

Luca Scrucca

Curriculum Vitae

PERSONAL INFORMATION

Born: Perugia, September 27, 1969
Actual position: Assistant Professor
Address: Department of Economics, Finance and Statistics
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EDUCATION

1995 **Graduated** with a first-class honors degree (110/110 cum laude) on Political Sciences (curriculum on Quantitative Analysis for Social Sciences), University of Perugia, with a thesis on Social Statistics titled:

Electoral polls: methodological aspects and an evaluation of the recent Italian experience

Advisor: Prof.ssa Lina Brunelli.

2000 **Master of Science**, Statistics, School of Statistics, University of Minnesota, U.S.A. (advisor Prof. Sanford Weisberg).

2000 **Ph.D.** on "Statistical and Mathematical Methods for Economic and Social Research" at the Department of Statistics, University of Perugia, Italy, with a doctoral thesis titled:

Graphics for Studying Logistic Regression Models

Advisor: Prof. Gianfranco Galmacci.

RESEARCH INTERESTS

Dimension reduction methods; Mixture-models for clustering and classification; Regression graphics; Linear and generalized linear models; Classification and clustering of high-dimensional data; DNA microarray data analysis; Spatial clustering.

SELECTED PUBLICATIONS

1. *Model-based SIR for dimension reduction* (2011) **Computational Statistics & Data Analysis**, Vol. 55 (11), pp. 3010-3026.
2. *A Geometric Approach to Subset Selection and Sparse Sufficient Dimension Reduction* (2011). In **New Perspectives in Statistical Modeling and Data Analysis**, editors Ingrassia S., Rocci R., Vichi M., Springer-Verlag, Berlin Heidelberg, pp. 569-576.
3. *Dimension Reduction for Model-Based Clustering* (2010). **Statistics and Computing**, 20 (4) pp. 471-484.
4. *Point Estimation Methods with Applications to Item Response Theory Models* (2010) (in collaboration with F. Bartolucci). In: Penelope Peterson, Eva Baker, Barry McGaw (editors) **The International Encyclopedia of Education**, 3rd edition, volume 7, pp. 366–373. Oxford: Elsevier.

5. *Visualization of model-based clustering structures* (2010). In **Data Analysis and Classification**, editors Palumbo F., Lauro C., Greenacre M., Berlin, Springer-Verlag, pp. 67-75.
6. *Regression Modeling of Competing Risk Using R: An In Depth Guide for Clinicians* (2010) (in collaboration with Antonella Santucci, Franco Aversa, Dipartimento di Medicina Clinica e Sperimentale, Università degli Studi di Perugia). **Bone Marrow Transplantation**, 45, 1388-1395.
7. *Class prediction and gene selection for DNA microarrays using sliced inverse regression* (2007). **Computational Statistics & Data Analysis**, Vol. 52, pp. 438-451.
8. *Competing risks analysis using R: an easy guide for clinicians* (in collaboration with Antonella Santucci and Franco Aversa, Hematology and Clinical Immunology Section, Department of Clinical and Experimental Medicine, University of Perugia, Perugia, Italy) **Bone Marrow Transplantation** (2007) 40, 381-387.
9. *Regularized sliced inverse regression with applications in classification* (2006). In **Data Analysis, Classification and the Forward Search**, editors Zani S., Cerioli A., Riani M., Vichi M., Berlin, Springer-Verlag, pp. 59-66.
10. *qcc: an R package for quality control charting and statistical process control*, **R News**, The Newsletter of the R Project, Vol. 4/1, June 2004, 11-17. [<http://cran.r-project.org/doc/Rnews>]
11. *A Simulation Study to Investigate the Behavior of the Log-density Ratio Under Normality* (2004) (with Sanford Weisberg, University of Minnesota). **Communications in Statistics (simulation and computation)**, Vol. 33(1), 159-178.
12. *Graphics for Studying Logistic Regression Models* (2002). **Statistical Methods & Applications**, Vol. 11(3), 371-394.
13. *Nonparametric Kernel Smoothing Methods. The sm library for Xlisp-Stat* (2001). **Journal of Statistical Software**, Vol. 6. [<http://www.jstatsoft.org/v06/i07>]
14. *A Review and Computer Code for Assessing the Structural Dimension of a Regression Model: Uncorrelated 2D Views* (2001). **Computational Statistics & Data Analysis**, Vol. 36(2), pp. 163-177.
15. *Assessing Multivariate Normality through Interactive Dynamic Graphics* (2000). **Quaderni di Statistica**, 2, pp. 221-240.

TEACHING

- *Statistics*, Faculty of Economics, Assisi, Università degli Studi di Perugia, a.a. 2011/12.
- *Statistical Methods for Economics and Finance*, Faculty of Economics, Università degli Studi di Perugia, a.a. 2010/11.
- *Statistical Quality Control*, Faculty of Economics, Università degli Studi di Perugia, a.a. 2001/02 – 2010/11.
- *Statistics*, Faculty of Economics, Università degli Studi di Urbino “Carlo Bo”, 2007/08 – 2009/10.
- *Statistical Methods for Market Research*, Faculty of Economics, Università degli Studi di Urbino “Carlo Bo”, 2005/06 – 2006/07.
- Teaching assistant for *Statistics I*, Faculty of Economics, Università degli Studi di Perugia, 2004/05, 2007/08.

- Teaching assistant for *Statistics II*, Faculty of Economics, Università degli Studi di Perugia, 2004/05, 2007/08.
- *Laboratory of Statistics and Informatics II*, Faculty of Economics, Università degli Studi di Perugia, 2003/04 – 2007/08.
- *Laboratory of Statistics and Informatics IV*, Faculty of Economics, Università degli Studi di Perugia, 2004/05.
- Short Course *Introduction to Xlisp-Stat*, Centre for Applied Statistics, Lancaster University, Lancaster (UK) 10-11 October 2001.
- *Teaching assistant*, School of Statistics, University of Minnesota (USA), 1998-1999.

Scientific societies

- Member of the Italian Statistical Society (SIS).
- Member of the CLADAG (*Classification & Data Analysis Group*), research unit on “Classification and Data Analysis” of SIS.
- Member of the *Working Group on Model-Based Clustering* directed by Prof. Adrian Raftery, University of Washington, Seattle.
- Member of the Academic board of the PhD in “Mathematical and Statistical Methods for Economics and Social Sciences”, University of Perugia, Italy.
- Member of the European Board of IASC (*International Association for Statistical Computing*), 2002–2006.

September 24, 2011