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Professional Preparation:

Università degli studi di Milano. Milano, Italy. Physics. Laurea. 1992
The Johns Hopkins University. Baltimore, MD. Mech. Engineering. MS. 1994
The Johns Hopkins University. Baltimore, MD. Mech. Engineering. PhD. 1997

Appointments:

2015-present **Professor**, Dept. of Marine Sciences, University of North Carolina at Chapel Hill.

Fall 2010 **Visiting Professor**, Dept. of Civil and Environmental Engineering, Università di Trieste, Italy.

Summer 2008 **Lecturer**, 2008 Les Houches Summer School on Atmospheric Boundary Layers.

2007-2015 **Associate Professor**, Dept. of Marine Sciences, University of North Carolina at Chapel Hill.

Spring 2005 **Visiting Professor**, Dept. of Aerospace Engineering, Arizona State University, Tempe, AZ.

2001-2007 **Assistant Professor**, Dept. of Marine Sciences, University of North Carolina at Chapel Hill.

1999-2001 **Research Assistant Professor**, Dept. of Marine Sciences, University of North Carolina at Chapel Hill.

1997-1999 **Post Doctoral Scholar**, Dr. R. Beardsley, Mentor.
Woods Hole Oceanographic Institution, Woods Hole, MA.

1996 **Summer program fellow**, Center for Turbulence Research, Stanford, CA

1992-1997 **Graduate Research Assistant**, Department of Mechanical Engineering The Johns Hopkins University, Baltimore, MD

1987-1992 **Teaching assistant**, Dipartimento di Scienze dell'Informazione (Computer Science), Università degli studi di Milano, Milano, Italy

Products:

Five Products Most Closely Related to this Proposal:

E. Santilli and **A. Scotti**, The Stratified Ocean Model with Adaptive Refinement (SOMAR), *J. Comp. Physics*, **291**, 60–81, 2015.

A. Scotti and B. White, Diagnosing mixing in stratified turbulent flows with a locally defined Available Potential Energy, *J. Fluid Mech.*, **740**, 114–135, 2014.

V. Chamalla, G. Bishakdatta, **A. Scotti** and S. Sarkar, Turbulence during the reflection of internal gravity waves at critical and near-critical slopes, *J. Fluid Mech.* **729**, 47–68, 2013

A. Scotti and B. White, Is horizontal convection really “non-turbulent”?, *G. Res. Lett.*, **38**, L21609, 2011.

E. Santilli and **A. Scotti**, An efficient method for solving elliptic equations on highly anisotropic grids, *J. Comp. Phys.*, **230**(23), 8342–8359, 2011.

Other Significant Products:

A. Scotti and S. Mitran, An approximated method for the solution of elliptic problems in thin domains: Application to nonlinear internal waves, *Ocean Modelling*, **25**, 144–153, 2008.

A. Scotti, R. C. Beardsley, B. Butman and J. Pineda, Shoaling of Nonlinear Internal Waves in Massachusetts Bay, *J. Geophys. Res.*, **113**, C08031, doi:10.1029/2008JC004726, 2008.

A. Scotti, R. C. Beardsley and B. Butman, Generation and propagation of nonlinear internal waves in Massachusetts Bay, *J. Geophys. Res.*, **112**, C10001, doi:10.1029/2007JC004313, 2007.

A. Scotti and J. Pineda, Plankton accumulation and transport in nonlinear internal fronts, *J. Marine Res.*, **65**, 1–30, 2007.

A. Scotti R. C. Beardsley and B. Butman, “On the interpretation of energy and energy fluxes of nonlinear internal waves: An example from Massachusetts Bay”, *J. Fluid Mech.*, **561**, 103–112, 2006.

Synergistic Activities:

- Co-Convener of Special Session on nonlinear internal waves at the 2006 AGU Fall Meeting, San Francisco, CA.
- Reviewer for funding agencies, several international journals in fluid mechanics and oceanography.

Collaborators and Co-Editors (total 12):

B. Butman (USGS), R. Camassa (UNC), K. Helfrich (WHOI), K. Kiger (UMD), R. McLaughlin (UNC), S. Mitran (UNC), J. Lerczak (OSU), J. Pineda (WHOI), U. Piomelli (Queens U.), S. Sarkar (UCSD), J. Trowbridge (WHOI), B. White (UNC).

Graduate Advisors and Postdoctoral Sponsors (Total 2):

R. Beardsley (WHOI) (PostDoctoral Mentor), C. Meneveau (JHU) (Graduate advisor).

Thesis Advisor and Postgraduate-Scholar Sponsor (Total 13):

Graduate Students: P. Birak (UNC), C. Edwards (SIO), M. Gasser i Rubinat (Aff. Unknown), M. James (Aff. Unknown), Z. Lin (Aff. unknown), S. Lockart (UNC), E. Montbureau (UNC), E. Santilli (UNC), J. Wilson (industry), T. Peters (U Iowa), V. Zemskova (UNC).
PostDoc advisor (last five years): P.-Y. Passaggia (UNC).