear stochastic processes for the mechanics of sea waves . *European Journal of Mechanics - B/Fluids* **21**(1):125-137

28. Fedele F., Laible J. P. & Eppstein M. 2002 Coupled complex adjoint sensitivities for frequency-domain fluorescence tomography: theory and vectorized implementation. *J. Computational Physics* **187**(2):597-619

Peer-Reviewed Conference Proceedings (***Supervised PhD students are bolded and underlined***)

Submitted

29. **Gallego G.**, Yezzi A. and Fedele F., A Variational Wave Acquisition Stereo System for the 3-D Reconstruction of Oceanic Sea States *30th ASME Int. Conf. Offshore Mechanics and Arctic Engng*, Rotterdam, The Netherlands, OMAE2011-49061

30. **Bruder B.**, Stoesser T. and Fedele F., Extracting energy from free streams through a novel von Karman vortex shedding device *30th ASME Int. Conf. Offshore Mechanics and Arctic Engng,* Rotterdam, The Netherlands, OMAE2011-49098

31. Fedele F., Benetazzo A., Forristall G.Z., Space-time waves and spectra in the Northern Adriatic Sea via a Wave Acquisition Stereo System *30th ASME Int. Conf. Offshore Mechanics and Arctic Engng,* Rotterdam, The Netherlands, OMAE2011-49924

32. Fedele F., Arena F., Tayfun M.A., Space-time extremes and storm seas *30th ASME Int. Conf. Offshore Mechanics and Arctic Engng,* Rotterdam, The Netherlands, OMAE2011-49048

33. Kara M., Stoesser T. , Will K.M. , Fedele F., A numerical method to predict fluid-structure interaction of flow past an elastically mounted circular cylinder, 6th Subrata Chakrabarti International Conference on Fluid Structure Interaction 9 - 11 May 2011, Orlando, USA

Published

34. **Cook D.**, Fedele F., and A. Yezzi 2010 'Detection of Spherical Inclusions Using Active Surfaces. *International Conference Synthetic Aperture Sonar and Synthetic Aperture Radar*, Sept. 13-14, Lerici, Italy

35. Fedele F., Cherneva Z., Tayfun, A., and C. Guedes Soares 2010 Nonlinear wave statistics. *29th ASME Int. Conf. Offshore Mechanics and Arctic Engng*, Shanghai, China, OMAE2010-20188

36. Fedele F., Arena F., and M.A. Tayfun 2010 Extreme waves of sea storms. *29th ASME Int. Conf. Offshore Mechanics and Arctic Engng*, Shanghai, China, OMAE2010-20187

37. Fedele F., **Sampath P.**, **Gallego G.**, Yezzi A., Benetazzo A., Forristall G.Z., Tayfun M.A., Cavaleri L., Sclavo M., Bastianini M. 2009 Beyond Waves & Spectra: Euler Characteristics of Oceanic Sea States. *28th ASME Int. Conf. Offshore Mechanics and Arctic Engng*, Honolulu, Hawaii, OMAE2009-79598

38. Fedele F. and Arena F. 2009 The Equivalent Power Storm Model for Long-Term Predictions of Extreme Wave Events *28th ASME Int. Conf. Offshore Mechanics and Arctic Engng*, Honolulu, Hawaii, OMAE2009-79597

39. Fedele F., **Gallego G.**, Benetazzo A., Yezzi A., Tayfun M.A. 2008 Euler Characteristics & maxima of oceanic sea states. *31° Convegno di Idraulica e Costruzioni Idrauliche*, Perugia Italy.

40. Fedele, F., **Gallego, G.**, Benetazzo, A., Yezzi A. "Wave Statistics and Spectra via a Variational Wave Acquisition Stereo System" *27th ASME Int. Conf. Offshore Mechanics and Arctic Engng.*, Lisbon, Portugal, OMAE2008-57160

41. Tayfun M.A, Fedele, F. 2008 Envelope and Phase Statistics of Large Waves. *27th ASME Int. Conf. Offshore Mechanics and Arctic Engng.* Lisbon, Portugal, OMAE2008-57129

42. Fedele F. Rogue waves in oceanic turbulence. *27th ASME Int. Conf. Offshore Mechanics and Arctic Engng.* Lisbon, Portugal, OMAE2008-57027

43. Tayfun, A., Fedele F. 2007 Expected shape of extreme waves in sea storms. *26th ASME Int. Conf. Offshore Mechanics and Arctic Engng.*, San Diego , USA, OMAE2007-29073

44. Fedele F. and Tayfun A. 2006 Explaining freak waves by a stochastic theory of wave groups *25th ASME Int. Conf. Offshore Mechanics and Arctic Engng*, Hamburg, Germany, 4-9 June 2006 OMAE2006-92527

45. Tayfun A. and Fedele F. 2006 Wave-Height distributions and nonlinear effects. *25th ASME Int. Conf. Offshore Mechanics and Arctic Engng*, Hamburg, Germany, 4-9 June 2006 OMAE2006-92019

46. Fedele F., Arena F. 2004 Successive wave crests in Gaussian seas. *Proceedings of XIV International Offshore and Polar Engineering Conference (ISOPE)* Toulon, FRANCE

47. Fedele F. 2004 The occurrence of Extreme crests and the nonlinear wave-wave interaction in random seas *PROCEEDINGS of XIV International Offshore and Polar Engineering Conference (ISOPE)* Toulon, FRANCE

48. Fedele F., Arena F. 2003 On the statistics of high non-linear random waves. *Proceedings of XIII International Offshore and Polar Engineering Conference (ISOPE)* Honolulu, Hawaii USA 25-30 May 2003

49. Arena F. , Fedele F. 2003 Non-linear space-time evolution of a high wave crest. *Proceedings of XXII Offshore Mechanics and Arctic Engineering (OMAE)* Cancun, Mexico 8-13 june 2003

50. Fedele F., Arena F. 2002 Statistical properties of non-linear forces of sea waves on a vertical wall. *28th Convegno Nazionale idraulica e costruzioni idrauliche* Potenza Italy September 16-19, 2002

51. Mckay M., Pinder G. F., Fedele F., Guarnaccia J., Wu L. 2002 Multiphase groundwater flow and transport using a new localized collocation method (LOCOM) *XIV International Conference on Computational Methods in Water Resources* June 23-28, 2002 Delft University of Technology The Netherlands

52. Fedele F., Laible J. P., Pinder G. F. 2002 Localized-Adjoint-Finite-Element-Method for Sub-Grid Stabilization of Convection-dominated Transport on a Triangular Mesh. *XIV International Conference on Computational Methods in Water Resources* June 23-28, 2002 Delft University of Technology The Netherlands

53. Arena F., Fedele F. 2002 Non-linear wind-generated waves forces on a vertical wall. *15th ASCE Engineering Mechanics Conferences* June 2-5 2002 Columbia University New York NY

54. Arena F., Fedele F. 2001 Statistical properties of non-linear Froude_Krylov forces on cylinders. ISOPE 2001 Stavanger Norway Vol. III:264-271

55. Arena F., Fedele F. 2000 Non-linear effects for wind-generated waves. *XXVII Convegno di Idraulica e Costruzioni Idrauliche*, Genoa Italy, vol. IV:21-28 *(In Italian)*

56. Fedele F., Tucciarelli T. 2000 An efficient double order solution of the groundwater contaminant transport problem. *XIII Conference on Computational Methods in Water Resources*, Calgary, Canada, Vol. 1:417-422.

C. Presentations

a. Invited Seminars

1. Fedele, F., "Rogue waves in oceanic turbulence and solitons in axisymmetric turbulent flow: an extreme view", *32nd SIAM Southeastern-Atlantic Section Conference* (SIAM-SEAS 2008) Special Session*: Turbulence*; March 14-15 2008, University of Central Florida, Orlando (*Invited Speaker*)

2. Fedele F., "Freak waves explained by stochastic wave groups". Contributed talk to Workshop: "Non-equilibrium statistical mechanics and turbulence", University of Warwick England July 15-21, 2006, (sponsored by The Engineering and Physical Sciences Research Council (EPSRC) of UK)

3. Fedele F., "On nonlinear stochastic wave groups", contributed talk to Isaac Newton Institute Workshop: "First-Passage and Extreme Value Problems in Random Processes" 26 June - 30 June 2006, (Supported by the European Commission, Sixth Framework Programme - Marie Curie Conferences and Training Courses)

4. Fedele F.,"Successive wave crests in a Gaussian sea", Séminaire Européen de Statistique 2004 (Statistics of Spatio-Temporal Systems) December 12th-18th, 2004 Castle Höhenried, Bernried, near Munich, Germany (European Mathematical Society Summer School)

5. Fedele F., "Wave Groups and extreme events in a Gaussian sea", University of Twente, dept. of Applied Mathematics, December 20 2004 (*invited speaker*)

b. Conferences & Workshops

6. Fedele F. 2009 Rogue waves in oceanic turbulence The Sixth IMACS International Conference on *Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory*, Athens Georgia USA (abstract)

7. Fedele F., Gallego G., Benetazzo A, Yezzi A. & Tayfun, M.A., 2009 Euler Characteristics & Maxima of Oceanic Sea States. *Proceedings of the Workshop ROGUE WAVES 2008*, Brest France

8. Fedele F. 2008 Rogue waves in oceanic turbulence. *Ocean Science meeting* Orlando Florida

9. Fedele F. & Hitt D.L. 2006 Linear Stability and Growth of Disturbances in Weakly-Rarefied Pulsatile Flows", *59th Annual Meeting of the APS Division of Fluid Dynamics*, November 19-21, 2006, Tampa Bay, Florida, USA

10. Fedele F. & Hitt D.L. 2006 Linear Stability and Growth of Disturbances in Weakly-Rarefied Pulsatile Flows. *59th Annual Meeting of the APS Division of Fluid Dynamics*, November 19-21, 2006, Tampa Bay, Florida, USA

11. Fedele F. & Hitt D.L. 2005 On the Linear Stability of Weakly Rarefied Flows in Microchannels", *35th AIAA Fluid Dynamics Conference and Exhibit* June 6 -9, 2005 Toronto, CA

12. Fedele F,. 2005 A New Computational Paradigm for the Statistics of Extreme Events in Nonlinear Random Seas", *Third M.I.T. Conference on Computational Fluid and Solid Mechanics* June 14 - 17, 2005 at MIT, Cambridge, MA 02139 USA

13. Fedele F & Hitt D.L. 2005 Transport, Growth and Stability of Disturbances in Weakly Rarefied Channel Flows. *Third M.I.T. Conference on Computational Fluid and Solid Mechanics* June 14 - 17, 2005 at MIT, Cambridge, MA 02139 USA

14. Fedele F., Laible J. P. & Eppstein M. 2004 A boundary element solution of the coupled fluorescence diffusion equations *OSA Advances In Optical Imaging and Photon Migration (AOIPM)* April 14-17 2004 Miami Beach FL (USA)

15. Fedele F. 2003 Tail probabilities of Successive Wave Crest Heights in Gaussian seas. *Proceedings of the Mediterranean Conference on modeling and simulation MCMS' 03* Reggio Calabria ITALY June 25-27, 2003

16. Fedele F., Hitt. D., Prahu R.D. 2003 A complete set of eigenfunctions for the stability of pulsatile pipe flow *Proceedings of the Mediterranean Conference on modeling and simulation MCMS' 03* Reggio Calabria ITALY June 25-27, 2003

17. Laible J.P., Fedele F. & Eppstein M. 2003 A boundary element approach to optical and fluorescence tomography. *BIOS 2003* 25–31 January 2003, San Jose, California, USA (SPIE 4955-33) (abstract)

18. Fedele F., Hitt D.L. 2003 On the statistics of Successive Wave Crest Heights in Gaussian seas. *Division of Fluid Dynamics 56th Annual Meeting*, East Rutherford, New Jersey (abstract)

19. Fedele F., Laible J. P., Eppstein M. 2002 Generalized Adjoint Sensitivities of the Coupled Frequency Domain Fluorescence Diffusion Equations, *OSA Advances In Optical Imaging and Photon Migration* (AOIPM) April 7-10 2002 Miami Beach FL (USA) pp. 371-373

20. Arena F., Fedele F. 2002 Intensity and Duration of Sea Storms off the California Coast. *Solutions to Coastal Disasters 2002 ASCE* San Diego (CA) February 24-27 2002

21. Fedele F., Laible J. P., Pinder G. F. 2002 An optimal Petrov-Galerkin method for convection-dominated transport equations. *MAXIMA 2002, IX Mexican American Exchange in Mathematics and its applications*, Cuernavaca Morelos Mexico (abstract)

D. SERVICE

A. Professional Contributions

Referee Services to Scholarly Journals

- *Proceedings of the National Academy of Sciences*
- *International Journal of Biomedical Imaging*
- *Geophysical Research Letters, AGU journal*
- *Journal of Geophysical Research –Ocean, AGU journal*
- *Numerical Methods for Partial Differential Equations*
- *European Journal of Mechanics-B/Fluids*
- *Ocean Engineering*
- *Journal of Waterway, Port, Coastal, and Ocean Engineering*

Conference Chairmanship and Technical Program Committee Member

- *28th ASME International Conference on Offshore Mechanics and Arctic Engineering, Hawaii 2009 (Session Chair)*

Memberships in Scholarly Societies

- *American Geophysical Union (AGU)*
- *American Society of Mechanical Engineers (ASME)*

B. Campus Contributions

Ph.D. Dissertation Committees

Student	**School**	**Advisor**
Jeseon Yoo	Civil & Environmental Eng.	Hermann Fritz
Mustafa Kara	Civil & Environmental Eng.	Mac Will

Other Campus Contributions

- Worked with the faculty members at Georgia Tech Savannah, on developing course material for ABET review in 2008;
- Initiated the Riemann Challenge at Georgia Tech Savannah, a student competition to invigorate the academic environment and stimulate interactions among grad and undergrad students.

E. GRANTS AND CONTRACTS

a. Funded

Title:	The maximum expected wave height and directional spectra at the oceanographic tower '*Acqua Alta*', Venice Italy.
Funding Agency:	CHEVRON
Role:	Principal Investigator
Collaborators:	-
Duration:	June 2009 – June 2011
Amount:	$201,120

Title:	VOSTURB: A Vortex Shedding Vertical Axis Turbine for harnessing renewable energy from tidal streams.
Funding Agency:	FRP 2009- Georgia Tech Innovation Grant Funding
Role:	Co-principal Investigator
Collaborators:	Thorsten Stoesser (PI), Anthony Yezzi (co-PI), Ron Harley (co-PI), James Mayor (co-PI)
Duration:	Sept 2009 – Sept 2010
Amount:	$30,000

Title:	Vortex-Shedding-based devices for renewable energy from tidal streams in coastal Georgia
Funding Agency:	Undergraduate Research Opportunities Program, Georgia Tech Fall 09
Duration:	Sept 2009 – Dec 2009
Amount:	$1,500

Title:	Ocean wave dissipation and energy balance (WAVE-DB): toward reliable spectra and first breaking statistics
Funding Agency:	ONR
Role:	Co-Principal Investigator
Collaborators:	Fabrice Ardhuin (PI) Service Hydrographique et Oceanographique de la Marine, Brest, France
Duration:	4 years
Amount:	$991,488 (Georgia Tech part $129,000)

Title:	Quantification of the energy potential from tidal streams for Rose Dhu Island, Georgia
Funding Agency:	Georgia Coastal Incentive Program
Role:	Principal Investigator
Collaborators:	Thorsten Stoesser (co-PI), Kevin Haas (co-PI)
Duration:	1 year
Amount:	$84,015

a. Pending

Title:	Extracting Energy from Free Streams through a Novel von Karman Vortex Shedding Device.
Funding Agency:	NSF
Role:	Co-Principal Investigator
Collaborators:	Thorsten Stoesser (PI), Ron Harley (co-PI), James Mayor (co-PI)
Duration:	3 years
Amount:	$380,217

Title:	BEM Adjoint-based Active Surfaces for Next-Generation Surface Wave Testing
Funding Agency:	NSF
Role:	Principal Investigator
Collaborators:	Glenn Rix (co-PI), Anthony Yezzi (co-PI)
Duration:	3 years
Amount:	$599,302

F. HONORS AND AWARDS

1. Scholarship for participation to the workshop: "**Analysis of Fluid Stability**" International Centre for Mathematical Sciences 25 June, 3 July 2009, Edinburgh UK, (sponsored by The Engineering and Physical Sciences Research Council (EPSRC) of UK)

2. Young researcher scholarship for participation to the international conference : "**Euler Equations : 250 years on**" Aussois, France June 18-23, 2007, an event that celebrated the tercentenary of the birth of Leonhard Euler, and also the 250th anniversary of the publication of his Principes Généraux du Mouvement des Fluides (General Principles of the Motion of Fluids).

3. Scholarship for participation to the workshop: "**Non-equilibrium statistical mechanics and turbulence**" University of Warwick England July 15-21, 2006, (sponsored by The Engineering and Physical Sciences Research Council (EPSRC) of UK)

4. Scholarship for participation to an Isaac Newton Institute Workshop: "**First-Passage and Extreme Value Problems in Random Processes**" 26 June - 30 June 2006, **(** Supported by the European Commission, Sixth Framework Programme - Marie Curie Conferences and Training Courses)

5. Scholarship for participation to Séminaire Européen de Statistique, December 12-18, 2004, (**Statistics of Spatio-Temporal Systems**) Castle Höhenried, Bernried, near Munich, Germany (European Mathematical Society Summer School)

6. Scholarship Erasmus for international studies abroad ($10,000) January/December 1999