

*Curriculum vitae*  
ENRICO DE BERNARDIS

June 2017

**Contents**

<b>Personal data</b>	<b>2</b>
<b>Education</b>	<b>2</b>
<b>Languages</b>	<b>2</b>
<b>Professional Career</b>	<b>2</b>
<b>Management positions in organization and research</b>	<b>2</b>
<b>Appointments at foreign research institutions</b>	<b>2</b>
<b>Positions in international committees</b>	<b>2</b>
<b>Management of major research programs</b>	<b>3</b>
<b>Teaching</b>	<b>3</b>
<b>Referee of international journals</b>	<b>3</b>
<b>Member of editorial board</b>	<b>3</b>
<b>Publications</b>	<b>4</b>
Books (editor) . . . . .	4
Journal articles . . . . .	4
Conference papers . . . . .	4

## Personal data

Enrico De Bernardis

Birth place and date: Frosinone (Italy), December 11, 1958

Home address: Piazza S. Maria 18, I-03100 Frosinone

Citizenship: Italian



## Education

1989: Doctor Degree in Applied Mechanics, University of Rome “La Sapienza”

1983: Honor Degree in Mechanical Engineering, University of Rome “La Sapienza”

## Languages

English (fluent), French (elementary), Italian (mother)

## Professional career

2011-present: Senior Research Scientist at CNR-INSEAN, Marine Technology Research Institute

2003-2010: Senior Research Scientist at INSEAN<sup>1</sup>, The Italian Ship Model Basin

1997-2003: Senior Research Engineer at INSEAN, The Italian Ship Model Basin

1989-1997: Research Scientist at CIRA, Italian Aerospace Research Center

## Management positions in organization and research

2004-2010: Manager of Vibration and Noise Branch at INSEAN

2000-2004: Manager of Information Technology Group at INSEAN

1998-2000: Head of Testing tools and equipment Lab at INSEAN

1989-1997: Head of Aeroacoustics Branch at CIRA

## Appointments at foreign research institutions

1988: Visiting Scientist at NASA Langley Research Center, Hampton, VA (USA), supported by: University of Rome “La Sapienza”, Doctorate in Applied Mechanics; George Washington University, GWU-NASA Joint Institute for Advancement of Flight Sciences.  
Period: May-October.

## Positions in international committees

1999-2002: Secretary of the Executive Committee, 23rd International Towing Tank Conference<sup>2</sup>.

<sup>1</sup>INSEAN was a Public Research Establishment, in the field of marine hydrodynamics, from 1927 to 2010, when it was merged with its human, technical and financial resources in the National Research Council of Italy and became CNR-INSEAN.

<sup>2</sup>International Towing Tank Conference (ITTC) is an international body bringing together the most important institutions (universities, research establishments, shipyards and naval registers) in the field of marine engineering. The body is divided into study committees, in office for three years, which conduct a research and analysis of the state of the art on their respective topics. At the end of three years the results of the work are shown in the general conference of the ITTC.

## Management of major research programs

- 2016-2019: CNR manager for the Project “CSA Oceans 2”, Coordination Action, funded by the European Union within the Horizon 2020 Programme, in support of the implementation of Strategic Research and Innovation Agenda of the Joint Programming Initiative “Healthy and Productive Seas and Oceans (JPI Oceans)”, a coordinating and integrating strategic platform, open to all EU Member States and Associated Countries who invest in marine and maritime research.
- 2006-2011: INSEAN manager for the Network of Excellence “Hydro Testing Alliance (HTA)”, funded by the European Union within the Sixth RTD Framework Programme, to improve the quality and efficiency of the trial in marine hydrodynamics in Europe by developing an organizational structure to co-ordinate the definition and introduction of novel measurement, observation and analysis technologies for model testing environments.
- 1997-2001: INSEAN manager for the Project “Wing Assisted Hydrofoil enabling technologies, Hydrodynamics and Aerodynamics (SEABUS-HYDAER)”, funded by the European Union within the Fourth RTD Framework Programme, to develop technologies in hydrodynamics and aerodynamics, propulsion, high speed testing, obstacle detection systems, for the study of a new concept marine vehicle.
- 1993-1996: CIRA manager for the Project “Rotorcraft Aerodynamics and Aeroacoustics (HELISHAPE)”, funded by the European Union within the Third RTD Framework Programme, to generate a basis for quiet and efficient future helicopters by means of numerical codes with higher prediction performances and wind tunnel tests on a modern, more complex model rotor equipped with pressure sensors.
- 1990-1992: CIRA manager for the Project “Helicopter and Tilt Rotor Aircraft Exterior Noise Research (HELINOISE)”, funded by the European Union within the Second RTD Framework Programme, to investigate the aeroacoustic mechanisms of rotor noise generation by means of a comprehensive wind tunnel test programme and the development of enhanced computational procedures.

## Teaching

academic years 2009-2010 to 2013-2014:

Lecturer in Mathematical Analysis at University of Cassino, Frosinone branch.

academic years 2005-2006 to 2009-2010:

Lecturer in Mathematical Analysis at University of Rome “La Sapienza”, Latina branch.

academic years 1992-1993 to 1995-1996:

Lecturer in Fluid Dynamics at University of Cassino.

## Referee of international journals

Journal of Marine Science and Technology.

Journal of Sound and Vibration.

## Member of editorial board

Communications in Applied and Industrial Mathematics.

## Publications

### Books (editor)

- [1] De Bernardis E., Spigler R., and Valente W., editors. *Applied and Industrial Mathematics in Italy III*, volume 82 of *Advances in Mathematics for Applied Sciences*. World Scientific, Singapore, 2009.

### Journal articles

- [1] Riccardi G. and De Bernardis E. Dynamics and acoustics of a spherical bubble rising under gravity in an inviscid liquid. *J. Acoust. Soc. Am.*, 140(3), 1488–1497, 2016.
- [2] De Bernardis E. and Riccardi G. Dynamics of a bubble rising in gravitational field. *Comm. Appl. Ind. Math.*, 7(1), 48–67, 2016.
- [3] Ianniello S. and De Bernardis E. Farassat’s formulations in marine propeller hydroacoustics. *Int. J. Aeroacoust.*, 14(1 & 2), 87–104, 2015.
- [4] Riccardi G., Vellucci P., and De Bernardis E. Asymptotic expansions of the complete elliptic integrals about unitary modulus. *Comm. Appl. Ind. Math.*, 5, e–490, 2014.
- [5] Riccardi G. and De Bernardis E. Extended Stokes’ flows in cylindrical geometries. *Int. J. Nonlinear Mech.*, 55, 186–208, 2013.
- [6] De Bernardis E. and Strani M. Gravity-capillary oscillations of an edgewise constrained meniscus in a cylindrical duct. *J. Sound Vib.*, 122(3), 523–533, 1988.

### Conference papers

- [1] De Bernardis E. and Riccardi G. Acoustics of a bubble rising in a gravitational field. In *CD ROM Proc. 22nd International Congress on Sound and Vibration*, Florence, (Italy), 2015. ISBN 978-88-88942-48-3.
- [2] Gennaretti M., Morino L., Ianniello S., De Bernardis E., and di Francescantonio P. Aeroacoustic analysis of propeller-fuselage interaction. In *Proc. Third Joint AIAA/CEAS Aeroacoustics Conference*, pages 645–652, Atlanta, GA (USA), 1997.
- [3] Iafrati A. and De Bernardis E. Effects of source convection on vortex sound. In Desideri J.-A., Hirsch C., Le Tallec P., Pandolfi M., and Periaux J., editors, *Proc. Third ECCOMAS Computational Fluid Dynamics Conference*, pages 760–765, Paris (France), 1996. John Wiley & Sons, Chichester, 1996.
- [4] Ianniello S. and De Bernardis E. The high-speed impulsive noise prediction through a volume integration: the problem of multiple emission times. In *Proc. 21th European Rotorcraft Forum*, paper n. 1.3, St. Petersburg (Russia), 1995.
- [5] Ianniello S. and De Bernardis E. Calculation of high-speed noise from helicopter rotor using different descriptions of quadrupole source. In *Aerodynamics and Aeroacoustics of Rotorcraft (Proc. 75th AGARD Fluid Dynamics Symposium, CP 552)*, paper n. 27, Berlin (Germany), 1994. AGARD, 1995.

- [6] Ianniello S. and De Bernardis E. Volume integration in the calculation of quadrupole noise from helicopter rotors. In *Proc. First Joint CEAS/AIAA Aeroacoustics Conference*, volume 1, pages 807–812, Munich (Germany), 1995.
- [7] Ianniello S., Gennaretti M., Guj G., and De Bernardis E. Validation of a new code for the prediction of noise generated by helicopter rotor. In *Proc. 19th European Rotorcraft Forum*, paper n. B6, Cernobbio (Italy), 1993.
- [8] Lowson M.V., Fiddes S.P., Klöppel V., De Bernardis E., Ianniello S., di Francescantonio P., Campos L.M.B.C., and Macedo C.M. Theoretical studies undertaken during HELINOISE programme. In *Proc. 19th European Rotorcraft Forum*, paper n. B4, Cernobbio (Italy), 1993.
- [9] Ianniello S., di Francescantonio P., Tarica D., and De Bernardis E. Theoretical and experimental comparisons for high-speed and blade-vortex interaction noise. In *Proc. 18th European Rotorcraft Forum*, paper n. 58, Avignon (France), 1992.
- [10] De Bernardis E. and Tarica D. Surface and volume quadrupole in the prediction of propeller noise. In *Proc. DGLR-AIAA 14th Aeroacoustics Conference*, volume 1, pages 383–387, Aachen (Germany), 1992.
- [11] De Bernardis E. and Tarica D. Boundary layer terms in high speed quadrupole noise. In *Proc. DGLR-AIAA 14th Aeroacoustics Conference*, volume 1, pages 26–28, Aachen (Germany), 1992.
- [12] Sestieri A., D’Ambrogio W., and De Bernardis E. On the use of different fundamental solutions for the interior acoustic problem. In Morino L. and Piva R., editors, *Boundary Integral Methods — Theory and Applications (Proc. IABEM Symposium)*, pages 460–469, Rome (Italy), 1990. Springer-Verlag, Berlin, 1991.
- [13] De Bernardis E., Tarica D., Visingardi A., and Renzoni P. A contribution to lifting surface aerodynamics based on time domain aeroacoustics. In Morino L. and Piva R., editors, *Boundary Integral Methods — Theory and Applications (Proc. IABEM Symposium)*, pages 172–181, Rome (Italy), 1990. Springer-Verlag, Berlin, 1991.
- [14] De Bernardis E. and Farassat F. On the possibility of singularities in the acoustic field of supersonic sources when BEM is applied to a wave equation. In Annigeri B.S. and Tseng K., editors, *Boundary Element Methods in Engineering (Proc. Int. Symp. on Boundary Element Methods: Advances in Solid and Fluid Mechanics)*, pages 522–528, East Hartford, CT (USA), 1989. Springer-Verlag, Berlin, 1990.
- [15] D’Ambrogio W., Sestieri A., and De Bernardis E. Optimal modification in the dynamic behaviour of vibrating structures. In *Proc. 7th World Congress on the Theory of Machines and Mechanisms*, volume 2, pages 977–980, Sevilla (Spain), 1987.
- [16] Sestieri A., D’Ambrogio W., and De Bernardis E. Optimal lumped modification of continuous vibrating structures. In *Proc. 5th International Modal Analysis Conference*, volume 2, pages 1606–1612, London (UK), 1987.
- [17] Sestieri A., De Bernardis E., and D’Ambrogio W. Structural modification of vibrating systems. In *EUROMECH Colloquium 213. Méthodes Actives de Contrôle du Bruit e des Vibrations*, Marseille (France), 1986.