

ELENA MARIA FUMAGALLI
CURRICULUM VITAE

PERSONAL DETAILS

WORK ADDRESS

- Copernicus Institute of Sustainable Development, Section Energy & Resources, Utrecht University
Princetonlaan 8a, 3584 CB Utrecht, The Netherlands
E-mail: e.m.fumagalli@uu.nl

LANGUAGES

- Italian native speaker, fluent in English, conversant in French, beginner in Dutch

CURRENT POSITION, AFFILIATIONS AND APPOINTMENTS

ASSISTANT PROFESSOR

Sept. 2018 - today

- Copernicus Institute of Sustainable Development, Section Energy & Resources
Utrecht University, Utrecht, The Netherlands

PART-TIME PROFESSOR

Oct. 2018 - today

- European University Institute, Florence School of Regulation
San Domenico di Fiesole, Florence, Italy

ACADEMIC EXPERIENCE

ASSOCIATE PROFESSOR

Dec. 2014 - Aug. 2018

- Dep. of Management, Economics and Industrial Engineering, Politecnico di Milano
Milan, Italy

VISITING SCHOLAR

Sept. 2016 - Feb. 2017

- Faculty of Technology, Policy and Management, Delft University of Technology
Delft, The Netherlands

TEACHING AREA COORDINATOR - INDUSTRIAL AND BUSINESS ECONOMICS

May 2016 - Aug. 2018

- MIP School of Management, Politecnico di Milano
Milan, Italy


DIRECTOR, PART-TIME MBA

May 2013 - July 2016

- MIP School of Management, Politecnico di Milano
Milan, Italy

- MEMBER OF THE EXTENDED FACULTY *Oct. 2007 - Set. 2018*
- European University Institute, Florence School of Regulation
San Domenico di Fiesole, Florence, Italy
- ASSISTANT PROFESSOR *Jan. 2007 - Nov. 2014*
- Dep. of Management, Economics and Industrial Engineering, Politecnico di Milano
Milan, Italy
- POSTDOCTORAL RESEARCHER *June 2005 - Dec. 2006*
- Dep. of Management, Economics and Industrial Engineering, Politecnico di Milano
Milan, Italy
- POSTDOCTORAL RESEARCHER *April 2002 - May 2005*
- Dep. of Electrical Engineering, Politecnico di Milano
Milan, Italy
- VISITING DOCTORAL STUDENT *Jan. 2000 - Dec. 2001*
- Energy Laboratory, Massachusetts Institute of Technology
Cambridge, MA, USA
- ASSISTANT RESEARCHER *Oct. 1997 - Dec. 1999*
- Center for Research on Energy and Environmental Economics and Policy (IEFE), Università Bocconi
Milan, Italy

EDUCATION

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- DOCTORATE IN ENERGY ENGINEERING *Nov. 1998 - Feb. 2002*
- Regulatory schemes and technical aspects of reliability in power systems
Università degli Studi di Padova, Padua, Italy
- LAUREA (B.SC., M.SC.) IN NUCLEAR ENGINEERING *Nov. 1989 - July. 1997*
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Politecnico di Milano, Milan, Italy

CURRENT TEACHING ACTIVITY (2020-21)

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- UTRECHT UNIVERSITY | M.Sc. & B. Sc.
- Consultancy Project | M.Sc. in Energy Science
 - Transdisciplinary Case Study | M.Sc. in Sustainable Development and M.Sc. in Water Science and Management
 - Sustainable Resource Use | B.Sc. in Global Sustainability Science

EUROPEAN UNIVERSITY INSTITUTE | FLORENCE SCHOOL OF REGULATION

- Residential and e-learning course on Regulation of Energy Utilities

TEACHING EXPERIENCE

POLITECNICO DI MILANO | DOCTORAL COURSES

- Industrial Economics and Policy | Academic year 2014/15 and 2016/17
- Economics of regulated industries | Academic years 2011/12 and 2013/14

UTRECHT UNIVERSITY | M.Sc.

- Consultancy Project | M.Sc. in Energy Science | Academic year 2018/19 and 2019/20
- Energy System Modeling | M.Sc. in Energy Science | Academic year 2019/20
- Transdisciplinary Case Study | M.Sc. in Sustainable Development and M.Sc. in Water Science and Management | Academic year 2018/19 and 2019/20

POLITECNICO DI MILANO | M.Sc. AND B.Sc.

- Energy Economics | M.Sc. in Energy Engineering | Academic years 2014/15 - 2017/18
- Economics of Network Industries | M.Sc. in Management Engineering | Academic years 2015/16 - 2017/18
- Economia dei Servizi e delle Reti | M.Sc. in Energy Engineering | Academic years 2007/08 - 2014/15
- Economia dei Servizi e delle Reti | M.Sc. in Electrical Engineering | Academic years 2008/09 - 2010/11
- Organizzazione di impresa | B.Sc. in Mechanical Engineering | Academic year 2017/18
- Economia e Organizzazione Aziendale | B.Sc. in Aerospace Engineering | Academic year 2014/15

POLITECNICO DI MILANO | MIP SCHOOL OF MANAGEMENT

- International MBA | Industrial and Business Economics | Academic years 2016/17 - 2017/18
- International MBA and Executive MBA | Regulatory Economics | Academic years 2008/09 - 2010/11
- Master in Energy Finance & Commodity Trading | Academic years 2006/07 - 2012/13
- Corporate training for Edison S.p.A. and Snam Rete Gas | Academic years 2010/11 - 2012/13
- Elective courses in Energy Management Programs | 2015
- Elective courses in Executive MBA and MBA Programs | 2012 and 2013

EUROPEAN UNIVERSITY INSTITUTE | FLORENCE SCHOOL OF REGULATION

- Annual Training on the Regulation of the Energy Sector | Module on Service Quality Regulation
Academic years 2007/08 - 2016/17

- Regulation of Energy Markets and Infrastructure | Training course JRC European Commission Petten, The Netherlands, 2015
- Regulation of Energy Markets | Training Course Regulatory Authorities of MEDREG countries Florence, Italy and Athens, Greece, 2011
- Regulation of Energy Utilities | Summer School Florence, Italy, 2008

UNIVERSIDAD PONTIFICIA COMILLAS

- Re-thinking the regulation of the power system to integrate large shares of renewables and distributed energy resources | Electric Energy System - University Enterprise Training Partnership Madrid, Spain, 2017

ENERGY REGULATORS REGIONAL ASSOCIATION (ERRA)

- Introduction to Energy Regulation | Summer School Budapest, Hungary, 2007 - 2012

NATIONAL ENERGY REGULATORY AUTHORITIES

- National Electricity Regulatory Commission (NERC) in Kiev, Ukraine | 2007-2008
- Energy Market Regulatory Authority of Turkey (EMRA) in Ankara, Turkey | 2005-2006
- National Control Commission for prices and energy (NCC) in Vilnius, Lithuania | 2003-2004

OTHER TEACHING ACTIVITIES

STUDENTS SUPERVISION, DOCTORAL AND POST-DOCTORAL STUDENTS

- L. Silva Rodriguez, Doctoral Student, Utrecht University and VITO/EnergyVille | *ongoing*
- A. Sadeghi, Doctoral Student, Utrecht University | *ongoing*
- F. Bovera, Doctoral Student, Politecnico di Milano | *ongoing*
- S. Jenniches, Doctoral Student, Utrecht University | *2018-2020*
- T. Romano, Post-Doctoral Research Fellow, Politecnico di Torino | *2016-2018*
- T. Romano, Doctoral Student, Politecnico di Milano | *2012-2016*
- A.M. Groppi, Post-Doctoral Research Fellow, Politecnico di Milano | *2011*

COMMITTEES

- Member of Doctoral Committees | Politecnico di Milano, Politecnico di Torino, Delft University of Technology, Università degli Studi di Padova, University of Ljubljana, Leiden University
- Member of the Educational Committee on Teaching Innovation | Dep. of Management, Economics and Industrial Engineering, Politecnico di Milano, 2017-2018
- Member of the Erasmus Exchange Program Committee | Dep. of Management, Economics and Industrial Engineering, Politecnico di Milano, 2007 - 2013
- Member of Hiring Committees for Doctoral and Post-Doctoral positions | Dep. of Management, Economics and Industrial Engineering, Politecnico di Milano and Utrecht University

OTHER ACADEMIC ACTIVITIES AND ACHIEVEMENTS

CONFERENCE COMMITTEES

- Member of the Scientific Committee for the 5th AIEE Energy Symposium (Milan: 15-17 December 2020)
- Member of the International Program Committee and of the Best Student Award Committee for the 16th IAEE European Energy Conference (Ljubljana: 25-28 August 2019)
- Member of the Scientific Committee for the 4th AIEE Energy Symposium (Rome: 10-12 December 2019)
- Member of the Scientific Committee for the 3rd AIEE Energy Symposium (Milan: 10-12 December 2018)

REFEREE FOR SCIENTIFIC JOURNALS

- *Economia Politica*, *Energy Economics*, *Energy Journal*, *Energy Policy*, *Energy Research & Social Science*, *European Journal of Operational Research*, *Journal of Industrial and Business Economics*, *IEEE Transactions on Power Delivery*, *IEEE Transactions on Power Systems*, *Nature Energy*, *Technological Forecasting & Social Change*

INVITED SEMINARS

- Forsyningstilsynet (Danish Utility Regulator)
Online Seminar, April 2021
Regulating electricity distribution networks under technological and demand uncertainty (*with F. Bovera, M. Delfanti, L. Lo Schiavo, and R. Vailati*)
- Centre de Géopolitique de l'Énergie et des matières premières (CGEMP)
Université Paris-Dauphine, Paris, France, Jan. 2017
Modeling Technology Diffusion: Wind Power in Italy (*with T. Romano and T. Daglish*)
- Institute of Energy Economics
University of Cologne, Cologne, Germany, Nov. 2012
Output-based incentive regulation in electricity distribution: evidence from Italy (*with C. Cambini and A. Croce*)
- Chaire EPPP - IAE de Paris
Pantheon-Sorbonne, Paris, France, Jan. 2012
Incentive regulation: benchmarking with quality of supply in electricity distribution (*with C. Cambini and A. Croce*)

AWARDS

- International Confederation of Energy Regulators Distinguished Scholar Award
5th World Forum on Energy Regulation, Quebec City, Canada, May 2012
Changing the regulation for regulating the change (*with L. Lo Schiavo, M. Delfanti, and V. Olivieri*)
- Marta Valente Best Paper Award
XXI Riunione Scientifica Annuale AiIG, L'Aquila, Italy, Oct. 2010
Transmission investments in Italy: difficulties and delays (*with A. Groppi*)

SCIENTIFIC REPORTS

- Partecipazione della domanda flessibile al mercato dei servizi di dispacciamento, Feb. 2018
RSE and Politecnico di Milano, with the collaboration of the industrial association Energy@Home

PUBLICATIONS

MONOGRAPHS

- Fumagalli, E., Lo Schiavo, L., Delestre F. (2007). Service quality regulation in electricity distribution and retail. Springer-Verlag, Berlin Heidelberg.

INTERNATIONAL REFEREED JOURNALS

- Bovera, F., Delfanti, M., Fumagalli, E., Lo Schiavo, L., Vailati, R. (2021). Regulating electricity distribution networks under technological and demand uncertainty. *Energy Policy*, 149, 111989.
- Rocco, M., Fumagalli, E., Vigone, C., Miserocchi, A., Colombo, E. (2021). Enhancing energy models with geo-spatial data for the analysis of future electrification pathways: the case of Tanzania. *Energy Strategy Reviews*, 34, 100614.
- Rocco, M., Tonini, F., Fumagalli, E., Colombo, E. (2020). Electrification pathways for Tanzania: implications for the economy and the environment. *Journal of Cleaner Production*, 263, 121278.
- Fumagalli, E., Akerboom, S. (2019). Dutch climate and energy policy: Targets and progress for 2020 and 2030. *Economics and policy of energy and the environment*, 119-147.
- Clò, S., Fumagalli, E. (2019). The effect of price regulation on energy imbalances: A Difference in Differences design. *Energy economics*, 81, 754-764.
- Jenniches, S., Worrell, E., Fumagalli, E. (2019). Regional economic and environmental impacts of wind power developments: A case study of a German region. *Energy Policy*, 132, 499-514.
- Butticè, V., Colombo, M. G., Fumagalli, E., Orsenigo, C. (2019). Green oriented crowdfunding campaigns: Their characteristics and diffusion in different institutional settings. *Technological Forecasting and Social Change*, 141, 85-97.
- Romano, T., Fumagalli E. (2018). Greening the power generation sector: understanding the role of uncertainty. *Renewable & Sustainable Energy Reviews*, 91, 272-286
- Cambini, C., Fumagalli, E., Rondi, L. (2016). Incentives to quality and investment: evidence from electricity distribution in Italy. *Journal of Regulatory Economics*, 49(1), 1-32.
- Cambini, C., Croce, A., Fumagalli, E. (2014). Output-based incentive regulation in electricity distribution: evidence from Italy. *Energy Economics*, 45, 205-216.
- Groppi, A., Fumagalli, E. (2014). Network expansion by a proactive transmission system operator: a case study. *Energy Policy*, 69, 610-623.
- De Paoli, L., Fumagalli, E. (2013). Estimating welfare losses and gains in explicit auctions for power trade: an application to the Italian case. *Economics and Policy of Energy and the Environment*, 2(2), 153-181.
- Di Castelnuovo, M., Fumagalli, E. (2013). An assessment of the Italian smart gas metering program. *Energy Policy*, 60, 714-721.
- Lo Schiavo, L., Delfanti, M., Fumagalli, E., Olivieri, V. (2013). Changing the regulation for regulating the change: Innovation-driven regulatory developments for smart grids, smart metering and e-mobility in Italy. *Energy Policy*, 57, 506-517.
- Creti, A., Fumagalli, E., Fumagalli, E. (2010). Integration of electricity markets in Europe: relevant issues for Italy. *Energy Policy*, 38(11), 6966-6976.

- Delfanti, M., Fumagalli, E., Garrone, P., Grilli, L., Lo Schiavo, L., (2010). Towards voltage quality regulation in Italy. *IEEE Transactions on Power Delivery*, 25(2), 1124 - 1132.
- Fumagalli, E., Lo Schiavo, L. (2009). Regulating and improving the quality of electricity supply: the case of Italy. *European Review of Energy Markets*, 3(2), 1-27.
- Fumagalli, E., Lo Schiavo, L., Paganoni, A.M., Secchi, P. (2009). Statistical analysis of exceptional events: the Italian regulatory experience. *IEEE Transactions on Power Delivery*, 24(3), 1319-1327.
- Fumagalli, E., Garrone, P., Grilli, L. (2007). Service quality in the electricity industry: The role of privatization and managerial behavior. *Energy Policy*, 35(12), 6212-6224.
- Fumagalli, E., Lo Schiavo, L., Salvati, S., Secchi, P. (2006). Statistical identification of major event days: an application to continuity of supply regulation in Italy. *IEEE Transactions on Power Delivery*, 21(2), 761 - 767.
- Fumagalli, E., Black, J., Vogelsang, I., Ilic, M. (2004). Quality of service provision in electric power distribution systems through reliability insurance. *IEEE Transactions on Power Systems*, 19(3), 1286 - 1293.
- Ilic, M., Arce, J., Yoon, Y., Fumagalli, E. (2001). Assessing reliability as the electric power industry restructures. *The Electricity Journal*, 14(2), 55-67.

INVITED CONTRIBUTIONS

- Fumagalli, E. (2016). Energy investment: The many lives of energy storage. *Nature Energy*, 1, 16096.

NATIONAL REFEREED JOURNALS

- Cambini, C., De Girolamo, F., Fumagalli, E. (2011). Incentive regulation and service quality. The case of electricity distribution in Italy. *Economia e Politica Industriale*, 38(2), 107-123.
- Torriti, J., Lo Schiavo L., Fumagalli, E. (2009). RIA (Regulatory Impact Assessment) in the practice of an independent authority - the experience of Italian Regulatory Authority for Electricity and Gas. *Mercato Concorrenza Regole*, 11(2), 253-291.
- Fumagalli, E., Internullo, M. (2005). Ancora sulla teoria dei giochi applicata al mercato elettrico. *L'Energia Elettrica*, 82 (6), 57-65.
- Fumagalli, E., Garrone, P., Internullo, M. (2005). Concorrenza ed espansione della rete elettrica di trasmissione: un'analisi del comportamento strategico degli operatori. *Economia delle Fonti di Energia e dell'Ambiente*, 48 (2), 87-113.
- Berizzi, A., Bovo, C., Delfanti, M., Fumagalli, E., Pasquadibisceglie, M. (2004). Progetto Simulazione Borsa Elettrica: un'analisi del mercato elettrico italiano al 2005. *AEI Rivista ufficiale dell'Associazione Elettrotecnica ed Elettronica Italiana*, 91(5), 26-33.
- Fumagalli, E., Lo Schiavo, L. (2004). Esportare la regolazione della qualità. *AEI Rivista ufficiale dell'Associazione Elettrotecnica ed Elettronica Italiana*, 91(3), 28-37.
- Bovo, C., Delfanti, M., Fumagalli, E., Silvestri, A., Urvetti, G. (2003). Teoria dei giochi: le possibilità offerte all'analisi dei mercati elettrici. *L'Energia Elettrica*, 80(5), 27-36.
- Fumagalli, E. (2001). Managing quality of service on the distribution grid according to consumer preferences. *Economia delle Fonti di Energia e dell'Ambiente*, 12(2), 87-110.

Date: May, 2021