

Prof. Aristide Fausto Massardo – PhD H.C. (massardo@unige.it – massa2444@gmail.com)

Present Appointment:

- **UNESCO Chair “Innovative Sustainable Clean Energy Research and Education”**, University of Genoa, Genoa, Italy, 2020-2024.
- **Honorary Ph.D.** from **Aristotele University of Thessaloniki, Greece**, 2024

Main duties at present appointment:

- **Director Rolls-Royce Fuel Cell Systems University Technology Centre (RRFCS-UTC)**, established at University of Genoa, since 2004.
- **Director Fincantieri-University of Genoa Joint lab. “Genoa-HISEA” (Hydrogen Initiative for Sustainable Energy Applications)**, since 2016.
- **Member Scientific Advisory Board CEA** Commissariat à l'énergie atomique et aux énergies alternatives–Energy Division, Saclay – Paris, France, 2020-2024.
- **President**, IREN Genoa Committee, since 2015.

Past Appointment

- **Full Professor of Energy Systems**, DIME, Polytechnic School, University of Genoa, Genoa, Italy, since 2001.
- **Chair Panel Consolidator Grant “PE08 Process and Industrial Engineering”** of the **European Research Council - ERC**, H2020, European Union, 2014-2018.
- **Member Scientific Committee Joint Undertaking FCH2 H2020**, Bruxelles, 2018-2021.
- **Member Governing Board European Turbine Network ETN**, 2018-2020.
- **Dean Polytechnic School** (formerly Faculty of Engineering and Faculty of Architecture) 2012 – 2018.
- **Member Scientific Committee** Research and entrepreneurship foundation, Rome, 2021-2023.
- **Chair Closed Cycle Technical Committee International Gas Turbine Institute (IGTI) American Society of Mechanical Engineers (ASME)** 1992-1995,
- **Chair Cycle Innovations Technical Committee International Gas Turbine Institute (IGTI) American Society of Mechanical Engineers (ASME)** 2002-2005.
- **Visiting Professor** at several international Universities: **Cranfield (UK)**, **Washington St. Louis (US)**, **Tokyo and Osaka (Japan)**, **ETH Zurich (CH)**, **California at Irvine and California at Davis (US)**, **Istituto Tecnologico de Aeronautica S. José dos Campos (Brasil)**, **Shibaura Institute of Technology Tokyo (Japan)**.
- **Visiting scientists** at **NETL-DOE Morgantown WV**, 2005, 2012, 2014, 2016, 2018.
- **Visiting scientists** at **IESE, Barcelona** (Spain), 2007.
- **“More Experienced researcher”** under **Marie Curie “EnSOFC” grant** (2007 – 2010), at RRFCS laboratories, Loughborough, UK.
- **“More Experienced researcher”** under **Marie Curie “Bio-SOFC” grant** (2007 – 2010), at AGH University laboratories, Krakow, Poland.
- **Member** of the **Academic Senate University of Genoa** 2009-2012.
- **Deputy Dean Faculty of Engineering**, 2005-2008.
- **Director Doctorate in Energy Systems Engineering**, 2011-2012.

4. Research activity and results

Prof. Massardo is the coordinator of the **Thermochemical Power Group** (www.tpg.unige.eu) since 1998. In the group about 35 researchers between permanent staff, post docs, and Ph.D. students are active. TPG financial support is about **65% at international level** (companies, US government, and UE programs, while less than 20% is from Italian Government). TPG average **funds per year are about 2,5 M€** based on the last 25 years data. In the same period, he has been involved in **more than 40 EU research projects (FP5, FP6,**

FP7, H2020, Horizon Europe), and in many other international collaborations including the one with **Department of Energy US through the CRADA agreement No. AGMT-0562** between the **US Department of Energy (DoE), National Energy Technology Laboratory (NETL) and University of Genoa (IT)**. The CRADA agreement No. AGMT-0562 is one of the few made between the NETL and a non-US partner.

He is the owner of **7 patents**, and his research activity includes more than **25 international “invited and keynote lecturers”**, and more than **150 Journal papers**, and the same number of Conference presentations. His **scientific bibliometric results** (based on SCOPUS) are: **H_{index} 43; papers 280, citations 5950**. Prof. Massardo is ranked in **the first hundred Italian researchers for the engineering area, and he is the most cited researcher in the field of Energy Engineering in Italy**. He has been the supervisor of **52 Ph.D. students**.

Prof. Massardo established in 2014 the spin-off “**H2Boat**” operating in the field of Hydrogen and Fuel Cells for marine and land-based applications. H2Boat, now Blu Energy Revolution, collaborated with Fincantieri the largest European shipyard for the development of innovative clean energy solutions based on fuel cells and hydrogen utilisation in the marine field. In 2018 he established the spin off “**SIT**” operating on advanced energy systems technology.

5. Awards

Prof. Massardo is the recipients of **several “international Awards”**:

- **Honorary Ph.D.** from **Aristotele University of Thessaloniki, Greece**, 2024.
- **ASME, Cycle Innovations Committee, 2018 Best Paper Award**: “Experimental Dynamic Analysis on a T100 Microturbine Connected with Different Volume Sizes”, ASME Paper GT2017-63579.
- **ASME Outstanding Service Award**, Cycle Innovations T. C., 2015 Montreal, Canada.
- **Award of Innovation Awards** for “Fincantieri Challenge”, Technology Innovation Foundation, Rome, 2014.
- **ICAE 2013 Best Paper Award**, Paper: "Real-time tool for management of smart polygen grids including thermal energy storage", Applied Energy (2014, Vol.130, pp.670-678), 2014.
- **ASME, Cycle Innovations Committee**, 2009 Best Paper Award: "Modelling and performance analysis of the Rolls-Royce fuel cell systems 1 MW plant", 2010.
- **ASME Cycle Innovations Committee**, 2007 Best Paper Award: "Time Characterisation of the Anodic Loop of a Pressurised Solid Oxide Fuel Cell System", 2008.
- **Best Paper Awards ASME**, Cycle Innovations Committee **1995, 1998, 2000, 2002, 2003, 2006** (see for details www.tpg.unige.eu).

6. Editorial Board Membership

- **Applied Thermal Engineering**, Elsevier, since 2006.
- **Applied Energy**, Elsevier, since 2009.
- **ASME Journal of Engineering for Gas Turbine and Power** (Associate Editor) 2002 -2005.
- **Journal of Aircraft Engineering and Aerospace Technology**, Emerald, since 2005.

7. National and international consultant positions

- Member of the **Technology Advisory Board of Rolls-Royce FCS**, Derby (UK), 2007-2018.
- Member of the “**Technical Advisory Board**” of **GSE**, Rome, 2010-2018.
- Member of the “**Cogeneration Power Plants Inspection Group**” of the Italian Authority for Electricity and Gas, **AEEG** (now ARERA), 2004-2010.
- Chair of the **Evaluation Committee for the National Research Council (CNR), ENEA and RSE activities** in the frame of “Ricerca del Sistema Elettrico RdS” since 2005.

- **Consultant of the Italian Authority for Electricity and Gas, AEEG (now ARERA)**, for “High Efficiency Cogeneration rules development and applications”, 2005-2010.
- Evaluator for **EU DG Research, FP6 FET, FP7 ENERGY, and FP7 SPACE**.
- Vice Chair for the Proposal Evaluation **EU-DG Research - FP7 ENERGY** (FET - Future Emerging Technology), Call 2008, and Call 2009 -2010.
- Chair for the Proposal Evaluation **EU-FCH JU** - Call 2012 and 2013 FP7, Call 2014, 2015, and 2017 H2020.
- Member of the **Panel PE08 Starting Grant** “Process and Production Engineering” of the **European, Research Council ERC**, European Union, 2012-2013.
- Evaluator for **EU Clean Aviation Joint Undertaking, Horizon Europe, 2023**.
- Member of the Panel for evaluation of **Severo Ochoa Centres of Excellence – Ministry of Economy**, 2016, 2019, and 2023, **Madrid, Spain**.
- **Chair of the PE08 Panel** “Process and Production Engineering” **for PRIN 2022** (Progetti di Rilevante Interesse Nazionale), **Ministry of University, Rome, 2023**.
- Member of the Panel for evaluation of **Centres of Excellence – FCT, 2024, Lisbon, Portugal**.
- Consultant of several **national and international companies** in the field of power generation, environmental protection, RES utilisation, clean hydrogen, fuel cells and sustainability.

Genoa, November 2024