Alessandra Durio

born in Torino, July 7th 1965

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Dep. of Economics "S. Cognetti de Martiis"
University of Torino, Italy

Education

1994 **Laurea Degree, Faculty of Mathematics, University of Torino**.
(Regole di decisione in produzione ed in accettazione lotti per il controllo statistico di qualità)

1984 **B.A, Liceo Scientifico "Marie Curie", Torino**.

Academic Experience

since 1998 **Assistant Professors, Statistics, University of Torino**.

2002—2004 **Member, Academic Board of PhD course in Statistics, University of Torino**.

Feb.—June 2000 **Visiting Assistant Professors, Dep. Probability & Statistics, University of St. Petesburg**.

1996—1998 **Visiting Scholar, Laboratoire de Statistique Théorique et Appliquée, Universitée de Paris VI**.

1995—1997 **Lecturer, Statistics, University of Torino**.

Affiliations

since 2012 **Member, CISAO (Interdepartmental Centre of Scientifics Research with the Sahel and Western Africa countries)**.

since 2012 **Member, Interdepartmental Centre OMERO (Olympcs Mega Events Research Observatory))**.

since 2007 **Member, International Statistical Institute**.

since 2007 **Member, International Society for Buisness and Industrial Statistics**.

since 2003 **Member, Italian Statistical Society**.

since 2002 **Member, European Network for Business and Industrial Statistics**.

Academic teaching

2003—2011 **Statistics, Faculty of Economics, Univesity of Torino**.

since 1999 **Audit Statistical Control, Scuola di Formazione Praticanti Dottori Commercialisti e Revisori Contabili, Ordine dei Dottori Commercialisti and University of Torino**.

2003—2005 **Statistics (English Version), Faculty of Economics, Univesity of Torino**.

2003—2004 **Theory of Probability, PhD course, Univesity of Torino**.

1998—2003	**Statistics, Faculty of Economics, Pinerolo (SUMI), Univesity of Torino**.
1997—2001	**Statistics, Buisness School (SAA), Univesity of Torino**.

University Activities

2000—2011	**Member, Faculty Lecturers Committee**.
1999—2011	**Member, Faculty Council**.
2003—2004	**Organizer, Workshop on Correlated Data Modeling Program Committee**.
2001—2003	**Chair, SUMI Curriculum Committee**.
2000—2001	**Organizer, PhD course Stochastic Processes, ICER and University of Torino**.

Other Professional Experience

1989—1990	**Teacher, Informatica Gestionale, I.T.C. "B. Pascal", Giaveno (TO)**.
1988—1996	**Statistical Quality Control Consulting, Consorzio per lo Sviluppo Elettronico dell' Automazione (CSEA), Torino** .

Main Research Interests

— Nonparametric and semiparapetric estimators.
— Robust statistics, outliers and clusters detection.
— High-dimensional data analysis.
— Computationally algorithms in statistical computing and data exploration.
— Statistical quality and process control.

Pubblications

Articles, Proceedings & Technical Reports

— A. Durio and Isaia E.D. (2011) The Minimum Density Power Divergence Approach in Building Robust Regression Models, in: *Informatica*, 20, 1–14

— A. Durio and Isaia E.D. (2010) Cluster Detection in The heuristic approach in finding initial values for minimum density power divergence estimators, in: *Journal of Statistical Computation and Simulation*, 81, 4, 471-480

— A. Durio and Isaia E.D. (2010) Cluster Detection in Regression Problems: a Similarity test Between Estimated Models, in: *Communications in Statistics—Theory and Methods*, 39, 508–516

— A. Durio and Isaia E.D. (2009) The Minimum Density Power Divergence Approach in Building Robust Regression Models, in: *Proceedings of the 13th International Conference on Applied Stochastic Models and Data Analysis, Selected Papers*, ASMDA09, Eds L Sakalausas, C. Skiadas and E. K. Zavadskas, ISBN 978-9955-28-463-5, 148–152

— A. Durio and Isaia E.D. (2008) Estimating the Parameters of a Bivariate Extreme Value Gumbel Distribution, in *Proceedings of the International Conference on Computational Statistics*, COMPSTAT08, Vol. II, Physica-Verlag, Heildelberg, 699–707.

— Durio A. and Isaia E.D. (2007) Clusters detection in regression problems: the integrated square error approach, in: *Proceedings of the 12th International Conference on Applied Stochastic Models & Data Analysis*, ASMDA07.

— Durio A. and Isaia E.D. (2007) A quick procedure for model selection in the case of mixture of normal densities, *Journal of Computational Statistics & Data Analysis*, 51, 12, 5635–5643.

— Durio A. and Isaia E.D. (2006) Outliers detection: the heuristic approach in finding initial guesses for l_2 estimates, in: *Proceedings of the "International Conference on Robust Statistics (ICORS06)"*.

— Durio A. and Isaia E.D. (2004) Bivariate non-parametric regression models: simulations and applications, *Applied Stochastic Models in Business and Industry*, 20, 291–303.

— Durio A. and Isaia E.D. (2004) Model selection in the case of mixture of normal densities, in: *Proceedings of the VII International Conference on Computer Data Analysis & Modeling: Robustness and Computer Intensive Methods*, CDAM04.

— Durio A. and Isaia E.D. (2004) On robustness to outliers of parametric L_2 estimate criterion in the case of bivariate normal mixtures: a simulation study, in: *Theory and Applications of Recent Robust Methods*, M. Hubert G. Pison A.S. and Aelst S.V., eds., Birkhäuser, 93–104.

— Durio A. and Isaia E.D. (2003) Parametric multivariate density estimation using L_2 distance: a simulation study on robustness, in: *Proceedings of the S.I.S. Intermediate Scientific Meeting*, 13–17.

— Durio A. and Isaia E.D. (2003) A parametric regression model by minimum L_2 criterion: a study on hydrocarbon pollution of electrical transformers, *Developments in Applied Statistics, Metodološki Zvezki*, 19, 69–83.

— Durio A. and Nikitin Y.Y. (2003) Local bahadur efficiency of some goodness-of-fit tests under skew alternatives, *Journal of Statistical Planning and Inference*, 115, 171–179.

— Durio A. (2002) A model of structural equations for quality evaluation in the medical field, in: *Correlated Data Modeling*, Gregori D., Carmecci G., Friedl H. and Wedling A., eds., Franco Angeli.

— Durio A. and Goia A. (2002) Applications of a functional non-parmetric model for scalar response with boostrap confidence intervals, *Developments in Applied Statistics, Metodološki Zvezki*, 17, 125–135.

— Durio A. and Nikitin Y.Y. (2002) Asympotic efficiency of signed-rank symmetry tests under skew alternatives, Technical report, ICER Working Paper Series No.12/2002, Torino.

— Durio A. and Nikitin Y.Y. (2002) On asymptotic efficiency of certain symmetry tests under skew alternatives, in: *Scritti in onore di Angelo Zanella*, Frosini B.V., Magagnoli U. and Boari G., eds., Vita e Pensiero Università.

— Durio A. and Nikitin Y.Y. (2001) Comparison of goodness-of-fit tests for simulated data under skew alternatives, in: *Proceedings of the 4th St. Petersburg Workshop on Simulation*.

— Durio A. and Nikitin Y.Y. (2001) Local asymptotic efficiency of some goodness-of-fit tests under skew alternatives, Technical report, ICER Working Paper Series No.4/2001, Torino.

— Durio A. (1996) Strumenti statistici per la stima della resistenza caratteristica dei calcestruzzi da prove indirette, Technical Report 62, Atti del Dipartimento di Ingegneria Strutturale del Politecnico di Torino.

— Durio A. (1996) Il programma matrix, in Controllo statistico del processo: carte di controllo di shewhart con regole di run lenght, Isaia E. D., Technical report, Dipartimento di Statistica e Matematica Applicata alle Scienze Umane "Diego de Castro", Sezione di Statistica, quaderno n. 3.

Books

— Durio A., Corradetti R. and Isaia E.D. (2004) *Appunti di calcolo delle probabilità*, Published on line.

— Durio A., Corradetti R. and Isaia E.D. (2004) *Appunti di statistica descrittiva*, Published on line.

— Durio A., Corradetti R. and Isaia E.D. (2001) *Appunti per un corso di statistica*, Giappichelli Editore, Torino.

Manuscripts & Seminars

— D. Amberti, A. Durio, E. D. Isaia, M. Lamieri (2006), Non standard analysis of survey data: confirmatory factor analysis and models of structural equations for customer satisfaction, ENBIS & Faculty of Statistics, University of Milano (pdf file available).

— Durio A. (2003) Modelli statistici per la valutazione di costo-efficacia in sanità, seminar, Dep. of Pubbic Health and Microbiology, Torino.

— Durio A. (2001) L'impiego del bootstrap nella stima a nucleo della densità, seminar, Dep, of Mathematics, University of Torino (pdf file available).

— Durio A. (2001) Lecture notes on stochastic processes, manuscript, Dep. of Statistics & Applied Mathematics "Diego de Castro", Torino (pdf file available).

— Durio A. (2000) Checking normality: some remarks on the kernel approach, seminar, Dep. of Statistics & Applied Mathematics "Diego de Castro", Torino (pdf file available).

— Durio A. (1998) Stimatori a nucleo: un metodo di stima non parametrica per le funzioni di densità, Dep. of Statistics & Applied Mathematics "Diego de Castro", Torino (pdf file available).

— Durio A. and Isaia E.D. (1997) Reliability models for censured data, manuscript, Dep. of Statistics & Applied Mathematics "Diego de Castro", Torino.

— Durio A. (1996) L'interpretazione dei dati nel campo delle prove in situ su CLS, seminar, Dept. of Structural Engeneering, Politecnico of Torino.

Invited Presentations & Conferences Attended

— Customer satisfaction and quality of service: analysis of coherence and latent variables for the University's canteen service, *ENBIS11 Conference*, Coimbra (Portugal), 2011.

— Studi di Settore, in: *Buongiorno Economia* , Reteconomy TV, Sky 906, Torino (Italy), 2011

— Luci e Ombre nell'Approccio Metodologico degli Studi di Settore, in: *VIII Seminario di studi su questioni attuali sostanziali e processuali di diritto tributario nazionale e comunitario*, Associazione Magistarti Tributari, Torino (Italy), 2011

— The Minimum Density Power Divergence Approach in Building Robust Regression Models, in: *13th International Conference on Applied Stochastic Models and Data Analysis*, ASMDA09, Vilnius (Lithuania), 2009

— Estimating the Parameters of a Bivariate Extreme Value Gumbel Distribution, *International Conference on Computational Statistics* (COMPSTAT08), Porto (Portugal), 2008.

— Choosing a Robust Estimator, *International Symposium for Business and Industrial Statistics* (ISBIS08), Prague (Czech Republic), 2008.

— Clusters detection in regression problems: the integrated square error approach, *12th International Conference on Applied Stochastic Models & Data Analysis*, Chania (Greece), 2007.

— Building useful regression models comparing different estimators, *3rd International Workshop on Correlated Data Modeling (WCDM07)*, Limerick (Ireland), 2007.

— A regression case study in cluster detection, *3rd International Workshop on Correlated Data Modeling (WCDM07)*, Limerick (Ireland), 2007.

— Regression models and cluster detection. An application to anthropometric measurements, *'International Symposium on Business & Industrial Statistics (ISBIS07)*, Ponta Delgada (Azores-Portugal), 2007.

— Clusters detection in regression models applied to a pollution risk evaluation problem. the L_2 approach, *6th ENBIS Conference*, Wroclaw (Poland), 2006.

— Outliers detection: the heuristic approach in finding initial guesses for l_2 estimates, *Proceedings of the "International Conference on Robust Statistics (ICORS06)"*, Lisbon (Portugal), 2006.

— Logit regression in forecasting the insolvency risk of the customers of automotive financial services, *5th ENBIS Conference*, Newcastle (UK), 2005.

— A quick procedure for model selection in the case of mixture of normal densities, *3rd World Conference on Computational Statistics & Data Analysis*, Limassol (Cyprus), 2005.

— Confirmatory factor analysis and models of structural equations for customer satisfaction: a case study on local public transport situation, *4th ENBIS Conference*, Copenhagen (Denmark), 2004.

— Model selection in the case of mixture of bivariate normal densities, *International Conference on Methodology and Statistics*, Lubiana (Slovenia), 2003.

— Parametric multivariate density estimation using l_2 distance: a simulation study on robustness, *Proceedings of the S.I.S. Intermediate Scientific Meeting*, Napoli (Italy), 2003.

— On robustness to outliers of parametric l_2 estimate criterion in the case of bivariate normal mixtures: a simulation study, *International Conference on Robust Statistics (ICORS03)*, Antwerpen (Belgium), 2003.

— A two pairs of gauging scores control charts to monitoring the process of slot machines, *3rd ENBIS Conference*, Barcellona (Spain), 2003.

— Le prefcerenze dei consumarori nel mercato degli snack al cioccolato. limiti e potezianlità della conjoint analysis, *Workshop on Design of Industrial Experiments (DEINDE03)*, Cagliari (Italy), 2003.

— *Introducing the paper of* Cugno M. Models for the construction and analysis of motorway accidents: hazard maps, *8th Young Statisticians Conference*, Balatonfoldvar (Hungary), 2003.

— A parametric regression model by minimum L_2 criterion: a study on hydrocarbon pollution of electrical transformers, *International Conference on Methodology and Statistics*,Lubiana (Slovenia), 2002.

— A nonparametric regression model with bootstrap confidence intervals: some applications in industrial and clinical field, *2nd ENBIS Conference*, Rimini (Italy), 2002.

— *Introducing the paper of* Novelli E. Statistical models for investment analysis in advertising: a Markov approach, *7th Young Statisticians Conference*, Pirano (Slovenia), 2002.

— Applications of a functional non-parmetric model for scalar response with boostrap confidence intervals, *International Conference on Methodology and Statistics*, Lubiana (Slovenia), 2001.

— Comparison of goodness-of-fit tests for simulated data under skew alternatives, *4th St. Petersburg Workshop on Simulation*, St. Petersburg (Russia), 2001.

— A model of structural equations for quality evaluation in the medical field, *1st Workshop on Correlated Data Modeling (WCDM99)*, Trieste (Italy), 1999.

Torino, 22 Gen. 2013   Alessandra Durio