

CURRICULUM VITAE

Fulvia Pennoni

PERSONAL INFORMATION

Family name: Pennoni

First name: Fulvia

Date of birth: June 22, 1976

Nationality: Italian

Family: Pietro (born 19th March 2007), Teresa (born 4th March 2011)

Personal web page: <https://sites.google.com/view/fulviapennoni>

EDUCATION

2000 - Degree in Economics and Business Administration, University of Perugia, Italy, Final grade: Summa cum Laude. Thesis: "Multivariate statistical methods applied to behaviour with revolving credit cards", supervisor Prof. Elena Stanghellini

2004 - PhD./Doctorate in "Statistics", University of Florence (IT). Dissertation: "Issues on the estimation of latent variable and latent class models with social science applications", supervisor Prof. Giovanni Marchetti

CURRENT POSITION

2021 - Full Professor of Statistics at Department of Statistics and Quantitative Methods, University of Milano-Bicocca (UMB, IT)

PREVIOUS PROFESSIONAL POSITIONS

2014 - 2021 Associate Professor of Statistics at Department of Statistics and Quantitative Methods, UMB

2006 - 2014 Research fellow of Statistics (postdoctoral position) at Department of Statistics, UMB

2005 - 2006 Research Assistant of Statistics (postdoctoral position) at the Unit of Econometrics and Applied Statistics of the Joint Research Centre of the European Commission, Ispra (IT) on "Development and application of advanced mathematical and statistical tools for data analysis", supervisor Stefano Tarantola

2004 - 2005 Research fellow of Statistics (postdoctoral position) at the Department of Statistics, University of Florence, on "Integrated information systems for small area estimation", supervisor Prof. Andrea Giommi

CURRENT AND PREVIOUS INSTITUTIONAL ROLES AND RESPONSIBILITIES

2021 - President of the joint teachers-students committee at UMB

2019 - Member of the joint teachers-students committee at UMB

2018 - Member of the academic board of the doctorate program in "Economics, Statistics and Data Science" UMB

2016 - Member of the committee of the annual monitoring of the master degree course in Biostatistics, UMB

2014 - 2021 Member of the academic board of the doctorate program in “Statistics and Mathematical Finance”

2013 - 2016 Member of the working group for evaluation and promotion of high-quality research projects of the university

2013 - 2016 Member of the working group for the Erasmus program and internationalization of the faculty of Statistics

2007 - 2009 Member of the committee for the analyses of the questionnaire of the freshers

2008 - 2009 Member of the working group for the dissemination of statistics in high schools

TEACHING EXPERIENCE

Postgraduate level courses:

2019 - “Latent Markov Models for the analysis of longitudinal data”, held for the PhD in Economics, Statistics and Data Science, UMB

2014 - 2018 “Introduction to the Expectation-Maximization algorithm” and Introduction to the Bootstrap, held for the PhD in Statistics and Mathematics for Finance, UMB

2018 - 2019 “Statistical analysis of real estate data”, held for the Master in Valuation & Advisory, Polytechnic of Milano Graduate School of Business

Held at degrees Biostatistics, Business Economics, Statistical and Economic Sciences (previously Faculty of Statistics) at UMB:

Academic years 2016-2022:

- in charge of the advanced course on *Statistical Models II*;
- in charge of the course on *Bayesian Inference*;
- in charge of the course on *Multivariate Statistical Analysis*;

Academic year 2015-2016:

- Teaching mobility (Call 2015 KA1, Erasmus+ programme) at University of Economics in Katowice, Poland, Department of Management/Economics and Financial Analysis from 09/03/2016 to 11/03/2016: *Multivariate Data Analysis with R*
- in charge of the advanced course on *Statistical Models II*;
- in charge of the course on *Probability and Statistical Inference*;
- in charge of the course of *Statistics I*;

Academic year 2014-2015:

- in charge of the advanced course on *Statistical Models with R*;
- in charge of the advanced course on *Statistical Quality Control*;
- in charge of the course on *Probability and Statistical Inference*;

Academic year 2013-2014:

- in charge of the course on *Simulation Methods with R*;
- in charge of the advanced course on *Statistical Quality Control*;

Academic year 2012-2013:

- in charge of the course on *Simulation Methods with R*;
- in charge of the advanced course on *Statistical Quality Control*;

Academic years 2010-2012:

- in charge of the course on *Simulation Methods with R*;
- in charge of the advanced course on *Statistical Quality Control*;
- Teaching Assistant for the course in *Statistics*.

Academic years 2008-2010:

- in charge of the course on *Simulation Methods with R*;

- Teaching Assistant for the advanced course in *Statistics*;
- Teaching Assistant for the advanced course on *Stochastic Processes*;
- Teaching Assistant for the course on *Sample Theory*;
- Teaching Assistant for the advanced course on *Statistical Quality Control*.

Academic year 2006-2007:

- Teaching Assistant for the course *Quantitative Methods for Economics, Finance and Management*, Faculty of Economy, University Carlo Cattaneo, LIUC (Varese), Italy;
- Teaching Assistant for the advanced course on *Stochastic Processes*;
- Teaching Assistant for the course on *Sample Theory*;

Held at the Faculties of Economy, Agriculture and Psychology of the University of Florence, (IT).

Academic years 2002-2004:

- Teaching Assistant for the advanced level course in *Statistics*;
- Teaching Assistant for the basic course in *Statistics with R*, at the Master “Conservation and management of the terrestrial flora and fauna”;
- Teaching Assistant for the course in *Statistics*.

SUPERVISOR OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2004 - Supervision and co-supervision of 4 PhD. students and about 40 bachelor and master theses at UMB

RESEARCH INTERESTS

Latent variable models and mixture models including hidden Markov models
Composite indicators
Graphical models

QUALITY AND IMPACT OF PUBLICATIONS (2022)

She (co)authored 2 scientific books with international publishers and at least 60 scientific products listed in Scopus, among which at least 16 are of type A (“fascia A”).

H-index: 9 (WoS), 10 (Scopus), 14 (Google Scholar)

REVIEWING ACTIVITIES

2022 - Associate Editor of *Statistical Modelling: An International Journal*

2022 - Associate Editor of *Statistical Methods and Applications*

2020 - Associate Editor of *Metron*

2005 - Referee for many high quality scientific international statistical journals (*Communication in Statistics - Simulation and Computation*, *Journal of Business & Economic Statistics*, *Journal of Statistical Planning and Inference* and more...)

PARTICIPATION TO RESEARCH GRANTS

Research specialist on the following grants funded by the Italian Government and Institute:

FIRB 2012 “Mixture and latent variable models for causal inference and analysis of socio-economic data”, “Futuro in Ricerca”. Principal Investigator of the local research group

PRIN 2007 “Graphical models, latent class and panel data models: methodological development and applications on education and health”

PRIN 2005 “Marginal models for categorical variables with applications to causal analysis”
PRIN 2003 “Bayesian network and causal inference: methodology and applications”
PRIN 2002 “Stochastic ordering in the analysis of dependence in multiple tables with application in sociology and health”

Research specialist on the research projects founded at national and regional level:

AlmaLaurea 2021: “Statistical analysis of longitudinal data collected through the questionnaire on the employment status of graduates”

InPreSa 2020 “Early detection and containment SARS-siCoV-2. Tools and services to address the COVID-19”, Lombardy Region

STAR 2013 “Statistical models for the evaluation and perceptions”, University of Naples-Federico II

EIEF 2008 - 2011 “Advances in non-linear panel models with socio-economic applications”, Einaudi Institute for Economics and Finance

2009 - 2010 “Performance evaluation of the structures operating on the regional legislation to help people with instructions, formation and job training”, Lombardy Region

ORGANIZATION OF INTERNATIONAL CONFERENCES

2020 “The European R users meeting, e-Rum2020”, Member of the program committee, UMB

2019 “Smart Statistics for Smart Applications”, Italian Statistical Society Conference, Member of the program committee, Università Cattolica (IT)

2016 “Methodological tools for accountability systems in education”, Member of the program committee, Joint Research Center of the European Community (IT)

INVITED SEMINARS IN ITALY AND ABROAD

2021 “A multivariate statistical approach to predict COVID-19 count data with epidemiological interpretation and uncertainty quantification”, European COVID-19 Forecast Hub (web seminar)

2020 “Gender ideology and breadwinning patterns among couples: a focus on the Japanese society”, Interdepartmental Research Centre for Gender Studies, UMB

2020 “Multivariate causal hidden Markov model for the estimation of treatment effects in longitudinal observational studies”, University College London, Department of Statistical Science, UK

2019 “Latent (Hidden) Markov models and the LMest package in R”, Biomathematics and Statistics Scotland, Edinburgh, UK

2019 “Heterogeneity among fertility patterns of couples employing Natural Family Planning methods”, International Institute for Restorative and Reproductive Medicine

2017 “A dynamic perspective to evaluate multiple treatments through a causal latent Markov model”, University of Catania

2016 “Longitudinal data analysis within the latent variable modelling framework: theory and illustrative examples”, University of Naples-Federico II

2016 “Latent Markov models for evaluation of the health care services”, University of Perugia

2009 “Introduction to the potential outcome approach to the evaluation”, Nova Universitas

2006 “The latent Markov model”, University of Lancaster, UK

2008 “An approximation of the quadratic exponential distribution for item response theory models”, University of Padova

MEMBERSHIPS

2020 - Italian Econometric Society (SIeE)
2019 - Italian Society of Economics, Demography and Statistics (SIEDS)
2010 - 2011 Royal Statistical Society, Psychometric Society
2006 - Italian Statistical Society (SIS)

PARTICIPATION TO CONFERENCES AS INVITED SPEAKER

2021 "Variable selection in hidden Markov model with missing data", ERCIM
2021 "A hidden Markov model for variable selection with missing values", SIS
2021 "A Tempered Expectation-Maximization algorithm for latent class model estimation", SIS
2018 "A latent variable model for a derived ordinal response accounting for sampling weights, missing values and covariates" ASMOD
2017 "A review of panel data models with a Markov dependent structure for univariate and multivariate ordinal responses", ERCIM
2017 "Dynamic sequential analysis of careers", CLADAG
2017 "Optimal model-based clustering with multilevel data", IFCS
2016 "Modelling a multivariate hidden Markov process on survey data", SIS
2015 "A discrete-valued latent stochastic process for the estimation of credit migration matrices", ERCIM
2015 "Exploring the dependencies between epigenetic pathways and air pollution with the use of the latent Markov model", Biometrics and Biostatistics
2015 "Latent Markov and Growth Mixture models: a comparison", CLADAG 2015
2013 "Hospital efficiency under competing panel data models", CLADAG
2009 "Impact evaluation of job training programs by a latent variable model", CLADAG
2008 "The latent Markov Rasch model", Psychometric Society

HONORS/AWARDS

2005 Press coverage with favorable comments for the work in Euroabstracts, "How well are European firms migrating to e-business"
2003 Marie Curie Fellowship for studies at the University of Lancaster, UK
2001 - 2004: National Scholarship for PhD studies (XVI cycle) at the University of Florence
2000 Italian Association for Consumer and Real Estate Credit (ASSOFIN) grant "Baldo Grazzini" at Findomestic Bank S.p.A
1998 - 1999: Italian Academic Exchange Service (ERASMUS), scholarship for studies in Sheffield, UK
1995 - 1999: University of Perugia scholarship for attending the Faculty of Economics and Business Administration
1995 Livio Tempesta Honour: awarded "... for showing how, with altruism and goodness, one can be useful to one's neighbour and, at the same time, strengthen one's own personality so as to gain estimation of the schoolteachers and classmates"