Milanese Gabriele

Personal information

- Name: Milanese Gabriele
- Home Address: Via Capraia 25/12 - Genova - c.a.p.16136
- Telephone: 3804114296
- e-mail: gabriele.milanese@edu.unige.it
- Nationality: Italian
- Date of birth: 28th December 1966

Education

- Energy Engineering PhD; 1998, Politecnico di Milano
  - dissertation title: 'Reynolds stress modelling by means of nonlinear constitutive relations' (tutor: Prof. C. Osnaghi)
- Mechanical Engineering Degree; 1994, University of Genova, 105/110
  - dissertation title: ' Three-dimensional simulation of turbulent flows' (tutor: Prof. F.Pittaluga)
- Classical School Diploma; 1985, 'Liceo C. Colombo', Genova

Work experience

- Johnson Electric GATE, February 2000 - January 2018
  Main activities:
  - Thermofluid-dynamics and aeroacoustics R&D
  - Development and validation of design tools
  - Design of new products
  - Organization and analysis of experimental activities
  - Interaction with CAD design and structural analysis activities
  - Customer technical support (Jaguar-Land-Rover, Ford, GM, PSA, Mercedes, etc)
- University of Genova, February 2018 - Present, Associate Researcher
  Main activities:
  - Development, validation and application of a CFD based design environment (1D, 2D, 3D tools) for a generic turbomachinery (with focus on axial fans, pumps and compressors)
  - Development and validation of CFD combustion models for turbulent diffusion autoigniting flames (methane, H2, syngas, etc.), with application on industrial glass furnaces (with focus on the process efficiency and emission reduction)

Projects

- LIFE-SUGAR https://www.lifesugarproject.com/ , 2021 - Present

  In collaboration with :

  Stara Glass S.p.A.
  Johnson Matthey PLC
  KT-Kinetics Technology S.p.A
  Stazione Sperimentale del Vetro

  Main activities: within CFD Group

  Coordinator (with Prof. C. Cravero) and developer of CFD analysis supporting experimental activities, focused on the introduction of syngas fuel to reduce CO2 emissions

Skills

- Engineering:
  - Energy systems
  - Turbomachinery
  - Thermofluid-dynamics
  - Combustion
  - Aeroacoustics
  - Turbulence
  - Numerical analysis
  - Metamodeling
  - Optimization

- Computer:
  - OS: Unix, Windows, Linux, MS-DOS
  - simulation software: Ansys-Fluent, Ansys-CFX, CFX-Tascflow, CFX-Turbogrid, Ansys-ICEM, Ansys-BladeModeler, Kiva, TCFD, OpenFOAM, DAKOTA, OpenSMOKE++, etc.
  - general software: Microsoft Office (Word, Excel, PowerPoint, etc.), Matlab, GIMP, etc.
  - programming languages: Fortran, Scilab, Matlab

Languages

- Native: Italian
- Other languages:
  - English (reading: good, writing: good, verbal: good)
  - French (reading: good, writing: good, verbal: good)

Pubblications

- G. Milanese, R. Ghio; "CFD simulation of axial flow fans", CFX Conference and User Meeting - Bergamo, 2002

- G. Milanese, R. Ghio, A. Cattanei, P. Zunino; "Validation of a 2-D Automotive Fan Design Procedure by Means of CFD", VMTS6 Conference and Exhibition – Brighton, 2003

- A.Cattanei, G.Milanese, D.Parodi;"An Experimental Study of the Effects of the Test Configuration on the Noise Generated by Axial Flow Fans", 5th AIAA/CEAS Aeroacoustics Conference; Miami, 2009

- A.Cattanei, E. Canepa, G.Milanese, D.Parodi; "Further Study of the Test Configuration for Axial Flow Fans Noise Measurements", 16th AIAA/CEAS Aeroacoustics Conference; Stockholm, 2010

- E. Canepa, A. Cattanei, G. Milanese, D. Parodi; "An experimental study of the effect of rotor-stator interaction on tonal noise in low-speed axial fans", Proceedings of the 10th International Symposium on Experimental Computational Aerothermodynamics of Internal Flows, 4-7 July 2011, Brussels, Belgium

- E. Canepa, A. Cattanei, F. Mazzocut Zecchin, G. Milanese, D. Parodi; "Experimental study of the effect of the rotor-stator gap variation on the tonal noise generated by low-speed axial fans", 19th AIAA/CEAS Aeroacoustics Conference, 2013

- E. Canepa, A. Cattanei, F. Mazzocut Zecchin, G. Milanese, D. Parodi; "Ottimizzazione aeroacustica di palettature di ventilatori assiali" Associazione Italiana di Acustica, Seminario Ferrara 2014

- E. Canepa, A. Cattanei, F. Mazzocut Zecchin, G. Milanese, D. Parodi; "Experimental study and velocity scaling of the tip-leakage noise generated by low-speed axial-flow fans", 20thAIAA/CEAS Aeroacoustics Conference , 2014

- E. Canepa, A. Cattanei, F. Mazzocut Zecchin, G. Milanese, D. Parodi; "An experimental investigation on the tip leakage noise in axial-flow fans with rotating shroud ", Journal of Sound and Vibration, vol. 375, pp. 115-131, 2016

- C. Cravero, G. Milanese; "Analysis of the Design Bounds in Performance Limits for Industrial Axial Flow Fans", Proceedings of ASME Turbo Expo 2020, September 21-25, 2020, Virtual, Online

- C. Cravero, G. Milanese; "Performance Investigation of Airfoils for Axial Flow Fans in Low Solidity Cascades Operating at High Inlet Flow Angles.", ASME. J. Turbomach. March 2023; 145(3)

Conferences (presenting author)

- G. Milanese, R. Ghio; "CFD simulation of axial flow fans", CFX Conference and User Meeting - Bergamo, 2002

- G. Milanese, U. Cella; "Automotive axial fans : models and design" International CAE Conference, Pacengo del Garda (Verona), 2014

- G. Milanese, N. Conza, U. Cella; "Automotive axial flow fans: modeling and design" ScilabTEC Conference; Paris, 2015

- G. Milanese, N. Conza, U. Cella; "Modeling and Design of Automotive Axial Flow Fans: further steps", International CAE Conference, Pacengo del Garda (Verona), 2015

- G. Milanese, D. Bruna, C. Cravero, M. Turner, "Development of a Generic Turbomachinery Design Platform", International CAE Conference, Vicenza, 2018

- G. Milanese, C. Cravero; "Advanced Axial flow Fans: an Integrated Design Platform for Industrial Applications", International CAE Conference, Vicenza, 2019

- C. Cravero, G. Milanese; "Analysis of the Design Bounds in Performance Limits for Industrial Axial Flow Fans", ASME Turbo Expo 2020, September 21-25, 2020, Virtual, Online

- C. Cravero, G. Milanese; "Performance Investigation of Airfoils for Axial Flow Fans in Low Solidity Cascades Operating at High Inlet Flow Angles", ASME Turbo Expo 2022, June 13-17, 2022, Rotterdam.

Personal data: I authorize the use of my personal information – D.Lgs. 196/2003 & GDPR 679/2016.

Gabriele Milanese