





PERSONAL INFORMATION

Enrico FABRIZIO



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WORK EXPERIENCE

Since January 2024

Full Professor (Professore Ordinario) - IIND-07/B - Building Physics and Building Energy Systems – Fisica Tecnica Ambientale
 Politecnico di Torino, DENERG (Department of Energy),

- Research and Teaching equally - Research in the fields of Building Energy Engineering, Building Services Engineering, Environmental control for animals and plants

[Public Higher Education](#)

November 2015 – December 2023

Associate Professor (Professore Associato) - ING-IND/11 (Building Physics and Building Energy Systems)
 Politecnico di Torino, DENERG (Department of Energy),

- Research and Teaching equally - Research in the fields of Building Energy Engineering, Building Services Engineering, Environmental control for animals and plants

[Public Higher Education](#)

May 2008 – October 2015

Assistant Professor (Ricercatore Universitario) - AGR/10 (Biosystems Engineering – Rural Buildings)
 Università degli Studi di Torino, DISAFA (Department of Agricultural, Forest and Food Sciences)

- Research and Teaching equally - Research in the fields of Building Energy Engineering, Environmental and Landscape impacts of Renewable Energy Technologies, Environmental control for animals and plants

[Public Higher Education](#)

EDUCATION AND TRAINING

2005 - 2008

PhD in Génie Civil and in Energy Technologies
 Institut National des Sciences Appliquées de Lyon (diplôme INSALYO 6804459) & Politecnico di Torino

1999 - 2003

MSc in Architecture
 Politecnico di Torino, 110/110 cum laude

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	C2	C2	C1	C1	C1

Communication skills

- He has been invited to present various speeches at National and International Conferences such as Konwakai Europe Meeting 2017, IEA (International Energy Agency) ECES Annex 31, IRSEC 2020, Morocco (Keynote Speech), Zero Build Forum 2020, RCEPB 2021, Bucharest (Romania).
- He has carried out over 1600 hours of teaching activity in first, second and third levels university courses. Following the research developed, he was invited to various second level university masters organized by the Mountain University of Edolo, the University of Turin and the Polytechnic of Turin.
- Lecturer at various training courses and technology transfer on the subject of energy certification of buildings and dynamic energy simulation of the energy-environmental performance of buildings organized by AiCARR Formazione, Collegio dei geometri di Torino, college of surveyors of Cuneo, Forte Chance Piemonte, APITFORMA, Edizioni Ambiente.

Organisational / managerial skills

- Since 2015, team leader of a research unit of 4 people (up to 7) at DENERG.
- Tutor/co-tutor of 9 PhD thesis in the PhD programmes on “Innovazione tecnologica per l’ambiente costruito”, “Energetics” and “EEC Engineering” at Politecnico di Torino and in the PhD program on “Agricultural, Forest and Food Sciences” at University of Torino.
- 2024- ongoing: Energy Manager at Politecnico di Torino

Job-related skills

- With regard to research and technology transfer activities with private companies, he was responsible for various research agreements with companies in the air conditioning sector.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Independent user	Independent user	Independent user	Independent user

Other skills

- Associate editor (2018-current) for the Sustainable Cities and Society (Elsevier) journal (IF = 10.5)
- Guest Editor for 6 Special Issues on the following international journals: Sustainable Cities and Society, Advances in Building Energy Research, Energies, Applied Sciences.
- Chairman at the following international conferences: Energy Forum (Bressanone), 2009 and 2010, Clima 2013 (Prague), ISHVAC 2013 (Xi’an), IBPC 2015 (Torino), PLEA 2015 Passive and Low Energy Architecture (Bologna), SEB-16 (Torino), BSA 2017 Building Simulation Application (Bolzano), Clima 2019 World Congress (Bucharest), Esf 2019 (Torino), BS 2019 (Roma), RoomVent 2020 (Torino), Ciriaf 2021 (Perugia), AiCARR 2024 (Milano), EnerStock 2024 (Lyon).
- Reviewer for the UE COST Open Call oc-2013-2 project proposals and for research projects by the following international bodies: Swiss National Foundation Agency (2014), Estonian Research Council (ETAg, 2015), Chilean Research Agency (2015) and Agence Nationale de la Recherche Française ANR-CEA (2010).
- Contract professor at the ESTP – Ecole Spéciale des Travaux Publics, du Bâtiment et de l’Industrie de Paris (Cachan) from 2015 to 2019 and in 2021: teaching of Simulation Thermique Dynamique and Génie Climatique (in French).
- Invited Jury Member of the PhD final dissertations at various EU Universities.
- He has been awarded the Scientific qualification as Maître des Conférences by the French Ministry of Education in the 60 - Mécanique, génie mécanique, génie civil sector.
- He has been awarded the Italian National Scientific Qualification (art.16 of the law 30 December 2010, n.240) as Full Professor in the 07/C1 – Biosystems Engineering sector in 2017.

Driving licence

B

ADDITIONAL INFORMATION



Main Publications

Author of over 200 scientific publications, he is co-author of 70 research articles in IF international journals, two volumes concerning the fundamentals and application of Building Physics.

10 Selected publications on international journals:

- M. Ferrara, E. Fabrizio, M. Filippi, J. Virgone, [*A simulation-based optimization method for cost-optimal analysis of nearly Zero Energy Buildings*](#), Energy and Buildings, ISSN 0378-7788, vol. 84 (2014), pp. 442-457. Doi: 10.1016/j.enbuild.2014.08.031
- M. Ferrara, E. Fabrizio, J. Virgone, M. Filippi, [*Energy systems in cost-optimized design of nearly zero-energy buildings*](#), Automation in Construction, ISSN 0926-5805, vol. 70 (2016), pp. 109-127. Doi: 10.1016/j.autcon.2016.06.007.
- G. Kazas, E. Fabrizio, M. Perino, [*Energy demand profile generation with detailed time resolution at an urban district scale: a reference building approach and case study*](#), Applied Energy, ISSN 0306-2619, vol. 193 (2017), pp. 243-262. Doi: 10.1016/j.apenergy.2017.01.095.
- M. Ferrara, E. Sirombo, E. Fabrizio, [*Automated optimization for the integrated design process: the energy, thermal and visual comfort nexus*](#), Energy and Buildings, ISSN 0378-7788, vol. 168C, pp. 413-427. Doi: 10.1016/j.enbuild.2018.03.039.
- M. Ferrara, F. Prunotto, A. Rolfo, E. Fabrizio, [*Energy demand and supply simultaneous optimization to design a Nearly Zero-Energy House*](#), Applied Sciences, ISSN 2076-3417, vol. 9, n° 11 (2019), pp. 1-21. Doi: 10.3390/app9112261.
- M. Bilardo, G. Fraise, M. Pailha, E. Fabrizio, [*Modelling and performance analysis of a new concept of integral collector storage \(ICS\) with phase change material*](#), Solar Energy, ISSN 0038-092X, vol. 183 (2019), pp. 425-440. Doi: 10.1016/j.solener.2019.03.032.
- M. Ferrara, C. Lisciandrello, A. Messina, M. Berta, Y. Zhang, E. Fabrizio, [*Optimizing the transition between design and operation of ZEBs: lessons learnt from the Solar Decathlon China 2018 SCUTxPoliTo Prototype*](#), Energy and Buildings, ISSN 0378-7788, vol. 213 (2020) 109824, pp. 1-16. Doi: 10.1016/j.enbuild.2020.109824.
- M. Bilardo, M. Ferrara, E. Fabrizio, [*Performance assessment and optimization of a solar cooling system to satisfy Renewable Energy Ratio \(RER\) requirements in multi-family buildings*](#), Renewable Energy, ISSN 0960-1481, vol. 155 (2020), pp. 990-1008.
- A. Biglia, M. Ferrara, E. Fabrizio, [*On the real performance of groundwater heat pumps: experimental evidence from a residential district*](#), Applied Thermal Engineering, ISSN 1359-4311, vol. 192 (2021), 116887, pp. 1-11. Doi: 10.1016/j.applthermaleng.2021.116887.
- M. Bilardo, F. Sandrone, G. Zanzottera, E. Fabrizio, [*Modelling a fifth-generation bidirectional low temperature district heating and cooling \(5GDHC\) network for nearly Zero Energy District \(nZED\)*](#), Energy Reports, ISSN 2352 4847, vol. 7 (2021), pp. 8390-8405. Doi: 10.1016/j.egy.2021.04.054.

Projects

Principal Investigator of the following projects:

- 2015 - 2017: Principal Investigator of the SIR 2014 research project “EPAnHaus – Energy Performance of Livestock Houses” funded by MIUR.
- 2016 - 2018: Principal Investigator of Starting Grant research project funded by Compagnia di San Paolo at Politecnico di Torino.
- 2017 - 2022: Principal Investigator for Politecnico di Torino of the research project “Fighting Energy Poverty in Piedmont” funded by Leroy Merlin Italia.
- 2019 - 2022: National Principal Investigator of the PRIN 2017 research project “Next.Com – e Next Generation of Multiphysics and multidomain Comfort models” funded by MIUR.
- 2023 – 2025: National Principal Investigator of the PRIN 2022 research project “DiAGreen – Digital twin of Agricultural Greenhouses” funded by MIUR.

He participated to various projects related to simulation and interpretation of results of zero energy buildings.

Memberships and Offices

Founding member of IBPSA-ITALY, Italian Section of the International Building Performance Simulation Association, member of its Board, Treasurer of the association (2011-2014) and Secretary of the association (2015-2021).

Member of the Research Commission of the Department of Agricultural, Forest and Food Sciences of the University of Torino (2013-2015).

Member of the Research Commission of the Department of Energy, Politecnico di Torino (2020-current).

He was within the Organizing Committee of the 2015 IBPC (International Building Physics Conference) in Torino, 14-17 June 2015.

He was within the Organizing Committee and Chair of the General track session #2 of the SEB16 (Sustainability in Energy and Buildings) Conference in Torino.

He was within the Organizing Committee of the RoomVent2020 international Conference in Torino, 13-15 February 2021.

Member of the Local Organizing Committee (LOC) of the International Conference of the Building performance simulation association, BS 2019, Rome, September 2019.

Member of the Scientific Committees of the AiCARR 2024 Conference (Milano), EnerStock 2024 Conference (Lyon) and of the REHVA Clima 2025 Conference (Milano).

Honours and awards

He has been awarded the 2014 REHVA Young Scientist Award by the European Federation of Air Conditioning Associations “in recognition of his outstanding scientific achievements and for his contributions to improve energy efficiency and the indoor environment of buildings”.

He was within the teaching supervisors of the SCUTxPOLITO team, the winner of the Solar Decathlon China 2018 contest.

In 2020, 2021 and 2022 he was among the top 2% scientists internationally across all disciplines (<https://doi.org/10.1371/journal.pbio.3000918>).

Citations

Scopus Author ID 16028531800, Documents: 127, Citations: 3274, h-index: 32

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV.