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### Short Resume of my CV

I am born in Florence, Italy, on April 29<sup>th</sup>, 1971. I am married with one lovely son just seven months old.

I am currently employed as Scientific Officer at the European Commission, Joint Research Centre. In particular I work in the Econometric and Statistical Support Unit at the Institute for Protection and Security of the Citizen (IPSC) in Ispra, Italy.

My career started in 1996 at the University of Florence, where I majored in Statistical and Actuarial Sciences in 2002 at the Faculty of Economics, with a thesis on the state of the play of the e-commerce in Australia. The focus of the thesis was on an electronic survey monitoring the e-commerce activities of the Australian firms in the textile sector. In particular, I was responsible of all the different phases of the survey: sampling design, questionnaire construction, implementation on the web, data collection and analysis, report and dissemination of the results. My thesis was part of a research project awarded by the Italian Trade Commission, for this reason I spent one year in Australia, studying at the University of Sydney, writing the thesis and working for the Italian Trade Commission (Australian office in Sydney). I got the degree with the Summa Cum Laude graduation.

In 2003, I started the Ph.D programme in Applied Statistics at the Department of Statistics of the University of Florence. I got the Ph.D in 2006, with a thesis on learning probabilistic networks from data. In the thesis new techniques on learning Bayesian Networks from data were analyzed and developed. The aim of the thesis was to apply Artificial Intelligence techniques to the analysis of microarray experiments. As part of a project funded by the department of the Internal Medicine of the University of Florence I worked intensively with breast cancer microarray data and I accumulated a consistent expertise in the field of genetics and micro array by developing a deep knowledge of the statistical issues related to these fields. In particular I practically worked with the

normalization issues, the imputation of missing data and the analysis of Micro array data. Moving in this framework, the aim of the thesis was to develop a set of algorithms to explore and analyze micro array data and to attempt to re-build and explore causal relations among genes using Bayesian Networks learning algorithms. Under the supervision of Prof. F.M. Stefanini, the work was focused on the development of Mixed Bayesian Networks methods, characterized by a large number of variables and admitting both discrete and continuous variables. The application of the new developed methods to Machine Learning and Micro array benchmark datasets was performed with successful results. In addition to this main topic, a new method to normalized Micro array data using spike controls was also developed and proposed. The thesis was composed by 4 scientific papers plus an appendix where the implementation of the new algorithms in the R environment was discussed. All the papers have been published in international peer-reviewed journals or conference proceedings.

Moreover, during my Ph.D. programme I spent one semester at the prestigious Computer Science Department of the University of Aalborg working in the Machine Intelligence group with Prof. Finn V. Jensen and Prof. Thomas D. Nielsen and, meanwhile, I also accumulated a strong teaching and tutoring experience by giving courses and seminars in Statistics

Then, from 2002 to 2006 I worked as statistical consultant for several Italian private firms, universities and institutions. My activities were often focused on production and elaboration of data, the preparation of reports and the presentation of results. In particular, I have been director of electronic survey in two projects with the University of Naples (SUN) and the University of Calabria and in a customer satisfaction survey of the Fondazione del Maggio Musicale Fiorentino.

From August 2006 to present, I work as scientific officer at the Econometrics and Statistical Unit of the Directorate Generale Joint Research Centre of the European Commission. As applied statistician, I am involved in several projects with different roles: I am Project Leader of the “Monitoring Flexicurity in Europe” project (jointly with DG Employment, Social Affairs and Equal Opportunities), meanwhile I am Statistical Coordinator for the “Measuring Active Citizenship in Europe” project (jointly with DG Education and Culture) and for the “Measuring Wellbeing and Happiness in Europe” project. I have a good knowledge with several European international surveys and my work is mainly based on the analysis and elaboration of these data sources. I also support all the Econometrics and Statistical Unit activities in many other ways as disseminating and presenting composite indicator results and methodology in several institutional meetings, universities and international conferences. During my current job at the European Commission I have had the opportunity to greatly enhance my professional skills in leading and managing projects. In these projects I have managed teams of interdisciplinary researchers to develop research reports, peer-reviewed scientific paper and managed external researchers work. Moreover, in these years I established a top level contact network with European policy makers and worldwide academic experts and I am cooperating with most of them in several project or research papers.

I have an excellent knowledge in programming statistical software as R, STATA or SPSS. In particular I developed two libraries in R. The first called MASTINO, is a suite of function to learn Bayesian Networks using R. The library has been submitted to CRAN in order to be included as R official package and it is currently available for download at the following address: [www.mascherini.org/software.html](http://www.mascherini.org/software.html). More over I also a second R library, called COMPOSITE, to build composite indicator using R. This library is now in the beta test phase and it will be submitted to CRAN shortly.

Furthermore, in the past years I produced a steady flow of publications including international peer-reviewed journals papers, conference proceedings and official reports in all the research areas mentioned above. This successful publication record proves the indubitable flexibility of my skills which allows me to successfully conduct researches in many different areas with important results always acknowledged by the academic community. The successful participation in research projects referred to so different areas proves also my uncommonly good skills of being able in easily interacting and communicating with experts, policy makers and stakeholders characterized by different expertise areas. I personally consider this skill as fundamental in working in an international organization as the European Commission, or in international companies.

Finally, working on research projects in an international organization has required a high degree of self-reliance, creativity, problem solving, self motivation and the ability to motivate others in a team. All the projects I have been involved in have required the full range of activities from initial design, through development to implementation and the presentation and publication of the results. The scientific rigor and the effectiveness of the methodology applied in all the projects I have been involved in have been always acknowledge by experts, policy makers and stakeholders.

Sincerely Yours,

Massimiliano Mascherini