

Rodolfo METULINI, PHD

Personal Data:

PLACE AND DATE OF BIRTH: Cattolica (RN) - Italy | 15 May 1983
RESIDENCE: Via Enrico Noe 2 - 20131 Milano (MI) - Italy
MOBILE: +39 349 1617597
EMAIL: rodolfo.metulini@unibg.it

Short Bio:

I serve the Department of Economics at University of Bergamo as Assistant Professor (RTD-B). I did my Bachelor and my Master in Statistics and Economics (Dept. of Statistical Sciences *P. Fortunati*) at University of Bologna, and I obtained there, in 2013, a Phd in Statistical Methodology for the Scientific Research. In the past, I served University of Salerno (Assistant Professor, Jul 2019 - Jul 2022), University of Brescia (Post-Doc, Lug 2016 - Giu 2019), S.Anna Pisa (Post-Doc, Sep 2015 - Jul 2016) and IMT School for Advanced Studies (Post-Doc, Jun 2013 - Sept 2015).

My research activity focuses on:

- Parametric and semi-parametric statistical methods for origin-destination data,
- statistical modelling for high-dimensional data with spatial dependence, with special regard to variables selection,
- sports statistics and data analytics.

I have published in several international journals (ASTa Advances in Statistical Analysis, Physica A, Annals of Operations Research, Social Indicator Research, PlosOne, Econometrics, Natural Hazards and Earth System Sciences, Journal of Applied Statistics, Journal of Quantitative Analysis in Sports, Electronic Journal of Applied Statistical Analysis, Statistics & Applications, The World Economy, Advances in Water Resources, Economia Politica).

Actual commitment:

SEP 2022 - | Assistant Professor (RTD-B) in Statistica per la Ricerca Sperimentale e Tecnologica
CURRENT | (SECS-S/02) at **Department of Economics - University of Bergamo**.

Past commitments:

JUL 2019 - | Assistant Professor (RTD-A) at **Department of Economics & Statistics - University of Salerno**, Fisciano (SA).
JUL 2022

JUL 2016 - | Post-Doc at **Department of Economics & Management - University of Brescia**, Brescia. Tutors: Prof. Maurizio Carpita, Prof. Paola Zuccolotto; Involved project: DMS Stat-Lab ((<https://sites.google.com/a/unibs.it/dms-statlab/>)) BODal (<http://bodai.unibs.it/>),
JUN 2019 | BDsports (<http://bodai.unibs.it/bdsports/>)

OCT 2015 - | Post-Doc at **Institute of Economics - Scuola Superiore S.Anna**, Pisa. Tutor:
JUN 2016 | Prof. Giorgio Fagiolo; Involved project: ISIGrowth (Horizon 2020 project No 649186).

JUN 2013 - | Post-Doc at **IMT School for Advanced Studies**, Lucca. Tutor: Prof. Massimo
SEP 2015 | Riccaboni; Involved projects: Crisislab (EU FP7 & Horizon 2020); ViWaN (FIRB - RBF12BA3Y)

Education:

NOV 2009 - FEB 2013	PhD in STATISTICAL METHODOLOGY FOR THE SCIENTIFIC RESEARCH, Department of Statistics - University of Bologna , Bologna. Thesis title: "Spatial Gravity Models for the Analysis of International Trade" Supervisor: Prof. ssa Rosa BERNARDINI PAPALIA
JAN 2006 - MAR 2008	Master of Science Degree in STATISTICS AND ECONOMICS, 107/110. Department of Statistics - University of Bologna , Bologna Thesis title : "Struttura e delocalizzazione delle imprese del settore meccanico in Emilia-Romagna" Supervisor: Prof. Carlo FILIPPUCCI
OCT 2002 - JAN 2006	Bachelor Degree in STATISTICA E INFORMATICA PER L'AZIENDA, 101/110. Department of Statistics - University of Bologna , Bologna Thesis title: "La Customer Satisfaction sui clienti della Pulirapida S.r.l." Supervisor: Prof. ssa Cristina BERNINI

Works in progress:

1. Variable selection in high-dimensional autologistic models. (with F. Giordano, Univ. Salerno);
2. Zero inflated Poisson Gravity Models with Spatial Filters (with R. Patuelli, Univ. Bologna)
3. Modelling mobile phone origin-destination traffic flows (with M. Carpita, Univ. Brescia)
4. Statistical Learning and Game Theory for the evaluation of players' importance in team sports (with G. Gnecco, IMT School for Advanced Studies Lucca)

Papers in international journals:

1. Metulini, R., Gnecco, G., Biancalani, F., Riccaboni, M. (2022) **Hierarchical Clustering and Matrix Completion for the Reconstruction of World Input-Output Tables**. *AStA Advances in Statistical Analysis*. In press.
doi: 10.1007/s10182-022-00448-6
2. Metulini, R., Gnecco, G. (2022) **Measuring Players' Importance in Basketball using the Generalized Shapley Value**. *Annals of Operations Research* (Online first).
doi: <https://doi.org/10.1007/s10479-022-04653-z>
3. Facchinetti, T., Metulini, R., Zuccolotto, P. (2021). **Filtering active moments in basketball games using data from players tracking systems**. *Annals of Operations Research*. Online first.
doi: 10.1007/s10479-021-04391-8
4. Metulini, R., Carpita M. (2021). **A Spatio-Temporal Indicator for City Users based on Mobile Phone Signals and Administrative Data**. *Social Indicator Research*, 156(2), 761-781.
doi: <https://doi.org/10.1007/s11205-020-02355-2>
5. Balistrocchi, M., Metulini, R., Carpita, M., and Ranzi, R. (2020). **Dynamic maps of human exposure to floods based on mobile phone data**. *Natural Hazards and Earth System Sciences*, 20, 3485–3500.
doi: <https://doi.org/10.5194/nhess-20-3485-2020>

6. Metulini, R., Le Carre, M. (2020). **Measuring Sport Performances Under Pressure by Classification Trees with Application to Basketball Shooting.** *Journal of Applied Statistics.* 47:12, 2120-2135.
doi: <https://doi.org/10.1080/02664763.2019.1704702>
7. Metulini, R., Manisera, M., Zuccolotto, P. (2018). **Modelling the dynamic pattern of surface area in basketball and its effects on team performance.** *Journal of Quantitative Analysis in Sports.* Vol. 14, Issue 3, pp. 117-130.
doi: <https://doi.org/10.1515/jqas-2018-0041>
8. Metulini, R., Schiavo, S., Sgrignoli, P., Riccaboni, M. (2018). **The Network of Migrants and International Trade.** *Economia Politica.* Vol. 35, Issue 3, pp. 763–787.
doi: <https://doi.org/10.1007/s40888-018-0106-6>
9. Metulini, R., Patuelli, R., Griffith, D.A. (2018) **A Spatial Filtering Zero Inflated Approach to the Estimation of the Gravity Model of Trade.** *Econometrics* 6(1), 9.
doi: [10.3390/econometrics6010009](https://doi.org/10.3390/econometrics6010009)
10. Metulini, R. (2017). **Filtering procedures for sensor data in basketball.** *Statistics & Applications.* Vol. 15, Issue 2, pp. 1-18.
doi: [10.26350/999999_000007](https://doi.org/10.26350/999999_000007)
11. Metulini, R. (2017). **Spatio-Temporal Movements in Team Sports: A Visualization approach using Motion Charts.** *Electronic Journal of Applied Statistical Analysis* Vol. 10, Issue 03, pp. 810-832.
doi: [10.1285/i20705948v10n3p810](https://doi.org/10.1285/i20705948v10n3p810)
12. De Angelis, E., Metulini, R., Bove, V., Riccaboni, M. (2017) **Virtual Water Trade and Bilateral Conflicts.** *Advances in Water Resources,* Vol. 110, pp. 549-561.
doi: [10.1016/j.advwatres.2017.04.002](https://doi.org/10.1016/j.advwatres.2017.04.002)
13. Metulini, R., Riccaboni, M., Sgrignoli, P., Zhu, Z. (2017). **The Indirect Effects of FDI on Trade: A Network Perspective.** *The World Economy,* Vol. 40, Issue 10, pp. 2193–2225.
doi: [10.1111/twec.12504](https://doi.org/10.1111/twec.12504)
14. Metulini, R., Tamea, S., Laio, F., Riccaboni, M. (2016). **The Water Suitcase of Migrants: Assessing Virtual Water Fluxes Associated to Human Migration.** *PLoS ONE* 11(4): e0153982.
doi: [10.1371/journal.pone.0153982](https://doi.org/10.1371/journal.pone.0153982)
15. Sgrignoli, P., Metulini, R., Schiavo, S., Riccaboni, M. (2015). **The relation between global migration and trade networks.** *Physica A: Statistical Mechanics and its Applications,* 417, 245-260.
doi: [10.1016/j.physa.2014.09.037](https://doi.org/10.1016/j.physa.2014.09.037)

Papers in review:

1. Metulini, R., Carpita, M. **Modeling and forecasting traffic flows with mobile phone big data in flooding risk areas to support a data-driven decision making;** (first round re-submission, "Annals of Operations Research" - Springer)
2. Biancalani, F., Gnecco, G., Metulini, R., **The relationship between players' average marginal contributions and salaries: an application to NBA basketball using the generalized Shapley value;** (Submitted, "Italian Journal of Applied Statistics")

Chapters in edited books or volumes:

1. Carpita, M., Metulini, R. (2021). **Modelling the spatio-temporal dynamic of traffic flows with gravity models and mobile phone data**, ASA 2021 Statistics and Information Systems for Policy Evaluation, Edited by: Bertaccini, B.; Fabbris, L.; Petrucci, A. DOI:10.36253/978-88-5518-461-8.19
2. Metulini, R., Riccaboni, M., Serti, F. (2020). **Water-in-food, Conflicts and Refugee Movements: A Comprehensive Analysis**, in: T. Distefano (eds.), Water Resources and Economic Processes, 224-261, Routledge. ISBN: 2019978-0-367-11140-3
3. Manisera, M., Metulini, R., Zuccolotto, P. (2019). **Basketball analytics using spatial tracking data**. "New Statistical Developments in Data Science" - A. Petrucci, F. Racioppi, R. Verde (Editors), series: PROMS. ISBN: 978-3-030-21157-8
4. Patuelli, R., Linders, G.J., Metulini, R., Griffith, D.A. (2016). **The Space of Gravity: Spatial Filtering Estimation of a Gravity Model for Bilateral Trade**. Spatial Econometric Interaction Modelling, pp. 145-169. Springer. ISBN: 978-3-319-30196-9

Short papers of Conference proceedings with ISBN:

1. Metulini, R., Gnecco, G., Biancalani, F., Riccaboni, M. (2022). **A Statistical Approach for the Completion of Input-Output Tables** - SIS 22 book of short papers, eds. Antonio Balzanella, Matilde Bini, Carlo Cavicchia, Rosanna Verde. Pearson, ISBN: draft
2. Metulini, R., Carpita, M. (2022). **Forecasting Traffic Flows with Complex Seasonality using Mobile Phone Data** - IES 22, INNOVATION AND SOCIETY 5.0: STATISTICAL AND ECONOMIC METHODOLOGIES FOR QUALITY ASSESSMENT, book of short papers, eds. Rosaria Lombardo, Ida Camminatiello, Violetta Simonacci. ISBN 978-88-94593-36-5 (online)
3. Metulini, R., Giordano, F. (2021) **A screening procedure for high-dimensional autologistic models**. Book of short papers - SIS 2021. Eds. Cira Perna, Nicola Salvati, Francesco Schirripa Spagnolo (Pearson). ISBN 9788891927361,
4. Carpita, M., Metulini, R., (2020), **Dynamic crowding maps with mobile phone big data**. Data Science & Social Research 2020, in BoA: Antonucci L., Kostiuk Y. eds. (2020). Book of Abstracts, 3rd international conference on Data Science & Social Research, ISBN 978-886629-051-3
5. Metulini R., Carpita M. (2019) **The HOG-FDA Approach with Mobile Phone Data to Modeling the Dynamic of Peoples Presences in the City**. In Bini M., Amenta P., D'Ambra A., Camminatiello I. (Eds.), IES 2019 Innovation & Society - Statistical Evaluation Systems at 360: Techniques, Technologies and new Frontiers Book of Abstracts, Cuzzolin Editing.
6. Facchinetti, T., Metulini, R., Zuccolotto, P. (2019) **Detecting and classifying moments in basketball matches using sensor tracked data**. SIS 2019 - Smart Statistics for Smart Applications - Book of short papers, editors: G. Arbia, S. Peluso, A. Pini, G. Rivellini. ISBN 9788891915108
7. Metulini, R., Carpita, M. (2019) **A strategy for the matching of mobile phone signals with census data**. SIS 2019 - Smart Statistics for Smart Applications - Book of short papers, editors: Giuseppe Arbia, Stefano Peluso, Alessia Pini, Giulia Rivellini. ISBN 9788891915108

8. Manisera M., Metulini R., Sandri M., Zuccolotto P. (2019), **Basketball Spatial Performance Indicators**. Data Science & Social Research 2019, Book of Abstracts, ISBN: 9788894312096
9. Metulini R., Carpita, M. (2019), **Human Activity Spatio-Temporal Indicators using Mobile Phone Data**. Data Science & Social Research 2019, Book of Abstracts, ISBN: 9788894312096
10. Metulini R. (2018), **Modelling the dynamic pattern of surface area in basketball and its effects on team performance**. Book of abstract, COMPSTAT 2018. ISBN: 978-9963-2227-3-5
11. Metulini R., (2018), **Players Movements and Team Shooting Performance: a Data Mining approach for Basketball**. Book of short papers SIS2018, ISBN-9788891910233. Publisher: Pearson, Editors: Antonino Abbruzzo, Eugenio Brentari, Marcello Chiodi e Davide Piacentino.
12. Metulini R., Manisera M., Zuccolotto P. (2017), **Space-Time Analysis of Movements in Basketball using Sensor Data**. In *Statistics and Data Science: new challenges, new generations. Proceedings of the SIS 2017 Conference of the Italian Statistical Society*, A. Petrucci and R. Verde (Eds.) , Firenze University Press, pp. 701-706. ISBN (on line) 978-88-6453-521-0.
13. Metulini, R., Manisera, M., Zuccolotto, P. (2017), **Sensor Analytics in Basketball**. In *Proceedings of MathSport International*, C. De Francesco, L. De Giovanni, M. Ferrante, G. Fonseca, F. Lisi, S. Pontarollo (Eds.), Padova University Press, pp. 265-274. ISBN: 978-88-6938-058-7.
14. Sgrignoli, P., Metulini, R., Schiavo, S., Riccaboni, M. (2013, December). **The Relation between Global Migration and Trade Networks**. In *Signal-Image Technology & Internet-Based Systems (SITIS)*, 2013 International Conference on (pp. 553-560). IEEE. ISBN: 978-1-4799-3211-5

Book of Abstracts with ISBN or DOI:

1. Carpita, M., Metulini, R., De Luca, G., Zuccolotto, P.: **Traffic flows time series clustering in flooding risk areas using origin-destination mobile phone data**, ITISE 2022, Proceedings of Abstract, Grn Canaria, Spain, 27–30 June 2022. (eds, Olga Valenzuela, Fernando Rojas, Hector Pomares, Luis Javier Herrera, Ignacio Rojas). ISBN: 978-84-19214-24-9
2. Razdar, B., Metulini, R., Carpita, M., Vassena, G.P.M., Ranzi, R.: **Flood risk management using mobile phone data and hydrological modeling in a heavily urbanized area in Lombardy**, ICRA9, 9th International Conference on Risk Analysis, Book of Abstract, Perugia, Italy, 25–27 May 2022 (Editors: Christos Kitsos, Teresa A. Oliveira, Francesca Pierri, Marialuisa Restaino). ISBN: 978-972-674-919-6
3. Metulini, R., Carpita, M.: **A statistical approach for flood risk assessment using mobile phone traffic flows' data**, ICRA9, 9th International Conference on Risk Analysis, Book of Abstract, Perugia, Italy, 25–27 May 2022 (Editors: Christos Kitsos, Teresa A. Oliveira, Francesca Pierri, Marialuisa Restaino). ISBN: 978-972-674-919-6
4. Razdar, B., Metulini, R., Carpita, M., and Ranzi, R.: **Dynamic flood hazard maps based on traffic flow forecasts using mobile phone data**, EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-3200, <https://doi.org/10.5194/egusphere-egu22-3200>, 2022
5. Metulini, R., Gnecco, G., **Players' importance in basketball and the generalized Shapley value**. 14th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2021), December 18-20 (London, UK). ISBN: 978-9925-7812-5-6
6. Metulini, R., Gnecco, G., **Players' Average Marginal Contribution in Basketball and Generalized Shapley Value**. 31st European conference on Operational Research (EURO 2021) July 11-14 (Athens, Greece). ISBN: 78-618-85079-1-3
7. Carpita, M., Metulini, R., **Dynamic crowding maps with mobile phone big data**. Antonucci L., Kostiuk Y. eds. (2020). Book of Abstracts, Third international conference on Data Science & Social Research, Bari, 10-11 December 2020. ISBN 978-886629-051-3

8. Metulini, R., Carpita, M., **Human activity spatio-temporal indicators using mobile phone data**. Second international conference on data science and social research, Paolo Mariani (eds.) 2019. ISBN: 9788894312096
9. Manisera, M., Metulini, R., Sandri, M., Zuccolotto, P., **Basketball spatial performance indicators**. Second international conference on data science and social research, Paolo Mariani (eds.) 2019. ISBN: 9788894312096
10. Metulini, R., **Modelling the dynamic pattern of surface area in basketball and its effects on team performance**. 23rd International Conference on Computational Statistics (COMPSTAT 2018). ISBN: 978-9963-2227-3-5.

Teaching:

- A.A.
2021/22
- Statistica**, hours: 60 (10 CFU) - Dipartimento di Scienze Aziendali (DISA-MIS) - Università di Salerno
- Quantitative Methods for Big Data Analysis - Regression models and panel data**, hours: 8 - Dipartimento di Scienze Aziendali (DISA-MIS) - Università di Salerno - Short course for PhD XXVII cycle of track *Big Data Management (BIDAMA)*
- A.A.
2020/21
- Statistica**, hours: 60 (10 CFU) - Dipartimento di Scienze Aziendali (DISA-MIS) - Università di Salerno
- Regression models and panel data**, hours: 8 - Dipartimento di Scienze Aziendali (DISA-MIS) - Università di Salerno - Short course for PhD XXVI cycle of track *Big Data Management (BIDAMA)*
- A.A.
2019/20
- Strumenti Quantitativi per l'Azienda**, hours: 30 (6 CFU) - Dipartimento di Scienze Aziendali (DISA-MIS) - Università di Salerno
- Analisi Quantitativa del Rischio Finanziario**, hours: 30 (6 CFU) - Dipartimento di Scienze Economiche e Statistiche (DISES) - Università di Salerno
- A.A.
2018/19
- Statistica per le Decisioni Aziendali** (teacher assistant), hours: 40 - University of Brescia - Department of Economics and Management.
Chair Professor: Prof. Eugenio Brentari.
- A.A.
2017/2018
- Practicals on Econometric Methods for Spatial and Social Networks**, with R - hours: 10 (Prof. **Ingmar Prucha**), Spatial Econometrics Advanced Institute (SEAI, Director: Prof. **Giuseppe Arbia**) - **In english**
- Statistica per le Decisioni Aziendali** (teacher assistant), hours: 40 - University of Brescia - Department of Economics and Management.
Chair Professor: Prof. Eugenio Brentari.
- A.A.
2016/2017
- Practicals on Econometric Methods for Spatial and Social Networks**, with R - hours: 10 (Prof. **Ingmar Prucha**), Spatial Econometrics Advanced Institute (SEAI, Director: Prof. **Giuseppe Arbia**) - **In english**
- Statistica per le Decisioni Aziendali** (teacher assistant), hours: 40 - University of Brescia - Department of Economics and Management.
Chair Professor: Prof. Eugenio Brentari.
- A.A.
2015/2016
- Practicals on Spatial Econometrics**, with R , hours: 10 (Prof. **Anil Bera**) - Spatial Econometrics Advanced Institute (SEAI, Director: Prof. **Giuseppe Arbia**) - **In english**
- Empirics of Trade** (lecturer)- to bachelor students, jointly with Giorgio Fagiolo (S.Anna) and Gianluca Santoni (CEPII). , hours: 4, Institute of Economics - Scuola Superiore S.Anna (Prof. Giorgio Fagiolo)
- A.A.
2014/2015
- Practicals on Econometric Methods for Spatial and Social Networks**, with R - hours: 10 (Prof. **Ingmar Prucha**), Spatial Econometrics Advanced Institute (SEAI, Director: Prof. **Giuseppe Arbia**) - **In english**
- International Economics and Business** (lecturer) hours: 2, XXX IMT doctoral cycle - (tracks: Computer Science, Economics and Management. IMT Institute for Advanced Studies Lucca. (Prof. Massimo Riccaboni) - **In english**
- Statistics Lab** for the XXX, IMT doctoral cycle. (hours:10, tracks: Computer Science, Economics and Management). IMT Institute for Advanced Studies Lucca - **In english**

A.A. 2013/2014	<p>Practicals on Spatial Econometrics, with R , hours: 20 (Prof. Anil Bera and Ingmar Prucha) - Spatial Econometrics Advanced Institute (SEAI, Director: Prof. Giuseppe Arbia) - In english</p> <p>Statistics Lab for the XXIX, IMT doctoral cycle. (hours:10, tracks: Computer Science, Economics and Management). IMT Institute for Advanced Studies Lucca. - In english</p>
A.A. 2012/2013	<p>Practicals on Spatial Econometrics, with R , hours: 20 (Prof. Anil Bera and Ingmar Prucha) - Spatial Econometrics Advanced Institute (SEAI, Director: Prof. Giuseppe Arbia) - In english</p> <p>Statistica Economica (teacher assistant), hours: 30 - University of Bologna - Department of Statistical Sciences - Chair Professor: (Prof. Carlo Filippucci.)</p>
A.A. 2010/2011	<p>Statistica Economica (teacher assistant), hours: 30 - University of Bologna - Department of Statistics - Chair Professor: (Prof. Carlo Filippucci.)</p> <p>Metodi Quantitativi per lo Sviluppo Economico (teacher assistant), hours: 30 - University of Bologna - Department of Statistics - Chair Professor: (Prof. Carlo Filippucci.)</p>
A.A. 2009/2010	<p>Statistica Economica (teacher assistant), hours: 30 - University of Bologna - Department of Statistics - Chair Professor: (Prof. Carlo Filippucci.)</p> <p>Metodi Quantitativi per lo Sviluppo Economico (teacher assistant), hours: 30 - University of Bologna - Department of Statistics. Chair Professor: (Prof. Carlo Filippucci.)</p>

Conferences:

JUNE 2022	ITISE 2022, 27th-30th June, Gran Canaria, Spain. Presented Paper: "Traffic flows time series clustering in flooding risk areas using origin-destination mobile phone data" (with M. Carpita, G. De Luca, P. Zuccolotto)
JUNE 2022	SIS 2022, Università degli studi della Campania L. Vanvitelli, Caserta, 22-24 June 2022. Presented Paper: "A Statistical Approach for the Completion of Input-Output Tables" (with G. Gnecco, F. Biancalani, M. Riccaboni)
JUNE 2022	IDSC 2022, Catholic University, Milano, 15-17 June 2022. Presented Paper: "Forecasting flood risk exposure using mobile phone traffic flows' data" (with M. Carpita)
MAY 2022	ICRA9, Perugia, 25-27 May 2022. Presented Paper: "A statistical approach for flood risk assessment using mobile phone traffic flows' data" (with M. Carpita) (Invited)
JAN 2022	IES 2022, Capua, 27-28 January 2022. Presented Paper: "Forecasting Traffic Flows with Complex Seasonality using Mobile Phone Data" (with M. Carpita)
DEC 2021	CMStatistics 2021 hybrid conference, London, 18-20 December 2021. Presented Paper: "Players' importance in basketball and the generalized Shapley value" (with G. Gnecco) (Invited)

- SEP 2021 | **ODS 2021 hybrid conference, Roma**, 14-17 September 2021. Presented Paper: "Modelling traffic flows with gravity models and mobile phone large data" (with M. Carpita) (**Invited**)
- SEP 2021 | **ASA 2021 on site conference, Firenze**, 6-8 September 2021. Presented Paper: "Modelling the spatio-temporal dynamic of traffic flows with gravity models and mobile phone data" (with M. Carpita)
- JUL 2021 | **EURO 2021 Hybrid conference, Athens**, 11-14 July 2021. Presented Paper: "Players' Average Marginal Contribution in Basketball and Generalized Shapley Value" (with G. Gnecco) (**Invited**)
- JUN 2021 | **SIS 2021**, 21-25 June 2021. Presented Paper: "A screening procedure for high-dimensional autologistic models" (with F. Giordano)
- DEC 2020 | **Third international conference on Data Science & Social Research (DSSR) 2020 fully virtual conference**, 10-11 December 2020. Presented Paper: "Dynamic crowding maps with mobile phone data" (with M. Carpita)
- SEP 2020 | **Mathematical and Statistical Methods for Actuarial Sciences and Finance (eMAF) 2020 remote conference**, 18-22-25 September 2020. Presented Paper: "Variable selection in high-dimensional autologistic models for failure prediction"
- JUL 2019 | **IES 2019 - STATISTICAL EVALUATION SYSTEMS AT 360°: TECHNIQUES, TECHNOLOGIES AND NEW FRONTIERS**, European University of Rome, Roma, Italy 4-5 July 2019. Presented Papers: "The HOG-FDA Approach with Mobile Phone Data to Modeling the Dynamic of People's Presences in the City" (with M. Carpita) (**Invited**)
- JUN 2019 | **SIS 2019 - Smart Statistics for Smart Applications**, Catholic University of the Sacred Heart, Milano, Italy 18-21 June 2019. Presented Papers: "Detecting and classifying moments in basketball matches using sensor tracked data" (with T. Facchinetti, P. Zuccolotto) (**Invited**)
"A strategy for the matching of mobile phone signals with census data" (with M. Carpita) (**Invited**)
- FEB 2019 | **Second international conference on data science and social research**, 4 February 2019 - University of Milano-Bicocca; 5 February 2019 - IULM University. Presented Papers: "Basketball Spatial Performance Indicators" (with M. Manisera, P. Zuccolotto, M. Sandri)
"Human Activity Spatio-Temporal Indicators using Mobile Phone Data" (With M. Carpita)
- OCT 2018 | **Workshop High Dimensional Small Data**, European Center for Living Technologies (ECLT), Venice, Italy, 19-20 October 2018. Presented Poster with speed presentation (5 minutes): "On Clustering Daily Mobile Phone Density Profiles"
- AUG 2018 | **23rd International Conference on Computational Statistics (COMPSTAT, 2018)**, Iasi, Romania, 28-31 August 2018. Presented paper: "Modelling the dynamic pattern of surface area in basketball and its effects on team performance" (**Invited**)
- JUN 2018 | **SIS 2018 Conference of the Italian Statistical Society** (University of Palermo, 20-22 June 2018). Presented paper: "Players Movements and Team Shooting Performance: a Data Mining approach for Basketball" (**Invited**)
- FEB 2018 | **Workshop: Stochastic Optimization and Data Analytics for Computational Management**. Bergamo (Italy). Attended only.
- NOV 2017 | **Workshop: Big Data Analytics in Sports**. Brescia (Italy). Attended only.
- JUN 2017 | **SIS2017**. Florence (Italy). Presented paper: "Space-Time Analysis of Movements in Basketbal using Sensor Data" (with M. Manisera, P. Zuccolotto)

JUN 2017	MathSport International. Padua (Italy). Presented paper: "Sensor Analytics in Basketball" (with M.Manisera, P. Zuccolotto)
JUN 2016	Spatial Econometric Assoiation (SEA) 2016. Roma (Italy). Presented paper: "A Spatial Filtering Zero - Inflated approach to the Estimation of the Gravity Model of Trade" (with R.Patuelli, D.A. Griffith)
MAY 2016	Primo Simposio "Acqua Risorsa Globale. Torino (Italy). Attended only.
SEP 2015	European trade study group (ETSG) 2015. Paris (France). Presented paper: "A Spatial Filtering Zero Inflated approach to the Estimation of the Gravity Model of Trade" (with R.Patuelli, D.A. Griffith)
SEP 2014	European Conference on Complex Systems (ECCS) 2014. Lucca (Italy). Presented papers: (1) "FDI and Trade: A Comparative network analysis approach" (with P.Sgrignoli, Z.Zhu and M. Riccaboni) (2) "The Virtual Water Suitcase of Migrants (3 minutes IGNITE talk, with S.Tamea, F.Laio, M.Riccaboni)"
SEP 2014	European trade study group (ETSG) 2014. Munich (Germany). Presented paper: "The Migration Network effect on International Trade" (with P.Sgrignoli, S.Schiavo, M.Riccaboni)
JUL 2014	Italian trade study group (ITSG) 2014. Cagliari (Italy). Presented paper: "The Migration Network effect on International Trade" (with P.Sgrignoli, S.Schiavo, M.Riccaboni)
AUG 2013	Regional Integration: Europe, the Mediterranean and the World Economy, ERSA. Palermo (Italy). Presented papers: (1) "Measuring spatial externalities in gravity models for international trade: a panel analysis among OECD countries" (2) "A structural analysis on Gravity of Trade regarding the possibility to remove distance from the model"

Organized sessions at International Conferences

2022: 9th International Conference on Risk Analysis (ICRA9), Perugia, 25-27 May, 2022. Title: "Statistical and Data Science Developments for Risk Assessment in Urban Areas" (organizers: Rodolfo Metulini and Maurizio Carpita).

Editorial activity

2022: Guest Editor of the Special Issue "Statistics for Performance and Match Analyses in Sports" in the international journal "Statistica Applicata - Italian Journal of Applied Statistics" (indexed in Scopus).

Reviewer for international journals:

- Papers in Regional Science (Wiley);
- PLOS One (PLOS);
- Advances in Complex Systems (World Scientific);
- Healt Economics (Wiley);
- Water Resources Research (Wiley);

- Water (MPDI);
- Sustainability (MPDI);
- Journal of European Real Estate Research (Emerland Insight) - **2 times**;
- Applied Network Science (Springer);
- Empirical Economics (Springer);
- Electronic Journal of Applied Statistical Analysis (ESE);
- International Journal of Geographical Information Science (Taylor & Francis);
- J (MDPI);
- Journal of Quantitative Analysis in Sports (De Gruyter) - **2 times**;
- Science of the Total Environment - STOTEN (Elsevier);
- Economics Bulletin;
- Journal of Sports Analytics (IOS Press);
- IMA Journal of Management Mathematics (Oxford University Press);
- Journal of Sports Sciences (Taylor & Francis);
- Journal of the Korean Statistical Society (Springer);
- Journal of Risk and Financial Management (MDPI);
- Annals of Operations Research (Springer) - **4 times**;
- Geographical Analysis (Wiley);
- International Journal of Disaster Risk Reduction (Elsevier);
- Development Studies Research (Taylor & Francis);
- Scienze Regionali (Il Mulino).

Reviewer of conference proceedings:

- LOD 2022 (8th International Online & Onsite Conference on Machine Learning, Optimization, and Data Science)

Past involved projects:

- Big & Open Data Innovation Laboratory (BODaI-Lab), project nr. 03-2016, granted by Fondazione Cariplo and Regione Lombardia <https://bodai.unibs.it>
- ISIGrowth (Horizon 2020 project No 649186) <http://www.isigrowth.eu/>
- Crisislab (EU FP7 & Horizon 2020) <http://www.crisislab.it/>
- ViWaN (FIRB - RBFR12BA3Y) <https://watertofood.org/>

Member of:

- Societa' Italiana di Statistica (SIS, 2017 - ongoing)
- Spatial Econometric Association (SEA, 2015 - 2018)

Scientific committees:

- 2nd International Conference on Applied Economics and Finance. 5-6 December, 2016 - Girne American University, Kyrenia, North Cyprus.
- International Conference on Advanced Water Technologies and Energy Management. 2-3 April 2018 - Cambridge, United Kingdom.

External referee for PhD Thesis:

- "Essays on the Growth and Productivity of Italian Firms throughout the Crisis", Dr. Francesco Biancalani, IMT School for Advanced Studies Lucca (Supervisor: Prof. Massimo Riccaboni)
- "slr-kit: a semi-supervised machine learning framework for systematic literature reviews", Dr. Davide Giuffrida, PhD school in Electronics, Computer Science and Electrical Engineering of the University of Pavia (Supervisor: Prof. Tullio Facchinetti)

Master thesis (as supervisor):

1. Mariagerarda Di Martino, "L'impatto del COVID-19 sulle PMI italiane" (A.A. 2020/21), Department of Economics and Statistics (DISES), University of Salerno.
2. Angelo Turco, "Livello di istruzione e brain-drain: un'analisi esplorativa tramite modello gravitazionale" (A.A. 2020/21), Dipartimento di Scienze Aziendali - Management e Innovation Systems (DISA-MIS), University of Salerno.
3. Valerio Panzariello, "La crisi dei mutui sub-prime: cause e risvolti nell'economia reale" (A.A. 2020/21), Dipartimento di Scienze Aziendali - Management e Innovation Systems (DISA-MIS), University of Salerno.
4. Dario Cerra, "Una analisi statistica sulle dinamiche economiche del gioco del calcio durante la pandemia da COVID-19" (A.A. 2020/21), Dipartimento di Scienze Aziendali - Management e Innovation Systems (DISA-MIS), University of Salerno.
5. Donato Bovi, "La digitalizzazione delle PMI italiane: un'analisi statistica esplorativa" (A.A. 2020/21), Dipartimento di Scienze Aziendali - Management e Innovation Systems (DISA-MIS), University of Salerno.
6. Marco Crescenzo, "Università e produttività d'impresa: Un'analisi statistica su dati georeferenziati per la valutazione dello spillover geografico" (A.A. 2019/20), Department of Economics and Statistics (DISES), University of Salerno.

Terza Missione:

- Progetto di Terza Missione "Salerno Letteratura Festival" Valutazione dell'impatto del Festival sugli indicatori socio-economici del territorio (coordinatore: Prof. Luigi Aldieri)

Presented seminars:

- MAR 2017 | **Sensor Analytics in basketball**
University of Brescia - Brescia (Italy). Chair: Prof. ssa Paola Zuccolotto
- OCT 2016 | **Accounting for Space using Spatial Econometrics and Network techniques**
University of Brescia - Brescia (Italy). Chair: Prof. ssa Rossella Levaggi
- JUL 2013 | **Spatial Econometrics and Social Networks**
IMT Institute for Advanced Studies - Lucca (Italy). Chair: Prof. Massimo Riccaboni
- JAN 2013 | **Spatial Gravity Models for International Trade**
Georg August University - Goettingen (Germany) . Chair: Dot. ssa Maria C. Lo Bue
- JUL 2012 | **The Spatial Gravity Model of Trade: an application among the OECD countries**
ERSA summer school - Umea (Sweden). Chair: Prof. Johan Lundberg
- JUL 2009 | **La Futility Analysis**
Medidata S.r.l. - Modena (Italy). Chair: Dot. ssa Lucia Simoni

Attended courses & summer schools:

- JAN 2019 | **Model Based Clustering**
Univesity Carlo Cattaneo LIUC, Castellanza, Varese (Italy)
Instructor: Prof. Cristina Tortora
- NOV 2017 | **Introduction to Functional Data Analysis**
Univesity of Bergamo - Bergamo (Italy)
Instructor: Prof. Laura Sangalli
- SEP 2012 | **Topics in Microeconometrics with applications to Energy Environmental economics**
Centro Interuniversitario di Econometria (CidE) - Palermo (Italy)
Director: Prof. Matteo Manera
- JUL 2012 | **Fiscal federalism, mobility and policy evaluation**
European Regional Science Associatio (ERSA) Summer school - Umea (Sweden)
Director: Prof. Johan Lundberg
- MAY 2011 | **Advanced course in Spatial Econometrics**
Spatial Econometrics Advanced Institute (SEAI) - Roma (Italy)
Director: Prof. Giuseppe Arbia

Past commitments outside of the Academia:

APR 2009 - | Biostatistician - Quality System Assurance assistant at MEDIDATA S.R.L., CLINICAL
DEC 2009 | RESEARCH OPERATOR (CRO), Modena
Producing reports for clinical and observational trials. I participated in the project of an information systems

JUL 2008 - | Junior Economist at PROMETEIA S.P.A., Bologna
JAN 2009 |
Forecasting of financial variables to a regional disaggregated level with STATA and DEMETRA.

MAR 2008 - | Analyst at RES.COOP S.R.L., Bologna
JUN 2008 |
Analyzing the structure of the mechanical sector firms in relation to their outsourcing production phase.

I consent to the publication of my CV in compliance with legal requirements for transparency (articoli 46 e 47 del D.P.R. 445/2000)

Rodolfo Metulini,
02/09/2022