

ANGELO FACCHINI
Curriculum Vitae

Part I – General information

Full Name	Angelo Facchini
Place of Birth	Siena
Citizenship	Italian
E-mail	4.facchini@gmail.com
Spoken Languages	English, German

Part II – Career

Current position: Assistant Professor, IMT School for Advanced Studies Lucca – Department of Economics, Networks, and Business Analytics

II.A – Academic appointments and working positions

2020 -	Italian Scientific Qualification as Associate Professor ASN 2018-20, 13/A2 Politica Economica. (All. 01)
2019 -	Local scientific coordinator (Responsabile Scientifico) del nodo IMT) of the project H2020 SoBigData++ (Grant n. 871042). Budget: 264.750 Euros (All. 02)
2019 -	Evaluation Committee member , PhD Track in Economics, Networks and Business Analytics.
2016 -	Assistant Professor , IMT School for Advanced Studies Lucca
2016 -	Associate Scientist CNR-Istituto Sistemi Complessi
2012-2016	Senior Researcher and project manager Enel Foundation (All. 09)
2011	Post-Doc Dept. of Information Engineering, Uni. of Siena
2007-2010	Research Assistant Dept. of Information Engineering, Uni. of Siena
2005-2006	Post-Doc Dept. of Chemical and Biosystems Sciences, Uni. of Siena

II.B – Visiting

2009 (Mar.-May)	Visiting Scholar Max Planck Institute for the Physics of Complex Systems (All. 11)
2006 (Sep.-Nov.)	Visiting Scholar Max Planck Institute for the Physics of Complex Systems (All. 11)
2004 (Aug.-Sep.)	Visiting Scholar Max Planck Institute for the Physics of Complex Systems (All. 11)
2003 (Aug.-Jan.)	Visiting Scholar Max Planck Institute for the Physics of Complex Systems (All. 11)

II.C - Education

2005	PhD in Chemical Physics, University of Siena
2001	Laurea Degree in Telecommunication Engineering, University of Siena

Part III – Summary of research topics

Note: Refer to part V

J: Journal paper; V: Volume contribution; C: Conference contribution; CS: Comments and surveys; S: submitted, P:preprint

III.A – Environmental and ecological economics: sustainability of energy and urban development

1. Regulatory aspects of the integration of renewable sources at regional level (J35, J31, J20, V3)
2. Data-driven policy: urban sustainability policies; policies to support sustainable mobility (J37, J32, J27, J26, J25, V3, CS3, CS4)

3. Urban metabolism and circular economy (J32, J21, J22, J19, J18, J5, P3)
4. Energy efficiency and energy poverty: use of energy in informal settlements in developing countries (CS5, C8)
5. Megacities (J21, J22, J19, J18, V2)

III.B – Energy economics, smart grids and energy communities

1. Effect of the regulation on the dynamics of the electricity markets (J30)
2. Smart grids management policies (J24, J28, J29, CS1)
3. Economic aspects of energy storage systems operation in microgrids (J23, J28, J36)

III.C – Other research interests

1. COVID-19 Epidemic: economic and environmental factors (P1, P2, J38)
2. Energy and water infrastructures (C10)
3. Complex Systems (J1-J4, J6-J17)

III.D – Research impact metrics

- My [Google Scholar profile](#) (on 27/04/2022) counts 1635 citations and an H-index of 22 (restricting on citations from 2017 on, they are 1078 with an H-index of 16)
- [Scopus](#) counts (on 27/04/2022) 1002 citations and an H-index of 17

Part IV – Publications selected for this comparative selection procedure

	Authors	Title	Year	Journal	Imp. Factor	Role	ANVUR A
1	C.I. Pardo Martinez, P. William Alfonso, A. Facchini, A. Cotte Poveda	Trends and dynamics of material and energy flows in an urban context: a case study of a city with an emerging economy	2021	Energy, Sust. and Society	2.811	Other Author	NO
2	V. Pieroni, A. Facchini, M. Riccaboni	COVID-19 vaccination and unemployment risk: lessons from the Italian crisis	2021	Scientific Reports	4.379	Corr. Author	YES
3	S. Korjani, A. Facchini, M. Mureddu, A. Rubino, A. Damiano	Battery management for energy communities- Economic evaluation of an artificial intelligence-led system	2021	Journal of Cleaner Production	9.297	Corr. Author	YES
4	F. Surmonte, U. Perna, A. Scala, A. Rubino, A. Facchini	A Data-driven approach to renewable energy source planning at regional level	2021	Energy Sources Part B: Economics, Planning and Policy	3.205	Corr. Author	NO
5	S. Maranghi, L. Parisi, A. Facchini, A. Rubino, O. Kordas, R. Basosi	Integrating urban metabolism and life cycle assessment to analyse urban sustainability	2020	Ecological Indicators	4.958	Corr. Author	YES
6	A. Scala, A. Facchini, U. Perna, R. Basosi	Portfolio analysis and geographical allocation of renewable sources: A stochastic approach	2019	Energy Policy	5.042	Corr. Author	YES

7	A. Facchini, A. Rubino, G. Caldarelli, G. Di Liddo	Changes to Gate Closure and its impact on wholesale electricity prices: The case of the UK	2019	Energy Policy	5.042	1st author and corr. Author	YES
8	C. Kennedy, I.D. Stewart, M.I. Westphal, A. Facchini, R. Mele	Keeping global climate change within 1.5 C through net negative electric cities	2018	Current Opinion in Environmental Sustainability	4.258	Not specified	YES
9	M Mureddu, A. Facchini, A Scala, G Caldarelli, A Damiano	A Complex Network Approach for the Estimation of the Energy Demand of Electric Mobility	2018	Scientific Reports	4.011	Corr. Author	YES
10	A. Facchini, C. Kennedy, I.D. Stewart, R. Mele	The energy metabolism of megacities	2017	Applied Energy	7.900	First Author and corr. author	YES
11	C. Kennedy, I.D. Stewart, A. Facchini, R. Mele	The role of utilities in developing low carbon, electric megacities	2017	Energy Policy	4.039	Other author	YES
12	Kennedy C.A., Stewart I., Facchini A., Cersosimo I., Mele R. et al.	Energy and material flows of megacities	2015	Proceedings of the National Academy of Sciences of the United States of America	9.423	Research design, data analysis	YES

Part V – Complete list of publications (Journals, conference contributions, other)

V.A – Submitted papers and preprints

	Authors	Title	Year	Journal	ANVUR A
S1	Pietro Saggese, Alessandro Belmonte, Nicola Dimitri, Angelo Facchini, Rainer Böhme	Who are the arbitrageurs? Empirical evidence from Bitcoin traders in the Mt. Gox exchange platform	2021	Working paper: Quaderni del Dipartimento Di Economia Politica e Statistica , Università di Siena, n. 849, 2021	
P3	A. Muscillo, S. Re, S. Gambacorta, G. Ferrara, N. Tagliaferro, E. Borello, A. Rubino, A. Facchini	Circular City Index: An Open Data analysis to assess the urban circularity preparedness of cities to address the green transition -- A study on the Italian municipalities	2021	ArXiv Preprint	

P2	V. Pieroni, A. Facchini, M. Riccaboni	From stay-at-home to return-to-work policies: COVID-19 mortality, mobility and furlough schemes in Italy	2021	ArXiv Preprint Published version: see J37 Table V.B	
P1	A. Facchini, S. Re	Potential effects of airborne particulate matter on spreading pathophysiology and prognosis of a viral respiratory infection	2020	Epidemiologia&Prevenzione Preprint	

V.B – Papers published in peer-reviewed international journals

	Authors	Title	Year	Journal	IF	ANVUR A
J38	V. Pieroni, A. Facchini, M. Riccaboni	COVID-19 vaccination and unemployment risk: Lessons from the Italian crisis	2021	Scientific Reports	4.379	YES
J37	C.I. Pardo Martinez, P. William Alfonso, A. Facchini, A. Cotte Poveda	Trends and dynamics of material and energy flows in an urban context: a case study of a city with an emerging economy	2021	Energy, Sustainability and Society	2.811	
J36	S. Korjani, A. Facchini, M. Mureddu, A. Rubino, A. Damiano	Battery management for energy communities- Economic evaluation of an artificial intelligence-led system	2021	Journal of Cleaner Production	9.297	YES
J35	F. Surmonte, U. Perna, A. Scala, A. Rubino, A. Facchini	A Data-driven approach to renewable energy source planning at regional level	2021	Energy Sources Part B: Economics, Planning and Policy	3.205	
J34	A. Facchini, R. Mele, G. Caldarelli	The Urban Metabolism of Lima: Perspectives and Policy Indications for GHG Emission Reductions	2021	Frontiers in Sustainable Cities	NA	
J33	Maranghi S., Parisi L., Facchini A., Rubino A., Kordas O., Basosi R.	Integrating urban metabolism and life cycle assessment to analyse urban sustainability	2020	Ecological Indicators	4.958	YES
J32	Andrienko G., Andrienko N., Boldrini C., Caldarelli G., Cintia P., Cresci S., Facchini A., et al.	(So) Big Data and the transformation of the city	2020	International Journal of Data Science and Analytics	NA	
J31	Scala A., Facchini A., Perna U., Basosi R.	Portfolio analysis and geographical allocation of renewable sources: A stochastic approach	2019	Energy Policy	5.042	YES
J30	Facchini A., Rubino A., Caldarelli G., Di Liddo G.	Changes to Gate Closure and its impact on	2019	Energy Policy	5.042	YES

		wholesale electricity prices: The case of the UK				
J29	Korjani S., Facchini A., Mureddu M., Caldarelli G., Damiano A.	Optimal positioning of storage systems in microgrids based on complex networks centrality measures	2018	Scientific Reports	4.011	YES
J28	Mureddu M., Facchini A., Damiano A.	A Statistical Approach for Modeling the Aging Effects in Li-Ion Energy Storage Systems	2018	IEEE Access	4.098	
J27	Chris Kennedy, Iain D Stewart, Michael I Westphal, ANGELO FACCHINI, Renata Mele	Keeping global climate change within 1.5 C through net negative electric cities	2018	Current Opinion in Environmental Sustainability	4.258	YES
J26	M Mureddu, FACCHINI A, A Scala, G Caldarelli, A Damiano	A Complex Network Approach for the Estimation of the Energy Demand of Electric Mobility	2018	Scientific Reports	4.011	YES
J25	I D Stewart, CA Kennedy, FACCHINI A, R Mele	The Electric City as a Solution to Sustainable Urban Development	2018	J. of Urban Technology	2.250	
J24	Facchini A.	Planning for the future	2017	Nature Energy	46.8	YES
J23	S Korjani, M Mureddu, FACCHINI A, A Damiano	Aging Cost Optimization for Planning and Management of Energy Storage Systems	2017	Energies	2.678	
J22	Facchini A., Kennedy C., Stewart I., Mele R.	The energy metabolism of megacities	2017	Applied Energy	7.900	YES
J21	Kennedy C., Stewart I.D., Facchini A., Mele R.	The role of utilities in developing low carbon, electric megacities	2017	Energy Policy	4.039	YES
J20	Valori L., Giannuzzi G.L., Facchini A., Squartini T., Garlaschelli D., Basosi R.	A generation-attraction model for renewable energy flows in Italy: A complex network approach	2016	European Physical Journal: Special Topics	1.862	
J19	Kennedy C.A., Stewart I., Facchini A., Cersosimo I., Mele R. et al.	Energy and material flows of megacities	2015	Proceedings of the National Academy of Sciences of the United States of America	9.423	YES
J18	Kennedy C., Stewart I.D., Ibrahim N., Facchini A., Mele R.	Developing a multi-layered indicator set for urban metabolism studies in megacities	2014	Ecological Indicators	3.444	YES
J17	Facchini A., Mocenni C.	Recurrence Methods for the Identification of Morphogenetic Patterns	2013	PLoS ONE	3.534	

J16	Facchini A., Mocenni C.	Filling gaps in ecological time series by means of twin surrogates	2011	International Journal of Bifurcation and Chaos	0.775	
J15	Mocenni C., Facchini A., Vicino A.	Comparison of recurrence quantification methods for the analysis of temporal and spatial chaos	2011	Mathematical and Computer Modelling	1.066	
J14	Mocenni C., Facchini A., Vicino A.	Identifying the dynamics of complex spatio-temporal systems by spatial recurrence properties	2010	Proceedings of the National Academy of Sciences of the United States of America	9.771	YES
J13	Barucci A., Macaluso G., Mecatti D., Noferini L., Fanelli D., Facchini A., Materassi M., Pieraccini M., Atzeni C.	Universal fluctuations in tropospheric radar measurements	2010	Europhysics Letters	2.753	
J12	Facchini A., Rossi F., Mocenni C.	Spatial recurrence strategies reveal different routes to Turing pattern formation in chemical systems	2009	Physics Letters, Section A: General, Atomic and Solid State Physics	2.009	
J11	Webber Jr. C.L., Marwan N., Facchini A., Giuliani A.	Simpler methods do it better: Success of Recurrence Quantification Analysis as a general purpose data analysis tool	2009	Physics Letters, Section A: General, Atomic and Solid State Physics	2.009	
J10	Facchini A., Mocenni C., Vicino A.	Generalized recurrence plots for the analysis of images from spatially distributed systems	2009	Physica D: Nonlinear Phenomena	1.568	YES
J9	Fontani G., Migliorini S., Benocci R., Facchini A., Casini M., Corradeschi F.	Effect of mental imagery on the development of skilled motor actions	2007	Perceptual and Motor Skills	0.55	
J8	Facchini A., Mocenni C., Marwan N., Vicino A., Tiezzi E.	Nonlinear time series analysis of dissolved oxygen in the Orbetello Lagoon (Italy)	2007	Ecological Modelling	2.077	YES
J7	Facchini A., Kantz H.	Curved structures in recurrence plots: The role of the sampling time	2007	Physical Review E - Statistical, Nonlinear, and Soft Matter Physics	2.483	
J6	Facchini A., Wimberger S., Tomadin A.	Multifractal fluctuations in the survival probability of an open quantum system	2007	Physica A: Statistical Mechanics and its Applications	1.43	
J5	Bastianoni S., Facchini A., Susani L., Tiezzi E.	Emergy as a function of exergy	2007	Energy	1.172	
J4	Facchini A., Delogu F., Lambroni L., Pulselli F.M., Tiezzi E.B.P.	Experimental evidences for chaotic dynamics in the vocalizations of the	2006	International Journal of Ecodynamics	NA	

		humpback whale megaptera novaeangliae				
J3	Facchini A., Kantz H., Tiezzi E.	Recurrence plot analysis of nonstationary data: The understanding of curved patterns	2005	Physical Review E - Statistical, Nonlinear, and Soft Matter Physics	2.418	
J2	Facchini A., Bellieni C.V., Marchettini N., Pulselli F.M., Tiezzi E.B.P.	Relating pain intensity of newborns to onset of nonlinear phenomena in cry recordings	2005	Physics Letters, Section A: General, Atomic and Solid State Physics	1.55	
J1	Facchini A., Bastianoni S., Marchettini N., Rustici M.	Characterization of chaotic dynamics in the vocalization of Cervus elaphus corsicanus (L)	2003	Journal of the Acoustical Society of America	1.482	

V.C – Chapters in volumes

	Authors	Title	Year	Volume
V3	Facchini, A., Scala, A.	Complex systems applications to electric mobility and regional intermittent sources planning	2021	A. Rubino, A. Sapio, M. La Scala, <i>Handbook of energy economics and policy</i> (Academic Press, ISBN 978-0- 12814712-2)
V2	Stewart, I.D., Kennedy, C.A, Facchini, A.	Measuring Progress towards sustainable megacities	2020	D. Labbé, A. Sorensen, <i>Handbook of Megacities and megacity-regions</i> (Elgar, ISBN 978-1-78897-269-7)
V1	Bocchi G., Facchini A.	Living at the edge of chaos: A complex systems view of cities	2016	O. Nel-lo, R. Mele, <i>Cities in the 21st Century</i> (Routledge ISBN 978-1-138- 11964-2)

V.D – Comments and surveys

	Authors	Title	Year	Journal/Volume	Impact Factor
CS5	Facchini A.	Exchanging recyclable waste for electricity in Fortaleza	2016	Cities in the 21st Century (ISBN 978-1-138-11964- 2)	NA
CS4	Facchini A.	Climate-sensitive urbanization in Tokyo-Yokohama	2016	Cities in the 21st Century	NA
CS3	Facchini A.	The città diffusa of the Po Valley	2016	Cities in the 21st Century	NA
CS2	Facchini A.	Shaping the city with big data: Seattle, Chicago and Lyon	2016	Cities in the 21st Century	NA

CS1	Facchini A.	Res Novae: New things and concepts in the "smart city" of Bari	2016	Cities in the 21st Century	NA
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V.E – Selected papers and contributions to international and national conferences

	Authors	Title	Year	Conference
C15	A. Facchini, A. Rubino, U. Perna	Composing renewable generation portfolia based on weather data: a first case study in Tuscany	2022	Energy and Finance Italia 7. Naples 10-11 February, 2022
C14	A. Facchini, A. Rubino, A. Damiano	Impact of incentive regulation for battery sizing and management	2021	6th AIEE Energy Symposium Current and Future Challenges to Energy Security
C13	F. Surmonte, U. Perna, A. Scala. A. Rubino, A. Facchini	A Data-driven approach to renewable energy source planning at regional level	2020	5th AIEE (Associazione Italiana Economisti dell’Energia) Energy Symposium Current and Future Challenges to Energy Security. 15-17 Dec. 2020
C12	Rubino, A., Korjani, S., Facchini, A., Mureddu, M., Damiano, A.	Assessing Battery management for energy communities: economic evaluation of an Artificial Intelligence (AI) led system	2019	4th AIEE Energy Symposium on Energy Security
C11	Facchini A., Korjani S., Damiano A.	A multi-microgrid aging cost optimisation of battery storage systems in presence of fluctuating renewable energy sources	2019	IEEE (Institute of Electric and Electronic Engineers) International Symposium on Industrial Electronics
C10	Facchini A., Scala A., Lattanzi N., Caldarelli G., Liberatore G., Dal Maso L., Di Nardo A.	Complexity science for sustainable smart water grids	2017	Communications in Computer and Information Science
C9	A. Scala, A. Facchini, U. Perna	Portfolio analysis and allocation of renewable sources	2017	Biennial International Workshop Advances in Energy Studies, BIWAES 2017, Naples.
C8	Butera F.M., Caputo P., Adhikari R.S., Facchini A.	Urban Development and Energy Access in Informal Settlements. A Review for Latin America and Africa	2016	Procedia Engineering, 161, 2016, pp. 2093-2099
C7	Facchini, C. Kennedy, I. Stewart, R. Mele	Energy and material flows in megacities	2015	BIWAES 2015. Biennial International Workshop Advances in Energy Studies 2015, “Energy and Urban Systems” Stockholm, 4-7 May, 2015.
C6	Facchini, A.	The Challenge of sustainability in megacities	2014	Habitat III, Seventh Session of the World Urban Forum "Urban Equity in Development - Cities for

				Life" Medellin 5-11 April 2014
C5	Facchini, A. Rubino	Time recurrence structure of electricity markets: the case of UK	2014	14th IAEE (International association for Energy Economics) Energy Conference, Rome, November 29, 2014.
C4	Paoletti S., Casini M., Giannitrapani A., Facchini A., Garulli A., Vicino A.	Load forecasting for active distribution networks	2011	IEEE PES Innovative Smart Grid Technologies Conference Europe
C3	Costa A., Marchettini N., Facchini A.	Developing the urban metabolism approach into a new urban metabolic model	2004	Advances in Architecture Series
C2	Niccolucci V., Ridolfi R., Facchini A.	The eMergy analysis of the Province of Siena in the SPIIn-Eco project	2003	Advances in Ecological Sciences
C1	Rosini M., Facchini A., Picchi M.P.	Composing indicators in a multi-layered perspective: Toward a hermeneutics of local sustainability	2002	Advances in Architecture Series

V.F – Non-academic contributions, media dissemination, interviews

2021	A. Facchini, V. Pieroni, M. Riccaboni. Covid-19, vaccini e rischio disoccupazione: quali priorità?	Dissemination – Scienza in rete
2020	A. Facchini, S. Re. Il dilemma di Wuhan: attenti alle nuove onde	Dissemination – Scienza in rete
2020	S. Re, A. Facchini, N. Brondino, F. Grazzini, G. Vacchiano, L. Carra. Inquinamento atmosferico e coronavirus: chi cerca trova	Dissemination – Scienza in rete
2019	L. Meini, A. Facchini, C. Papa. Cities of tomorrow: the circular cities.	Dissemination – ISPI Online
2018	A. Facchini. La modulazione della domanda di energia e il ruolo delle rinnovabili	Dissemination – AGI BlogItalia
2018	A. Facchini. Così aumenterà lo stress idrico di chi vive nelle città. Una ricerca	Dissemination – AGI BlogItalia
2018	Il Movimento Elettrico	Interview “La Repubblica”
2017	A. Facchini. Il problema dell'energia nelle baraccopoli in Africa e America Latina	Dissemination – AGI BlogItalia
2017	A. Facchini. Il ruolo delle utility nello sviluppo delle megacity elettriche	Non-academic - “Il Merito” (ISSN 2532-8913)
2017	A. Facchini, M. Mureddu, A. Scala, G. Caldarelli, A. Damiano. Uno scenario per la mobilità elettrica su scala regionale: il caso della Regione Sardegna	Non-academic - “Il Merito” (ISSN 2532-8913)
2016	A. Facchini. La sfida dell'energia nelle megalopoli	Non-academic “Il Merito” (ISSN 2532-8913)
2015	Inchiesta sulle città	Interview “Corriere della Sera”

VI – Teaching*VI.A – Teaching: undergraduate and PhD courses*

- 2022 "Introduction to sustainability and ecological economics", IMT School for Advanced Studies, Lucca, PhD in Systems Science, curriculum in Economics, Networks, and Business Analytics (All. 15).
- 2021 "Introduction to sustainability and ecological economics", IMT School for Advanced Studies, Lucca, PhD in Systems Science, curriculum in Economics, Networks, and Business Analytics (All. 15).
- 2021 "Advanced Topics in Network Theory: Topological Concepts in Network Theory", IMT School for Advanced Studies, Lucca, PhD in Systems Science, curriculum in Economics, Networks, and Business Analytics.
- 2020 "Introduction to sustainability and ecological economics", IMT School for Advanced Studies, Lucca, PhD in Systems Science, curriculum in Economics, Networks, and Business Analytics.
- 2019 "Advanced Topics in Network Theory: Algorithms and Applications", PhD programme in Systems Science, Curriculum in Economics, Networks and Business Analytics.
- 2018 "Advanced Topics in Network Theory: Algorithms and Applications", PhD programme in Systems Science, Curriculum in Economics, Networks and Business Analytics.
- 2017 "Introduction to complexity and its application to energy systems", Scuola di Dottorato di Ricerca in Scienze Chimiche e Farmaceutiche dell'Università di Siena
- 2011 *Introduction to game theory*, Università di Siena, Faculty of Engineering, Laurea Specialistica in Management Engineering
- 2010 *Modelling and simulation of ecological systems*, Università di Siena, Faculty of Engineering, Laurea Specialistica in Management Engineering.
- 2010 *Introduction to game theory*, Università di Siena, Faculty of Engineering, Laurea Specialistica in Management Engineering

VI.B – Supervision of PhD students

- 2020- Andrea Gini, PhD in "Data Science", *Classe di Scienze*, Scuola Normale Superiore, XXXIV cycle.
- 2018- Pietro Saggese. Title: "Arbitrage in the Bitcoin ecosystem: an investigation of the Mt. Gox exchange platform". IMT School for Advanced Studies Lucca, PhD in Systems Science, Curriculum in Economics, Networks and Business Analytics, XXXII cycle. (All. 03)
- 2017- 2020 Gevorg Yegikyan. Title: "Urban Structure and Mobility as Spatio-temporal complex Networks". Scuola Normale Superiore, Pisa. PhD in "Data Science", *Classe di Scienze*, Scuola Normale Superiore Pisa, XXXIII cycle. (All. 05)

VI.C – Invited talks and lectures

- 2021 "Infrastructural Networks", Lecture in "Master in Big Data Analytics & Social Mining" (<https://www.masterbigdata.it/>)
- 2021 "Energy communities: challenges and perspectives of a (potentially) disruptive paradigm", Virtual ECO Seminar Series, Dept. of Economics, University of Loughborough, 17-02-2021
- 2020 "Cambiamento climatico e città", VI Scuola nazionale di chimica dell'Ambiente e dei Beni Culturali, Siena, 3-6 Feb. 2020.
- 2020 "Infrastructural Networks", Lecture in "Master in Big Data Analytics & Social Mining" (<https://www.masterbigdata.it/>)
- 2020 "Jobs Perspectives in the Age of Climate Change and Sustainability" Lecture in "Master in Sustainable Development Jobs" organizzato dalla Fondazione Feltrinelli (<https://www.fondazionefeltrinelli.it/mastersdj/>)

- 2019 "The electric city as a solution to urban sustainability". Workshop "Electric Cities and the Energy Transition: challenges and opportunities" organized by the Society for Petroleum Engineers Italia and Fondazione ENI Enrico Mattei.
- 2019 "Infrastructural Networks", Lecture in "Master in Big Data Analytics & Social Mining" (<https://www.masterbigdata.it/>)
- 2018 "Impatto delle reti complesse sul mondo reale". As part of "I giovedì del dottorato di ricerca in ambiente, design e innovazione", Università degli Studi della Campania - Luigi Vanvitelli.
- 2016 "Urban metrology: Accounting energy and material flows in urban systems" Workshop "Metrology in A Complex World: From Urban And Energy Systems To Social Networks", organised by Centro di Servizi Metrologici Avanzati (CeSMA), Università degli Studi di Napoli Federico II.
- 2015 "Energy and material flows in megacities". Dept. of Economics, University of Bari
- 2014 "Cities as engines of innovation and sustainability", VIU-MOST Training program – Innovation of enterprises and green technologies in practice, Venice International University.
- 2014 "Innovation in the energy sector: challenges and strategies", VIU-MOST Training program – Innovation of enterprises and green technologies in practice, Venice International University.

Part VII – Funding information and responsibility for research activities

VII.A – EU Commission grants

Year	Title	Program	Grant value
2019	SoBigData++ (EC Grant 871042). - Principal Investigator for the IMT consortium partner; - Task 10.3 leader (Sustainable cities for citizens - All. 02)	H2020	Budget responsibility: 264.750 Euros
2021	ESFRI 2021 Roadmap. Principal investigator for the hosting institution.	ESFRI	Expected Budget (2022-2025): 140.000 Euros Total Budget (2021-2050): 175M Euros

VII.B – Responsibility for studies and research activities entrusted by public and private institutions

- 2018-2021 **Responsibility for research activities** - University of Cagliari: "Development of an integrated hydrological-energy model for the management of energy resources in the context of the regional multisectoral water system" - ENAS/RAS Convention of 13.03.2013 (DDSIN n.9737/525). Development of methods for energy efficiency and the optimization of water resources through the storage of water as long-term energy storage. Technical-economic analysis of infrastructures based on the evolution of energy markets in relation to Directive (EU) 2018/2001 on self-consumption and energy communities. (All. 07)
- 2016 **Responsibility for research activities** - Research appointment received from the University of Cagliari: Development of complex models for the analysis, planning and management of electric vehicle fleets in the electric energy system of Sardinia (Contract 28/2016, prot. 4407). Design and implementation of methods for the optimal positioning of electric vehicle fleets considering the current and future scenarios of electric systems and markets. (All. 08)
- 2012-2016 **Responsibility for research activities** at the Enel Foundation, on megacities, energy systems in developing countries and sustainable urban development. (All. 09)
- 2003 **Research activity**: Computer data processing relating to environmental modelling for the implementation of the "Sustainability analysis for the province of Grosseto" project. (All. 10)

VII.C – Research projects as member

2016-2019	OPENMAKER	Responsible for all the IMT activities and main editor of deliverable D2.4.
2016-2020	SOBIGDATA	Involved in the activities of communication and in the thematic cluster “Cities of citizens”
2018	COEGSS	Participation in the dissemination activities entrusted to IMT
2011	ADDRESS	Participation in the activities of task T3.5 (Consumer side demand response)

VIII – Memberships, editorial activities, and conference organisation

VIII.A – Memberships

2021	Member of the European Association of Environmental and Resources Economists
2020-	Member of Italian Association of Environmental and Resource Economists
2016-	Member of Accademia dei Fisiocritici , Founded in Siena, March 1693
2020-	Member of OIPE (Ossevatorio Italiano sulla Povertà Energetica)
2019-	Executive Board member of Italian Complex Systems Society https://italy.cssociety.org/index.php/executive-board/

VIII.B – Editorial Activities

1. *Topic Editor* of the Journal Sustainability (IF 3.251) <https://www.mdpi.com/journal/sustainability>
2. *Guest Editor* (with A. Rubino, A. Flamos, M. Giulietti, M. Fell, A. Morone) of the special issue “New energy downstream. Emerging business models” hosted by Energy Sources Part B: Economics, Planning and Policy (All. 16)
3. *Serves as referee for the following Journals*: Nature Energy; Applied Energy; Nature Scientific Reports; Energy Policy; Energy; Environmental Science & Technology; Energy Sources Part B; Sustainable Cities and Society; Journal of Urban Technology; Ecological Modelling, Journal of Cleaner production, Applied Network Science, Journal of Industrial Ecology, Communications Earth & Environment, Energy, (see All. 06 for a selection of achievements)

VIII.C – Organisation of conferences and events

2017	Organiser- Workshop "Complex water infrastructures and sustainability", Lucca, 12 Oct. 2017, 12-10-2017 (All. 12)
2017	Organiser - workshop "Complex energy infrastructures and sustainability", Lucca, 13 Oct. 2017, 13-10-2017 (All. 13)
2017	Chair of session – “Mobility of passengers and freight”, Biennial International Workshop Advances in Energy Studies - BIWAES 2017, Napoli 25-28 Sept. 2017 (All. 14)
2015	Organiser of the Symposium “Energy and material flows in megacities” as side event of the conference “Ecology at the interface”, Roma 21-25 Sept. 2015

Monteriggioni, 27 aprile 2022

Angelo Facchini