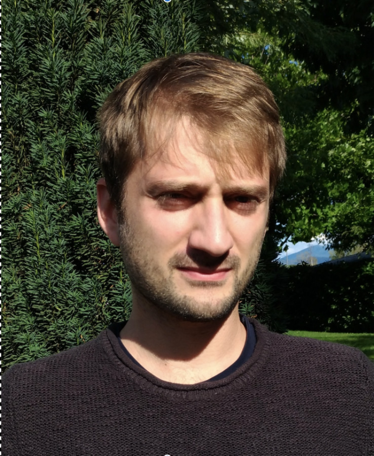
**CURRICULUM VITAE**

**Giulio Gori, PhD**

Post-doctoral fellow, DeFI team, INRIA/Centre de Mathématiquées Appliqueé, École Polytechnique, Institut Polytechnique de Paris.

1 Rue Honoré d’Estienne d’Orves, 91120 Palaiseau, France.

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Laboratory web page: <http://www.cmap.polytechnique.fr/~defi/>

**EDUCATION**

2019 Ph.D. Aerospace Engineering

Thesis: *Non-Ideal Compressible Fluid-Dynamics: Developing a Combined Perspective on Modeling, Numerics and Experiments.*

Department of Aerospace Science and Technology, Politecnico di Milano, Italy

Advisor: Prof. Alberto Matteo Attilio Guardone

2013 Master Degree in Aeronautical Engineering

Thesis: *PoliMIce: un ambiente di simulazione per la previsione dell’accrescimento di ghiaccio su velivoli.*

Department of Aerospace Science and Technology, Politecnico di Milano, Italy

Supervisor: Prof. Alberto Matteo Attilio Guardone

2010 Bachelor Degree in Aerospace Engineering

Department of Aerospace Science and Technology, Politecnico di Milano, Italy

2007 High school diploma at Liceo Scientifico Amedeo di Savoia duca di Aosta, Pistoia, Italy

**CURRENT AND PREVIOUS POSITIONS**

2017 – UTOPIAE MSCA-ITN Early Stage Researcher

INRIA/ Centre de Mathématiquées Appliqueé, École Polytechnique, IPP, France

2014 – 2017 Research fellow

CREALab/Department of Aerospace Science and Technology, Politecnico di Milano, Italy

**MOBILITY**

2019 Visiting fellow

Von Karman Institute for Fluid Dynamics, Belgium (4 months)

2018 Visiting fellow

Center for Turbulence Research at Stanford University (1.5 months), Palo Alto, CA, USA

2016 Visiting Ph.D. candidate,

UT Twente, Faculty of Engineering Technology, Enschede, Netherlands (3 months)

2014 Visiting fellow

Aerospace Design Lab (ADL) at Stanford University (1 month), Palo Alto, CA, USA

**COMMISSIONS OF TRUST**

2015 – Invited referee for the following international scientific Journals: Journal of Computational Physics, Physics of Fluids, Mathematics and Computers in Simulations, Applied Mathematics and Computation.

2014 – Co-supervisor, tutoring master students in authoring their final thesis.

2014 – 2017 Coordinator of the SU2 open-source CFD solver User Group at Politecnico di Milano, Italy.

**PUBLICATIONS RECORD**

My publication record includes more than 20 scientific contributions delivered in a time frame of about 5 years.

Among these contributions, 8 are peer reviewed Journals, 10 are peer reviewed conference proceedings whereas the remaining are non-reviewed contributions. Publications covers a wide range of topics, spanning from in-flight ice accretion, non-ideal compressible fluid flows, atmospheric entry for space applications, uncertainty quantification and turbomachinery design.

**Peer Reviewed Journals**

* **G. Gori**, M. Zocca, A. Guardone, O. Le Maître and P. M. Congedo*. Bayesian Inference of Thermodynamic Models from Vapor Flow Experiments*, Computer & Fluids, Vol. 205, 104550, 2020.
* N. Razaaly, G. Persico, **G. Gori** and P.M. Congedo, *Quantile-Based Roust Optimization of a Supersonic Nozzle for Organic-Rankine Cycle Turbines*, Applied Mathematical Modelling, Vol. 82, pp. 802-824, 2020
* **G. Gori**, M. Zocca, G. Cammi, A. Spinelli, P. M. Congedo and A. Guardone*, Accuracy Assessment of the Non-Ideal Computational fluid Dynamics Model for Siloxane MDM from the open-source SU2 suite*, European Journal of Mechanics-B/Fluids, Vol. 79, pp. 109-120, 2019.
* **G. Gori**, A. Guardone*, VirtuaSchlieren: a Hybrid GPU/CPU-based Schlieren Simulator for Ideal and Non-Ideal Compressible-Fluid Flows*. Journal of Applied Mathematics and Computation, Vol. 319, pp. 647-661, 2018.
* D. Vimercati, **G. Gori**, A. Guardone*, Non-Ideal Oblique Shock Waves*, Journal of Fluid Mechanics, Vol. 847, pp. 266-285, 2018. (6 citations)
* **G. Gori,** G. Parma, M. Zocca and A. Guardone, Journal of Aircraft*, Local Solution to the Unsteady Stefan Problem for In-Flight Ice Accretion Modeling*, Vol. 55, pp. 251-262, 2018.
* M. Zocca, **G. Gori** and A. Guardone*, Blockage and Three-Dimensional Effects in Wind-Tunnel Testing for Ice Accretion over Wings*, Journal of Aircraft, Vol. 54, pp. 759-767, 2017.
* **G. Gori**, M. Zocca, M. Garabelli, A. Guardone and G. Quaranta, *PoliMIce: a Simulation Framework for Three-Dimensional Ice Accretion*, Journal of Applied Mathematics and Computation, V. 267, pp. 96-107, 2015.

**Chapter in Books**

* J. Reis, **G. Gori**, P.M. Congedo and O. Le Maître, *Introduction to Spectral Methods for Uncertainty Quantification,* Chapter in *Optimization Under Uncertainty with Applications to Aerospace Engineering*, Massimiliano Vasile, Springer Nature, 2020. (Submitted, in editing process)

**Peer Reviewed Conference Proceedings**

* **G. Gori**, N. Razaaly, G. Iaccarino and P. M. Congedo*, Structural Uncertainty Estimation of Turbulence Models in Organic Rankine Cycle Applications, p*roceeding at the ORC2019 conference, Athens, Greece, 2019.
* N. Razaaly, **G. Gori**, G. Iaccarino, P. M. Congedo*, Optimization of an ORC Supersonic Nozzle Under Epistemic Uncertainties due to Turbulence Models*, proceeding at the Global Power and Propulsion Society GPPS2019 Conference, Zurich, Switzerland, 2019.
* N. Razaaly, **G. Gori**, O. Le Maître, G. Iaccarino, P. M. Congedo*, Robust Optimization of Turbine Cascade for Organic Rankine Cycles Operating with Siloxane MDM*, proceeding of the Summer Program at the Center for Turbulence Research, Stanford University, California, USA, 2018.
* **G. Gori**, M. Zocca, G. Cammi, A. Spinelli and A. Guardone*, Experimental Assessment of the Open-Source SU2 CFD suite for ORC Applications*, Energy Procedia, Vol. 129, pp. 256-263, 2017.
* D. Vimercati, **G. Gori**, A. Spinelli and A. Guardone*, Non-Ideal Effects on the Typical Trailing Edge Shock Pattern of ORC turbine Blades*, Energy Procedia, Vol. 129, pp. 1109-1116, 2017.
* P. Molesini, **G. Gori** and A. Guardone*, An Analysis of fast-Response Pressure Probes Dynamics for ORC Power Systems*, Energy Procedia, Vol. 129, pp. 264-271, 2017.
* M. Pini, S. Vitale, P. Colonna, **G. Gori**, A. Guardone, T. Economon, J. J. Alonso and F. Palacios*, SU2: the open-source software for Non-Ideal Compressible Flows*, Journal of Physics: Conference Series, Vol. 821, 2017. **G. Gori**, P. Molesini, G. Persico and A. Guardone, *Non-Ideal Compressible-Fluid Dynamics of Fast-Response Pressure Probes for Unsteady Flow Measurements in Turbomachinery*, Journal of Physics: Conference Series, Vol. 821, 2017.
* **G. Gori**, D. Vimercati and A. Guardone*, Non-Ideal Compressible-Fluid Effects in Oblique Shock Waves*, Journal of Physics: Conference Series, Vol. 821, 2017.
* **G. Gori**, A. Guardone, S. Vitale, A. Head, M. Pini, P. Colonna*, Non-Ideal Compressible-Fluid Dynamics Simulations with SU2: Numerical Assessment of Nozzle and Blade Flows for Organic Rankine Cycle Applications*, proceeding of the 3rd International Seminar on ORC Power Systems, Brussels, Belgium, 2015.

**Conference Proceedings**

* **G. Gori**, A. Turchi, T. Magin, O. Le Maître and P. M. Congedo*. Exploring the Impact of the Initial Temperature Field Uncertainty on the Response of Ablative Materials*, proceeding at the International Conference on Flight Vehicles, Aerothermodynamics and Re-Entry Missions and Engineering, Bari, Italy, 2019.
* B. Arizmendi, T. Bellosta, A. del Val, **G. Gori**, M. O. Prazeres and J. Reis*, On Real-Time Management of On-Board Ice Protection Systems by Means of Machine Learning*, Proceeding at the AIAA Aviation Forum 2019, Dallas, Texas, USA, 2019.
* **G. Gori**, D. Vimercati and A. Guardone*, A Numerical Investigation of Oblique Shock Waves in Non-Ideal Compressible-fluid Flows*, proceeding at the 31st International Symposium on Shock Waves ISSW31, Nagoya, Japan, 2018.
* M. Zocca, **G. Gori**, O. Le Maître, P. M. Congedo and A. Guardone, *A Robust Experiment Design for the Investigation of Non-Ideal Compressible Fluid Flow Effects*, proceeding at the 7th European Conference on Computational Fluid Dynamics (ECFD7), Glasgow, United Kingdom, 2018.
* N. Razaaly, G. Persico, **G. Gori**, P. M Congedo*, Robust Optimization of a Supersonic ORC Turbine Cascade: a Quantile-Based Approach*, proceeding at the 7th European Conference on Computational Fluid Dynamics (ECFD7), Glasgow, United Kingdom, 2018.
* S. Vitale, **G. Gori**, M. Pini, A. Guardone, T. D. Economon, F. Palacios, J. J. Alonso and P. Colonna*, Extension of the SU2 Open-Source CFD Code to the Simulation of Turbulent Flows of Fluids Modelled with Complex Thermophysical Laws*, proceeding at the 22nd AIAA Computational Fluid Dynamics Conference, Dallas, Texas, USA, 2015.
* **G. Gori**, M. Zocca and A. Guardone, *A Model for In-flight Ice Accretion Based on the Exact Solution of the Unsteady Stefan Problem*, proceeding at the 7th AIAA Atmospheric and Space Environments Conference, Dallas, Texas, USA, 2015.

**AWARDED FELLOWSHIPS**

2017 – 2020 Early Stage Researcher Fellowship within the Marie Sklodowska-Curie Innovative Training Network H2020-MSCA-ITN-2016, Grant Agreement n. 722734, INRIA/Centre de Mathématiquées Appliqueé, École Polytechnique, Institut Polytechnique de Paris, France

2015 – 2017 Temporary Research Fellowship for Research Activities UOR DAER “Metodi numerici per la simulazione di correnti di fluidi comprimibili non-ideali” CREALab/Department of Aerospace Science and Technology, Politecnico di Milano, Italy

2014 – 2015 Temporary Research Fellowship for Research Activities UOR DAER “Simulazione numerica di correnti di gas densi con codici fluidodinamici per griglie chimera” CREALab/Department of Aerospace Science and Technology, Politecnico di Milano, Italy

**RESEARCH EXPEDITIONS LED**

I successfully submitted a proposal to the Summer Program 2018 of the Center for Turbulence Research (CTR), at Stanford University, California, USA. I was responsible of leading a research project titled *On the calibration of turbulence models for a siloxane MDM in the Non-Ideal regime and application to the robust optimization of turbine cascades*, devoted to the development of innovative data-driven approaches for the calibration of molecular complex fluid models and for the robust optimization of Organic Rankine Cycle turbine blades.

**FUNDINGS RECEIVED**

Personal scholarship of $ 3,550 to participate to the CTR Sumer Program 2018 at Stanford University, CA, USA.

**SUPERVISING ACTIVITY**

Co-supervision of master students in developing their final MSc thesis at the Department of Aerospace Science and Technology of Politecnico di Milano:

* *Un Modello Semplificato per l’Accrescimento di Ghiaccio su Profili Alari Oscillanti*, D. Sangaletti, 2017.
* *Dynamics of Line-Cavity Systems for Ideal and Non-Ideal Compressible-Fluid Flows*, P. Molesini, 2016.
* *Generazione di Immagini Schlieren da Simulazioni Fluidodinamiche su Architettura GPU*, L. Virtuani, 2015.
* *A Model for In-Flight Ice Accretion Based on the Exact Solution of the Unsteady Stefan Problem*, G. Parma, 2015.
* *Effetti di Galleria nelle Misure di formazione di Ghiaccio su Velivoli*, M. Zocca, 2013.

**CONFERENCE ORGANIZATION**

2019 Member of Organizing Committee (Local Organizer), *UQOP: Uncertainty Quantification and Optimization,* March 18-20, Paris, France (https://uqop.sciencesconf.org)

2017 Staff member, *4th International Seminar on ORC Power Systems*, September 13-15, Milano, Italy (http://orc2017.fyper.com)

2016 Staff member, *NICFD-PP 2016: 1st International Seminar on Non-Ideal Compressible-Fluid Dynamics for Propulsion & Power*, October 20-21, Varenna, Italy (https://easychair.org/smart-program/NICFD2016/index.html)

**SOFTWARE DEVELOPMENT**

PoliMIce Core developer member of the early versions of the integrated CFD-multiphase software for in-flight ice accretion (2012-2017).

SU2 Member of the Principal Developers team of the SU2 open-source CFD solver for compressible and incompressible flows.

Paris,

September 22nd 2020