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# PAOLO COLETTI

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## EDUCATION

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**Dottorato di Ricerca (Ph.D.) in Mathematics**, specialization in Numerical Analysis, Applied Mathematics and Operative Research at Department of Mathematics of *University of Trento*.

**Laurea (Master) in Mathematics** at *University of Trento*. Thesis on numerical analysis applied to turbulence models in hydraulics.

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## LANGUAGES

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| <b>Italian</b> | Mother tongue  |
| <b>English</b> | Very good, oral and written. Cambridge academic IELTS test band 8 (European Framework level C1-C2)           |
| <b>German</b>  | Good, oral and written. Bilingual certificate from Province of Bolzano level A (European Framework level C1) |
| <b>French</b>  | Discrete, oral and written   |

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## COMPUTER SKILLS

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| <b>Oper. Sys.</b> | UNIX and Linux, Windows and MS-DOS.  |
| <b>Languages</b>  | Python, PERL and shell scripting, SQL, C++, PHP, FORTRAN, VBA, Java.   |
| <b>Software</b>   | Word, Excel, Powerpoint, Access (certifications: ECDL Core full and ECDL Advanced), MySQL, R, MatLab, PowerPoint, LaTeX, SPSS. |

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## SCIENTIFIC SKILLS

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| <b>Mathemat.</b>           | Numerical analysis and matrix calculation, finite elements and finite differences numerical methods for ordinary differential equations, analytical methods for partial and convection-diffusion differential equations, functional analysis applied to partial differential equations.   |
| <b>Language technology</b> | Acoustic models and training, grammars for language models, search algorithms, interpretation and generation of natural language.   |
| <b>Statistics</b>          | Probability and distributions, discrete and continuous random variables, descriptive statistics, sampling techniques and survey building, questionnaires, indexes, univariate analysis, confidence intervals and significance tests, independence tests, contingency tables, correlations, inferences, multivariate analysis, causal relations, linear regression, logistics and log-linear regression models, causal models, latent variables, history data analysis and longitudinal temporal data events, non parametric tests, PASW-SPSS. |
| <b>Decision theory</b>     | Expected utility theory, premium at risk, certainty equivalent, small risks, stochastic dominance, insurances and premiums, value functions, investor's   |

problem with benchmark, value at risk, risk spreading, mean variance approach, inventory management, auctions.

**Physics** Classical mechanics of point and rigid bodies, Lagrange mechanics, continuous mechanics and hydraulics, mathematical models for fluid dynamics, turbulence models.

**Finance** NPV and IRR, bonds, stocks, funds and futures, asset allocation, Monte Carlo simulations, technical analysis.

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## TEACHING EXPERIENCES

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### LECTURER OF COMPUTER SCIENCE COURSES

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**Algorithmic Thinking and Coding** (ING-INF/05, 09/H1) at the Faculty of Economics and Management at *Free University of Bolzano*.

**Big Data and Blockchain** (ING-INF/05, 09/H1) at the Faculty of Economics and Management at *Free University of Bolzano*.

**Financial Trading Algorithms** (ING-INF/05, 09/H1) at the Faculty of Computer Science at *Free University of Bolzano*.

**Computer Science and Information Processing** (ING-INF/05, 09/H1) at the Faculty of Economics and Management at *Free University of Bolzano*.

**Advanced Computer Skills** (ING-INF/05, 09/H1) at the Faculty of Economics and Management at *Free University of Bolzano*.

**Advanced Data Analysis** (ING-INF/05, 09/H1) at the Master degree in Entrepreneurship and Innovation at Faculty of Economics and Management at *Free University of Bolzano*.

**Information Systems and Data Management** (ING-INF/05, 09/H1) at the Faculty of Economics and Management at *Free University of Bolzano*.

**Informatica** (ING-INF/05, 09/H1) at the Faculty of Economics and Management at *Free University of Bolzano*.

**Introduction to Information Science** (ING-INF/05, 09/H1) at the Faculty of Science and Technology at *Free University of Bolzano*.

**Information Processing Systems** (ING-INF/05, 09/H1) at the Master degree course in Nursing Management Coordination at *University of Rome Tor Vergata*, remote site by the *Province College for Health-Care Professions Claudiana* in Bolzano.

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### LECTURER OF STATISTICS

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**Advanced statistics** (SECS-S/02, 13/D1) at the PhD program in Management of Mountain Environment at the Faculty of Science and Technology at *Free University of Bolzano*.

**Statistics** (SECS-S/02, 13/D1) at the Faculty of Science and Technology at *Free University of Bolzano*.

**Statistics B** (SECS-S/01, 13/D1) at the Faculty of Economics and Management at *Free University of Bolzano*.

**Statistics for Experimental and Technological Research** (SECS-S/02, 13/D1) at the Master degree course in Nursing Management Coordination at *University of Rome Tor Vergata*, remote site by the *Province College for Health-Care Professions Claudiana* in Bolzano.

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## ASSISTANT PROFESSOR

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**Statistics B** (SECS-S/01, 13/D1) at the Faculty of Economics and Management at *Free University of Bolzano*.

**Decision Theory** (SECS-S/06, 13/A5) at the Faculty of Economics and Management at *Free University of Bolzano*.

**Classical Mechanics** (MAT/07, 01/A4) at the Faculty of Sciences at *University of Trento*.

**Fundamentals of Mathematical Physics** (MAT/07, 01/A4) at the Faculty of Sciences at *University of Trento*.

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## PROFESSIONAL EXPERIENCES

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1992-1998 **Ph.D. student** at Department of Mathematics at *Trento University*

1998-2004 **Researcher** at Interactive Sensorial Systems division of *Scientific and Technological Research Center* in Trento (now *Fondazione Bruno Kessler*), involved in the following projects

- SPINS Speech Interface for a Network Scanner, co-financed by Hewlett Packard.
- NESPOLE! Negotiating Through Spoken Language in E-Commerce, co-financed by European Fifth Framework Programme and American National Science Foundation.
- VICO Virtual Intelligent Codriver, co-financed by European Sixth Framework Programme.

2006-2010 **Researcher** at *Advanced Financial System Research* in Loughton UK.

2011-now **Researcher** in Information Processing Systems (ING-INF/05, 09/H1) at the Faculty of Economics and Management at *Free University of Bolzano*.

- Database of Italian stock markets.
- An Intelligent Analysis Platform for Stock Market Data.

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## PUBLICATIONS

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Paolo Coletti and Maurizio Murgia; **Automatic extraction of dividends from annual general meetings' minutes of private firms**; *ACM Journal of Data and Information Quality*; under review.



Tong Liu, Paolo Coletti, Anton Dignös, Johann Gamper and Maurizio Murgia; **Correlation Graph Analytics for Stock Time Series Data**; *Advances in Database Technology - EDBT 2021, 24th International Conference on Extending Database Technology*, Nicosia, Cyprus, March 23 - 26, Proceedings, pp. 666-669; DOI: 10.5441/002/edbt.2021.79



Thomas Aichner, Paolo Coletti, Frank Jacob and Robert Wilken; **Did the Volkswagen Emissions Scandal Harm the "Made in Germany" Image? A Cross-Cultural, Cross-Products, Cross-Time Study**; *Corporate Reputation Review*; 24, 179-190, 15 September 2020; DOI: 10.1057/s41299-020-00101-5



Thomas Aichner, Robert Wilken and Paolo Coletti; **Country Image at Risk: Spillover Effects of Product-Harm Crises and the Role of Trust**; *Journal of Global Marketing*; 34 (2); 73-89; 3 July 2020; DOI: 10.1080/08911762.2020.1786614



Thomas Aichner, Paolo Coletti, Patrick Lombardo; **Il futuro del mobile marketing in Italia: uno studio con il metodo Delphi**, *Micro & Macro Marketing*; 29 (1); 95–121; April 2020; DOI: 10.1431/96400



Paolo Coletti, Maurizio Murgia; **The network of the Italian stock market during the 2008–2011 financial crises**; *Algorithmic Finance*; 5 (3-4); 111–137; 13 April 2017; DOI: 10.3233/AF-160177



Paolo Coletti; **Comparing minimum spanning trees of the Italian stock market using returns and volumes**; *Physica A: Statistical Mechanics and its Applications*; 463; 246-261; December 2016; DOI: 10.1016/j.physa.2016.07.029



Thomas Aichner, Paolo Coletti, Cipriano Forza, Urban Perkman, Alessio Trentin; **Effects of subcultural differences on country and product evaluations: a replication study**, *Journal of Global Marketing*; 29(3); 115-127; July 2016; DOI: 10.1080/08911762.2015.1138012



Paolo Coletti, Maurizio Murgia; **Design and Construction of a Historical Financial Database of the Italian Stock Market 1973–2011**; *ACM Journal of Data and Information Quality*; 6(4); October 2015. DOI: 10.1145/2822898



Thomas Aichner, Urban Perkman, Paolo Coletti; **Warum sich Kunden an Mass Customization beteiligen**; *transfer, Werbeforschung & Praxis*; 3/15; September 2015.



Thomas Aichner, Paolo Coletti; **Customers' Online Shopping Preferences in Mass Customisation**, *Journal of Direct, Data and Digital Marketing Practice*; vol. 15; September 2013.



Juan Gabriel Brida, Paolo Coletti; **Tourist's Intention of Returning to a Visited Destination: Cruise Ship Passengers in Cartagena De Indias, Colombia**; *Tourism in Marine Environments*; vol.8; n. 3; December 2012.



Maria Carla Joris, Paolo Coletti; **Gestione di progetti e del rischio clinico**; *Il Pensiero scientifico*; October 2012; ISBN 978-88-490-0422-9



Paolo Coletti, Thomas Aichner; **Mass Customization; An Exploration of European Characteristics**; *Springer*; May 2011; ISBN 978-3-642-18389-8.



Marco Costantino, Paolo Coletti; **Information Extraction in Finance**; *Witpress*; 2008; ISBN 978-1-84564-146-7.



Alessio Brutti et al.; **Use of Multiple Speech Recognition Units in an In-car Assistance System**; *DSP for Vehicle and Mobile Systems*; pp. 97-111; Springer; 2005; ISBN 978-0-387-22979-9.



Alessio Brutti et al.; **Progetto VICO: sviluppo di un prototipo per interazione vocale in automobile**; *Primo convegno Associazione Italiana Scienze della Voce*; Padova (Italy); December 2004, DOI 10.1109/IVS.2003.1212984.



Alessio Brutti et al.; **On the development of an in-car speech interaction system at Irst**; *Special Workshop in Maui*; Hawaii (USA); January 2004.



Paolo Coletti et al.; **A speech driven in-car assistance system**; *Proceedings of the IEEE IV2003 Intelligent Vehicles Symposium*; pp. 622-626; Columbus (Ohio; USA); June 2003.



Paolo Coletti, Luca Cristoforetti, Marco Matassoni, Maurizio Omologo, Piergiorgio Svaizer; **Developing a speech interaction system for the car**; *Proceedings of the 8th International Conference on Human Aspects of Advanced Manufacturing: Agility & Hybrid Automation*; pp. 521-525; Rome (Italy); May 2003.



Susanne Burger et al.; **The NESPOLE! Voice over IP Dialogue Database**; *Proceedings of EUROSPEECH; 7th European Conference on Speech Communication and Technology*; Aalborg (Denmark); September 2001.



Alon Lavie et al.; **Architecture and Design Considerations in NESPOLE!: a Speech Translation System for E-commerce Applications**; *Proceedings First international conference on Human language technology research*; March 2001, DOI 10.3115/1072133.1072140.



Augusto Palombini et al.; **Cervelli in fuga**; *Avverbi Edizioni*; Rome (Italy); June 2001; ISBN 978-8-88732-827-1.



Marcello Federico, Dimitri Giordani, Paolo Coletti; **Development and Evaluation of an Italian Broadcast News Corpus**; *Proceedings of the Second International Conference on Language Resources and Evaluation*; pp. 921-924; Athens (Greece); June 2000.



Paolo Coletti, Marcello Federico; **A two-stage speech recognition method for information retrieval applications**; *Proceedings of EUROSPEECH; 6th European Conference on Speech Communication and Technology*; pp. 459-462; Budapest (Hungary); September 1999.



Paolo Coletti; **Analytical and Numerical Analysis of k- $\epsilon$  and Large Eddy Simulation Turbulence Models**; Ph.D. Thesis; *Dipartimento di Matematica; Università di Trento*; February 1998. DOI: 10.13140/RG.2.2.27333.86248



Paolo Coletti; **Existence for any Reynolds number for Large Eddy Simulation Turbulence Model**; *Dipartimento di Matematica; Università di Trento*; February 1998.



Paolo Coletti; **A Global Existence Theorem for Large Eddy Simulation Turbulence Model**; *Mathematical Methods and Models in Applied Science*; vol. 7; n. 5; pp. 579-591; May 1997.



Paolo Coletti; **Risoluzione numerica di modelli di turbolenza in acque basse**; Master degree thesis; *Facoltà di Scienze Matematiche Fisiche e Naturali; Università di Trento*; July 1992.

Bolzano, April 12, 2023