

Curriculum Vitae

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Personal Information

First Name **Alessandro**
 Family Name **IAFRATI**
 Citizenship
 Birth
 Place of Birth

Work

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Appointments and Responsibilities at CNR-INM

Level Research Director
 Period August 2019-present
 Role **Institute Director**
 Activities and Responsibilities Coordinates the institute activities and is responsible, in the programming framework of the National Research Council (CNR), of the activities carried out by the institute on the research projects and industrial contracts. CNR-INM was formed in March 2018 by merging the former INSEAN (*Marine Technology Research Institute*) and the ISSIA (*Institute of Intelligent Systems for Automation*) and has a total of about 170 employees, 75 of which are researchers and engineers.

Level Senior Research Scientist/Research Director
 Period February 2018-June 2021
 Role **Technical Responsible of CNR-INM**
 Activities and Responsibilities Supervises all the activities related to the preparation of experimental tests; coordinates all laboratories, workshops and experimental facilities in the preparation of models, instrumentation experimental setups and testing; participates to the preparation of proposals involving experimental activities for both industrial or research projects

Level Senior Research Scientist
 Period March 2018-July 2019
 Role **Head of testing and models laboratory**
 Activities and Responsibilities Coordinates the activities in the laboratories and decide their schedule in order to make them fitting with the schedule of the tests in the experimental facilities

Level Senior Research Scientist
 Period 2016 – June 2021
 Role **Scientific Responsible for the High Speed Ditching Facility**
 Activities and Responsibilities Management, scientific planning and design of experimental activities to be carried out on the facility; coordination of the technical personnel assigned, either permanently or temporarily, to the facility.

Appointment and Directions in INSEAN *INSEAN (the Italian Ship Model Basin) has been an independent National Research Institution until 2010 and was transformed into an institute of the CNR (National Research Council) in 2011.*

Role Senior Research Scientist
 Period 2009 – 2010
 Role **Director of the “Resistance and Optimization” Scientific Unit**
 Main responsibilities Direction of the scientific unit, preparation of the research plans and research proposals in national, international, and industrial context.

Scientific Career

At INSEAN or CNR-INM

March 2020 – present: Research Director
2003 – February 2020: Senior Research Scientist
1997 – 2002: Research Scientist

At CIRA

1992 - 1997 Research Scientist

Italian Aerospace Research Centre, Capua (CE), Italy

Education

Typology

Professor on *Modélisation expérimentale en hydrodynamique à surface libre*

Date

10/06/2017

Title

Full-Professor, First ranked position n. 4045, section 60 (Mécanique, génie mécanique, génie civil)

Organization

Ecole Centrale de Nantes (France)

Typology

National Habilitation

Validity

from 03/02/2014 to 03/02/2020

Title

Habilitation to Full Professor, Sector 09/A1 (Aeronautical, Aerospace and Naval Engineering)

Organization

Italian Ministry of Education, University and Research

Typology

PhD

Period

2008-2009

Title

PhD by Publication in Applied Mathematics

Organization

School of Mathematics, University of East Anglia (UK)

Typology

Degree (Master Degree equivalent)

Years

1985-1991

Title

Degree in Mechanical Engineering

Vote

110/110 summa cum laudae

Organization

Department of Mechanics and Aeronautics, Univ. of Rome “La Sapienza”

Scientific Activity

Bibliometric indicators (updated Jan 2021)

Google Scholar	All	From 2017
Citations	1855	827
h-index	22	16
i 10-index	43	30

Scopus	All	From 2017
Citations	1208	576
h-index	19	ND

The bibliometric indicators for Google Scholar are available on internet by using the ID **DgSlcVoAAAAJ&hl=en** or directly at the link <https://scholar.google.it/citations?hl=it&user=DgSlcVoAAAAJ>

Alternatively, with the Scopus ID **6603614776** or directly at the link https://www.scopus.com/cto2/main.uri?ctoid=CTODS_770980617&authors=6603614776&origin=AuthorNamesList

Scientific Reviewer for International research agencies

External Reviewer for Research Foundation – Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO), Belgium; PRACE: Partnership for Advanced Computing in Europe, Belgium; NSERC: Natural Sciences and Engineering Research Council of Canada; Dutch Research Council (NWO); Research Council KU Leuven; U.S.-Israel Binational Science Foundation

Scientific Reviewer for National research agencies

Reviewer and Scientific/Technical expert for proposals and projects of the Italian Ministry of Economic Development; Proposal Reviewer for the PRIN (Research Projects of National Interest)

Reviewer for academic/research positions	<ul style="list-style-type: none"> • Member of Doctoral Committees, Habilitation jury and tenure reviewer for several academic positions.
Scientific Appointments in International context	<ul style="list-style-type: none"> • Member of the <i>Technical Advisory Panel for International joint Research Laboratory on Offshore Oil & Gas Engineering</i> (Dalian Univ. of Technology & Univ. Western Australia) • Chairman of the <i>Specialist Committee on Modelling of Environmental Conditions</i>, 29th ITTC • Chairman of the <i>Specialist Committee on Modelling of Environmental Conditions</i>, 28th ITTC • Member of the Technical Committee on <i>Computational Fluid Dynamics</i> of the ECCOMAS - <i>European Community on Computational Methods in Applied Sciences</i> • Member of the <i>General Council dell'International Association for Computational Mechanics</i> (IACM) • External Associate Supervisor for Doctoral and Master Courses at the Swinburne University of Technology, Hawthorn (VI), Australia
Scientific Appointments in the National Context	<ul style="list-style-type: none"> • Member of the Directive Board of the SIMAI – Italian Society for Applied and Industrial Mathematics (March, 2009- March, 2013).
Organization of International Conferences	<ul style="list-style-type: none"> • Organizer of the <i>International Conference on Hydroelasticity in Marine Technology</i>, Roma, Italy, 2022. • Organizer of the <i>37th International Workshop on Water Waves and Floating Bodies</i> (IWWWFB), Roma, Italy, 2022. • Member of the Scientific Committee of the <i>IX International Conference on Computational Methods in Marine Engineering</i> (MARINE 2021), Edinburgh, UK, June 2021. • Member of the Scientific Committee of the <i>VIII International Conference on Computational Methods in Marine Engineering</i> (MARINE 2019), Goteborg, Sweden, May 2019. • Member of the Scientific Committee of the <i>B'WAVES 2018 Workshop – Marseille, France, May 2018</i> • Member of the Scientific Committee of the <i>19th International Conference on Ship and Shipping Research</i>, Trieste, Italy 2018. • Member of the Scientific Committee of the <i>VII International Conference on Computational Methods in Marine Engineering</i> (MARINE 2017), Nantes, France, May 2017. • Member of the Scientific Committee of the ECCOMAS 2016 – <i>European Congress on Computational Methods in Applied Sciences</i>, Crete Island, Greece, June, 2016. • Member of the International Organizing and Scientific Committee of the SuperFAST2008 – International Conference on Superfast Marine Vehicles moving above, under and in water surface, St. Petersburg, Russia, July, 2008. • Secretary and Member of the Local Organizing Committee of the <i>26th ONR Symposium on Naval Hydrodynamics</i>, Rome, Italy, September, 2006. • Member of the <i>Organizing and Paper Committee of the 19th International Workshop on Water Waves and Floating Bodies</i>, IWWWFB, Cortona, Italy, March 2004.
Visiting Research Periods (most relevant)	<ul style="list-style-type: none"> • Visiting Researcher at: <i>State Key Laboratory of Coastal and Offshore Engineering</i>, Dalian Univ. of Technology (CN); <i>Department of Naval Architecture and Ocean Engineering</i>, Shanghai Jiao Tong Univ. (CN); <i>Faculty of Science, Engineering and Technology at Swinburne University</i>, Hawthorn, Victoria (AU); <i>Department of Mathematics of the Izmir Institute of Technology</i>, Izmir, Turkey; <i>School of Mathematics, Univ East Anglia</i>, UK; <i>Lavrentiev Institute of Hydrodynamics – Siberian Branch Russian Academy of Science</i>, Novosibirsk, Russia
Referee for Scientific Journals	<ul style="list-style-type: none"> • Reviewer for: Applied Ocean Research, Applied Mathematical Modelling, ASME J. Fluid Engineering, Chinese Journal of Oceanology and Limnology, Communication in Applied and Industrial Mathematics, European Journal of Mechanics/B Fluids, Engineering Analysis with Boundary Elements, Engineering Applications of Computational Fluid Mechanics, Int. J. for Numerical Methods in Fluids, Int. J. of Computational Fluid Dynamics, Int. J. of Offshore and Polar Engineering (IJOPE), International Journal of Multiphase Flow, Iranian J. of Science and Technology, J. Computational Physics, J. Engineering Mathematics, J. Fluids and Structures, J. Fluid Mechanics, J. Geophysical Research - Ocean, J. Hydrodynamics, J. Marine Science and Technology, J. Ship Research, J. Sound and Vibrations, Ocean Engineering, Ocean Modelling, Physics of Fluids, Quarterly J. Mechanics and Applied Mathematics, Ships and Offshore Structures, Theoretical and Computational Fluid Dynamics.

Invited Lectures	<ul style="list-style-type: none"> About 15 invited and keynote lectures at international conference and internal seminars at Universities.
Responsibility in International Research Projects	
EU funded Projects	<ul style="list-style-type: none"> SARAH - <i>Increased Safety and robust certification for ditching of aircrafts and helicopters</i>, H2020-MG-2016-2017 SMAES - <i>Smart Aircraft in Emergency Situations</i>, FP7-AAT-2010-RTD-1
Participation/ Collaboration in International Research Projects	
Collaboration in projects	<ul style="list-style-type: none"> <i>Combined numerical/asymptotic algorithms in fluid-structure interaction problems: flow and other aspects of dam-breaking</i>, funded by TUBITAK (TR)
Responsibility in National Projects	
Industrial Research Projects	<ul style="list-style-type: none"> THALES-IXV - <i>Scaled Model Experimental Test Campaign</i>, funded by Thales Alenia Space USV - <i>Study of the dynamics of an unmanned space vehicle during the water landing</i>, funded by CIRA (Italian Aerospace Research Center)
Teaching Activity	
Courses	<ul style="list-style-type: none"> 2003-08, Professorship – Numerical Analysis, Degree in Mechanical/Electrical Engineering, Univ. “La Sapienza” 1996-2000, Professorship – Fluid Dynamics, Diploma course in Mechanical Engineering, Univ. of Cassino