

Enrico Nobile

Curriculum Vitae

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EDUCATION

- 1982–1983 **Post-Graduate Diploma Course *with honours***
Von Karman Institute for Fluid Dynamics
Rhode St-Genese - BELGIUM
- 1977–1983 **Laurea in Mechanical Engineering**
CUM LAUDE
Università di Trieste, ITALY

WORK EXPERIENCE

CURRENT, FROM 2010 (PT)

ESTECO S.p.A. - www.esteco.com

Board member and Scientific Advisor

Managing strategic decisions and initiatives within the company. Explore novel opportunities for applied research and innovation. Pursue research collaborations with companies and public Institutions at National and International level.

CURRENT, FROM 2001 (PT)

University of Trieste, ITALY

Full professor of Thermodynamics and Heat Transfer

Teaching at undergraduate and graduate level. Mentoring of graduate and post-graduate students. Research activities, at fundamental and applied level.

1997–2001 (FT)

University of Trieste, ITALY

Associate professor of Thermodynamics and Heat Transfer

Teaching at undergraduate and graduate level. Mentoring of graduate and post-graduate students. Research activities, at fundamental and applied level.

1986–1997 (FT)

University of Trieste, ITALY

Research assistant of Thermodynamics and Heat Transfer

Teaching at undergraduate level. Mentoring of graduate. Research activities, at fundamental and applied level.

1984–1986 (FT)

Quality assurance, and CAD/CAE Integration

Laboratory testing and quality assurance. CAD/CAE implementation.

AWARDS

- 1982-1983 *VKI-NATO Fellowship*
- 1983 *ASME (American Society of Mechanical Engineers) Award*
- 1988-1989 *CNR-NATO Advanced Fellowship Program*

TEACHING EXPERIENCE

- 2003--PRESENT Course of CFD and Num. Heat Transfer, University of Trieste, ITALY
- 2010--PRESENT Classes of Coffee Brewing, Int. Master in *Coffee Economics and Science*, - *Ernesto Illy*, Trieste, ITALY
- 2001--2014 UIT (www.uitonline.it), Post-graduate Summer School on CFD and Micro-scale Heat Transfer, Siena, ITALY
- 1993--2009 Course of Applied Thermodynamics and Heat Transfer, University of Trieste, ITALY
- 1993--1995 Undergraduate course of Heat Transfer University of Modena and Reggio Emilia, ITALY
- 1988--1989 Classes of Heat Transfer and Numerical Heat Transfer, Dept. of Mech. Eng., University of New Brunswick, CANADA
- 1986--1997 Tutorials and complementary classes of Thermodynamics and Heat Transfer, University of Trieste, ITALY

Prof. **Nobile** has supervised and is supervising several B. Sc. and M. Sc. thesis, and seven Ph. D thesis.

GRANTS AWARDED

- 1995 ENEA--national project L.95/95, HPC modelling of fluid flow and combustion
- 1997-2010 MIUR National projects Responsible of local unit
- 2012 EUROSTARS - Project
- 2012 E!6853 OptimHEX,
- 2014-2017 EU FP7-PEOPLE-2013-IAPP Project ACCUSIM

PRESENT RESEARCH ACTIVITIES

- Functional and shape optimization of heat transfer systems and components.
- RBF (Radial Basis Function) meshless methods in fluid flow and heat transfer.
- Industrial applications of CFD in heat transfer equipment, internal combustion engines and electronic packaging.
- CFD modelling of multiphase (free surface and phase-change) flow.

SOME RECENT PUBLICATIONS

Prof. **Nobile** is the author or co-author of more than 120 publications, constituted by articles on International Scientific Journals, volumes (edited and refereed), and Proceedings of International and National Conferences.

D. Miotti, R. Zamolo and **E. Nobile**, A Fully Meshless Approach to the Numerical Simulation of Heat Conduction Problems over Arbitrary 3D Geometries, *Energies*, **14**, No. (5), (2021), doi : 10.3390/en14051351.

D. Jošt, A. Škerlavaj, V. Pirnat, M. Morgut, **E. Nobile**, Detailed Analysis of Flow in Two Pelton Turbines with Efficiency and Cavitation Prediction, *Int. J. Fluid Machinery and Systems*, **12**, No. 4, (2019), doi : 10.5293/IJFMS.2019.12.4.388.

M. Morgut, D. Jšt, A. Škerlavaj, **E. Nobile**, G. Contento, R. Pigazzini, T. Puzzer, S. Martini, Numerical simulations of a cavitating propeller in uniform and oblique flow, *Int. Shipbuild. Prog.*, **66**, (2019), pp. 77-90, doi : 10.3233/ISP-180257.

R. Zamolo, **E. Nobile**, Solution of incompressible fluid flow problems with heat transfer by means of an efficient RBF-FD meshless approach, *Numerical Heat Transfer, Part B: Fundamentals*, (2019), pp. 1-24, doi : 10.1080/10407790.2019.1580048.

R. Zamolo, **E. Nobile**, B. Šarler, Novel multilevel techniques for convergence acceleration in the solution of systems of equations arising from RBF-FD meshless discretizations, *J. Comput. Phys.*, **392**, pp. 311-334, (2019), <https://doi.org/10.1016/j.jcp.2019.04.064>.

R. Zamolo, **E. Nobile**, Two algorithms for fast 2D node generation: Application to RBF meshless discretization of diffusion problems and image halftoning, *Computers & Mathematics with Applications*, **75** (12), 4305-4321, (2018), <https://doi.org/10.1016/j.camwa.2018.03.031>.

... AND SOME POPULAR ONES

R. Russo, A. Clarich, C. Poloni, **E. Nobile**, Optimization of a Boomerang shape using modeFRONTIER, *Procs. 12th AIAA Aviation Technology, Integration, and Operations (ATIO) Conf. and 14th AIAA/ISSMO Conf.*, AIAA 2012-5489, (2012), <https://doi.org/10.2514/6.2012-5489>.

L. Navarini, **E. Nobile**, F. Pinto, A. Scheri, F. Suggi-Liverani, Experimental Investigation of Steam Pressure Coffee Extraction in a Stove-top Coffee Maker, *Applied Thermal Engineering*, **29**, pp. 998-1004, (2009), <https://doi.org/10.1016/j.applthermaleng.2008.05.014>.

OTHER ACHIEVEMENTS

- Prof. **Nobile** is one of the co-founders of ESTECO (www.esteco.com), a company specialized in the development of CAE software, and in particular modeFRONTIER®, a multidisciplinary optimization design environment, and VOLTA, a multidisciplinary business process optimization and simulation data management.
- Head of the HPC Group at the University of Trieste, 1997 - 2002.
- Member of the Steering Committee of UIT, 1997 - 2004.
- President of the Italian NAFEMS chapter, 2001 - 2003.
- Reviewer, within ITHPCN (Information Technology - High Performance Computing and Networking), of European ESPRIT and COPERNICUS projects.
- Evaluator, c/o European Commission - DG III Industry - RTD: Information Technologies - of ESPRIT and COPERNICUS proposals, HPCN sector.
- Prof. **Nobile** has some significant experience in dissemination of scientific results, by means of publication on popular journals (www.tecnelab.it/approfondimenti/speciali/progettazione--termofluidodinamica-computazionale), participation in TV interviews (<https://youtu.be/PbF3IPAh6Gw>) and, more recently, as organizer and moderator of the panel *UTOPIAE - how to cope with the uncertainty and achieve optimal performance in safer complex systems* at the *Euro-Science Open Forum 2020* www.esof.eu/trieste-and-esof2020/, Trieste, 3 September 2020.