

CV ROBERTO CAMUSSI

• EDUCATION

- 1991 Degree in Aeronautical Engineering (five years degree course), University of Rome "La Sapienza", with full marks (110/110 cum laude). Thesis awarded by AIDAA - Italian Institute of Aeronautics and Astronautics- for the best thesis in Aeronautics in the academic year 1990-91.
- 1992-95 PhD in "Theoretical and Applied Mechanics", University La Sapienza of Rome, Italy
- 1994-95 Visiting fellow at the Ecole Normale Supérieure of Lyon (Laboratory "Physique Recherche"), France

• CURRENT POSITION

- 2011-*present* Full Professor of Fluid Dynamic, Department of Engineering of the University Roma Tre of Rome, Italy

• PREVIOUS POSITIONS

- 1995 – 2002 Researcher in Fluid Dynamic, Faculty of Engineering, University Roma Tre
- 2002 – 2010 Associate Professor of Fluid Dynamic, Faculty of Engineering, University Roma Tre

• MAIN INSTITUTIONAL RESPONSIBILITIES

- 2013-*present* Vice-director of the Department of Engineering, University Roma Tre
- 2014-*present* Delegate of the Engineering Dept. at the CLA ("Centro Linguistico di Ateneo") of the University Roma Tre
- 2014-*present* Delegate of the Engineering Dept. at the "Ufficio Studenti con Disabilità" of the University Roma Tre
- 2008-*present* Member of the Management Board of the ENEA-DIMI Wind Tunnel.
- 2007-*present* Responsible of the Laboratory of Aerodynamics and Thermo-fluid Dynamics of the University Roma Tre, Dept. of Engineering
- 2007-2013 Delegate of the Mechanical and Industrial Engineering Dept. at the Scientific Committee of the BAST ("Biblioteca di Area Scientifica e Tecnologica") of the University Roma Tre

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

Since 2007

- he supervised 14 PhD students (2 of them are currently active)
- he supervised more than 20 Master student's thesis
- he supervised more than 150 Bachelor Students' thesis.
- he financed, utilizing his own funds, 1 position (three years) of a RTD-A (Italian Researcher)
- he tutored and financed, utilizing his own funds, 16 yearly Postdoc positions
- he financed, utilizing his own funds, 40 contracts for external collaborators

He was also member of national committees for:

- PhD positions, Doctoral defences, Researcher positions, Professorships (Full and Associate).

He was also member of international committees for:

- PhD defences (University of Poitiers, Trinity College of Dublin, Ecole Centrale de Lyon, TU Delft, University of Nottingham),

- French HDR assignment (*Habilitation a Diriger la Recherche*, Ecole Centrale de Lyon),
- Evaluation for promotion to Associate Professor (Trinity College of Dublin, University of Bath).

● **TEACHING ACTIVITIES**

In charge of courses at the Engineering Department (former Faculty) of the University Roma Tre since 1998.

2008–*present* Professor of the course FLUIDODINAMICA, 1st Level Degree in Mechanical Engineering at the University Roma Tre. Professor of the course AERODINAMICA, Master Degree in Aeronautical Engineering at the University Roma Tre.

2006-2015 Professor of the course TERMOFLUIDODINAMICA DEI SISTEMI PROPULSIVI, Master Degree in Aeronautical Engineering at the University Roma Tre.

2004-2007 Professor of the courses for the Master Degree in Aeronautical Engineering at the University Roma Tre: AERODINAMICA SPERIMENTALE ED APPLICATA, AERODINAMICA I, FONDAMENTI DI AERONAUTICA, FLUIDODINAMICA NUMERICA.

Since 2007 he teaches the courses AIRFRAME NOISE and JET NOISE for the Doctoral School of Engineering, University Roma Tre.

● **ORGANISATION OF SCIENTIFIC MEETINGS**

2018 Co-chair of the AIAA/CEAS Aeroacoustics Conference, 25–29 June 2018, Atlanta (USA).

2018 Member of the Scientific Committee of the 12th International Conference on Flow-Induced Vibration, Toronto (CAN)

2016 Member of the Scientific Committee of the 11th International Conference on Flow-Induced Vibration, Den Haag (NL)

2015 Member of the scientific Committee of the 10th European Congress and Exposition on Noise Control Engineering, EuroNoise 2015, Maastricht.

2015 Member of the International Program Committee of the 5th CEAS Air & Space Conference, Delft.

2014 Member of the scientific Committee (and session co-developer for the area: Control of FIV and noise) of the 2014 ASME Pressure Vessels & Piping Conference, Anaheim (California).

2014 Member of the Scientific Committee of the 11th International Conference on Flow-Induced Vibration, TCD Dublin (IRL)

2012 Co-organizer of the 9th European Fluid Mechanics Conference (EFMC9), Roma (IT).

2012 Member of the Scientific Committee of the 10th International Conference on Flow-Induced Vibration, TCD Dublin.

2011 Organizer of the international school *Noise sources in turbulent shear flows* at CISM (Centre International de Science Mechanique), Udine (IT).

2010 Organizer of the “XVII Convegno Nazionale A.I.V.E.LA.”, University Roma Tre.

2010 Co-organizer of the *National Workshop on Aeroacoustics* at CIRA, Capua (IT).

2007 Co-organizer of the international *Short Course on Aeroacoustics*, University Roma Tre.

2007 Co-organizer (and member of the *Scientific Committee and Review Experts*) of the *13th AIAA/CEAS Aeroacoustics Conference*, Roma (IT).

2006 Co-organizer of the “XIV Convegno Nazionale A.I.V.E.LA.”, University Roma Tre.

Since 2006 he organized several periodic workshops among partners of the EU projects he was involved in.

- **INVITED LECTURES (main)**

- Invited Lecturer of the international course *Measurement, simulation and control of subsonic and supersonic jet noise*, Von Karman Institute Lecture Series, 26-27/9 2016. Lecture title “Advanced processing techniques”.
- Invited speaker at the Joint Euromech/IUTAM Symposium “Jet Noise Modelling and Control”, Paris, 28-30/9 2016
- Guest speaker at DLR Gottingen, lecture title “Application of wavelet transform in Aeroacoustics”, 23/6/2015.
- Invited Lecturer of the international course *Fundamentals of Aeroengine Noise*, Von Karman Institute Lecture Series, 1-3/12 2014. Lecture title “Advanced analysis techniques (wavelets, LSE, POD) for noise sources identification”.
- Invited Lecturer of the international course *Advanced post-processing of experimental and numerical data*, Von Karman Institute Lecture Series, 4-7/11 2013. Lecture title “Wavelet analysis and applications in aeroacoustics”.
- Invited Lecturer of the international course *Advanced post-processing of experimental and numerical data*, Von Karman Institute Lecture Series, 4-7/11 2013. Lecture title “Wall pressure fluctuations statistics: measurements and numerical simulations”.
- Invited Lecturer at the conference *Flinovia - Flow Induced Noise and Vibration*, Roma 11-13/11 2013. Lecture title: “Wall pressure fluctuations induced by supersonic TBL”.
- Invited speaker (plenary lecture) at the *14th European Turbulence Conference ETC14*, Lyon 1-4/9 2013. Lecture Title “Application of time-frequency tools in aeroacoustics: identification of noise sources and theoretical modelling”.
- Invited Lecturer of the international course *Noise sources in turbulent shear flows* at C.I.S.M. (Centre International de Science Meccanica), Udine (IT) 18-22/4 2011). Lecture title: “Boundary Layer Noise”.
- Invited Lecturer at the Ercoftac Symposium *Sound Source Mechanisms in Turbulent Shear Flows*, Poitiers – France, July 7-9/7 2008. Lecture title “Noise source identification through wavelet analysis of pressure/velocity data”

In the past he gave seminars at the Ecole Normale Superieure of Lyon, Ecole Centrale de Lyon, University of Karlsruhe, Trinity College of Dublin, CRS4 (*Centro di Ricerca, Sviluppo e Studi Superiori in Sardegna*). He was invited as lecturer at the Cargese Summer School “Turbulence: measurements and signals” (CNRS, France), in 2002.

- **NATIONAL AND INTERNATIONAL MEMBERSHIPS**

2009- *present* Member of the *Aeroacoustic Specialists Committee* of the CEAS (Council of European Aerospace Society) as unique representative of the Italian Universities.

2012- *present* Associate editor of the journal *Acta Acustica United with Acustica*

2011- *present* Member of the Editorial Advisory Board of the journal *The Open Acoustic Journal*

He is also:

Member of the Directive Board of the AIVELA (*Associazione Italiana di Velocimetria Laser*).

Ordinary member of AIAA (*American Institute of Aeronautics and Astronautics*),

Ordinary member of EUROMECH (*European Mechanics Society*)

Ordinary member of AIMETA (*Associazione Italiana di Meccanica Teorica e Applicata*)

- **JOURNAL REFEREEING**

He is referee of many scientific international journals including: Journal of Fluid Mechanics, Physics of Fluids, Experiments in Fluids, Journal of Sound and Vibration, Journal of the Acoustical Society of America, Journal of Turbulence, European Physical Journal, Fluids Dynamic Research, Archives of Mechanics, International Journal of Aeroacoustics, Journal of Fluids and Structures, Applied Scientific Research, Experimental Thermal and Fluid Science, Aerospace Science and Technology, Computer and Fluids, Environmental Fluid Mechanics, Journal of Aerospace Engineering, Journal of Wind Engineering and Industrial Aerodynamics, Acta Meccanica, Open Acoustic Journal, Journal of Mechanical Engineering Science (Part C), Journal of Engineering Manufacture, Micromachines.

- **RESEARCH PROPOSAL REFEREEING**

- Since February 2017 he is *Expert Evaluator* for the EU (INEA agency) for the (1st and 2nd stage) evaluation of projects submitted to the program *Mobility for Growth* of the H2020 framework

He is also:

- Referee for the Agence National de la Recherche (France)
- Referee for the US National Science Foundation (USA)
- Referee for EPSRC (UK Engineering and Physical Science Research Council)
- Referee for IRCSET (Irish Research Council for Science, Engineering and Technology)
- Referee for STW (Dutch Funding Agency)
- Referee for ISAAC (TU Delft)
- Referee for the evaluation of research proposal submitted to the Italian Ministry of Research and Education (MIUR)

- **PATENT**

R. Camussi, A. Di Marco, E. Giulietti, S. Attanasi, "Aerogeneratore ad asse verticale a resistenza amplificata", deposit n. RM2012A000496 16/10/2012.

- **MAJOR COLLABORATIONS**

National: AVIO, ALENIA, CIRA, ENEA, INSEAN-CNR, Politecnico di Torino, Univ. "La Sapienza" Roma, Univ. "Federico II" Napoli.

International: Trinity College of Dublin, Ecole Normale Superieure de Lyon, Ecole Centrale de Lyon, University of Poitiers, University of Leicester, University of St. Petersburg, CAAA (China Academy of Aerospace Aerodynamics, Beijing), DLR Gottingen, DLR Berlin.

International Private Companies: BOEING, AIRBUS.

- **FUNDING ID**

Since 2005 he has been Principal Investigator of several contracts funded by private or public Italian entities as well as by the European Community. The total budget managed in the last ten years is of about 2.1MEuro.

The EU Funded Projects he is/was PI (for the UNIROMATRE Beneficiary) are the following:

- ERACLE (CleanSky2) JTI-CS2-2014-CFP01-AIR-01-04 Period 2018-2020
- WITTINESS (CleanSky) FP7 JTI-CS-2013-02-GRA- 02-025 period 2015-2017
- EASIER (CleanSky) FP7 JTI-CS-2013-02-GRA-05-008 period 2014-2016
- JERONIMO - FP7 Cooperative ACP2-GA-2012- 314692 period 2012-2016
- AEROTRANET2 - FP7 ITN Marie Curie PITN-GA-2012-317142 period 2012-2016

- ORINOCO – FP7 Cooperative ACP0-GA-2010-266103
- AEROTRANET- FP6 MEST-CT-2005-02031 period 2006-2009
- PROBAND - FP6 Strep AST4-CT-2005-012222 2006-2009

The main private and public companies he had funds under research contracts, are: AVIO, ALENIA, CIRA, ENEA, CNR, MBDA, BASF (Germany), the Italian Ministry MIUR under the instrument PRIN.

Other companies he had contracts with, are: KEMPRO Intl., Media Lario, Airworks, Cassa Forense, LOGIS, Italiana Costruzioni.

• **SCIENTIFIC INTERESTS**

The main scientific interest is towards Experimental Aerodynamics, including:

- Aerodynamic and Aeroacoustics of round Jets;
- Compressible and incompressible, attached and separated boundary layers including boundary layer noise;
- Aeroacoustic wind tunnel testing, including development and application of beamforming techniques;
- Jets in cross-flow;
- Statistics and modelling of homogeneous and isotropic turbulence;
- Advanced signal processing including time-frequency decomposition;
- Cavity flows;
- Hydrodynamics and hydroacoustics of naval propellers;
- Convective turbulence;
- Turbulent combustion in premixed flames;
- Transitional convection in closed domains.

Applied research studies included:

- Drone noise
- Aerodynamics of helicopter rotor blades;
- Spray dynamics;
- Design of thermal protection under hypersonic flow conditions;
- Wind tunnel design and qualification;
- Design and characterization of horizontal and vertical axis wind turbines;
- Fire dynamics;
- Application of commercial numerical codes for industrial problems (codes Ansys Fluent and Cd Star).

He authored and co-authored more than 180 scientific publications