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ACADEMIC EXPERIENCE

2011 – present Assistant professor at LaCàN, UPC.
2007 – 2011 Senior researcher and lecturer at the Ecole Polytechnique Fédérale de Lausanne (Switzerland).
2005 – 2007 Researcher at the Radon Institute for Computational and Applied Mathematics (Linz, Austria).
2001 – 2005 Research and teaching assistant at the Ecole Polytechnique Fédérale de Lausanne (Switzerland).

EDUCATION

2004 *PhD in Applied Mathematics (Docteur ès Sciences)*.
Ecole Polytechnique Fédérale de Lausanne (Switzerland).
2001 *Degree in Mathematics (Laurea in Matematica)*.
Università degli Studi dell'Insubria (Como, Italy).

RESEARCH INTERESTS

Numerical analysis, Partial differential equations, Finite elements, Domain decomposition methods, Computational fluid mechanics.

SELECTED PUBLICATIONS

1. M. Discacciati, E. Miglio and A. Quarteroni (2002): *Mathematical and numerical models for coupling surface and groundwater flows*. Appl. Numer. Math. 43, 57–74.
2. S. Deparis, M. Discacciati, G. Fourestey and A. Quarteroni (2006): *Fluid-structure algorithms based on Steklov-Poincaré operators*. Comput. Methods Appl. Mech. Engrg. 195, 5797–5812.
3. M. Discacciati, A. Quarteroni and A. Valli (2007): *Robin-Robin domain decomposition methods for the Stokes-Darcy coupling*. SIAM J. Numer. Anal. 45(3), 1246–1268.
4. M. Discacciati and A. Quarteroni (2009): *Navier-Stokes/Darcy coupling: modeling, analysis, and numerical approximation*. Rev. Mat. Complut. 22(2), 315–426.
5. L. Badea, M. Discacciati and A. Quarteroni (2010): *Numerical analysis of the Navier-Stokes/Darcy coupling*. Numer. Math. 115(2), 195–227.
6. P. Blanco, M. Discacciati and A. Quarteroni (2011): *Modeling dimensionally-heterogeneous problems: analysis, approximation and applications*. Numer. Math. 119(2), 299–335.

PARTICIPATION IN RESEARCH PROJECTS

- *Virtual control methods for coupling heterogeneous problems*, principal investigator, funded by the European Union, Marie Curie Career Integration Grant, 2011-2015.
- *Modeling and simulation of the human cardiovascular system with application to the diagnosis, treatment and surgical planning of cardiovascular diseases*, researcher, funded by the Swiss State Secretariat for Education and Research – Brazilian Swiss Joint Research Programme, 2010-2012.
- *Fluid dynamics and mixing behavior in orbitally shaken bioreactors for mammalian cell cultivation*, researcher, funded by the Swiss National Science Foundation, 2009-2012.
- *Mathematical modeling and simulation of the cardiovascular system*, researcher, funded by the European Research Council – ERC Advanced Grants, 2009-2011.

PROFESSIONAL ACTIVITIES

- Reviewer for: *Communications in Applied Mathematics and Computational Science*, *Communications in Mathematical Science*, *Computational Geosciences*, *Computer Methods in Applied Mechanics and Engineering*, *IMA Journal of Numerical Analysis*, *Journal of Computational Physics*, *M2AN*, *Numerical Methods for Partial Differential Equations*, *SIAM Journal on Mathematical Analysis*, *SIAM Journal on Numerical Analysis*.
- Co-organizer of the minisymposium *Mathematical and numerical models for coupled multiphysics problems* at the SIAM Conference on Analysis of Partial Differential Equations PD09, 2009.
- Organizer of the minisymposium *Numerical methods for coupled multiphysics problems* at the Third Chilean Workshop on Numerical Analysis of Partial Differential Equations WON-APDE 2010.
- Co-organizer of the minisymposium *Heterogeneous domain decomposition methods* at the 21st International Conference on Domain Decomposition Methods, 2012.

More information can be found at <https://sites.google.com/site/marcodiscacciati/>.