

# CURRICULUM VITAE et STUDIORUM

## Laura Maria Sangalli

Born on 12 January 1979 in Pavia, Italy. Italian citizen. Married, one child.

MOX - Dipartimento di Matematica, Politecnico di Milano, P.zza L. da Vinci 32, 20133 Milano, MI, Italy  
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### POSITIONS

**2015/03 - present** Associate Professor, MOX Laboratory for Modeling and Scientific Computing, Dipartimento di Matematica, Politecnico di Milano, Italy.

*National Full Professor Qualification in Statistics* (Abilitazione Scientifica Nazionale 2016, idoneità I fascia, settore 13/D1 - Statistica).

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

**2010/06 - 2014/06** Assistant Professor in Statistics (Ricercatore Junior), MOX, Dipartimento di Matematica, Politecnico di Milano.

*National Associate Professor Qualification in Statistics* (Abilitazione Scientifica Nazionale 2012, idoneità 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.

### RESEARCH GRANTS

**2010/12 - 2014/07** *Starting grant FIRB Futuro in Ricerca*, funded by MIUR Ministero dell'Istruzione dell'Università e della Ricerca (264,9K euro, total with co-funding: 327K euro). Research project: "Advanced statistical and numerical methods for the analysis of high dimensional functional data in life sciences and engineering" (short title: SNAPLE Statistical and Numerical methods for the Analysis of Problems in Life sciences and Engineering)

<http://mox.polimi.it/users/sangalli/firbSNAPLE.html>

*One in 105 projects selected out of 3792 proposals* in all fields of sciences and humanities (*success rate 2.7%*).

Principal investigator: Laura M. Sangalli. Research team: Laura M. Sangalli (funded by SNAPLE 2013/06 - 2014/06), John A. D. Aston (CRiSM, University of Warwick, UK), Simona Perotto, Bree Ettinger (PostDoc funded by SNAPLE 2011/06 - 2013/06), Laura Azzimonti (PostDoc funded by SNAPLE 2013/01 - 2014/01).

**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.

**2015/03 - 2019/03** Member of the proponent team and currently acting as 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. Forecasted EU funding: about 680000 euro.

**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.

**2007 - present** Various visiting research fellowships and grants (see VISITING).

**2010, 2012 and 2013** Young researcher grants, Dipartimento di Matematica, Politecnico di Milano (awarded on the base of publication records).

**2005 and 2004** Research prizes for PhD students of the Istituto Universitario di Studi Superiori di Pavia.

**2005/03 - 2005/08** *MARIE-CURIE* visiting PhD scholarship, Lancaster University.

**2002/11 - 2005/10** Italian PhD scholarship.

#### EDITORIAL AND REFEREEING ACTIVITY

**2016 - present** *Co-Editor in Chief* (with Yimin Xiao) of Statistics and Probability Letters.

**2015 - present** Associate Editor of the International Journal of Biostatistics.

**2015 - present** Associate Editor of Stat.

**2016 - 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.

**2009 - present** Referee for: Annals of Statistics; Journal of the American Statistical Association; Journal of the Royal Statistical Society Series B; Journal of the Royal Statistical Society Series C; Biometrika; Journal of Multivariate Analysis; Scandinavian Journal of Statistics; Environmetrics; Journal of Computational and Graphical Statistics; Computational Statistics and Data Analysis; Stochastic Environmental Research and Risk Assessment; Bayesian Analysis; Psychometrika; Atmospheric Measurement Techniques; Springer Series Contribution to Statistics.

**2013 - present** Referee of PhD thesis.

**2009** Co-Editor of the conference proceedings of S.Co.2009.

#### 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.

## RESEARCH EVALUATION

- 2012** Panelist 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).

## CONFERENCE ORGANIZATION AND OTHER SCIENTIFIC ACTIVITIES (SELECTED)

- 2016-2020** Elected member of the European Regional Committee of the Bernoulli Society.
- 2017 - 2018** Member of the Scientific Program Committee of the 23rd International Conference in Computational Statistics, COMPSTAT 2018, Iasi, Romania.
- 2016 - 2017** Member of the Scientific Program Committee of the European Meeting of Statisticians 2017, 31st edition, Helsinki, Finland. The committee is composed by only 6 international researchers.
- 2016 - 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 Matemática Oaxaca, Mexico.
- 2016 - 2017** Member of the Scientific Committee of the conference of The International Environmetrics Society, TIES 2017, Bergamo, Italy.
- 2016 - 2017** Member of the Scientific Program 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.
- 2015 - present** 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.
- 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.
- 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.
- 2013 - present** 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.
- 2013 - 2014** Member of the Organizing Committee of “IWFOS2014, 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 Committee of the Competition and BarCamp on “Technology foresight and statistics for the future”; Politecnico di Milano.

**2012 - present** Organizer of Mini-Symposia and Invited Sessions in various national and international conferences; see Meetings below.

**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, Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction”; Politecnico di Milano.

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

**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.

## INVITED SEMINARS (\*) AND ORGANIZING (‡) AT MEETINGS

I received more than 120 personal invitations to give seminars at international meetings. The following are those I was able to accept. In several cases, my travel and subsistence have been funded by the organizers.

- \* **2017/07** International Workshop on Statistical Modelling IWSM 2017, Groningen, Netherlands. *KEYNOTE talk*; funded by IWSM.
- \* **2017/06** The International Workshop on Functional and Operatorial Statistics IWFOs 2017, A Coruña, Spain. *KEYNOTE talk*; funded by IWFOs
- \* **2017/03** ENAR 2017 Spring Meeting, Washington, USA. *Invited talk*.
- \* ‡ **2016/12** CMStatistics16, 9th International Conference of the ERCIM working group on Computing and Statistics; Seville, Spain. *Invited talk. Organizer of the Invited Session* “Inference for functional data, with life sciences applications”.
- \* **2017/11** "Big Data", ICT4INTEL, Dipartimento delle informazioni per la sicurezza (DIS), Presidenza del Consiglio dei Ministri della Repubblica Italiana. *Invited presentation*.
- \* **2016/09** SIMAI2016, congress of the Italian Society of Industrial and Applied Mathematics, Milano. *Invited talk*.
- \* **2016/05** CASI2016, 36th Conference on Applied Statistics in Ireland, Limerick, Ireland. *KEYNOTE talk*; funded by CASI.
- \* **2016/05** Workshop on functional data analysis: recent progress and new perspectives; Les Diablerets, Switzerland. *Invited talk*; funded by École Polytechnique Fédérale de Lausanne.
- \* **2016/04** SIAM Conference on Uncertainty Quantification; Lausanne, Switzerland. *Invited talk*.
- \* ‡ **2015/12** CMStatistics15, 8th International Conference of the ERCIM working group on Computing and Statistics; London, UK. *Invited talk. Organizer of the Invited Session* “Functional and object data with complex dependencies”.
- \* **2015/09** Eighth International Workshop on Simulation; Wien, Austria. *Invited talk*.
- \* **2015/07** ISNPS International Society of NonParametric Statistics, Congress on Biosciences, Medicine and Novel Nonparametric Methods; Graz, Austria. *Invited talk*.
- \* **2015/06** Workshop on Frontiers in Functional Data Analysis; BIRS Banff International Research Station for Mathematical Innovation and Discovery, Canada. *Invited talk*; funded by BIRS.
- \* **2015/06** GRASPA15, biannual meeting of the Research Group for Statistical Application to Environmental Problems; Bari, Italy. *Invited talk*.
- \* ‡ **2014/12** ERCIM’14, 7th International Conference of the ERCIM working group on Computing and Statistics; Pisa, Italy. *Invited talk. Organizer of the Invited Session* “Data on manifolds and manifold data”. *Member of the Scientific Committee*.
- \* **2014/06** SIS Scientific Meeting 2014, Società Italiana di Statistica; Cagliari, Italy. *Invited talks*.
- \* **2014/03** Workshop on Spatial Statistics for Environmental and Energy Challenges; KAUST, Saudi Arabia. *Invited talk*; Funded by KAUST.
- \* ‡ **2013/12** ERCIM’13, 6th International Conference of the ERCIM working group on Computing and Statistics; London, UK. *Invited talk. Organizer of the Invited Session* “Spatial Functional Data Analysis”.
- \* **2013/09** RSS Royal Statistical Society International Conference; University of Newcastle, UK. *Invited talk; Selected paper for the Journal of the Royal Statistical Society invited session (for Ser. B Statistical Methodology)*. Funded by School of Maths & Stats, Newcastle University, UK.
- ‡ **2013/09** S.Co.2013, Eighth Conference on Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction; Politecnico di Milano. *Organizing Committee*.

- \* **2013/06** SIS2013, Società Italiana di Statistica; Università degli Studi di Brescia. *Invited talk.*
- \* **2012/12** Barcelona BioMed Conference in Bayesian Methods in Biostatistics and Bioinformatics, Barcelona, Spain. *Invited talk*; funded by Institute for Research in Biomedicine IRB Barcelona.
- \* **2012/12** ERCIM'12, 5th International Conference of the ERCIM working group on Computing and Statistics; Oviedo, Spain. *Invited talk.*
- ‡ **2012/11** Workshop on Statistics of Time Warpings and Phase Variations; MBI Mathematical Biosciences Institute, The Ohio State University, OH, USA. *Organizer*; funded by MBI.
- \* **2012/09** Workshop on High dimensional and dependent functional data; Bristol, UK. *Invited talk*; funded by the University of Bristol.
- \* **2012/08** ISCB 33rd Annual Conference of the International Society for Clinical Biostatistics; Bergen, Norway. *Invited talk*; funded by the International Society for Clinical Biostatistics.
- \* **2012/07** Joint Meeting of yBIS International Young Business and Industrial Statisticians and jSPE Young Portuguese Statisticians, Lisbon, Portugal. *Invited talk.*
- ‡ **2012/06** SIMAI2012, Società Italiana di Matematica Applicata ed Industriale; Politecnico di Torino, Italy. *Co-organizer of the minisymposium* "Computational and statistical methods for biomedical applications".
- ‡ **2012/06** SIS2012, Società Italiana di Statistica; Sapienza Università di Roma, Italy. *Organizer of the Specialized Session* "Statistics for high-dimensional and functional data".
- ‡ **2012/04** SIAM Conference on Uncertainty Quantification; Raleigh, North Carolina. *Co-organizer of the minisymposium* "Data analysis and inference in functional spaces; statistical and numerical approaches to uncertainty estimation".
- \* **2012/01** TIES2012, 22nd Annual Conference of The International Environmetrics Society; Advanced Institute of Mathematics, University of Hyderabad, India. *Invited talk.*
- \* **2011/12** ERCIM'11, 4th International Conference of the ERCIM working group on Computing and Statistics; University of London, UK. *Invited talk.*
- \* **2011/10** Incontro dei giovani statistici, Giornata Italiana della Statistica; Sapienza Università di Roma. *Invited brief communication.*
- ‡ **2011/10** SNAPLE kickoff meeting, First one-day workshop on FIRB Futuro in Ricerca research project SNAPLE; Politecnico di Milano. *Organizer.*
- \* **2011/03** SIAM Conference on Computational Science and Engineering; Reno, Nevada. *Invited talk.*
- \* **2010/08** JSM2010 Joint Statistical Meetings; Vancouver, Canada. *Invited talk.*
- \* **2010/05** Workshop on Functional Data Analysis: Future Directions; BIRS Banff International Research Station for Mathematical Innovation and Discovery, Canada. *Invited talk*; funded by BIRS.
- ‡ **2009/09** S.Co.2009, Sixth Conference on Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction; Politecnico di Milano. *Organizing Committee.*
- \* **2009/09** SFC2009, XVIth Joint Meeting of the French Society of Classification; Grenoble, France. *Invited talk.*
- \* **2008/09** SIMAI2008, Società Italiana di Matematica Applicata ed Industriale; Roma, Italy. *Invited talk.* Young researcher travel support.
- 2008/01** MCMSki: Markov chain Monte Carlo in Theory and Practice; IMS and ISBA international meeting, Bormio, Italy. *Prize awarded for poster presentation.* Young researcher travel support.
- 2004/06 - present** Co-author of invited talks and presenter of contributed talks at several international conferences (not listed in detail).

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

### 3 Post-Doctoral fellows

- Eleonora Arnone, 2017/12 - present.
- Laura Azzimonti, 2013/01 - 2014/01, *funded by my starting grant project FIRB SNAPLE*; currently researcher at IDSIA Institute of artificial intelligence, Switzerland.
- Bree Ettinger, 2011/06 - 2013/06, *funded by my starting grant project FIRB SNAPLE*; currently lecturer and co-director of undergraduate studies at Emory University, Atlanta, USA.

### 7 PhD students

- Federico Ferraccioli, 2017/11 - present, visiting PhD student from Università degli Studi di Padova, Italy.
- Eleonora Arnone, 2014/10 - 2018/02; currently postdoc at Politecnico di Milano.
- Antonio Elias Fernandez, 2017/04 - 2017/07, visiting PhD student from Universidad Carlos III de Madrid.
- Mara Bernardi, 2013/10 - 2016/10; currently postdoc at SISSA International School for Advanced Studies, Trieste, Italy.
- Marzia Cremona, 2012/10 - 2015/10; currently postdoc at Pennsylvania State University, USA.
- Gabriel Martos Venturini, 2013/09 - 2013/12, visiting PhD student from Universidad Carlos III de Madrid; currently post-doc at Universidad Católica de Chile.
- Laura Azzimonti, 2010/01 - 2013/01; currently researcher at IDSIA Institute of artificial intelligence, Switzerland.

### More than 20 Master students

Among these:

- Marco Stefanucci, 2015, visiting student from University of Rome, currently PhD student at University of Rome;
- Eardi Lila, 2014, currently PhD student at University of Cambridge;
- Matthieu Wilhelm, 2014, visiting student from École Polytechnique Fédérale de Lausanne, currently PhD student at Université de Neuchâtel, Switzerland;
- Mara Bernardi, 2013, currently postdoc at SISSA International School for Advanced Studies, Trieste, Italy;
- Davide Pigoli, 2009, currently lecturer at King's College London, UK;
- Valeria Vitelli, 2008, currently researcher at University of Oslo, Norway.

## TEACHING

Lecturer (since 2005), Teaching Assistant (since 2003) and Tutor (since 2001) for several courses in Statistics at undergraduate, graduate, post-graduate and post-doctoral level (\*: course held in English). Currently lecturing about 400 students per year.

### 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

- Coordinator and 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 IN HIGH-SCHOOLS

**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.

### OTHER SKILLS

**Language skills** English, fluent (spoken and written); French, fluent (spoken and written); Italian, mother tongue.

**Computing skills** Experienced programmer in S-Plus/R, Matlab. Good knowledge of the statistical package SAS.

### RESEARCH PROJECTS

**2010 - 2014** Starting grant project FIRB Futuro in Ricerca project SNAPLE (see RESEARCH GRANTS). *Principal Investigator.*

**2010 - 2013** Dote Ricercatore, Politecnico di Milano - Regione Lombardia, research project “Functional data analysis for life sciences” (see RESEARCH GRANTS).

**2013 - 2014** Research Project “Algoritmi numerici e di ottimizzazione per il supporto alle missioni di ricerca e soccorso”, funded by AgustaWestland within the research program “RTO Rapid Tasking Operations” (MIUR - Regione Lombardia). Investigator.

**2006 - 2009** *AneuRisk* Project, supported by Fondazione Politecnico di Milano and Siemens Medical Solutions Italia; P.I.: Prof. A. Veneziani. Investigator.

**2006 - 2008** PRIN project “Numerical Approximation of multiscale and multiphysics problems with adaptive methods”, funded by MIUR Ministero dell’Istruzione dell’Università e della Ricerca, scientific coordinators: Prof. Fausto Saleri, Marco Verani. Investigator.

**2005** Marie Curie Training Site Human Potential Programme “Computer Intensive Methods in Applied Statistical Modelling”, funded by 6th Framework Program European Commission. Investigator.

**2003 - 2005** PRIN project “Bayesian networks and causal inference: methods and applications”, funded by MIUR Ministero dell’Istruzione dell’Università e della Ricerca, scientific coordinator: Prof. G. Consonni. Investigator.

**2002 - 2004** PRIN project “Bayesian nonparametric methods and their applications”, funded by MIUR Ministero dell’Istruzione dell’Università e della Ricerca, scientific coordinator: Prof. E. Regazzini. Investigator.

## MAIN INTERNATIONAL COLLABORATIONS

James Ramsay, McGill University, Montreal, Canada: 4 papers co-authored.

Steve Marron, Univ. of North Carolina, NC, USA: 2 papers co-authored.

Anuj Srivastava, Florida State Univ., USA: 2 papers co-authored.

Fabio Nobile, École Polytechnique Fédérale de Lausanne: 2 papers co-authored.

## ONGOING SCIENTIFIC COLLABORATIONS

### Main national collaborations

- IIT Istituto Italiano di Tecnologia
- IEO Istituto Europeo di Oncologia
- Dipartimento di Scienze Chirurgiche Specialistiche, Università di Milano;
- Chirurgia Vascolare, Fondazione I.R.C.C.S. Ca’ Granda Ospedale Maggiore Policlinico, Milano;
- Dipartimento di Scienze Neurologiche, Fondazione I.R.C.C.S. Ca’ Granda Ospedale Maggiore Policlinico, Milano;
- Dipartimento di Neuroradiologia, Ospedale Niguarda Ca’ Granda, Milano;
- Department of Neurophysiology, Fondazione IRCCS Istituto Neurologico “C. Besta” Milano;
- Cardiovascular Clinical Biology, Università Vita-Salute San Raffaele; Coronary Care Unit, Fondazione San Raffaele; Cytometry Service, Ospedale San Raffaele, Milano;
- Experimental Immunology Unit, Dip. di Biotecnologie DIBIT, Fondazione San Raffaele, Milano.
- Dipartimento di Patologia, Unità di Urologia and Unità di Day-Surgery, Fondazione IRCCS Istituto Nazionale per lo Studio e la Cura dei Tumori, Milano.
- Dipartimento di Bioingegneria, Istituto di Ricerche Farmacologiche Mario Negri, Bergamo;

### Main international collaborations

- Department of Mathematics and Statistics, McGill University, Montreal, Canada;
- Department of Mathematics and Computer Sciences, Emory University, Atlanta, USA;
- Department of Statistics, University of North Carolina at Chapel Hill, USA;
- Department of Statistics, Florida State University, USA;
- Department of Biostatistics, Columbia Mailman School of Public Health, USA;
- CRiSM Center for Research in Statistical Methodology, Dept. of Statistics, University of Warwick, UK;
- Department of Mathematical Sciences, University of Copenhagen, Denmark.

## CAREER BREAKS

**2014 - 2016** Maternity and parental leaves (more than 8 months).

## PUBLICATIONS

### Publications in international journals

- [1] 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.
- [2] Anna Maria Paganoni and Laura M. Sangalli (2017), “Functional regression models: some directions of future research”, *Statistical Modelling*, 17(1), 1–6.
- [3] 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.
- [4] Piotr Kokoszka, Hanny Oja, Byeong Park, Laura M. Sangalli (2017), “Special issue on functional data analysis”, *Econometrics and Statistics*, 1, 99–100.
- [5] 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.
- [6] Bree Ettinger, Simona Perotto, Laura M. Sangalli (2016), “Spatial regression models over two-dimensional manifolds”, *Biometrika*, 103 (1), 71–88.
- [7] Matthieu Wilhelm, Laura M. Sangalli (2016), “Generalized Spatial Regression with Differential Regularization”, *Journal of Statistical Computation and Simulation*, 86 (13), 2497–2518.
- [8] 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.
- [9] 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.
- [10] 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.
- [11] 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.
- [12] 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.
- [13] 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.
- [14] N. Nicolai, L.M. Sangalli, A. Necchi, P. Giannatempo, A.M. Paganoni, M. Colecchia, L. Piva, M. Catanzaro, D. Biondi, 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.
- [15] 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.

- [16] 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.
- [17] 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.
- [18] 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.
- [19] 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.
- [20] 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.
- [21] 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.
- [22] Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2014), “Rejoinder: Analysis of AneuRisk65 data”, *Electronic Journal of Statistics*, Vol. 8, No. 2, pp. 1937–1939.
- [23] 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.
- [24] 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.
- [25] 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.
- [26] Helle Sørensen, Jeff Goldsmith, Laura M. Sangalli (2013), “An introduction with medical applications to functional data analysis”. *Statistics in Medicine*, 32, pp. 5222–5240.
- [27] 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.
- [28] 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.
- [29] 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.
- [30] 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.
- [31] 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.
- [32] Gareth O. Roberts and Laura M. Sangalli (2010), “Latent diffusion models for survival analysis”, *Bernoulli*, Vol. 16, pp. 435–458.

- [33] 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.
- [34] 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.
- [35] 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.
- [36] 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.
- [37] 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  $CO_2$  Laser Therapy”, *Analytical and Quantitative Cytology and Histology*, Vol. 31, No. 3, pp. 153–160.
- [38] 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

- [39] 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.
- [40] 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.
- [41] 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.
- [42] 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.
- [43] 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.
- [44] 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.
- [45] 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.
- [46] 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.
- [47] 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 ISI journals

- [48] P. Giannatempo, A. Paganoni, L.M. Sangalli, M. Colecchia, L. Piva, M. Catanzaro, T. Torelli, E. Farè, D. Raggi, D. Biasoni, S. Stagni, G. Pizzocaro, R. Salvioni, N. Nicolai (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.
- [49] 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.
- [50] 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.
- [51] 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.
- [52] 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.
- [53] 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.
- [54] 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

- [55] 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)
- [56] 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)
- [57] Laura M. Sangalli (2014), “Functional data analysis in spaces of surfaces”, Proceedings of the 47th Scientific Meeting of the Italian Statistical Society. (peer-reviewed)
- [58] 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)
- [59] 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)
- [60] 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.

- [61] 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.
- [62] 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.
- [63] Laura M. Sangalli (2013), “On a novel class of models for spatial data analysis”, Proceedings of S.Co.2013 Conference.
- [64] Matthieu Wilhelm, Laura M. Sangalli (2013), “Generalized models for spatial regression with differential penalization”, Proceedings of S.Co.2013 Conference.
- [65] 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)
- [66] 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)
- [67] 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)
- [68] 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)
- [69] 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.
- [70] 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.
- [71] 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.
- [72] 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.
- [73] 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)
- [74] 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)
- [75] 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)
- [76] 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)
- [77] 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.

- [78] 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>.
- [79] 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>.
- [80] 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.
- [81] 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.
- [82] 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)
- [83] 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)
- [84] 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)
- [85] 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>.
- [86] 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

- [87] 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

- [88] 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.
- [89] Laura M. Sangalli (2006), “Random probability measures and their applications to Bayesian Statistics”, PhD thesis, Dipartimento di Matematica, Università degli Studi di Pavia.

## Software

- [90] Franco Dassi, Bree Ettinger, Marco Martinolli, Simona Perotto, Laura M. Sangalli and Stefano Ubbiali (2017), “meshsimp: Simplification of Surface Triangular Meshes with Associated Distributed Data”, R package version 0.1.1, <https://CRAN.R-project.org/package=meshsimp>



- [91] Eardi Lila, Laura M. Sangalli, Jim Ramsay, Luca Formaggia (2016), “fdaPDE: functional data analysis and Partial Differential Equations; statistical analysis of functional and spatial data, based on regression with partial differential regularizations”, R package version 0.1-2, <http://CRAN.R-project.org/package=fdaPDE>
- [92] Alice Parodi, Marco Morelli, Laura M. Sangalli, Piercesare Secchi, Simone Vantini (2016), “FunChIP: Clustering and Alignment of ChIP-Seq peaks based on their shapes”, Bioconductor, <http://bioconductor.org/packages/FunChIP/>
- [93] Alice Parodi, Mirco Patriarca, Laura Sangalli, Piercesare Secchi, Simone Vantini, Valeria Vitelli (2015), “fdakma: Clustering and alignment of a given set of curves”, R package version 1.2.1, <http://CRAN.R-project.org/package=fdakma>