

CURRICULUM VITAE et STUDIORUM

Laura Maria Sangalli

Born on 12 January 1979 in Pavia, Italy. Italian citizen. Married, two children (born in 2014 and 2018).

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POSITIONS

2023/10 - present Full Professor in Statistics, MOX Laboratory for Modeling and Scientific Computing, Dipartimento di Matematica, Politecnico di Milano, Italy.

2015/03 - present Associate Professor in Statistics, MOX, Dipartimento di Matematica, Politecnico di Milano.

National Full Professor Qualification in Statistics 2016

Abilitazione Scientifica Nazionale 2016 - Primo Quadrimestre, I fascia, settore 13/D1 - Statistica.

2014/06 - 2015/03 Associate Professor tenure track in Statistics, MOX, Dipartimento di Matematica, Politecnico di Milano.

2010/06 - 2014/06 Assistant Professor in Statistics, MOX, Dipartimento di Matematica, Politecnico di Milano.

National Associate Professor Qualification in Statistics 2012

Abilitazione Scientifica Nazionale 2012, II fascia, settore 13/D1 - Statistica.

2006/06 - 2010/06 Postdoc, MOX, Dipartimento di Matematica, Politecnico di Milano.

2006/03 - 2006/05 Postdoc, Department of Mathematics and Statistics, Lancaster University, UK.

EDUCATION

2002/11 - 2006/02 PhD in Mathematics and Statistics, Dipartimento di Matematica, Università degli Studi di Pavia, Italy. Thesis: "Random probability measures and their applications to Bayesian statistics". Supervisor: Prof. Eugenio Regazzini.

2005/03 - 2005/10 *MARIE-CURIE* Programme, 6th Framework Program European Union; Department of Mathematics and Statistics, Lancaster University. Research project: "Computer intensive methods in applied statistical modelling". Supervisor: Prof. Gareth O. Roberts.

1998/09 - 2002/07 Laurea cum laude (Master degree, first-class honours) in Economics, Università degli Studi di Pavia. Thesis: "Analisi bayesiana di modelli mistura". Supervisor: Prof. Guido Consonni.

CAREER BREAKS

2019 - 2021 Long-term illness (1.5 years).

2014 - 2018 Maternity and parental leaves (more than 14 months).

EDITORIAL ACTIVITY

- 2024 - 2025** *Co-Editor (Methods)* Statistical Methods & Applications, Journal of the Italian Statistical Society
- 2016 - 2023** *Co-Editor in Chief* of Statistics and Probability Letters.
- 2021 - present** Associate Editor of Bernoulli.
- 2015 - present** Associate Editor of the International Journal of Biostatistics.
- 2015 - present** Associate Editor of Stat.
- 2018** Editor of the Special Issue of Statistics and Probability Letters on “The role of Statistics in the era of big data”, Vol. 136, pp. 1–170.
- 2017** Guest Editor of the Special Section of Statistics and Econometrics on “Functional data analysis”, Vol. 1, pp. 99–200.
- 2014** Guest Editor of the Special Section of the Electronic Journal of Statistics on “Statistics of Time Warpings and Phase Variations”, Vol. 8, No. 2, pp. 1697–1906.

COMMISSION OF TRUST

- 2023** Panel Member for ERC STARTING GRANTS, panel PE1 (Mathematics).
- 2021** Panel Member for ERC STARTING GRANTS, panel PE1 (Mathematics).
- 2019** Invited to join the Panel of ERC STARTING GRANTS, panel PE1 (Mathematics) of future calls.
- 2023** Invited to act as Panel Member for individual grants by the Portuguese Fundação para a Ciência e a Tecnologia (Portuguese public funding agency for R&D). Panel: Mathematics and Computer and Information Sciences. I declined due to conflicting commitments.
- 2022** Invited to act as Panel Member for individual grants by the Portuguese Fundação para a Ciência e a Tecnologia (Portuguese public funding agency for R&D). Panel: Mathematics and Computer and Information Sciences. I declined due to conflicting commitments.
- 2021** Invited to act as Panel Member for individual grants by the Portuguese Fundação para a Ciência e a Tecnologia (Portuguese public funding agency for R&D). Panel: Mathematics and Computer and Information Sciences. I declined due to a career break.
- 2012** Panel Member for FIRB Futuro in Ricerca 2012 starting grants, MIUR Ministero dell’Istruzione dell’Università e della Ricerca; Panel: Physical Sciences and Engineering (PE1 Mathematics, PE6 Computer science and informatics, PE7 Systems and communication engineering).
- 2017 - present** External reviewer for tenured associate professor positions in the U.S.A..
- 2016 - present** Evaluator for the Academy of Finland for the field of mathematical statistics.

RESEARCH GRANTS AND AWARDS

- 2023 - 2025** Coordinator of the Research Unit of Politecnico di Milano for the PRIN project: "Complex Environmental Data and Modeling (CoEnv)", funded by MUR Ministero dell’Università e della Ricerca, and by European Commission, NextGenerationEU programma.
Funding of the Research Unit: 66 510 euro; total with co-funding of Research Unit: 90 892 euro.
- 2010/12 - 2014/07** Principal Investigator of the *STARTING GRANT FIRB Futuro in Ricerca*, funded by MIUR Ministero dell’Istruzione dell’Università e della Ricerca, Research project: "Advanced statistical and numerical methods for the analysis of high dimensional functional data in life sciences and engineering".
One in 105 projects selected out of 3792 proposals across all fields of sciences and humanities.
Success rate 2.7%.
Funding: 264 900 euro; total with co-funding: 327 000 euro.

2022/07 - 2022/12 Principal Investigator of the research grant "femR: finite element method for solving PDEs in R", funded on the basis of competitive selection by the R Consortium and Linux Foundation. Funding: 20 000 dollars.

2016/11 - 2020/11 Member of the Proponent Team of the ICT COST Action "Vector Boson Scattering Coordination and Action Network", EU Framework Programme Horizon 2020. EU funding: about 450 000 euro.

2015/03 - 2019/03 Member of the Proponent Team and Management Committee Substitute of the ICT COST Action CRoNoS: Computationally intensive methods for the Robust analysis of Non-Standard data, EU Framework Programme Horizon 2020. EU funding: about 680 000 euro.

2019-2020 The paper Sangalli et al., Spatial spline regression models, *Journal of the Royal Statistical Society Ser. B*, 2013, 75, 681-703, is an *highly cited paper* in the field of Mathematics, according to *Web of Science*: it received enough citations to place it in the *top 1% of the academic field of Mathematics* based on a highly cited threshold for the field and publication year. This paper has also been selected among all those published by the *Journal of the Royal Statistical Society Ser. B* in 2013, and I have been invited to present it at the Royal Statistical Society International Conference (2013, Newcastle, UK) in the invited session organized by the Journal.

2010/06 - 2013/06 Research program Dote Ricercatore, Politecnico di Milano - Regione Lombardia. Research project: "Functional data analysis for life sciences". This research program funded 3 years of my assistant professorship (about 150 000 euro).

VISITING (*long visits funded by host institutions*)

2011/01 - 2011/02 SAMSI Statistical and Applied Mathematical Sciences Institute, Research Triangle Park, North Carolina, USA. Funded by SAMSI. One month. Invited by Steve Marron.

2010/04 - 2010/07 Department of Mathematics and Statistics, McGill University, Montreal, and School of Mathematics and Statistics, Carleton University, Ottawa, Canada. Funded by McGill University. Four months. Invited by James Ramsay.

2009/01 CRiSM Center for Research in Statistical Methodology, Department of Statistics, University of Warwick, UK. Funded by the CRiSM. Three weeks. Invited by Gareth Roberts.

2007/09 CRiSM. Funded by the CRiSM. Three weeks. Invited by Gareth Roberts.

2005/03 - 2005/12 Department of Mathematics and Statistics, Lancaster University. Ten months.

INSTITUTIONAL RESPONSIBILITIES (SELECTED)

2017 - present Member of the advisory board of the PhD program in Mathematical Models and Methods in Engineering, Politecnico di Milano.

2018 - present Member of several committees for the selection of Associate Professor tenure track positions in Italian Universities (2018: Sapienza Università di Roma; 2021: Politecnico di Milano; 2022: Univeristà di Roma Tor Vergata).

2010 - present Member of several committees for the selection of Post-Doctoral Researcher positions in Statistics (Department of Mathematics, Politecnico di Milano).

OTHER SCIENTIFIC ACTIVITIES (SELECTED)

2022 - 2024 Elected vice-President of GRASPA-SIS, the Research Section of the Italian Statistical Society for Statistical Applications to Environmental Problems.

2016 - 2020 Elected member of the European Regional Committee of the Bernoulli Society.

2020 - 2021 Elected member of the Scientific Board of GRASPA-SIS.

2015 - 2019 Management Committee Substitute of the ICT COST Action “CRoNoS: Computationally-intensive methods for the robust analysis of non-standard data”, EU Framework Programme Horizon 2020; Coordinator: Prof. E. Kontoghiorghes.

2013 - 2020 Chair of the Specialized Research Team “CODA - Complex data structures and Object Data Analysis”, ERCIM Working Group on Computational and Methodological Statistics, the European Research Consortium for Informatics and Mathematics.

CONFERENCE ORGANIZATION

2025 Member of the *Scientific Committee* of IWSM 2025, International Workshop on Statistical Modeling, Limerick, Ireland.

2025 Member of the *Scientific Committee* of IWFOS 2025, 6th International Workshop on Functional and Operatorial Statistics, IWFOS 2025, Novara, Italy.

2023 Member of the *Scientific Committee* of GRASPA 2023, Biannual Meeting of the Research Group for Statistical Application to Environmental Problems, and Regional Meeting of the International Environmetrics Society TIES, Palermo, Italy.

2022 Member of the *Program Committee* of IFCS 2022, the Conference of the International Federation of Classification Societies, Porto, Portugal.

2022 Organizer of the Symposium "Environment and sustainability: new challenges and perspectives for Statistics", Milano.

2021 Member of the *Scientific Committee* of TIES 2021, Conference of the International Environmetrics Society, London, UK.

2021 Member of the *Scientific Committee* of IWSM 2021, the International Workshop on Statistical Modelling, Bilbao, Spain.

2021 Member of the *Scientific Committee* of GRASPA 2021, Biannual Meeting of the Research Group for Statistical Application to Environmental Problems, and Regional Meeting of the International Environmetrics Society TIES, Roma, Italy.

2019 Member of the *Scientific Committee* of GRASPA 2019, Biannual Meeting of the Research Group for Statistical Application to Environmental Problems, and Regional Meeting of the International Environmetrics Society TIES, Pescara, Italy.

2018 Member of the *Scientific Committee* of the 23rd International Conference in Computational Statistics, COMPSTAT 2018, Iasi, Romania.

2017 Member of the *Scientific Committee* of the European Meeting of Statisticians 2017, 31st edition, Helsinki, Finland. The committee is composed by only 6 international researchers.

2017 *Organizer* (with Jiguo Cao, Giles Hooker, James Ramsay and Fang Yao) of the workshop “Distributed Data for Dynamics and Manifolds”; hosted and funded by Banth International Research Station, Canada and Casa Matematica Oaxaca, Mexico.

2017 Member of the *Scientific Committee* of the conference of The International Environmetrics Society, TIES 2017, Bergamo, Italy.

2017 Member of the *Scientific Committee* of the Meeting of the Italian Statistical Society 2017, Florence, Italy.

2016 Member of the *Scientific Committee* of “CMStatistics2016, 9th International Conference of the ERCIM working group on Computational and Methodological Statistics”; Seville, Spain.

2014 Member of the *Scientific Committee* of “ERCIM2014, 7th International Conference of the ERCIM working group on Computing and Statistics”; Pisa, Italy. 1300 participants.

- 2014** *Organizer* of “FIRB SNAPLE closing workshop”; Politecnico di Milano.
- 2014** Member of the *Organizing Committee* of “IWFOSS2014, 3rd International Workshop on Functional and Operatorial Statistics”; Università del Piemonte Orientale, Novara, Italy.
- 2013** Member of the *Organizing Committee* of “S.Co.2013, Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction”; Politecnico di Milano.
- 2013** Member of the *Scientific and Organizing Committees* of the Competition and BarCamp on “Technology foresight and statistics for the future”; Politecnico di Milano.
- 2012** *Organizer* (with Steve Marron, James Ramsay and Anuj Srivastava) of the workshop “Statistics of Time Warpings and Phase Variations”; MBI Mathematical Biosciences Institute, The Ohio State University, OH, USA. Workshop funded by MBI.
- 2011** *Organizer* of “SNAPLE kickoff meeting”; First one-day workshop FIRB Futuro in Ricerca research project SNAPLE, Politecnico di Milano.
- 2009** Member of the *Organizing Committee* of “S.Co.2009, 6th Conference on Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction”; Politecnico di Milano.
- 2009 - present** Organizer of several Mini-Symposia and Invited Sessions in various national and international conferences (CMStatistics 2018, CMStatistics 2015, ERCIM 2013, SIMAI 2012, SIS 2012, SIAM UQ 2012).

PLENARY AND KEYNOTE LECTURES

I received several invitations to give Plenary and Keynote Lectures (40 minutes or longer) in large international conferences and workshops, where my participation has been funded by organizers.

- 2023** Sixth Spatial Statistics conference, Boulder, USA.
This is the main conference in spatial data analysis.
- 2023** 54th Journées de Statistique de la Société Française de Statistique, Bruxelles, Belgium.
This is the main conference in Statistics in francophone countries.
- 2023** Stochastic Geometry Days 2023, Dijon, France.
- 2022** Conference on Statistical methods and models for complex data, Padova, Italy.
My lecture was followed by the speeches of two discussants.
- 2022** Workshop on Multivariate Analysis of Complex Data, Bruxelles, Belgium.
- 2019** Seventh Stu Hunter Research Conference, 2019, Varese, Italy.
My lecture was followed by speeches of two discussants and an additional 1 hour floor-discussion.
- 2017** 32nd International Workshop on Statistical Modelling, IWSM 2017, Groningen, Netherlands.
- 2016** 37th Conference on Applied Statistics in Ireland, CASI 2016, Limerick, Ireland.
- 2012** Barcelona BioMed Conference 2012, Spain.
- 2012** Workshop on High dimensional and dependent functional data, 2012, Bristol, UK.
- I also received invitations to give the following Keynote Plenary lectures, that I had to decline:
- 2023** 32th International Statistics Symposium, 2023, Bogotá, Colombia.
This is the largest conference of Statistics in South America.
- 2023** International workshop on Emerging New Topics in Functional Data Analysis, Singapore.
- 2023** Workshop on Functional Data Analysis and Nonparametric Statistics, Madrid, Spain.

- 2019** 21st European Young Statisticians Meeting, EYSM 2019, Belgrade, Serbia.
This is the largest conference of young statisticians in Europe.
- 2019** Geometric and Topological Approaches to Data Analysis, Cambridge.
- 2018** Workshop on Advances in Functional Data Analysis; Rennes, France.
- 2017** 4th International Workshop on Functional and Operatorial Statistics, IWFOs 2017, Coruña, Spain.
This is the largest conference on functional data analysis.
- 2018** International workshop on Functional Data Analysis, 2018, Iasi, Romania.
- 2016** International workshop on Functional Data Analysis, 2016, Oviedo, Spain.

OTHER INVITED TALKS (SELECTED)

I received more than 200 personal invitations to give seminars at international meetings, mainly related to my expertise in functional data analysis. In several cases, my travel and subsistence have been funded by the organizers. I only list a selection of those I was able to accept. For *Plenary and Keynote Lectures*, see the dedicated section above.

- 2023** CMStatistics, Berlin, Germany.
- 2022** IMS International Conference on Statistics and Data Science, Florence, Italy.
- 2020** Workshop on Statistics meets Machine Learning, Oberwolfach, Germany. *Funded by Oberwolfach.*
- 2018** CMStatistics 2018, 11th International Conference of the ERCIM working group on Computing and Statistics; Pisa, Italy.
- 2018** ISNPS 2018, biannual Conference of the International Society of Non-Parametric Statistics, Salerno, Italy.
- 2017** ENAR 2017 Spring Meeting, Washington, USA.
- 2016** CMStatistics 2016, 9th International Conference of the ERCIM working group on Computing and Statistics; Seville, Spain.
- 2016** SIMAI 2016, congress of the Italian Society of Industrial and Applied Mathematics, Milano.
- 2016** Workshop on functional data analysis: recent progress and new perspectives; Les Diablerets, Switzerland. *Funded by École Polytechnique Fédérale de Lausanne.*
- 2016** SIAM Conference on Uncertainty Quantification; Lausanne, Switzerland.
- 2015** CMStatistics 2015, 8th International Conference of the ERCIM working group on Computing and Statistics; London, UK.
- 2015** Eighth International Workshop on Simulation; Wien, Austria.
- 2015** ISNPS 2015, International Society of NonParametric Statistics, Congress on Biosciences, Medicine and Novel Nonparametric Methods; Graz, Austria.
- 2015** Workshop on Frontiers in Functional Data Analysis; BIRS Banff International Research Station for Mathematical Innovation and Discovery, Canada. *Funded by BIRS.*
- 2015** GRASPA 2015, biannual meeting of the Research Group for Statistical Application to Environmental Problems; Bari, Italy.
- 2014** ERCIM 2014, 7th International Conference of the ERCIM working group on Computing and Statistics; Pisa, Italy.
- 2014** SIS 2014, Scientific Meeting, Società Italiana di Statistica; Cagliari, Italy.
- 2014** Workshop on Spatial Statistics for Environmental and Energy Challenges; KAUST, Saudi Arabia. *Funded by KAUST.*

- 2013** ERCIM 2013, 6th International Conference of the ERCIM working group on Computing and Statistics; London, UK.
- 2013** RSS Royal Statistical Society International Conference; University of Newcastle, UK. *My paper Sangalli et al., Journal of the Royal Statistical Society Ser. B, Statistical Methodology, 2013, 75, 4, 681-703, has been selected among all those published by the Journal of the Royal Statistical Society Ser. B in 2013 (ranking: 3/124 in Statistics and Probability), and I have been invited to present it at this conference, with participation funded by School of Maths & Stats, Newcastle University.*
- 2013** SIS 2013, Società Italiana di Statistica; Università degli Studi di Brescia.
- 2012** ERCIM 2012, 5th International Conference of the ERCIM working group on Computing and Statistics; Oviedo, Spain.
- 2012** Workshop on Statistics of Time Warpings and Phase Variations; MBI Mathematical Biosciences Institute, The Ohio State University, OH, USA. *Funded by MBI.*
- 2012** ISCB 33rd Annual Conference of the International Society for Clinical Biostatistics; Bergen, Norway. *Funded by the International Society for Clinical Biostatistics.*
- 2012** Joint Meeting of yBIS International Young Business and Industrial Statisticians and jSPE Young Portuguese Statisticians, Lisbon, Portugal.
- 2012** SIMAI 2012, Società Italiana di Matematica Applicata ed Industriale; Politecnico di Torino, Italy.
- 2012** SIS 2012, Società Italiana di Statistica; Sapienza Università di Roma, Italy.
- 2012** SIAM Conference on Uncertainty Quantification; Raleigh, North Carolina.
- 2012** TIES 2012, 22nd Annual Conference of The International Environmetrics Society; Advanced Institute of Mathematics, University of Hyderabad, India.
- 2011** ERCIM 2011, 4th International Conference of the ERCIM working group on Computing and Statistics; University of London, UK.
- 2011** SIAM Conference on Computational Science and Engineering; Reno, Nevada.
- 2010** JSM 2010 Joint Statistical Meetings; Vancouver, Canada.
- 2010** Workshop on Functional Data Analysis: Future Directions; BIRS Banff International Research Station for Mathematical Innovation and Discovery, Canada. *Funded by BIRS.*
- 2009** SFC 2009, XVIth Joint Meeting of the French Society of Classification; Grenoble, France.
- 2008** SIMAI 2008, Società Italiana di Matematica Applicata ed Industriale; Roma, Italy. *Young researcher travel support.*
- 2008** MCMSki 2008: Markov chain Monte Carlo in Theory and Practice; IMS and ISBA international meeting, Bormio, Italy. *In this conference I did not give an invited talk but I presented a poster that was awarded among the best poster presentations; Young researcher travel support.*

INVITED SEMINARS IN UNIVERSITIES AND RESEARCH CENTERS (*funded by host institutions*)

I received more than 50 invitations to give seminars at universities and research centers. The following are those I was able to accept.

- 2023/12** School of Business and Economics Humboldt-Universität, Berlin, Germany.
- 2023/11** Karlsruhe Institute of Technology, Heidelberg, Germany.
- 2023/05** Department of Pure Mathematics and Mathematical Statistics, Cambridge, UK.
- 2022/10** Department of Statistics, university College London, London, UK (online).

2022/04 Department of Statistical Science, Sapienza Università di Roma, Rome, Italy (online).

2021/05 Department of Environmental Sciences, Computer Sciences and Statistics, Università Ca' Foscari, Venezia, Italy (online).

2021/05 Department of Statistics, University Grenoble Alpes, France (online).

2021/03 Department Mathematical and Statistical Sciences, University of Alberta, Canada (online).

2018/12 Department of Atmospheric and Cryospheric Sciences, University of Innsbruck, Innsbruck, Austria.

2017/10 Department of Mathematics, Otto-von-Guericke University, Magdeburg, Germany.

2017/04 Dipartimento di Scienze Statistiche, Università degli Studi di Bologna, Bologna, Italy.

2016/11 Université Libre de Bruxelles, Bruxelles, Belgium.

2016/10 Bonn University, Bonn, Germany.

2016/07 Departamento de Estadística, Universidad Carlos III de Madrid, Madrid, Spain.

2016/04 Aalto University, Aalto, Finland.

2014/02 Dipartimento di Scienze Statistiche, Università Cattolica del Sacro Cuore, Milano, Italy.

2013/11 Dipartimento di Scienze Statistiche, Sapienza Università di Roma, Italy.

2013/10 Department of Mathematics and Statistics, University of Limerick, Ireland.

2013/10 Department of Decision Sciences, Università Bocconi, Milano.

2013/09 School of Maths & Stats, Newcastle University, UK.

2013/04 School of Mathematics and Statistics, University of Glasgow, UK.

2013/02 Università Cattolica del Sacro Cuore, Roma, Italy.

2012/05 EPFL École Polytechnique Fédérale de Lausanne, Switzerland.

2012/05 Seminari di Cultura Matematica; Politecnico di Milano.

2011/01 SAMSI Statistical and Applied Mathematical Sciences Institute, North Carolina, USA.

2010/03 Institut for Matematiske Fag, Aalborg Universitet, Denmark.

2010/03 Dipartimento di Economia Politica e Metodi Quantitativi, Università degli Studi di Pavia.

2010/01 Dipartimento di Scienze Statistiche, Università degli Studi di Padova, Italy.

2009/01 Department of Statistics, University of Warwick, UK.

2008/04 Dipartimento di Economia Finanza e Statistica, Università degli Studi di Perugia, Italy.

2007/09 Department of Statistics, University of Warwick, UK.

2006/03 European Commission, Directorate General Joint Research Center, Ispra, Italy.

2006/02 Dipartimento di Matematica, Politecnico di Milano.

2005/03 Department of Mathematic and Statistics, Lancaster University, UK.

SUPERVISION AND CO-SUPERVISION OF POST-DOC, PHD AND MASTER STUDENTS

3 Post-Doctoral fellows

- Eleonora Arnone, 2017/12 - 2021/09, partially *funded by my starting grant project FIRB*; currently Senior Researcher (RTDB) at Università degli Studi di Torino.
- Laura Azzimonti, 2013/01 - 2014/01, *funded by my starting grant project FIRB*; currently Senior Researcher at IDSIA Institute of artificial intelligence, Switzerland.
- Bree Ettinger, 2011/06 - 2013/06, *funded by my starting grant project FIRB*; currently senior lecturer and Director of undergraduate studies at Emory University, Atlanta, USA.

16 PhD students

- Pietro Donelli, 2023/12 - present, Politecnico di Milano.
- Alessandro Palummpo, 2023/12 - present, Politecnico di Milano.
- Aldo Clemente, 2022/11 - present, Politecnico di Milano.
- Michele Cavazzuti, 2022/11 - present, Politecnico di Milano.
- Simone Panzeri, 2022/11 - present, Politecnico di Milano.
- Blerta Begu, 2022/09 - present, visiting PhD student from University College Dublin, Ireland.
- Letizia Clementi, 2020/11 - 2024/01, Politecnico di Milano.
- Harold Hernandez Roig, 2021/10 - 2022/01, visiting PhD student from Universidad Carlos III de Madrid, Spain.
- Cristian Castiglione, 2021/07 - 2023/04, PhD student from Università degli Studi di Padova.
- Federico Ferraccioli, 2017/11 - 2020/02, visiting PhD student from Università degli Studi di Padova; currently Junior Researcher (RTDA) at Università degli Studi di Padova.
- Eleonora Arnone, 2014/10 - 2018/02; currently Senior Researcher (RTDB) at Università degli Studi di Torino.
- Antonio Elias Fernandez, 2017/04 - 2017/07, visiting PhD student from Universidad Carlos III de Madrid, currently PostDoctoral Fellow at the Department of Applied Mathematics, Universidad de Málaga, Spain.
- Mara Bernardi, 2013/10 - 2016/10; currently postdoc at SISSA International School for Advanced Studies, Trieste, Italy.
- Marzia Cremona, 2012/10 - 2015/10; currently Assistant Professor at Université Laval, Québec, Canada.
- Gabriel Martos Venturini, 2013/09 - 2013/12, visiting PhD student from Universidad Carlos III de Madrid; currently Assistant Professor at Universidad Torcuato Di Tella, Buenos Aires, Argentina.
- Laura Azzimonti, 2010/01 - 2013/01; currently Senior Researcher at IDSIA Institute of artificial intelligence, Switzerland.

More than 50 Master students

TEACHING

Lecturer (since 2005), Teaching Assistant (since 2003) and Tutor (since 2001) for several courses in Statistics at undergraduate, graduate, post-graduate, PhD and post-doctoral level, some of which taught in English.

2023/2024

- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano.
- Lecturer of “Fondamenti di statistica e segnali biomedici”, undergraduate course, Politecnico di Milano.

2022/2023

- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano.
- Lecturer of “Fondamenti di statistica e segnali biomedici”, undergraduate course, Politecnico di Milano.

2021/2022

- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano.
- Lecturer of “Fondamenti di statistica e segnali biomedici”, undergraduate course, Politecnico di Milano.

2020/2021

- Lecturer of “Statistical and computational techniques for the analysis of functional and complex data”, PhD course, Politecnico di Milano.
- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano.
- Lecturer of “Fondamenti di statistica e segnali biomedici”, undergraduate course, Politecnico di Milano.

2018/2019

- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano (2 classes).

2017/2018

- Lecturer of “Introduction to functional data analysis”, PhD course, Università degli Studi di Bergamo.
- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano.

2016/2017

- Lecturer of “Geostatistica”, PhD course, Politecnico di Milano.
- Lecturer of “Introduction to functional data analysis”, course for researchers and PhD students, Consiglio Nazionale delle Ricerche, Milano.
- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano (2 classes).

2015/2016

- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano (2 classes).

2014/2015

- Lecturer of “Applied Statistics”, graduate course, Politecnico di Milano.
- Lecturer of “Introduction to Statistics and Data Analysis”, short course for the Master in Energy Finance, School of Management, Politecnico di Milano.

2013/2014

- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano (2 classes).
- Lecturer of “Big Data Challenges to Modern Statistics”, 14th Annual Winter School in eScience (for PhD students, post-docs and young researchers), Geilo, Norway.
- Lecturer of “Introduction to Statistics and Data Analysis”, short course for the Master in Energy Finance, School of Management, Politecnico di Milano.
- Coordinator and lecturer of “Inference for functional data with applications”, PhD course, Politecnico di Milano.

2012/2013

- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano.
- Lecturer of “Introduction to Statistics and Data Analysis”, short course for the Master in Energy Finance, School of Management, Politecnico di Milano.

2011/2012

- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano.
- Lecturer of “Introduction to Statistics and Data Analysis”, short course for the Master in Energy Finance, School of Management, Politecnico di Milano.

2010/2011

- Lecturer of “Statistica”, undergraduate course, Politecnico di Milano.
- Teaching assistant of “Statistica”, undergraduate course, Politecnico di Milano.
- Lecturer of “Introduction to Statistics and Data Analysis”, short course for the Master in Energy Finance, School of Management, Politecnico di Milano.

2009/2010

- Lecturer of “Introduction to Statistics and Data Analysis”, short course for the Master in Energy Finance, School of Management, Politecnico di Milano.
- Teaching assistant and tutor of “Statistica Applicata”, graduate course, Politecnico di Milano.
- Teaching assistant of “Sequenze temporali ad alta frequenza: Analisi di dati funzionali - Data Stream Mining”, short course for PhD students, post-docs and young researchers, organized by SIS Società Italiana di Statistica; Seconda Università di Napoli, Italy.

2008/2009

- Teaching assistant of “Statistics”, graduate course, Politecnico di Milano.
- Teaching assistant of “Statistica”, undergraduate course, Politecnico di Milano.

2007/2008

- Teaching assistant of “Statistics”, graduate course, Politecnico di Milano.
- Teaching assistant of “Statistica”, undergraduate course, Politecnico di Milano.
- Teaching assistant of “Statistica matematica A”, undergraduate course, Politecnico di Milano.
- Tutor of “Statistica Applicata”, graduate course, Politecnico di Milano.

2006/2007

- Teaching assistant of “Statistica”, undergraduate course, Politecnico di Milano.
- Teaching assistant of “Statistica matematica A”, undergraduate course, Politecnico di Milano.

2005/2006

- Lecturer of “Advanced Likelihood Theory”, *MSc Master in Statistical Science*, Department of Mathematics and Statistics, Lancaster University, UK.

2004/2005

- Teaching assistant of “Probability and Statistics”, post-graduate school “Quantitative Methods for Social and Economic Analysis”, Università degli Studi di Pavia, Istituto Universitario di Studi Superiori di Pavia and Accademia Nazionale dei Lincei.

2003/2004

- Teaching assistant of “Modelli Statistici e Laboratorio Informatico di Statistica”, undergraduate course, Università degli Studi di Pavia.

2001/2002

- Tutor of “Analisi dei Dati”, undergraduate course, Università degli Studi di Pavia.
- Tutor of “Statistica 1”, undergraduate course, Università degli Studi di Pavia.

2001/2002

- Tutor of “Analisi dei Dati”, undergraduate course, Università degli Studi di Pavia.
- Tutor of “Statistica 1”, undergraduate course, Università degli Studi di Pavia.

ACTIVITIES FOR PROMOTING MATHEMATICS AND RESEARCH

2024/04 Open Day, Politecnico di Milano.

2023/04 Open Day, Politecnico di Milano.

2019/04 Open Day, Politecnico di Milano.

2017/11 Big Data, ICT4INTEL, Dipartimento delle informazioni per la sicurezza (DIS), Presidenza del Consiglio dei Ministri della Repubblica Italiana.

2017/04 Open Day, Politecnico di Milano.

2016/06 Summer School, Politecnico di Milano.

- 2016/03** Lecture at the high school Liceo Scientifico Gandini, Lodi, Italia.
- 2015/06** Summer School, Politecnico di Milano.
- 2013/06** Summer School, Politecnico di Milano.
- 2012/10** European Job Day, Regione Lombardia, Milano.
- 2012/06** Summer School, Politecnico di Milano.
- 2011/10** Incontro dei giovani statistici, Giornata Italiana della Statistica; Sapienza Università di Roma.

PUBLICATIONS

Publications in international journals

- [1] Palummo, A., Arnone, E., Formaggia, L., and Sangalli, L.M. (2024), Functional principal component analysis for incomplete space-time data, *Environmental and Ecological Statistics*, To appear.
- [2] Clementi, L., Arnone, E., Santambrogio, M., Franceschetti, S., Panzica, F. and Sangalli, L.M. (2023), Anatomically compliant modes of variations: new tools for brain connectivity, *Plos One*, DOI: 10.1371/journal.pone.0292450.
- [3] Arnone, E., Negri, L., Panzica, F. and Sangalli, L.M. (2023), Analyzing data in complicated 3D domains: smoothing, semiparametric regression and functional principal component analysis, *Biometrics*, DOI: 10.1111/biom.13845.
- [4] Ferraccioli, F., Sangalli, L.M., Finos, L. (2023), “Nonparametric tests for semiparametric regression models”, *TEST*, DOI: 10.1007/s11749-023-00868-9.
- [5] Arnone, E., De Falco, C., Formaggia, L., Meretti, G and Sangalli, L.M. (2023), Computationally efficient techniques for spatial regression with differential regularization, *International Journal of Computer Mathematics*, DOI: 10.1080/00207160.2023.2239944.
- [6] Arnone, E. Sangalli, L.M. and Vicini, A. (2023), “Smoothing spatio-temporal data with complex missing data patterns”, *Statistical Modelling*, 23, 4, 327-356.
- [7] Arnone, E., Kneip, A., Nobile, F. and Sangalli, L.M. (2022), Some first results on the consistency of spatial regression with partial differential equation regularization, *Statistica Sinica*, 32, 209-238.
- [8] Elias, A., Jimenez, R., Paganoni, A.M. and Sangalli, L.M. (2022), “Integrated Depths for Partially Observed Functional Data”, *Journal of Computational and Graphical Statistics*, doi:10.1080/10618600.2022.2070171.
- [9] Ferraccioli, F., Sangalli, L.M., Finos, L. (2022), “Some first inferential tools for spatial regression with differential regularization”, *Journal of Multivariate Analysis*, DOI: 10.1016/j.jmva.2021.104866.
- [10] Scimone, R., Menafoglio, A., Sangalli, L.M. and Secchi, P. (2022), “A look at the spatio-temporal mortality patterns in Italy during the COVID-19 pandemic through the lens of mortality densities”, *Spatial Statistics*, doi:10.1016/j.spasta.2021.100541.
- [11] Ponti, L., Perotto, S. and Sangalli, L.M. (2022), “A PDE-regularized smoothing method for space-time data over manifolds with application to medical data”, *International Journal for Numerical Methods in Biomedical Engineering*, DOI: 10.1002/cnm.3650.
- [12] Arnone, E., Ferraccioli, F., Pigolotti, C., Sangalli, L.M. (2022), “A roughness penalty approach to estimate densities over two-dimensional manifolds”, *Computational Statistics and Data Analysis*, doi:10.1016/j.csda.2022.107527.
- [13] Ferraccioli, F., Arnone, E., Finos, L., Ramsay, J.O., Sangalli, L.M. (2021), “Nonparametric density estimation over complicated domains”, *Journal of the Royal Statistical Society Ser. B, Statistical Methodology*, 83, 346-368.

- [14] Laura M. Sangalli (2021), “Spatial regression with partial differential equation regularization”, *International Statistical Review*, 89, 3, 505-531.
- [15] Laura M. Sangalli (2020), “A novel approach to the analysis of spatial and functional data over complex domains”, *Quality Engineering*, 32, 2, 181-190, *followed by discussions and a rejoinder by the author*.
 Laura M. Sangalli (2020), “Rejoinder”, *Quality Engineering*, 32, 2, 197-198.
- [16] Eleonora Arnone, Laura Azzimonti, Fabio Nobile, Laura M. Sangalli (2019), “Modelling spatially dependent functional data via regression with differential regularization”, *Journal of Multivariate Analysis*, 170, 275-295.
- [17] Mara S. Bernardi, Michelle Caray, James O. Ramsay, Laura M. Sangalli (2018), “Modeling spatial anisotropy via regression with partial differential regularization”, *Journal of Multivariate Analysis*, 167, 15-30.
- [18] Laura M. Sangalli (2018), “The role of Statistics in the era of Big Data”, *Statistics & Probability Letters*, 136, 1-3.
- [19] Marco Stefanucci, Laura M. Sangalli, Pierpaolo Brutti (2018), “PCA-based discrimination of partially observed functional data, with an application to Aneurisk65 dataset”, *Statistica Neerlandica*, 72 (3), 246-264.
- [20] Ballestrero, A. et al. (2018), “Vector boson scattering: Recent experimental and theory developments”, *Reviews in Physics*, 3, 44-63.
- [21] Mara S. Bernardi, Laura M. Sangalli, Gabriele Mazza, James O. Ramsay (2017), “A penalized regression model for spatial functional data with application to the analysis of the production of waste in Venice province”, *Stochastic Environmental Research and Risk Assessment*, 31 (1), 23-38.
- [22] Anna Maria Paganoni and Laura M. Sangalli (2017), “Functional regression models: some directions of future research”, *Statistical Modelling*, 17(1), 1-6.
- [23] Alice C.L. Parodi, Laura M. Sangalli, Simone Vantini, Bruno Amati, Piercesare Secchi and Marco J. Morelli (2017), “FunChIP: a R/Bioconductor package for functional classification of ChIP-seq data”, *Bioinformatics*, 33 (16), 2570-2572.
- [24] Piotr Kokoszka, Hanny Oja, Byeong Park, Laura M. Sangalli (2017), “Special issue on functional data analysis”, *Econometrics and Statistics*, 1, 99-100.
- [25] Eardi Lila, John A.D. Aston, Sangalli, Laura M. Sangalli (2016), “Smooth Principal Component Analysis over two-dimensional manifolds with an application to Neuroimaging”, *Annals of Applied Statistics*, 10 (4), 1854-1879.
- [26] Bree Ettinger, Simona Perotto, Laura M. Sangalli (2016), “Spatial regression models over two-dimensional manifolds”, *Biometrika*, 103 (1), 71-88.
- [27] Matthieu Wilhelm, Laura M. Sangalli (2016), “Generalized Spatial Regression with Differential Regularization”, *Journal of Statistical Computation and Simulation*, 86 (13), 2497-2518.
- [28] Matthieu Wilhelm, Luca Dede’, Laura M. Sangalli, Pierre Wilhelm (2016), “IGS: an IsoGeometric approach for Smoothing on surfaces”, *Computer Methods in Applied Mechanics and Engineering*, 302, 70-89.
- [29] Mara S. Bernardi, Matteo Pelucchi, Alessandro Stagni, Laura M. Sangalli, Alberto Cuoci, Alessio Frassoldati, Piercesare Secchi, Tiziano Faravelli (2016), “Curve Matching, a generalized framework for models/experiments comparison: an application to n-heptane combustion kinetic mechanisms”. *Combustion and Flame*, 168, 186-203.
- [30] J.S. Marron, James O. Ramsay, Laura M. Sangalli, Anuj Srivastava (2015), “Functional Data Analysis of Amplitude and Phase Variation”, *Statistical Science*, 30 (4), 468-484.
- [31] Laura Azzimonti, Laura M. Sangalli, Piercesare Secchi, Maurizio Domanin, Fabio Nobile (2015), “Blood flow velocity field estimation via spatial regression with PDE penalization”, *Journal of the American Statistical Association, Theory and Methods*, 110 (511), 1057-1071.

- [32] Marzia Angela Cremona, Laura M. Sangalli, Simone Vantini, Gaetano Ivan Dellino, Pier Giuseppe Pelicci, Piercesare Secchi, Laura Riva (2015), “Peak shape clustering reveals biological insights”, *BMC Bioinformatics*, DOI: 10.1186/s12859-015-0787-6.
- [33] Franco Dassi, Bree Ettinger, Simona Perotto, Laura M. Sangalli (2015), “A mesh simplification strategy for a spatial regression analysis over the cortical surface of the brain”, *Applied Numerical Mathematics*, 90, 111–131.
- [34] N. Nicolai, L.M. Sangalli, A. Necchi, P. Giannatempo, A.M. Paganoni, M. Colecchia, L. Piva, M. Catanzaro, D. Biasoni, S. Stagni, T. Torelli, D. Raggi, E. Faré, G. Pizzocaro, R. Salvioni (2015), “A combination of cisplatin and 5-fluorouracil plus a taxane in patients undergoing lymph-node dissection for nodal metastases from squamous cell carcinoma (SCC) of the penis: treatment outcome and survival analyses in neo-adjuvant and adjuvant settings”, *Clinical Genitourinary Cancer*, doi:10.1016/j.clgc.2015.07.009.
- [35] Laura Azzimonti, Fabio Nobile, Laura M. Sangalli, Piercesare Secchi (2014), “Mixed Finite Elements for spatial regression with PDE penalization”, *SIAM/ASA Journal on Uncertainty quantification*, Vol. 2, No. 1, pp. 305–335.
- [36] J.S. Marron, James O. Ramsay, Laura M. Sangalli, Anuj Srivastava (2014), “Statistics of Time Warpings and Phase Variations”, *Electronic Journal of Statistics*, Vol. 8, No. 2, pp. 1697–1702.
- [37] Mara Bernardi, Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2014), “Analysis of Proteomics data: Block K-mean Alignment”, *Electronic Journal of Statistics*, Vol. 8, No. 2, pp. 1714–1723.
- [38] Mirco Patriarca, Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2014), “Analysis of Spike Train Data: an Application of K-mean Alignment”, *Electronic Journal of Statistics*, Vol. 8, No. 2, pp. 1769–1775.
- [39] Mara Bernardi, Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2014), “Analysis of Juggling Data: an Application of K-mean Alignment”, *Electronic Journal of Statistics*, Vol. 8, No. 2, pp. 1817–1824.
- [40] Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2014), “AneuRisk65: three-dimensional cerebral vascular geometries”, *Electronic Journal of Statistics*, Vol. 8, No. 2, pp. 1879–1890.
- [41] Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2014), “Analysis of AneuRisk65 data: K-mean Alignment”, *Electronic Journal of Statistics*, Vol. 8, No. 2, pp. 1891–1904.
- [42] Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2014), “Rejoinder: Analysis of AneuRisk65 data”, *Electronic Journal of Statistics*, Vol. 8, No. 2, pp. 1937–1939.
- [43] Matilde Dalla Rosa, Laura M. Sangalli, Simone Vantini (2014), “Principal Differential Analysis of the Aneurisk65 Data Set”, *Advances in Data Analysis and Classification*, Vol. 8, Issue 3, pp. 287–302.
- [44] Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2014), “Object Oriented Data Analysis: a few methodological challenges”, discussion of the paper “An Overview of Object Oriented Data Analysis” by J.S. Marron and Andres M. Alonso, *Biometrical Journal*, Vol. 56, Issue 5, pp. 774–777.
- [45] Laura M. Sangalli, James O. Ramsay, Timothy O. Ramsay (2013), “Spatial spline regression models”, *Journal of the Royal Statistical Society Ser. B, Statistical Methodology*, 75, Part 4, pp. 681–703.
- [46] Helle Sørensen, Jeff Goldsmith, Laura M. Sangalli (2013), “An introduction with medical applications to functional data analysis”. *Statistics in Medicine*, 32, pp. 5222–5240.
- [47] Davide Pigoli, Laura M. Sangalli (2012), “Wavelets in Functional Data Analysis: estimation of multidimensional curves and their derivatives”, *Computational Statistics and Data Analysis*, 56, 1482–1498.
- [48] Stefano Castruccio, Luca Bonaventura and Laura M. Sangalli (2012), “A Bayesian approach to spatial prediction with flexible variogram models”, *Journal of Agricultural, Biological, and Environmental Statistics*, Vol. 17, N. 2, pp 209–227.

- [49] E. Ammirati, C.V. Cannistraci, N.A. Cristell, V. Vecchio, A. Palini, P. Tornvall, A.M. Paganoni, E.A. Miendlarzewska, L.M. Sangalli, A. Monello, J. Pernow, M. Björnstedt Bennermo, T. Ravasi, D. Hu, N.G. Uren, D. Cianflone, A.A. Manfredi, A. Maseri (2012), “Identification and Predictive Value of IL6(+)IL10(+) and IL6(-)IL10(+) Cytokine Patterns in ST-Elevation Acute Myocardial Infarction”. *Circulation Research*, 111, 1336-1348.
- [50] Tiziano Passerini, Laura M. Sangalli, Simone Vantini, Marina Piccinelli, Susanna Bacigaluppi, Luca Antiga, Edoardo Boccardi, Piercesare Secchi, Alessandro Veneziani (2012), “An Integrated CFD-Statistical Investigation of Parent Vasculature of Cerebral Aneurysms”, *Cardiovascular Engineering and Technology*, Vol. 3, No. 1, pp. 26–40. SCOPUS.
- [51] C. de Lalla, A. Rinaldi, D. Montagna, L. Azzimonti, M.E. Bernardo, L.M. Sangalli, A.M. Paganoni, R. Maccario, A. Di Cesare-Merlone, M. Zecca, F. Locatelli, P. Dellabona, G. Casorati (2011), “Invariant NKT cell reconstitution in pediatric leukemia patients given HLA-haploidentical stem cell transplantation defines distinct CD4+ and CD4- subset dynamics and correlates with the remission state”, *The Journal of Immunology*, Vol. 186, pp. 4490–4499.
- [52] Gareth O. Roberts and Laura M. Sangalli (2010), “Latent diffusion models for survival analysis”, *Bernoulli*, Vol. 16, pp. 435–458.
- [53] Laura M. Sangalli, Piercesare Secchi, Simone Vantini and Valeria Vitelli (2010), “K-means alignment for curve clustering”, *Computational Statistics and Data Analysis*, Vol. 54, pp. 1219–1233.
- [54] Laura M. Sangalli, Piercesare Secchi, Simone Vantini and Valeria Vitelli (2010), “Functional clustering and alignment methods with applications”, *Communications in Applied and Industrial Mathematics*, Vol. 1, No. 1, pp. 205–224.
- [55] Laura M. Sangalli, Piercesare Secchi, Simone Vantini and Alessandro Veneziani (2009), “Efficient estimation of three-dimensional curves and their derivatives by free-knot regression splines, applied to the analysis of inner carotid artery centrelines”, *Journal of the Royal Statistical Society Ser. C, Applied Statistics*, Vol. 58, No. 3, pp. 285–306.
- [56] Laura M. Sangalli, Piercesare Secchi, Simone Vantini and Alessandro Veneziani (2009), “A Case Study in Exploratory Functional Data Analysis: Geometrical Features of the Internal Carotid Artery”, *Journal of the American Statistical Association*, Vol. 104, No. 485, 37–48.
- [57] M. Colecchia, N. Nicolai, P. Secchi, G. Bandieramonte, A.M. Paganoni, L.M. Sangalli, G. Pizzocaro, L. Piva and R. Salvioni (2009), “pT1 Penile Squamous Cell Carcinoma: A Clinicopathologic Study of 56 Cases Treated by CO₂ Laser Therapy”, *Analytical and Quantitative Cytology and Histology*, Vol. 31, No. 3, pp. 153–160.
- [58] Laura M. Sangalli (2006), “Some developments of the normalized random measures with independent increments”, *Sankhya: The Indian Journal of Statistics*, Vol. 68, Part 3, pp. 461–487. Scopus.

Chapters in books

- [59] Arnone, E., Cunial, E., Sangalli, L.M. (2023). Generalized Spatio-Temporal Regression with PDE Penalization. In: Classification and Data Science in the Digital Age. Springer, 29–34.
- [60] Scimone, R., Menafoglio, A., Sangalli, L.M., Secchi, P. (2023). The Death Process in Italy Before and During the Covid-19 Pandemic: A Functional Compositional Approach. In: Classification and Data Science in the Digital Age. Springer, 333–341.
- [61] Mara S. Bernardi and Laura M. Sangalli (2021), “Modelling spatially dependent functional data by spatial regression with differential regularization”, in Geostatistical Functional Data Analysis, Wiley, 260-285.
- [62] Eleonora Arnone, Mara S. Bernardi, Laura M. Sangalli, Piercesare Secchi (2020), Analysis of Telecom Italia Mobile Phone Data by Space-time Regression with Differential Regularization, in Functional and High-Dimensional Statistics and Related Fields, Springer, Springer Ser. Contribution to Statistics, 5-10.

- [63] Eleonora Arnone, Alois Kneip, Fabio Nobile, Laura M. Sangalli (2020), Some Numerical Test on the Convergence Rates of Regression with Differential Regularization, in *Functional and High-Dimensional Statistics and Related Fields*, Springer, Springer Ser. Contribution to Statistics, 11-18.
- [64] Federico Ferraccioli, Laura M. Sangalli, Eleonora Arnone, Livio Finos (2020), A Functional Data Analysis Approach to the Estimation of Densities over Complex Regions, in *Functional and High-Dimensional Statistics and Related Fields*, Springer, Springer Ser. Contribution to Statistics, 77-82.
- [65] Eleonora Arnone, Laura Azzimonti, Fabio Nobile, Laura M. Sangalli (2017), “A time-dependent PDE regularization to model functional data defined over spatio-temporal domains”, in *Functional Statistics and Related Fields*, Springer, Springer Ser. Contribution to Statistics, 41-44.
- [66] Eardi Lila, John A. D. Aston, Laura M. Sangalli (2017), “Functional data analysis of neuroimaging signals associated with cerebral activity in the brain cortex”, in *Functional Statistics and Related Fields*, Springer, Springer Ser. Contribution to Statistics, 169-172.
- [67] Laura M. Sangalli (2015), “Estimating surfaces and spatial fields via regression models with differential regularization”, *Advances In Complex Data Modeling And Computational Methods In Statistics*, Springer Ser. Contribution to Statistics, pp. 191–209.
- [68] Bree Ettinger, Tiziano Passerini, Simona Perotto, Laura M. Sangalli (2013), “Spatial smoothing for data distributed over non-planar domains”, in *Complex Models and Computational Methods in Statistics*, Springer Ser. Contribution to Statistics, pp. 123–135.
- [69] James O. Ramsay, Tim Ramsay and Laura M. Sangalli (2011), “Spatial Functional Data Analysis”, in *Recent Advances in Functional Data Analysis and Related Topics*, Contributions to Statistics, Physica-Verlag Springer, pp. 269–276.
- [70] Laura M. Sangalli, Piercesare Secchi, Simone Vantini and Valeria Vitelli (2012), “Joint Clustering and Alignment of Functional Data: an Application to Vascular Geometries”, in *Advanced Statistical Methods for the Analysis of Large Data-Sets*, Springer, pp. 33–43.
- [71] Davide Pigoli and Laura M. Sangalli (2011), “Wavelets smoothing for multidimensional curves”, in *Recent Advances in Functional Data Analysis and Related Topics*, Contributions to Statistics, Physica-Verlag Springer, pp. 255–262.
- [72] Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2008), “Explorative functional data analysis for 3D-geometries of the Inner Carotid Artery”, in *Functional and Operatorial Statistics*, edited by S. Dabo-Niang and F. Ferraty, Physica-Verlag Springer, pp. 289–296.
- [73] R.V. Ramamoorthi and Laura M. Sangalli (2006), “On a characterization of Dirichlet distribution”, in *Bayesian Statistics and its Applications*, edited by Satyanshu K. Upadhyay, Umesh Singh and Dipak K. Dey, pp. 385–397.

Conference proceedings in WOS/Scopus journals

- [74] Clementi, L., Gregorio, C, Savarè, L., Ieva, F, Santambrogio, M.D. Sangalli, L.M. (2021), A functional Data Analysis Approach to Left Ventricular Remodeling Assessment, Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS, 2021, pp. 3505–3508.
- [75] Giannatempo, P., Paganoni, A.M., Sangalli, L.M., Colecchia, M., Piva, L., Catanzaro, M., Torelli, T., Faré, E. Raggi, D., Biasoni, D., Stagni, S., Pizzocaro, G., Salvioni, R., Nicolai, N., (2014), “Survival analyses of adjuvant or neoadjuvant combination of a taxane plus cisplatin and 5-fluorouracil (T-PF) in patients with bulky nodal metastases from squamous cell carcinoma of the penis (PSCC): Results of a single high-volume center”, *Journal Of Clinical Oncology*, 32, suppl 4, abstr 377.
- [76] N. Nicolai, L.M. Sangalli, A. Necchi, P. Giannatempo, A.M. Paganoni, M. Colecchia, L. Piva, M. Catanzaro, D. Biasoni, S. Stagni, T. Torelli, D. Raggi, E. Faré, A. Crestani, G. Pizzocaro, R. Salvioni (2014), “Neo-adjuvant and adjuvant combination of a taxane plus cisplatin and 5-fluorouracil in patients undergoing lymph-node dissection for nodal metastases from squamous cell carcinoma (SCC) of the penis: Is there an indication for a recommendable use?”, *European Urology Supplements*, Vol. 13, Issue 1, pp. e57.

- [77] C. De Lalla, A. Rinaldi, D. Montagna, L.M. Sangalli, L. Azzimonti, A.M. Paganoni, R. Maccario, M.E. Bernardo, F. Locatelli, P. Dellabona, G. Casorati (2010), “iNKT cell reconstitution in paediatric leukaemia patients following haploidentical stem cell transplantation suggests contribution to leukaemia control and reveals independent CD4+ and CD4-subset maturation programmes”, *Bone Marrow Transplantation*, Vol. 45, pp. S206.
- [78] E. Ammirati, N. Cristell, C.V. Cannistraci, A. Paganoni, L. Sangalli, A. Monello, N. Uren, A.A. Manfredi, D. Cianflone, A. Maseri (2009), “Distinctive cytokine signature in patients with ST-Elevation Myocardial Infarction (STEMI) associated with high levels of circulating interleukin (IL)6”, *European Heart Journal*, Vol. 30, Suppl 1, pp. 934–935.
- [79] E. Ammirati, N. Cristell, C. Cannistraci, V. Vecchio, A. Paganoni, L. Sangalli, A. Palini, A. Monello, M. Banfi, N. Uren, A. Manfredi, D. Cianflone, A. Maseri (2009), “Cytokine differentiation pattern in patients with st-elevation myocardial infarction (stemi) associated with high levels of circulating inteleukin (il)-6”, *Atherosclerosis Supplements*, Vol. 10, No. 2, pp. e466.
- [80] S. Bacigaluppi, T. Passerini, L. Sangalli, P. Secchi, S. Vantini, S. Vele and A. Veneziani (2008), “Analysis of cerebral vascular morphologies for assessing rupture risk in cerebral aneurysms”, *Journal of Biomechanics*, Vol. 41, pp. S9.
- [81] M. Colecchia, N. Nicolai, P. Secchi, G. Bandieramonte, A.M. Paganoni, L.M. Sangalli, L. Piva, G. Pizzocaro and R. Salvioni (2008), “Carbon-dioxide (CO2) laser microsurgery only for initially invasive squamous cell carcinoma (SCC) of the penis: A 25 years experience”, *European Urology Supplements*, 7, 3, pp. 111.

Other conference proceedings

- [82] Blerta Begu, Simone Panzeri, Eleonora Arnone, Laura M. Sangalli (2023), A Novel Spatio-Temporal Estimation Method for Occurrences Over Planar and Curved Regions, Proceedings of the GRASPA 2023 Conference. (peer-reviewed)
- [83] Cristian Castiglione, Eleonora Arnone, Mauro Bernardi, Alessio Farcomeni, Laura M. Sangalli (2023), Penalized quantile regression for spatial distributed data, Proceedings of the GRASPA 2023 Conference. (peer-reviewed)
- [84] Michele Cavazzutti, Eleonora Arnone, Federico Ferraccioli, Livio Finos, Cristina Galimberti, Laura M. Sangalli (2023), A Novel Spatio-Sign-Flip tests for the nonparametric component in Spatial Regression with PDE regularization, Proceedings of the GRASPA 2023 Conference. (peer-reviewed)
- [85] Aldo Clemente, Eleonora Arnone, Jorge Mateu, Laura M. Sangalli (2023), Non-parametric density estimation over linear networks, Proceedings of the GRASPA 2023 Conference. (peer-reviewed)
- [86] Alessandro Palummo, Eleonora Arnone, Luca Formaggia, Laura M. Sangalli (2023), Functional principal component analysis for space-time data, Proceedings of the GRASPA 2023 Conference. (peer-reviewed)
- [87] Simone Panzeri, Blerta Begu, Eleonora Arnone, Laura M. Sangalli (2023), An Estimation Tool for Spatio-Temporal Events over Curved Surfaces, Proceedings of "Statistics and Data Science Conference". (peer-reviewed)
- [88] Michele Cavazzutti, Eleonora Arnone, Federico Ferraccioli, Livio Finos, Laura M. Sangalli (2023), Sign-Flip tests for spatial regression with differential regularization, Proceedings of "Statistics and Data Science Conference". (peer-reviewed)
- [89] Aldo Clemente, Eleonora Arnone, Jorge Mateu, Laura M. Sangalli (2023), Spatial regression with differential regularization over linear networks, Proceedings of "Statistics and Data Science Conference". (peer-reviewed)
- [90] Eleonora Arnone, Laura Azzimonti, Fabio Nobile, Laura M. Sangalli (2019), “Regression with time-dependent PDE regularization for the analysis of spatiotemporal data”, *Smart statistics for smart applications*, 649-652. (peer-reviewed)

- [91] Mara Sabina Bernardi, Laura M. Sangalli, James Ramsay, Michelle Carey (2019), “PDE-regularized regression for anisotropic spatial fields”, *Smart statistics for smart applications*, 669-672. (peer-reviewed)
- [92] Federico Ferraccioli, Laura M. Sangalli, Livio Finos (2019), “Bounded Domain Density Estimation”, *Smart statistics for smart applications*, 861-866. (peer-reviewed)
- [93] Marco Stefanucci, Laura M. Sangalli, Pierpaolo Brutti (2018), “Classification of the Aneurisk65 dataset using PCA for partially observed functional data”, *Proceedings of the 49th Scientific Meeting of the Italian Statistical Society*. (peer-reviewed)
- [94] Federico Ferraccioli, Laura M. Sangalli, Livio Finos (2018), “Nonparametric penalized likelihood for density estimation”, *Proceedings of the 49th Scientific Meeting of the Italian Statistical Society*. (peer-reviewed)
- [95] Mara S. Bernardi, Gabriele Mazza, James O. Ramsay, Laura M. Sangalli (2016), “A penalized regression model for functional data with spatial dependence”, *Proceedings of the 48th Scientific Meeting of the Italian Statistical Society*. (peer-reviewed)
- [96] Laura M. Sangalli (2014), “Statistical and Numerical Techniques for Spatial Functional Data Analysis”, *Contributions in infinite-dimensional statistics and related topics*, Esculapio, pp. 239–244. (peer-reviewed)
- [97] Laura M. Sangalli (2014), “Functional data analysis in spaces of surfaces”, *Proceedings of the 47th Scientific Meeting of the Italian Statistical Society*. (peer-reviewed)
- [98] Laura Azzimonti, Laura M. Sangalli, Piercesare Secchi (2014), “Modeling prior knowledge on complex phenomena behaviors via partial differential equations”, *Proceedings of the 47th Scientific Meeting of the Italian Statistical Society*. (peer-reviewed)
- [99] Marzia A. Cremona, Pier Giuseppe Pelicci, Laura Riva, Laura M. Sangalli, Piercesare Secchi, and Simone Vantini (2014), “Cluster analysis on shape indices for ChIP-Seq data”, *Proceedings of the 47th Scientific Meeting of the Italian Statistical Society*. (peer-reviewed)
- [100] Laura Azzimonti, Laura M. Sangalli, Piercesare Secchi (2013), “Spatial regression with pde penalization: an application to blood velocity field estimation”, *Proceedings of S.Co.2013 Conference*. (peer-reviewed)
- [101] Marzia A. Cremona, Laura Riva, Laura M. Sangalli, Piercesare Secchi and Simone Vantini (2013), “Clustering chip-seq data using peak shape”, *Proceedings of S.Co.2013 Conference*. (peer-reviewed)
- [102] Bree Ettinger, Simona Perotto, Laura M. Sangalli (2013), “A functional data analysis approach to modeling spatially distributed data across several non-planar domains”, *Proceedings of S.Co.2013 Conference*. (peer-reviewed)
- [103] Laura M. Sangalli (2013), “On a novel class of models for spatial data analysis”, *Proceedings of S.Co.2013 Conference*. (peer-reviewed)
- [104] Matthieu Wilhelm, Laura M. Sangalli (2013), “Generalized models for spatial regression with differential penalization”, *Proceedings of S.Co.2013 Conference*. (peer-reviewed)
- [105] Bree Ettinger, Simona Perotto, Laura M. Sangalli (2013), “Studying hemodynamic forces via spatial regression models over non-planar domains”, *Proceedings of the 2013 Conference of the Italian Statistical Society, Advances in Latent Variables - Methods, Models and Applications*. (peer-reviewed)
- [106] Laura M. Sangalli and James O. Ramsay (2012), “A novel method for spatial smoothing”, *Proceedings of the 46th Scientific Meeting of the Italian Statistical Society*. (peer-reviewed)
- [107] Laura Azzimonti, Laura M. Sangalli, Piercesare Secchi, Silvia Romagnoli and Maurizio Domanin (2012), “PDE penalization for spatial fields smoothing”, *Proceedings of the 46th Scientific Meeting of the Italian Statistical Society*. (peer-reviewed)
- [108] Bree Ettinger, Simona Perotto, Laura M. Sangalli (2012), “Spatial smoothing over non-planar domains”, *Proceedings of the 46th Scientific Meeting of the Italian Statistical Society*. (peer-reviewed)

- [109] James O. Ramsay, Tim Ramsay and Laura M. Sangalli (2011), “Spatial spline regression models for data distributed over irregularly shaped regions”, Proceedings of S.Co.2011 Conference. (peer-reviewed)
- [110] Laura Azzimonti, Maurizio Domanin, Laura M. Sangalli and Piercesare Secchi (2011), “Surface estimation via spatial spline models with PDE penalization”, Proceedings of S.Co.2011 Conference. (peer-reviewed)
- [111] Laura M. Sangalli, Piercesare Secchi, Simone Vantini and Valeria Vitelli (2010), “Classification of Functional Data: Unsupervised Curve Clustering When Curves are Misaligned”, 2010 JSM Proceedings, pp. 4034–4047.
- [112] Tiziano Passerini, Alessandro Veneziani, Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2010), “Cerebral aneurysms: relations between geometry, hemodynamics and aneurysm location in the cerebral vasculature”, Bulletin of the American Physical Society, Vol. 55, N. 16.
- [113] Laura M. Sangalli, Piercesare Secchi, Simone Vantini and Valeria Vitelli (2010), “Functional clustering and alignment”, Proceedings of the 45th Scientific Meeting of the Italian Statistical Society. (peer-reviewed)
- [114] Laura Azzimonti, Claudia De Lalla, Daniela Montagna, Anna Maria Paganoni, Laura M. Sangalli (2010), “Mixed effects models for growth curves”, Proceedings of the 45th Scientific Meeting of the Italian Statistical Society. (peer-reviewed)
- [115] Davide Pigoli, Laura M. Sangalli (2010), “Wavelet smoothing for curves in more than one dimension”, Proceedings of the 45th Scientific Meeting of the Italian Statistical Society. (peer-reviewed)
- [116] Matilde Dalla Rosa, Laura M. Sangalli and Simone Vantini (2010), “Data Reduction by means of Principal Differential Analysis: an Application to the Study of the Geometrical Features of the Internal Carotid Artery”, Proceedings of the 45th Scientific Meeting of the Italian Statistical Society. (peer-reviewed)
- [117] Tiziano Passerini, Alessandro Veneziani, Laura M. Sangalli, Piercesare Secchi and Simone Vantini (2009), “Wall shear stress in the Internal Carotid Artery and its relation to aneurysm location”, CM-BE2009 1st International Conference on Mathematical and Computational Biomedical Engineering, edited by P. Nithiarasu and R. Löhner, pp. 163–166.
- [118] Laura M. Sangalli (2009), “Locally adaptive regression techniques for multidimensional curve fitting”, Proceedings of S.Co.2009 Conference, Maggioli Eds, pp. 375–380. Available at <http://mox.polimi.it/sco2009>. (peer-reviewed)
- [119] Laura M. Sangalli, Piercesare Secchi, Simone Vantini and Valeria Vitelli (2009), “Curve clustering for misaligned data: the k-mean alignment algorithm”, Proceedings of S.Co.2009 Conference, Maggioli Eds, pp. 381–386. Available at <http://mox.polimi.it/sco2009>. (peer-reviewed)
- [120] Laura M. Sangalli, Piercesare Secchi, Simone Vantini and Valeria Vitelli (2009), “K-mean clustering of misaligned functional data”, Actes des XVIèmes Rencontres de la Société Francophone de Classification, pp. 185–188.
- [121] E. Ammirati, N. Cristell, V. Vecchio, A. Palini, A.M. Paganoni, L.M. Sangalli, A. Monello, D. Piraino, C.V. Cannistraci, A. Durante, A.C. Vermi, M. Banfi, M. De Metrio, G.C. Marenzi, P. Secchi, A.A. Manfredi, D. Hu, N. Uren, D. Cianflone, A. Maseri (2008), “Pattern differenziale cito/chemochinico nei pazienti con STEMI associato ad elevati livelli di IL-6 circolante riconosciuto mediante analisi simultanea di 18 cito/chemochine con Flex-set CBA”, *Giornale Italiano di Cardiologia*, 9, Suppl. 1-12, pp. 22.
- [122] Laura M. Sangalli, Piercesare Secchi and Simone Vantini (2008), “A case study in functional data analysis; investigating the geometry of the internal carotid artery for cerebral aneurysms classification”, Proceedings of the XLIV Riunione Scientifica Società Italiana di Statistica, Cleup Eds., pp. 181–188. (peer-reviewed)

- [123] Laura M. Sangalli and Simone Vantini (2008), “Free knot regression splines for 3-dimensional functional data, with applications to the analysis of Inner Carotid Artery centerlines”, Proceedings of the XLIV Riunione Scientifica Società Italiana di Statistica, Cleup Eds. (peer-reviewed)
- [124] Laura M. Sangalli and Simone Vantini (2008), “Registration of Functional Data: Aligning Inner Carotid Artery Centerlines”, Proceedings of the XLIV Riunione Scientifica Società Italiana di Statistica, Cleup Eds. (peer-reviewed)
- [125] S. Bacigaluppi, L. Antiga, T. Passerini, M. Piccinelli, S. Vantini, L. Sangalli, A. Remuzzi, P. Secchi, M. Collice, E. Boccardi and A. Veneziani (2008), “Geometric analysis of the Internal Carotid Artery (ICA) in relation to aneurysms”, Proceedings of the 59th Annual Meeting of the German Society of Neurosurgery (DGNC) - 3rd Joint Meeting with the Italian Neurosurgical Society (SINch). GMS German Medical Science, e-journal, German Medical Science GMS Publishing House, Düsseldorf. Available at <http://www.egms.de/en/meetings/dgnc2008/08dgnc328.shtml>.
- [126] Laura M. Sangalli, Piercesare Secchi and Simone Vantini (2007), “Functional data analysis for 3D-geometries of the Inner Carotid Artery”, Book of Short Papers of S.Co.2007 conference, Cleup Eds., pp. 427–432. Available at <http://venus.unive.it/sco2007/ocs/papers.php>.

Editing

- [127] Proceedings of S.Co. 2009 Sixth Conference on Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction. Edited by A.M. Paganoni, L.M. Sangalli, P. Secchi, S. Vantini; Maggioli Editore.

PhD dissertation

- [128] Laura M. Sangalli (2007), “Alcune misure di probabilità aleatorie e loro applicazioni in statistica bayesiana”, *Bollettino Unione Matematica Italiana*, A, Vol. 10, No. 2, pp. 339–342.
- [129] Laura M. Sangalli (2006), “Random probability measures and their applications to Bayesian Statistics”, PhD thesis, Dipartimento di Matematica, Università degli Studi di Pavia.

Software

- [130] Eleonora Arnone, Aldo Clemente, Laura M. Sangalli, Eardi Lila, Jim Ramsay, Luca Formaggia (2023), “fdaPDE: Physics-Informed Spatial and Functional Data Analysis”, R package available from CRAN
<https://CRAN.R-project.org/package=fdaPDE>
<https://github.com/fdaPDE>
- [131] Aldo Clemente, Alessandro Palummo, Eleonora Arnone, Luca Formaggia, Laura M. Sangalli (2023), “femR: Bridging Physics and statistics in R”, R package available from GitHub
<https://CRAN.R-project.org/package=fdaPDE>
- [132] Alice Parodi, Marco Morelli, Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2023), “FunChIP: Clustering and Alignment of ChIP-Seq peaks based on their shapes” (2023), R package available from Bioconductor
<https://bioconductor.org/packages/FunChIP>
- [133] Laura Sangalli, Piercesare Secchi, Aymeric Stamm, Simone Vantini, Valeria Vitelli, Alessandro Zito, “fdacluster: Joint Clustering and Alignment of Functional Data”, R package available from CRAN
<https://CRAN.R-project.org/package=fdacluster>

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