

MARIO TROTTINI

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Education

Ph.D, Department of Statistics, Carnegie Mellon University, Pittsburgh, PA, USA. Thesis: “Decision Models for Data Disclosure Limitation”. Advisor: Prof. Stephen E. Fienberg

Ph.D, Department of Statistics, University “La Sapienza”, Rome, Italy. Thesis: “A Generalized Predictive Criterion for Model Selection”. Advisor: Prof. Fulvio Spezzaferri

B.S. , Department of Statistics, University “La Sapienza”, Rome, Italy. Thesis: “Bayesian Robustness”. Advisor: Prof. Fulvio Spezzaferri

Research merits acknowledged by Spanish Institutions

- Sexenios de investigación reconocidos por la CNEAI: 2
- Acreditación como Profesor Titular de Universidad por la ANECA: año 2011

Awards/Fellowships

- Postdoctoral Marie Curie Individual Fellowship for Young European Researcher, CORDIS program “Improve Human Potential. Host Institution: Department of Statistics, University of Valencia, Valencia, Spain, February 2001-February 2003.
- *Honorable Mention Savage Award* in the Leonard J. Savage Award for the Ph.D thesis “Decision Models for Data Disclosure Limitation”, Joint Statistical Meeting, Minneapolis, 2005.

Research Interests

- Bayesian Statistical Modeling
- (Multiple Objectives) Decision Theory
- Model Selection
- Statistical Confidentiality and Data Disclosure Limitation
- Time Series and Spatial Statistics

Academic Experience

- julio 2016-present** Profesor Contratado Doctor, Department of Mathematics, University of Alicante, Spain
- 2013-Julio 2016** Profesor Titular de Universidad, Department of Mathematics, University of Alicante, Spain
- 2011-2013** Profesor Contratado Doctor, Department of Statistics, University of Alicante, Spain
- 2007-2011** Profesor Ayudante Doctor, Department of Statistics, University of Alicante, Spain
- 2003-2007** Profesor Ayudante, Department of Statistics, University of Alicante, Spain
- 2000-2001** Researcher Assistant, Department of Statistics, Carnegie Mellon University, Pittsburgh, PA, USA.
- 1998-2000** Teaching Assistant, Department of Statistics, Carnegie Mellon University, Pittsburgh, PA, USA.

Research Projects

- 1. Project's Title:** DHEA GABA RECEPTOR RESPONSES IN AGED ADULTS (MH-55756)

Funding Institution : NATIONAL INSTITUTE FOR MENTAL HEALTH (USA)

Award period : 01/01/1997 to 31/12/2001

Principal Investigator : P.D. Kroboth
- 2. Project's Title:** LEARNING AND INTELLIGENT SYSTEMS: A NEXT GENERATION INTELLIGENT LEARNING ENVIROMENT FOR STATISTICAL REASONING (LIS-9720354)

Funding Institution : NATIONAL SCIENCE FOUNDATION (USA), NSF PROGRAM : LEARNING AND INTELLIGENT SYSTEMS (LIS)

Award period : 01/01/1998 to 31/12/2001

Principal Investigator : M. C. Lovett
- 3. Project's Title:** A WEB-BASED QUERY SYSTEM FOR DISCLOSURE-LIMITED STATISTICAL ANALYSIS OF CONFIDENTIAL DATA (EIA-9876619)

Funding Institution : NATIONAL INSTITUTE OF STATISTICAL SCIENCES (USA)

Award period : 29/09/1999 to 30/09/2002

Principal Investigator : A.F. Karr

4. **Project's Title:** STATISTICAL INFORMATION, CONFIDENTIALITY AND DISCLOSURE LIMITATION (HPMFCT-2000-00463)

Funding Institution : EUROPEAN COMMUNITY, CORDIS PROGRAM, IMPROVING THE HUMAN RESEARCH POTENTIAL

Award period : 15/02/2001 to 14/02/2003

Principal Investigator : M. J. Bayarri

5. **Project's Title:** DATA CONFIDENTIALITY, DATA QUALITY AND DATA INTEGRATION FOR FEDERAL DATABASES: FOUNDATIONS TO SOFTWARE PROTOTYPES (EIA-0131884)

Funding Institution : NATIONAL INSTITUTE OF STATISTICAL SCIENCES (USA)

Award period : 01/08/2002 to 31/07/2007

Principal Investigator : A.F. Karr

6. **Project's Title:** MÉTODOS AVANZADOS DE PROCESADO DE SEÑAL EN NEUROIMAGEN POR RESONANCIA MAGNETICA Y ELECTROENCEFALOGRAFIA. APLICACION A CARTOGRAFIA CEREBRAL E INTERFAZ CEREBRO-COMPUTADOR EN DISCAPACITADOS (TEC2006-13966-C03-01/TCM)

Funding Institution : SPANISH MINISTRY OF EDUCATION AND SCIENCE

Award period : 01/12/2006 to 30/11/2009

Principal Investigator : J.A. Hernández Tamames

7. **Project's Title:** MÉTODOS AVANZADOS DE PROCESADO DE SEÑAL EN NEUROIMAGEN POR RESONANCIA MAGNETICA Y ELECTROENCEFALOGRAFIA. APLICACION A CARTOGRAFIA CEREBRAL E INTERFAZ CEREBRO-COMPUTADOR EN DISCAPACITADOS (TEC2005-07801-C03-01/TCM)

Funding Institution : SPANISH MINISTRY OF EDUCATION AND SCIENCE

Award period : 20/12/2005 to 20/12/2006

Principal Investigator : J.A. Hernández Tamames

8. **Project's Title:** Soporte nacional a "ESTUDIO DE VARIACIONES DEL NIVEL DEL MAR MEDITERRÁNEO Y DEL MAR NEGRO: UNA SINERGIA DE ALTIMETRÍA, DATOS DE MAREÓGRAFOS Y MODELOS GENERALES DE CIRCULACIÓN OCEANOGRÁFICA (ESP2006-11357)

Funding Institution : SPANISH MINISTRY OF EDUCATION AND SCIENCE

Award period : 01/10/2006 to 22/12/2009

Principal Investigator : M. I. Vigo

9. **Project's Title:** ANÁLISIS EXPLORATORIO Y MODELADO DE LOS DATOS DE LA ENCUESTA SUMINISTRADA POR LABAQUA SOBRE CONSUMO DE AGUA EN ALICANTE (SGITT-OTRI: LABAQUA1-08PA)

Funding Institution : LABAQUA S. A.

Award period : 09/12/2008 to 15/02/2009

Principal Investigator : M. Trottini

10. **Project's Title:** ESTUDIO DE VARIACIONES DEL NIVEL DEL MAR MEDITERRÁNEO Y DEL MAR NEGRO: UNA COMBINACIÓN DE ALTIMETRÍA, MAREÓGRAFOS Y MODELOS GENERALES DE CIRCULACIÓN OCEANOGRÁFICA (ACOMP/2009/031)

Funding Institution : GENERALIDAD VALENCIANA (LOCAL GOVERNMENT)

Award period : 01/01/2009 to 31/12/2009

Principal Investigator : M. I. Vigo

11. **Project's Title:** DISEÑO DE EXPERIMENTOS PARA LA VALIDACIÓN DE MODELOS Y ANÁLISIS DE LAS PREFERENCIAS DE LOS CONSUMIDORES (SGITT-OTRI: LABAQUA1-09PA)

Funding Institution : LABAQUA S. A.

Award period : 31/07/2009 to 15/09/2009

Principal Investigator : M. Trottini

12. **Project's Title:** DISEÑO DE ENCUESTA SOBRE EL CONSUMO DE AGUA EN BARCELONA (SGITT-OTRI: LABAQUA3-09PA)

Funding Institution : LABAQUA S. A.

Award period : 09/12/2009 to 09/06/2010

Principal Investigator : M. Trottini

13. **Project's Title:** SISTEMAS DINÁMICOS Y ESTADÍSTICA (VIGROB-229)

Funding Institution : UNIVERSITY OF ALICANTE

Award period : 01/02/2010 to 31/12/2010

Principal Investigator : C. Alonso

14. **Project's Title:** SURFACE GEOSTROPHIC CURRENTS FROM ALTIMETRY AND SPACE GRAVITY FOR THE GLOBAL OCEAN AND THE MEDITERRANEAN

Funding Institution : INDIAN SPACE ORGANIZATION AND CENTRE NATIONAL D'ETUDES SPATIALES (CNES-DSP/OT09-27509)

Award period : 01/01/2010 to 31/12/2010

Principal Investigator : M. I. Vigo

15. **Project's Title:** VARIACIONES DEL NIVEL DEL MAR Y CORRIENTES GEOSTRÓFICAS DEL MAR MEDITERRANEO A PARTIR DE DATOS DE ALTIMETRÍA DESDE SATÉLITE. (AYA2009-07981)

Funding Institution : SPANISH MINISTRY OF SCIENCE AND INNOVATION

Award period : 01/01/2010 to 31/12/2010

Principal Investigator : M. I. Vigo

16. **Project's Title:** MÉTODOS ESTADÍSTICO-MATEMÁTICO PARA EL TRATAMIENTO DE DATOS DE OBSERVACIÓN DE LA TIERRA (VIGROB-260)

Funding Institution : UNIVERSITY OF ALICANTE

Award period : 2010-2011; 2012-2013; 2012-2013; 2013-2014; 2014-2015; 2015-2016;

Principal Investigator : M. Trottini

17. **Project's Title:** PARTICIPACIÓN EN EL EQUIPO CIENTÍFICO DE LA MISIÓN DE OBSERVACIÓN DE LA TIERRA SARAL/ALTIKA: DETERMINACIÓN DE LA MASA Y NIVEL DEL MAR MEDITERRANEO COMO ELEMENTOS DETERMINANTES DEL CLIMA REGIONAL (CGL2010-12153-E)

Funding Institution : SPANISH MINISTRY OF SCIENCE AND INNOVATION

Award period : 01/01/2011 to 31/12/2013

Principal Investigator : M. I. Vigo

18. **Project's Title:** Basin Scale Geostrophy: a challenge for GOCE and altimetry data. The case of the Mediterranean Sea (CNES-DSP/OT/12-2118).

Funding Institution : NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA) AND CENTRE NATIONAL D'ETUDES SPATIALES (CNES)

Award period : 01/01/2013 to 31/12/2016

Principal Investigator : M. I. Vigo

19. **Project's Title:** DESARROLLO DE DOS MODELOS QUE PERMITAN PREDECIR, A PARTIR DE LOS DATOS DE CALIDAD DEL AGUA DE UN DEPOSITO INICIAL, LA CONCENTRACIÓN DE CLORO Y LA TURBIDEZ DEL AGUA EN UN PUNTO DE ALEJADO DE LA RED DE DISTRIBUCIÓN DE LABAQUA (SGITT-OTRI: LABAQUA1-15PA)

Funding Institution : LABAQUA S. A.

Award period : 23/04/2015 to 23/08/2015

Principal Investigator : M. Trottini

Selected Publications

Journal Papers

1. J. M. Sanchez-Reales, M. I. Vigo, y **M. Trottini** (2016). Ocean Surface Geostrophic Circulation Climatology and Annual Variations Inferred from Satellite Altimetry and GOCE Gravity Data. *Pure and Applied Geophysics*, vol. 849-860 pag. 1-12.
2. **M. Trottini**, M. I. Vigo, and S. Belda Palazón (2015). On the Use of Running Trends as Summary Statistics for Univariate Time Series and Time Series Association. *J. Climate*, vol. 28, pag. 7489 - 7502.
3. **M. Trottini**, M. Bossú, D. Corridore, G. Ierardo, V. Luzzi, M. Saccucci, and A. Polimeni (2015). "Assessing Risk Factors for Dental Caries: a Statistical Modeling Approach, *Caries Research* , vol. 49, pag. 193 - 208.
4. **M. Trottini**, K. Muralidhar and R. Sarathy (2012). An Investigation of Model-Based Microdata Masking for Magnitude Tabular Data Release. *Lecture Notes in Computer Science*, Vol. 7556, pag. 4762.
5. **M. Trottini**, K. Muralidhar and R. Sarathy (2011). Maintaining Tail Dependence in Data Shuffling Using t Copula. *Statistics Probability Letters*, Vol. 81, pag. 420-428.
6. M. I. Vigo, J. M. Sanchez-Reales, **M. Trottini**, and B. F. Chao (2011). Mediterranean Sea Level Variations: Analysis of the Satellite Altimetric Data, 1992-2008. *Journal of Geodynamics*, vol. 52, pag. 271-278.
7. **M. Trottini**, K. Muralidhar and R. Sarathy (2008). A Preliminary Investigation of the Impact of the Gaussian versus t-Copula for Data Perturbation. *Lecture Notes in Computer Science*, Vol. 5262, pag. 127-138.
8. **M. Trottini** (2008). Disclosure Limitation as a Decision Problem. *Metron*, Vol. LXVI, pag. 109-134.
9. J. Pérez-Carpinell, V. J. Camps, and **M. Trottini** (2008). Color Memory in Children. *Color Research and Application*, Vol. 33, pag. 372-380.

10. D. Ting, S.E. Fienberg, and **M. Trottini** (2008). ROMM Methodology for Microdata Release. *International Journal of Information and Computer Security*, Vol. 2, pag. 86-105.
11. **M. Trottini**, L. Franconi and S. Poletti (2006). Italian Household Expenditure Survey: A Proposal for Data Dissemination. *Lecture Notes in Computer Science*, Vol. 4302, pag. 318-333.
12. J. Pérez-Carpinell, V. J. Camps, **M. Trottini** and C. M. Pérez-Baylach (2006). Color Memory in Elderly Adults. *Color Research and Application*, Vol. 31, n. 6 , pag. 458-467.
13. **M. Trottini**, S.E. Fienberg, U.E. Makov and M. M. Meyer (2004). Additive Noise and Multiplicative Bias as Disclosure Limitation Techniques for Continuous Microdata. *Journal of Computational Methods in Science and Engineering*, Vol. 4, n. 1,2, pag. 5-16.
14. **M. Trottini**, and F. Spezzaferri (2002). A Generalized Predictive Criterion For Model Selection. *The Canadian Journal of Statistics*, Vol. 30, n. 1, pag. 1-18.
15. **M. Trottini**, and S.E. Fienberg (2002). Modelling Uncertainty for Disclosure Risk and Data Utility. *The International Journal of Uncertainty, Fuzziness and Knowledge Based Systems*, Vol. 10, n. 5, pag. 511-528.
16. **M. Trottini**(2001). A Decision-Theoretic Approach to Data Disclosure Problems. *Research in Official Statistics*, Vol. 4, n. 1, pag. 2-17.
17. T.J. Fabian , M.A. Dew , B.G.Pollock, C.F. Reynolds, B.H. Mulsant , M.A. Butters, M.D. Zmuda , A.M. Linares, **M. Trottini**, P.D. Kroboth (2001). Endogenous Concentrations of Dhea And Dhea-S Decrease with Remission of Depression in Older Adults. *Biological Psychiatry*, Vol. 50, pag. 767-764.

Book Chapters

1. **M. Trottini** (2006). *Statistical Confidentiality In Longitudinal Linked Data: Objectives And Attributes*. Monograph of Official Statistics. Work Session On Statistical Data Confidentiality, Geneva, 9-11 November 2005, EUROSTAT, pag. 165-173.
2. D. Ting, S. E. Fienberg, and **M. Trottini** (2003). *Assessing Disclosure Risk and Data Utility: A Multiple Objectives Decision Problem*. Monograph of Official Statistics. Work Session On Statistical Data Confidentiality, Luxembourg, 7-9 April 2003, EUROSTAT, pag. 312-323.
3. A. Dobra, **M. Trottini**, and S.E. Fienberg (2003). *Assessing the Risk of Disclosure of Confidential Categorical Data*. Bayesian Statistics 7 , M.J. Bayarri, J.O. Berger, J.M. Bernardo, A.P. Dawid, D. Heckerman, A.F.M Smith, M. West Eds., Oxford University Press, pag. 125-144.
4. **M. Trottini** (2002). *Un Nuevo Sistema de Recogida y Análisis de Datos Sobre la Violencia en Educación*. II Jornadas Sobre Violencia en la Educación. Problemas desde la Perspectiva del Centro Docente, Editorial Club Universitario, Alicante, pag. 31-39.

Invited Talks [Organizing Institution] (number of talks)

- EUROSTAT, Statistical Office of the European Communities (4) ,
- ISTAT, Italian National Institute of Statistics (1);
- ISBA, International Society for Bayesian Analysis (3);
- SIS, Italian Statistical Society (1)
- MICROSOFT (1)
- University of Alicante, Department of Law (2);
- University of Alicante, Sociology Department (1);
- University of Alicante, Statistics Department Department (2);
- University of Valencia, Statistics Department (1);
- University Rey Juan Carlos, Escuela Superior De Ciencias Experimentales y Tecnologia (1);

Visiting Research Position

Numerous visits ranging from one month to two years at:

- Department of Statistics, Carnegie Mellon University (Pittsburgh, PA, USA),
- Department of Statistical Science, Duke University (Durham, NC, USA),
- Department of Statistics, University "La Sapienza" of Rome (Italy),
- Unit of Statistical Disclosure Control, Italian National Institute of Statistics (ISTAT),
- European Space Agency (ESA), Frascati (Italy)

Professional Service

Referee for *Management Science*; *Statistical Science*; *Journal of Statistical Planning and Inference*; *Journal of Official Statistics*; *IEEE Transactions on Knowledge and Data Engineering*; *Journal of Privacy and Confidentiality*; *Journal of Climate*.

Teaching Experience

Ph.D courses: *Multivariate Statistics*, Ph.D in Education, University of Alicante, Spain, 2004-2009.

Master courses: *Experimental Design and Bioinformatic*, Master in Chemical Medicine, Master in Optometry and Vision Science, Master in Biotechnology, Master in Biomedicine, University of Alicante, 2010-present; *Biostatistics*, Master in Advance Optometry and Vision Science, University of Alicante, 2006-2010; *Statistics and Law*, Título de postgrado en Argumentación Jurídica, Department of Law, University of Alicante, 2004-Present; *Probability and Statistics*, Master of Sciences in Computational Finance, Carnegie Mellon University, 2000; *Linear Models*, Master of Sciences in Computational Finance, Carnegie Mellon University, 2000; *Advanced Statistical Methods*, Master of Sciences in Computational Finance, Carnegie Mellon University, 2000; *Applied Bayesian Methods*, Master in Statistics, Statistics Department, Carnegie Mellon University, 1999.

B.S. courses: *Statistical Reasoning*, Carnegie Mellon University, 1998; *Modern Regression*, Carnegie Mellon University, 1998; *Introductory Statistics*, B.S. in Mathematics (laboratory only), 2003-2005, University of Alicante; *Advanced Statistics*, B.S. in Mathematics, 2002-2003, University of Alicante; *Advanced Statistics*, B.S. in Mathematics, 2003-2005, University of Alicante; *Sample Survey and Sampling*, B.S. in Labour Relations 2003-2005, University of Alicante; *Time Series and Forecasting*, B.S. in Mathematics, 2004-2013; *Biostatistics*, B.S. in Biology, 2005-2011, University of Alicante; *Statistics*, B.S. in Optics and Optometry, 2012-Present, University of Alicante; *Fundamental of Mathematics*, B.S. in Biology, 2015 (Grupo ARA in english), University of Alicante; *Time Series*, B.S. in Mathematics 2014-Present, University of Alicante; *Stochastic Processes*, B.S. in Mathematics 2014-Present, University of Alicante.

Short courses: *Taller de R, III JORNADAS DE COPLA, University of Alicante 2008*; *Introducción al software R, IV JORNADAS DE COPLA, University of Alicante 2009*.

Languages

Italian : Mother tongue.

English : Fluent (written and spoken)

Spanish : Fluent (written and spoken)

French : Medium.