

PERSONAL

Name: **Annalisa Griffa**

Current Academic Rank: Primo Ricercatore (Senior Scientist)

Institution: ISMAR - Consiglio Nazionale Ricerche (CNR),
La Spezia, Italy

Citizenship: Italian

HIGHER EDUCATION

Scripps Institution of Oceanography	Ph.D.	1988
Scripps Institution of Oceanography	M.S.	1983
Universita' degli Studi, Torino, Italy	Laurea	1978

EXPERIENCE

Academic:

Consiglio Nazionale Ricerche (C.N.R.) <i>La Spezia, Italy</i>	Senior Scientist	2002 - present
Consiglio Nazionale Ricerche (C.N.R.) <i>La Spezia, Italy</i>	Responsible UO La Spezia CNR-ISMAR	2010 - 2013
<i>University of Miami</i>	Part time Research Professor	2002 - 2013
University of Miami	Associate Professor	1996 - 2002
CNR, <i>La Spezia, Italy</i>	Visiting Scientist	1997 - 2002
University of Miami	Assistant Professor	1989 - 1996
E.N.E.A. Laboratory, <i>La Spezia, Italy</i>	Ricercatore	1982 - 1989
Scripps Institution of Oceanography	Research Assistant	1982 - 1988
Scripps Institution of Oceanography	Fellowship	1981 - 1982

Teaching Experience

University of Miami/RSMAS	Taught graduate
Geophysical Fluid Dynamics 1	1991-1994
Geophysical Fluid Dynamics 2	1995-1996

Research Interests

General and coastal marine circulation. Transport and dispersion in marine environment. Numerical modeling and assimilation. Turbulent transport processes and their parameterization. Analysis of Lagrangian data and HF radar data

PUBLICATIONS

Selected publications (since 2010)

Corgnati L., C. Mantovani, A. Griffa, M. Berta, P. Penna, P. Celentano, L. Bellomo, D. Carlson, and R. D'Adamo. Implementation and Validation of the ISMAR High Frequency Coastal Radar Network in the Gulf of Manfredonia (Mediterranean Sea) (2018), IEEE- Oceanic Engineering, in press

Rubio A, Mader J, Corgnati L, Mantovani C, Griffa A, Novellino A, Quentin C, Wyatt L, Schulz-Stellenfleth J, Horstmann J, Lorente P, Zambianchi E, Hartnett M, Fernandes C, Zervakis V, Gorringer P, Melet A and Puillat I. HF Radar Activity in European Coastal Seas: Next Steps toward a Pan-European HF Radar Network. (2017) Front. Mar. Sci. 4:8. doi: 10.3389/fmars.2017.00008

Carlson D. F., Suaria G., Aliani S., Fredj E., Fortibuoni T., Griffa A., Russo A., Melli V. Combining Litter Observations with a Regional Ocean Model to Identify Sources and Sinks of Floating Debris in a Semi-enclosed Basin: The Adriatic Sea (2017). Front. Mar. Sci. 4 DOI=10.3389/fmars.2017.00078

Corgnati L., S. Marini, L. Mazzei, E. Ottaviani, S. Aliani, A. Conversi, A. Griffa Looking inside the Ocean: Toward an Autonomous Imaging System for Monitoring Gelatinous Zooplankton (2016). Sensors, 2124. DOI: 10.3390/s16122124

M. Berta, A. Griffa, A.C. Poje, and T.M. Özgökmen, 2016. "Submesoscale tracer patch evolution from surface drifter triad observations in the Gulf of Mexico". *Geophysical Research Letters* vol.43, 11751-11759. Doi: 10.1002/2016GL070357

Rio MH, R. Santoleri, R. Bourdalle-Badie, A. Griffa, L. Piterbarg, G. Taburet, Improving the Altimeter-Derived Surface Currents Using High-Resolution Sea Surface Temperature Data: A Feasibility Study Based on Model Outputs (2016). J. Atmos. Ocean. Tech, 33, 2769- 2784 DOI: 10.1175/JTECH-D-16-0017.1

Mariano, A. J., E.H. Ryan, H.S. Huntley, L.C Laurindo, E. Coelho, A. Griffa, A., T.M. Ozgokmen, M. Berta, D. Bogucki, S.S. Chen, More...Statistical properties of the surface velocity field in the northern Gulf of Mexico sampled by GLAD drifters (2016), *J. Geophys. Res.*, 121, 5193-5216. DOI: 10.1002/2015JC011569

Carlson, D, A. Griffa, E. Zambianchi, G. Suaria, L. Corgnati, M.G. Magaldi, P.M. Poulain, A. Russo, L. Bellomo, C. Mantovani,... (2016) Observed and modeled surface Lagrangian transport between coastal regions in the Adriatic Sea with implications for marine protected areas. *Cont. shelf res.*, 118, 23-49. DOI: 10.1016/j.csr.2016.02.012

Berta, M., A. Griffa, M.G. Magaldi, T.M Ozgokmen, A.C. Poje, A.C. Haza, Angelique, M.J. Olascoaga, (2015) Improved Surface Velocity and Trajectory Estimates in the Gulf of Mexico from Blended Satellite Altimetry and Drifter Data, *J. Atmos. Ocean. Tech.*, 32, 1880-1889, DOI: 10.1175/JTE

Corgnati, L. Mantovani C. Griffa A. et al. The ISMAR high frequency coastal radar network: monitoring surface currents for management of marine resources. (2015). *OCEANS 2015 – GENOVA, IEEE*

Marini, S., Corgnati L., Mazzei, L. et al. GUARD1: an Autonomous System for Gelatinuos Zooplankton Image-based Recognition. (2015). *OCEANS 2015 – GENOVA, IEEE*

Bellomo L., A. Griffa, S. Cosoli, P. Falco, R. Gerin, I. Iermano, A. Kalampokis, Z. Kokkini, A. Lana, M.G. Magaldi, I. Mamoutos, C. Mantovani, J. Marmain, E. Potiris, J.M. Sayol, Y. Barbin, M. Berta, M. Borghini, A. Bussani, L. Corgnati, Q. Dagneaux, J. Gaggelli, P. Guterman, D. Mallarino, A. Mazzoldi, A. Molcard, A. Orfila, P.-M. Poulain, C. Quentin, J. Tintoré, M. Uttieri, A. Vetrano, E. Zambianchi & V. Zervakis (2015). Toward an integrated HF radar network in the Mediterranean Sea to improve search and rescue and oil spill response: the TOSCA project experience. *Journal of Operational Oceanography* 1755-877
<http://dx.doi.org/10.1080/1755876X.2015.1087184>

Aliani S., M. Berta, M. Borghini, D. Carlson, A. Conversi, L. Corgnati, A. Griffa, M.G. Magaldi, C. Mantovani, S. Marini, L. Mazzei, G. Suaria, A. Vetrano, (2015). Biodiversity conservation: an example of a multidisciplinary approach to marine dispersal. *Rendiconti Lincei. Scienze Fisiche e Naturali*, 48, 26-37, DOI:10.1007/s12210-014-0357-2

Coeho E., P. Hogan, G. Jacobs, P. Thoppil, H. Huntley, B. Haus, B. Lipphardt, Jr., A. D. Kirwan, Jr., E. H. Ryan, J. Olascoaga, G. Novelli, F. Beron-Vera, A. C. Haza, A. C. Poje, A. Griffa, T.M. Özgökmen, D. Bogucki, S. Chen, M. Curcic, M. Iskandarani, F. Judt, N. Laxague, A. J. Mariano, A.J.H.M. Reniers, C. Smith, A. Valle-Levinson, and M. Wei, (2015). Ocean Current Estimation Using a Multi-Model Ensemble Kalman Filter During the Grand Lagrangian Deployment Experiment (GLAD), *Ocean Modelling*, 87, 86-106
DOI:10.1016/j.ocemod.2014.11.001

Berta M, A. Griffa, M.G. Magaldi, T.M. Özgökmen, A.C. Poje, A. Haza, M.J. Olascoaga, (2015). Improved Surface Velocity and Trajectory Estimates in the Gulf of Mexico from Blended Satellite Altimetry and Drifter Data. *J. Atmospheric Oceanic Technology*, 32, 1880-1901

Haza A., T. Ozgokmen, A. Griffa, A. Poje, M.P. Lelong (2014). How does drifter position uncertainty affect ocean dispersion estimates? *J.Atms.Oceanog.Tech*, 31, 2809- 2828.

DOI:10.1175/JTECH-D-14-00107.1

Jacobs, G.A., B. Bartels, D. Bogucki, F.J. Beron-Vera, S. Chen, E.F. Coelho, M. Curcic, A. Griffa, M. Gough, B.K. Haus, A.C. Haza, R.W. Helber, P.J. Hogan, H. Huntley, M. Iskandarani, F. Judt, A.D. Kirwan Jr., N. Laxague, A. Valle-Levinson, B. Lipphardt, A. Mariano, H.E. Ngodock, G. Novelli, M.J. Olascoaga, T.M. Özgökmen, P.G. Thoppil, A.C. Poje, A. J.H.M. Reniers, C.D. Rowley, E.H. Ryan, S.R. Smith, P.L. Spence, and M. Wei, (2014). Data Assimilation Considerations for Improved Ocean Predictability during the Gulf of Mexico Grand Lagrangian Deployment (GLAD), *Ocean Modeling*, 83, 98-117.

M. Berta, L. Bellomo, M.G. Magaldi, A. Griffa, A. Molcard, J. Marmain, M. Borghini, V. Taillandier. Estimating Lagrangian transport blending drifters with HF radar data and models: Results from the TOSCA experiment in the Ligurian Current (North Western Mediterranean Sea), 2014. *Progress in Oceanography* 128, 15-29

Poje, A.C., T.M. Özgökmen., B. Lipphardt, Jr., B. Haus, E.H. Ryan, A.C. Haza, G. Jacobs, A.J.H.M. Reniers, J. Olascoaga, G. Novelli, A. Griffa, F.J. Beron-Vera, S. Chen, P. Hogan, E. Coelho, A.D. Kirwan, Jr., H. Huntley, A.J. Mariano (2014). Submesoscale dispersion in the vicinity of the Deepwater Horizon spill. *Proceedings of the National Academy of Sciences*, 111(35), 12693-12698.

Veneziani, M., A. Griffa, Z. Garraffo, J. Mensa, 2014. Barrier layers in the Tropical South Atlantic: mean dynamics and submesoscale effects. *J. Phys Oceanog.*, 44, 265-288, DOI: 10.1175/JPO-D-13-064.1

Piterberg, L., V. Taillandier, A. Griffa, 2014. Investigating frontal variability from repeated glider transects in the Ligurian current (North Western Mediterranean Sea). *J. Mar. Sys.*, 129, 381-395 <http://dx.doi.org/10.1016/j.jmarsys.2013.08.003>

Griffa, A., A. Haza, T. M. Özgökmen, A. Molcard, V. Taillandier, K. Schroeder, Y. Chang, P. M. Poulain, 2013, Investigating transport pathways in the ocean. *Deep Sea Res. II*, 85, 81-95

Mensa, J., Z. Garraffo, A. Griffa, T. Özgökmen, A. Haza, M. Veneziani, 2013. Seasonality of the submesoscale dynamics in the Gulf Stream region. *Ocean Dynamics*, 63, 923-941.

Marini S., A. Griffa, A. Molcard, 2013. Prototype imaging devices for jelly zooplankton. *Sea Tech*, vol. December 2013 p.1-7

Haza, T.M. Özgökmen, A. Griffa, Z. D. Garraffo, L. Piterberg, 2012. Parameterization of Particle Transport at Submesoscales in the Gulf Stream Region Using Lagrangian Subgridscale Models. *Oc. Modelling*, pp. 31-49, doi: 10.1016/j.ocemod.2011.11.005

Schroeder, K, J. Chiggiato, A. C. Haza, A. Griffa, T. M. Özgökmen, P. Zanasca, A. Molcard, M. Borghini, P. M. Poulain, R. Gerin, E. Zambianchi, P. Falco, C. Trees, 2012. Targeted Lagrangian Sampling of submesoscale dispersion at a coastal frontal zone. *Geophys. Rev. Lett.* 39, L11608, doi:10.1029/2012GL051879

Poulain, P.M., R. Gerin, M. Rixen, P. Zanasca, J. Teixeira, A. Griffa, A. Molcard, M. DeMarte and N. Pinardi, 2012. Aspects of the surface circulation in the Liguro Provençal basin and Gulf of Lyon as observed by satellite tracked drifters (2007-2009), *Bullett. Geophys. Theor and Appl.*, 53(2), 261-279

Chang, Y., D. Hammond, A. Haza, P. Hogan, H.S. Huntley, A.D. Kirwan, Jr, B.L. Lipphardt, Jr., V. Taillandier, A. Griffa, T.M. Ozgokmen, 2011. Enhanced Estimation of Sonobuoy Trajectories by Velocity Reconstruction With Near-Surface Drifters. *Oc. Modelling*, 36, 179-197

K. Schroeder, A.C. Haza, A. Griffa, T.M. Ozgokmen, P.M. Poulain, R. Gerin, G. Peggion, M. Rixen, 2011, Relative dispersion in the Liguro-Provencal basin: From sub-mesoscale to mesoscale, *Deep Sea Res.*, 58, 209-228.

Haza A.C., T.M. Ozgokmen, A. Griffa, A. Molcard, P.M. Poulain, G. Peggion, 2010. Transport properties in small scale coastal flows: relative dispersion from VHF radar measurements in the Gulf of La Spezia. *Oc. Dynam.*, 60 (4), 861-882. DOI: 10.1007/s10236-010-0301-7

Magaldi M.G., T.M. Ozgokmen, A. Griffa, M. Rixen, 2010. On the response of a turbulent coastal buoyant current to wind events, *Ocean Dynamics*, 60, 93

Mercatini A., A. Griffa, L. Piterbarg, E. Zambianchi, M. Magaldi, 2010. Estimating surface velocities from satellite tracer data and numerical models: implementation and testing of a new simple method, *Ocean Modelling*, 33, 190-203.

Taillandier V., S. Dobricic, N. Pinardi, P. Testor, A. Griffa, L. Mortier, G.P. Gasparini, 2010. Integration of ARGO trajectories in the MFS assimilation scheme, and impact on the regional analysis of the North Western Mediterranean circulation *J. Geophys. Res.*, 115, C03007, doi:10.1029/2008JC005251.

Books & monographs:

Lagrangian Analysis and Predictability of Coastal and Ocean Dynamics, 2007
Eds A. Griffa, A.D. Kirwan, A.J. Mariano, T.M. Özgökmen and T. Rossby,
Cambridge University Press, 500 pg.

PROFESSIONAL

Other professional activities (2010 - present)

Member of SCOR commette (Italian representative) (2015-present)

Member of IOC commette COI (Commissione Oceanografica Italiana) (2008-2013)

Responsible of Operational Unity of La Spezia (RUOS), CNR-ISMAR (2010-2013)

Responsible of HF radar network, CNR-ISMAR (2012-present)

Member of Marine Board, ESF (2005-2010) (European Science Foundation)

Member of permanent committee LAPCOD (Lagrangian Assimilation and Prediction Ocean Dynamics)

Post-Doc Advising

Lorenzo Corgnati	2015-2017
Maristella Berta	2012-2015
Dan Carlson	2013-2015
Katrin Schroeder	2010 – 2011
Alessandro Mercatini	2008 - 2009
Angelique Haza	2005 - 2007
Vincent Taillandier	2004 - 2006
Anne Molcard	2000-2002
Tamay Ozgokmen	1997-1998

Thesis & Dissertation Advising

Jean Mensa	Ph.D.	2009- 2015
Marcello Magaldi	Ph.D.	2005-2009
Andrea Doglioli	Ph.D.	2004
Milena Veneziani	Ph.D.	2005
Sonia Bauer	Ph.D.	2000
Victoria Coles	Ph.D.	1998
Sergio Castellari	Ph.D.	1997
Carmen Acero	Ph.D.	1996
Enrico Zambianchi	Ph.D.	1996
Horacio Figueroa	Ph.D.	1991
Kevin Smith	Ph.D.	1991