



POLITECNICO
MILANO 1863

Curriculum vitae



Fabio Inzoli, PhD

Full Professor
Department of Energy
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University Education

1984 MS in Mechanical Engineering, Politecnico di Milano, Milano, Italy
1991 PhD in Energy Engineering, Politecnico di Milano, Milano, Italy

Professional Activities

1984-1988 Research assistant in Energy Engineering Department, Politecnico di Milano.
1991-1992 Research fellows at University of Study, Milano, Italy
1994-1996 Research fellows at Scientific Institute H. San Raffaele, Milano. Italy.

Academic record

1996-1997 Assistant Professor of Thermodynamics, Politecnico di Milano, Milano, Italy.
1997-2010 Associate Professor, Politecnico di Milano, Milano, Italy.
2010- Full Professor, Politecnico di Milano, Milano, Italy.

Academic Governance in Politecnico di Milano

Head of Department of Energy (2013-2019)
Member of Academic Senate (2013-2019)
Member of Board of Governors (2011-2012)
Member of Board of Department of Energy (2008-2019)
Member of PhD programme in Energy and Nuclear Science and Technologies (2008-2011)
Member of the Study Programme Board of Energy Engineering Course of Study (2010-2022)
Member of Study Programme Board of Environmental and Geomatic Engineering Course of Study (2002-2012)

Institutional Roles

- Director of CFDHub@Polimi, Interdepartmental HPC services for computational Science, since 2012 (www.cfdhub.polimi.it)
- Member of Project Management Group of Partnership Agreement between ENEL spa and Politecnico di Milano since 2016, for promoting research cooperation related to the global energy challenges involving resource assessment, processes and technological

development, breakthrough innovation, energy system analyses and scenarios including economics, environmental and social impact of energy systems.

- Member of Project Management Group of Partnership Agreement between Ansaldo Energia and Politecnico di Milano, since 2013, for promoting research activities in the field of gas turbine development.
- Member of the expert panel in Industrial Energy for the National Research Plan 2022-2027, Italian Ministry of University and Research.
- Member of board of Lombardy Energy Cleantech Cluster (Le2C) (2013-2020)
- Member of Project Management Group of Partnership Agreement between Goppion spa and Politecnico di Milano (2016-2018), for promoting research cooperation in the field of museum industry.
- Member of Project Management Group of Partnership Agreement between ITER International Fusion Energy Organisation and Politecnico di Milano (2014-2016), for promoting research cooperation related to Fusion Technology, cryogenic, electrical and nuclear engineering.
- Member of Project Management Group of Partnership Agreement between Solvay Specialty Polymers Italia spa and Politecnico di Milano (2013-2015) for promoting research cooperation in the field of new materials for production, conversion and storage of energy.
- Member of Project Management Group of Partnership Agreement between Maire Technimont spa and Politecnico di Milano (2013-2015)

Research interest

Prof. Fabio Inzoli is Full Professor in Thermodynamics, Heat transfer and Applied CFD at the Department of Energy in Politecnico di Milano.

His current areas of interest is related to heat transfer and multiphase flows modelling, power plant flue gas cleaning and oil and gas processes.

He is author of more than 200 scientific papers published on international journal or presented in national and international conferences. He started setting up in 2001 a research group on CFD which is currently focused on the development and implementation of turbulence and multi-phase models applied to the design of complex and innovative power plant devices.

In period 2013-2019 he became Head of Department of Energy, in Politecnico di Milano, a research infrastructure that joins together different skills existing at Politecnico di Milano in various fields of engineering to provide, through interdisciplinary approach, convenient solutions to the complex problems that currently affect the energy sector. More than 330 people work in the 5 Research Division within 18 research units. The experimental laboratories are more than 10.000 m² dedicated to research, education, services to the industry.

Technology transfer

Team leader of research activities in energy field supported by companies as Nooter Eriksen, STF, Eni spa, Redecam group, ENEL, Tenova.

Educational activity

Currently Prof. Fabio Inzoli teaches courses at the School of Industrial and Information Engineering of Politecnico di Milano. In particular, "Applied Thermodynamics and Heat Transfer" for students of Bachelor in Aeronautic Engineering, "CFD for Energy Engineering"

for MS in Energy Engineering and “CFD for Nuclear Engineering” for MS in Nuclear Engineering

In his career, he had several educational courses in the energetic field under agreements with industrial partners. Since 2018 he is Director of Master supported by ENEL in Strategic and Innovative O&M Management. He is and has been tutor of PhD programs for both numerical and experimental research issues about multiphase flow modeling applied to chemical industries.

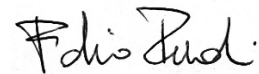
Bibliography

Prof. Fabio Inzoli is author of more than 200 publications in the field of energy conversion and Computational Fluid Dynamics.

Scopus database (04/2022): documents 127, Citations 2800, H_index 29

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Milan, 12th April 2022

A handwritten signature in black ink that reads "Fabio Inzoli". The signature is written in a cursive style with a period at the end.

Publications (2019-2022):

1. G. Besagni, F. Inzoli, **“BUBBLE SIZES AND SHAPES IN A COUNTER-CURRENT BUBBLE COLUMN WITH PURE AND BINARY LIQUID PHASES”**, Flow Measurement and Instrumentation, 67, pp. 55-82, 2019
2. E. Ranaee, F. Inzoli, M. Riva, A. Guadagnini, **“HYSTERESIS EFFECTS OF THREE-PHASE RELATIVE PERMEABILITIES ON BLACK-OIL RESERVOIR SIMULATION UNDER WAG INJECTION PROTOCOLS”** Journal of Petroleum Science and Engineering, pp. 1161-1174, 2019.
3. F. Inzoli, M. Masi, F. Resta, **“LE OPPORTUNITÀ PER LE IMPRESE: SOSTENIBILITÀ, INNOVAZIONE, EFFICIENZA”**, in Energia, Innovazione e Competitività, a cura di F. Di Amato, Ed. Assolombarda, pp. 118-131., 2019
4. Ghorbani, B., Shirmohammadi, R., Amidpour, M., Inzoli, F., Rocco, M., **“DESIGN AND THERMOECONOMIC ANALYSIS OF A MULTI-EFFECT DESALINATION UNIT EQUIPPED WITH A CRYOGENIC REFRIGERATION SYSTEM”**, Energy Conversion and Management, 202, pp. 112208-112226, 2019.
5. Mereu, R., Passoni, S., Inzoli, F., **“SCALE-RESOLVING CFD MODELING OF A THICK WIND TURBINE AIRFOIL WITH APPLICATION OF VORTEX GENERATORS: VALIDATION AND SENSITIVITY ANALYSES”**, Energy, 187, pp. 1-15, 2019
6. Guédon, G.R., Inzoli, F., Riva, M., Guadagnini, A., **“PORE-SCALE VELOCITIES IN THREE-DIMENSIONAL POROUS MATERIALS WITH TRAPPED IMMISCIBLE FLUID”**, Physical Review, 100 (4), pp. 1-9, 2019
7. Besagni, G., Gallazzini, L., Inzoli, F., **“ON THE SCALE-UP CRITERIA FOR BUBBLE COLUMNS”**, Petroleum, 5 (2), pp. 114-122, 2019.
8. Besagni, G., Inzoli, F., Ziegenhein, T., Lucas, D., **“THE PSEUDO-HOMOGENEOUS FLOW REGIME IN LARGE-SCALE BUBBLE COLUMNS: EXPERIMENTAL BENCHMARK AND COMPUTATIONAL FLUID DYNAMICS MODELLING”**, Petroleum, 5 (2), pp. 141-160, 2019.
9. Besagni, G., Inzoli, F., Zieghenein, T., Lucas, D., **“EXPERIMENTAL STUDY OF LIQUID VELOCITY PROFILES IN LARGE-SCALE BUBBLE COLUMNS WITH PARTICLE TRACKING VELOCIMETRY”**, Journal of Physics: Conference Series, 1224 (1), pp. 1-10, 2019.
10. Quang, D.L., Mereu, R., Besagni, G., Dossena, V., Inzoli, F., **“NUMERICAL MODELLING OF FLASHING FLOW PHASE CHANGE IN CONVERGENT-DIVERGENT NOZZLE: A SENSITIVITY ANALYSIS”**, Journal of Physics: Conference Series, 1224 (1), art. no. 012010, pp. 1-19, 2019.
11. Besagni, G., Inzoli, F., **“PREDICTION OF BUBBLE SIZE DISTRIBUTIONS IN LARGE-SCALE BUBBLE COLUMNS USING A POPULATION BALANCE MODEL”**, Computation, 7 (1), art. no. 17, pp. 1-16, 2019.
12. Alikhani, P., Guadagnini, A., Inzoli, F., **“FEEDBACK BETWEEN GRAVITY AND VISCOUS FORCES IN TWO-PHASE BUCKLEY-LEVERETT FLOW IN RANDOMLY HETEROGENEOUS PERMEABILITY FIELDS”**, 4th EAGE Conference on Petroleum Geostatistics, art. no. ThP08, pp. 1-5, 2019.
13. Ziegenhein, T., Lucas, D., Besagni, G., Inzoli, F., **“EXPERIMENTAL STUDY OF THE LIQUID VELOCITY AND TURBULENCE IN A LARGE-SCALE AIR-WATER COUNTER-CURRENT BUBBLE COLUMN”**, Experimental Thermal and Fluid Science, 111, pp. 1-21, 2020.
14. Moghadasi, L., Ranaee, E., Renna, D., Bartosek, M., Maddinelli, G., Masserano, F., Cominelli, A., Inzoli, F., Guadagnini, A., **“COMBINING TWO- AND THREE-PHASE COREFLOODING EXPERIMENTS FOR RESERVOIR SIMULATION UNDER WAG PRACTICES”**, International Petroleum Technology Conference 2020, IPTC 2020, 2020.
15. Ranaee, E., Guédon, G.R., Moghadasi, L., Inzoli, F., Riva, M., Maddinelli, G., Bartosek, M., Guadagnini, A., **“IMPLEMENTATION OF THREE-PHASE BLACK-OIL RESERVOIR MODELS ASSISTED BY MICRO-SCALE ANALYSES”**, Society of Petroleum Engineers - SPE Europepec Featured at 82nd EAGE Conference and Exhibition, 2020.

16. Hosseini, A., Mereu, R., Canu, S., Ziegenhein, T., Lucas, D., Inzoli, F. **“MULTIPHASE NUMERICAL MODELING OF A PILOT-SCALE BUBBLE COLUMN WITH A FIXED POLY-DISPERSITY APPROACH”**, International Journal of Multiphase Flow, Vol. 128, paper 103287, 2020.
17. Besagni, G., Croci, L., Cristiani, N., Guédon, G.R., Inzoli, F., **“REFRIGERANT SELECTION FOR EJECTOR REFRIGERATION systems: A MULTISCALE EVALUATION”**, E3S Web of Conferences, 197, paper 10011, 2020
18. Besagni, G., Croci, L., Cristiani, N., Inzoli, F., Guédon, G.R., **“COMPUTATIONAL FLUID DYNAMIC MODELLING OF SUPERSONIC EJECTORS: COMPARISON BETWEEN 2D AND 3D MODELLING”**, Journal of Physics: Conference Series, art. no. 012091, 2021.
19. Ranaee, E., Ghorbani, H., Keshavarzian, S., Ghazaeipour Abarghoei, P., Riva, M., Inzoli, F., Guadagnini, A., **“ANALYSIS OF THE PERFORMANCE OF A CRUDE-OIL DESALTING SYSTEM BASED ON HISTORICAL DATA”**, Fuel, 291, art. no. 120046, 2021
20. Besagni, G., Croci, L., Cristiani, N., Inzoli, F., Guédon, G.R., **“MULTI-SCALE PERFORMANCE EVALUATION OF EJECTOR REFRIGERATION SYSTEMS”**, Journal of Physics: Conference Series, art. no. 012013, 2021.
21. Besagni, G., Cristiani, N., Croci, L., Guédon, G.R., Inzoli, F. **“COMPUTATIONAL FLUID-DYNAMICS MODELLING OF SUPERSONIC EJECTORS: SCREENING OF MODELLING APPROACHES, COMPREHENSIVE VALIDATION AND ASSESSMENT OF EJECTOR COMPONENT EFFICIENCIES”**, Applied Thermal Engineering, 2021.
22. Besagni, G., Cristiani, N., Croci, L., Guédon, G.R., Inzoli, F., **“MULTI-SCALE EVALUATION OF EJECTOR PERFORMANCES: THE INFLUENCE OF REFRIGERANTS AND EJECTOR DESIGN”**, Applied Thermal Engineering, 2021.