Curriculum Vitae

Francesco Pietro Colelli
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Address: via De Gasperi 35, Montegrotto Terme, 35036 (PD), Italy.
General info: Birth Date: 6/11/1992 Nationality: Italian

Education

- 01/09/2018 – 10/03/2023 **PhD - Science and Management of Climate Change**. Ca' Foscari University and Euro-Mediterranean Center on Climate Change (CMCC). Grade: awarded cum laude. Thesis: "The energy requirements of rising adaptation needs: mechanisms and impacts"; Supervisor: Prof. Enrica De Cian (enrica.decian@unive.it).
- 01/09/2016 – 13/03/2018. **MSc in Environmental and Development Economics.** University of Rome III. Grade: **110/110** cum Laude. Thesis: "Economic and Environmental impacts of waste management in Italy".
- 15/09/2014 – 01/11/2015. **MSc in Economics and Policy of Energy and the Environment**. University College London. Grade: Merit (2:1). Thesis: "The Real Exchange Rate and real oil prices in export dependent countries: is there evidence of cointegration?"
- 01/09/2011 – 26/07/2014. **BSc in Economics and Management**. University of Padua. Grade: **110/110.** Thesis: "Natural Resources: Blessing or Curse? Contrasting theories and elusive empirical evidence"

Employment

- 01/10/2019 – Current. **Junior Researcher**. Euro-Mediterranean Center on Climate Change (CMCC) Foundation. Research topics: modeling the energy impacts of climate change adaptation with Energy Demand Models and Integrated Assessment Models (EDGE model, WITCH model).
- 01/09/2022 – 31/08/2024. **Postdoctoral Researcher**. Department of Economics, Ca' Foscari University. Research topics: economic analysis on the impacts of adaptation to climate change on energy markets.
- 01/10/2016 – 31/12/2018. **Junior Research Fellow.** Bocconi University, Centre for Geography, Resources, Environment, Energy and Networks (GREEN). Research topics: innovative financing schemes and business models for the green economy.
- 01/09/2015 – 31/12/2015. **Visiting Scholar.** International Center for Climate Governance, Venice. Research topics: the risk of stranded assets in the upstream oil industry.

Research Activities at Foreign Institutions (Unpaid Visiting Positions).

- Researcher at the University of Boston, Boston (MA), supervised by Prof. Ian Sue Wing. Research Topics: Empirical investigations of long-run adaptation effects with macro panel data. Period: 25/09/2022 – 26/10/2022.
- Visiting Research Scholar at the University of California, Berkeley (CA), supervised by Prof. David Anthoff. Research Topics: Updating Integrated Assessment Models for evaluating the energy costs of climate change. Period: 01/09/2021 – 15/03/2022.

Teaching activities

- Academic years 2023/2024 and 2024/2025, Adjunct Professor, *Economic Literacy*. Institution: Department of Economics, Ca' Foscari University. Degree Program: Interfaculty Course in Economic and Financial Education. Teaching Hours: 30 per year.

- 07/11/2023 – 07/12/2023, Contract Lecturer on "*Climate Change: from physical impacts to adaptation and mitigation.*" Institution: Ca' Foscari University – SIE School For International Education. Degree Program: Summer School in Global Studies. Academic Year: 2022/2023. Teaching Hours: 4.
- 18/01/2024, Guest Lecturer on "*Data, tools and methods for Earth system science.*" Supervisor: Prof. Malcolm Mistry. Institution: Department of Economics, Ca' Foscari University. Degree Program: PhD program "Science and Management of Climate Change." Academic Year: 2023/2024. Teaching Hours: 2.
- 10/28/2019 – 10/29/2019 and 06/08/2021 – 06/10/2021, Contract Lecturer on "*Waste Management: circular economy and extended producer responsibility models*." Supervisor: Prof. Federico Pontoni. Institution: Polytechnic University of Milan. Degree Program: Sustainability of Public Utilities in the RIDEF Master's Program. Teaching Hours: 6.

Teaching Assistance:

- Climate Change Economics; Supervisor**:** Prof. Enrica De Cian; Institution**:** Ca' Foscari University; Degree Program**:** PhD program "Science and Management of Climate Change", Academic Years: 2021/2022, 2022/2023, 2023/2024, Period**:** September-December.
- Industrial Economics, Supervisor**:** Prof. Monica Bonacina, Institution**:** Bocconi University, Degree Program**:** Business Administration and Management, Period**:** Second semester, AY 2016/2017, Teaching Hours: 20 total hours for exercises, mentoring, and exam assistance

Supervision of graduate students:

- **Co-supervisor** of L. Piazza, PhD student in Science and Management of Climate Change. Academic Years: 2022/2023, 2023/2024.
- **Tutor** of E. Cofler, Internship at CMCC Foundation and Master Thesis in Science and Management of Climate Change. Academic Year: 2023/2024. Currently enrolled as PhD student at Polytechnic University, Milano.

Commissions of trust:

- Guest Editor of Environmental Research: Infrastructure and Sustainability (ERIS) special issue "Focus on big and granular data to assess infrastructure-related impacts and adaptation", Period: 01/07/2024 to 31/01/2025.
- Reviewer of: Nature Communications Earth & Environment, Energy Economics, Environmental Research Letters, Environmental Research Energy.

Publications

Working papers:

- **Colelli**, Francesco, De Cian, E., Piazza, L., Pasut, W., Toward Net Zero in the midst of the energy and climate crises: the response of residential photovoltaic systems. Ca' Foscari Department of Economics Working Paper SSRN 4592099 (2023).
- Di Bella, A., **Colelli**, F.P., Adapting to more extreme events due to climate change requires additional generation capacity: a study on the resilience of the Italian power system. Presented at the ICEM Conference 2023 (**Awarded as the Best Conference Presentation**) and published open source at: arXiv:2409.03593.

Peer-reviewed:

- **Colelli** F. P., Wing I. S., De Cian E. (2023). Intensive and extensive margins of the peak load: Measuring adaptation with mixed frequency panel data. **Energy Economics**, vol. 126, ISSN: 0140-9883, doi: https://doi.org/10.1016/j.eneco.2023.106923.
- **Colelli** F. P., Wing I. S., De Cian E (2023). Air-conditioning adoption and electricity demand highlight climate change mitigation–adaptation tradeoffs. **Scientific Reports**, vol. 13, ISSN: 2045-2322, doi: https://doi.org/10.1038/s41598-023-31469-z.
- **Colelli** F. P., Emmerling J., Marangoni G., Mistry M. N., De Cian E. (2022). Increased energy use for adaptation significantly impacts mitigation pathways. **Nature Communications**, vol. 13, ISSN: 2041-1723, doi: https://doi.org/10.1038/s41467-022-32471-1.
- **Colelli**, F. P., Mistry, M. (2022). Income-dependent expansion of electricity demand for climate change adaptation in Brazil. **Energy and Climate Change**, vol. 3, ISSN: 2666-2787, doi: https://doi.org/10.1016/j.egycc.2022.100071.
- **Colelli** F. P, Croci E, Pontoni F., Zanini S. (2022). Assessment of the effectiveness and efficiency of packaging waste EPR schemes in Europe. **Waste Management**, ISSN: 0956-053X, doi: https://doi.org/10.1016/j.wasman.2022.05.019.
- **Colelli**, FP, Witkop, D, De Cian, E, Tavoni, M (2021). Power systems' performance under high renewables' penetration rates: a natural experiment due to the COVID-19 demand shock. **Environmental Research Letters**, vol. 16, ISSN: 1748-9326, doi: https://doi.org/10.1088/1748-9326/abfba2.
- **Colelli**, FP, De Cian, E (2020). Cooling demand in integrated assessment models: a methodological review. **Environmental Research Letters**, vol. 15, ISSN: 1748-9326, doi: https://doi.org/10.1088/1748-9326/abb90a.
- Bagaini, A., **Colelli**, FP., Croci, E., Molteni, T. (2020). Assessing the relevance of barriers to energy efficiency implementation in the building and transport sectors in eight European countries. **The Electricity Journal**, vol. 33, ISSN: 1040-6190, doi: https://doi.org/10.1016/j.tej.2020.106820.
- Croci, E., Donelli, M., **Colelli**, FP., (2021). An LCA comparison of last-mile distribution logistics scenarios in Milan and Turin municipalities. **Case Studies on Transport Policy**, vol. 9, p. 181-190, ISSN: 2213-624X, doi: https://doi.org/10.1016/j.cstp.2020.12.001.
- Croci, E., & **Colelli**, F. (2021). Assessment of environmental and economic benefits of packaging waste system in Italy. *Economics and Policy of Energy and Environment: 1, 2021*, 37-58. https://doi.org/10.3280/efe2021-001003

Policy Works:

- Campagnolo, L., De Cian, E., Pavanello, F., Falchetta, G., Colelli, F.P., Mansi, G.A., Bigano, A., Parrado, R., Frassetto, E. The cost of climate change on households and families in the EU. European Economic and Social Committee (2023). ISBN 978-92-830-6221-9, Catalogue number QE-04-23-897-EN-N. Personal contributions: analyzing data, collaborate in writing, framing results and figures. Scientific significance: This study investigates the major climate-related risks for households in the EU capturing both the climate induced cost of impacts and adaptation measures. This analysis is complemented with the assessment of mitigation policy costs for households using a mixed modelling approach.

Book Chapters:

- De Cian, E., Squarci, G., Crimi, J., Mazzone, A., Cruz, T., Bezerra, P., Campagnolo, L., **Colelli, F.P.,** Davide, M., Falchetta, G., Jagu, D., Lucena, A. F., Mistry, M., Pavanello, F., Randazzo, T., Renner, S., Schaefer, R. & Sue Wing, I. The Cooling Solution. The future of air-conditioning and its impact on society (2023).
- Croci, E., & **Colelli**, F. (2019). The costs and benefits of extended producer responsibility: an evaluation of the Italian waste electrical and electronic equipment (WEEE) management system. In *Environmental*

Fiscal Challenges for Cities and Transport (pp. 60-74). Edward Elgar Publishing. DOI: 10.4337/9781789904185.00016

Conferences

- Presentation titled " Climate Change Impacts and Adaptation of the Electricity Grid: Evidence from the European Balancing Energy Markets" at the Association of Environmental and Resource Economists Conference (AERE) in Washington, 29/05/2024 - 31/05/2024. Oral.
- Presentation titled "Energy used for adaptation adjusts over the long run: from the empirical evidence to a multi model assessment" at the **Integrated Assessment Modeling Consortium (IAMC)** 2023, CMCC, Venice. Period: 11/14/2023 - 11/16/2023. Oral.
- Presentation titled "Energy used for adaptation adjusts over the long run" at the **European Climate and Energy Modelling Platform 2023**. Period: 10/5/2023 - 10/6/2023. Oral.
- Presentation titled "Identification of the extensive vs intensive margins of temperatures on energy and income from observed changes in the climate" at the 28th Annual Conference of the **European Association of Environmental and Resource Economists (EAERE)**, University of Cyprus, Limassol. Period: 06/19/2023 - 06/25/2023. Oral.
- Presentation titled "Re-estimating climate change impacts on energy demand and economic outcomes: short vs long term effects in macro panels" at the **Italian Association of Environmental and Resource Economists (IAERE)**. Period: 02/23/2023. Oral.
- Presentation titled "Identification of the intensive and extensive margin of peak demand in a panel framework" at the 40th edition of the **International Energy Workshop (IEW)**, Fraunhofer ISE, Freiburg. Period: 05/25/2022 - 05/26/2022. Oral.
- Presentation titled "Decomposition of the short/long-run responses to weather/climate of peak electricity demand in India and Europe" at the **EGU**. Period: 04/19/2021 - 04/30/2021. Oral.
- Presentation at ClimRisk19: "Climate Risk: implications for ecosystem services and society, challenges, solutions" at the **SISC Seventh Annual Conference**, Trento. Period: 10/23/2019 - 10/25/2019. Oral.

Invited speaker at scientific seminars, summer schools and workshops:

- Presentation titled "Climate Change Impacts and Adaptation of the Electricity Grid: Evidence from the European Balancing Energy Markets." at the Florence School of Regulation - Research Meeting, 18/07/2024. Oral.
- Presentation titled "ISIMIP Energy – Demand-side current works and future prospects", Cross-sectoral **ISIMIP and PROCLIAS Workshop**,22/04/2024.
- Presentation titled "Intensive and extensive margins of the peak load: measuring adaptation with mixed frequency panel data" at the **ENERGYA 2nd scientific workshop** - Frontiers in climate change adaptation, Campus San Giobbe, Venice, 10/27/2022.
- Presentation titled "Modelling adaptation driven energy demand: a review of the IAM-based studies results and methods" at the **CD-Links Summer School on Integrated Assessment Models**: **A Tool for Science-Based Policy Making**, Palazzo Artigianelli, Venice, 06/30/2019.
- Presentation titled "Electricity demand and climate adaptation in Brazil" at the **2nd Energy Innovation Bootcamp of the EUI-Florence School of Regulation**, 11/28/2019.

Membership of Scientific Societies

- 2024, Member of the Association of Environmental and Resource Economists.
- 2022-2024, Member of the European Association of Environmental and Resource Economists.
- 2019-2022, Member of the Italian Society for Climate Science.

Organisation of international conferences, including membership in the steering and/or programme committee;

- Co-organization of the **ENERGYA 2nd scientific workshop** - Frontiers in climate change adaptation, Campus San Giobbe, Venice, 10/27/2022.

- Co-organization of a thematic session during the cross-sectoral **ISIMIP and PROCLIAS Workshop**, (20-22/04/2024), with the role of coordinator of the "Energy Demand" group within the "Energy" Working Group of ISIMIP (main coordinator: Christian Otto, christian.otto@pik-potsdam.de)

Funding received

- The research period at BU (1 month, 10-2022) has been funded by the Departmental Funds of the Department of Earth and Environment of Boston University.
- The research period at UC Berkeley (2021-2022) has been funded by the "Global Excellence in Modelling of Climate and Energy" H2020-MSCA-RISE project GEMCLIME, GA No. 681228.

Volunteering

- **Jury Member** of the art exhibition "Seeds Planting Art", organized by the NGO *Artists for Plants* in collaboration with the Svalbard Global Seed Vault, July 2023.
- **Project manager,** *Mother Earth Foundation*, Manila, Philippines, January – February 2016. Project 'Zero Waste in the Philippines', providing training to local public agencies.

Skills

- **Languages:** Italian: mother tongue; English: IELTS Test (13/02/2014) band score: 8; French: DALF Test (24/06/2014) overall level C1.
- **Software and programming languages:** R (advanced), GAMS (intermediate), Python (basic).