europass

Giacomo Aletti

Date of birth: 10/12/1972 | Nationality: Italian | Gender: Male | (+39) 0250316158 | (+39) 3409739142 | giacomo.aletti@unimi.it | Skype: giacomo.aletti |

Via Saldini 50, 20133, Milano, Italy

About me: Born on December 10, 1972. PhD in Mathematics at the University of Milan. Full Professor of Probability and Mathematical Statistics at the Department of Environmental Science and Policy. Long period research visitor at Erasmus University (Rotterdam, Netherlands) and at several universities outside of Europe: The Hebrew University of Jerusalem, Bar-Ilan University (Tel Aviv), Vanderbilt University (Nashville), Stanford University, George Mason University (Fairfax), Fudan University (Shanghai). He has several research interests and collaborations with researchers from other fields, especially with colleagues in agriculture and in medicine. He deals with applied mathematics, with particular interest in modelling, mathematical statistics and interacting stochastic systems. Recently, he has worked on the development of probabilistic algorithms for BigData themes, applied to rural environment and land use policy, remote sensing, social interaction (twitter).

WORK EXPERIENCE

01/02/2018 – CURRENT

FULL PROFESSOR – Dept of Environmental Science and Policy, University of Milan

SSD MAT/06: Probabilità e Statistica Matematica

Milan, Italy

01/07/2017 – 01/02/2018

ASSOCIATE PROFESSOR – Dept of Environmental Science and Policy, University of Milan

SSD MAT/06: Probabilità e Statistica Matematica

Milan, Italy

2009 – 2017

ASSOCIATE PROFESSOR – Dept of Mathematics, University of Milan

SSD MAT/06: Probabilità e Statistica Matematica

Milan, Italy

2001 – 2009

ASSISTANT PROFESSOR – Dept of Mathematics, University of Milan

SSD MAT/06: Probabilità e Statistica Matematica

Milan, Italy

1997 – 2001

PHD FELLOW – University of Milan

Milan, Italy

EDUCATION AND TRAINING

1997 – 2001 – Milano, Italy

PH.D. IN MATHEMATICS – University of Mlan

- Title of thesis: "On the general theory of set-indexed stochastic processes"
- Supervision: Merzbach, Ely and Capasso, Vincenzo

EQF level 8

Milano, Italy

LAUREA (MASTER) IN MATHEMATICS – University of Mlan

- Grade: 110/100 cum Laude
- Title of thesis (Italian): "Su i Processi di Punto nel Piano"

EQF level 7

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	C2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PUBLICATIONS

Publications archives

Total citations (Scopus, December, 2020): **1675** by **1464** documents
h-index (Scopus, December, 2020): **19**

- Google Scholar
- Scopus
- Web of Science
- ORCID
- myAIR - UNIMI
- arXiv

HONOURS AND AWARDS

Honours and awards

2005:
- Research Price Amici della Città di Milano ("Friends of the City of Milan"), Falck Fundation.
- Awarded the silver plaque of the President of the Republic and the President of the Lombardy Region.
- Gold Medal awarded for Mathematical Research.

2002:
- Research Price of the Department of Mathematics "F. Enriques", University of Milan.

2000:
- Research Price of the Department of Mathematics "F. Enriques", University of Milan.

PHD COMMITTEE

2010 – CURRENT

PhD Committee

- 2020 COMPUTATIONAL MATHEMATICS AND DECISION SCIENCES-2019 Università degli Studi di PAVIA
- 2019 COMPUTATIONAL MATHEMATICS AND DECISION SCIENCES-2019 Università degli Studi di PAVIA
- 2018 COMPUTATIONAL MATHEMATICS AND DECISION SCIENCES-2018 Università degli Studi di PAVIA
- 2015 SCIENZE MATEMATICHE-2015 Università degli Studi di MILANO
- 2014 SCIENZE MATEMATICHE-2014 Università degli Studi di MILANO
- 2013 SCIENZE MATEMATICHE-2013 Università degli Studi di MILANO
- 2012 MATEMATICA E STATISTICA PER LE SCIENZE COMPUTAZIONALI-2012 Università degli Studi di MILANO
- 2011 MATEMATICA E STATISTICA PER LE SCIENZE COMPUTAZIONALI-2011 Università degli Studi di MILANO
- 2010 MATEMATICA E STATISTICA PER LE SCIENZE COMPUTAZIONALI-2010 Università degli Studi di MILANO

DIGITAL SKILLS

Programming - proficient user

R | MATLAB | Python | C

Editing with programming - proficient user

LaTeX | Microsoft Office

Web development - proficient user

Web Development: HTML 5, CSS, JavaScript

ORGANISATIONAL SKILLS

Organisational skills

PHD STUDENTS ADVISOR

- Antonio Daziario, Statistics on multi-type Galton-Watson trees, PhD Thesis discussed in 2014.
- Enea Bongiorno, A Birth-and-Growth Process for Random Closed Sets Based on Minkowski Sum, PhD Thesis discussed in 2008.

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills

- good communication skills gained through my experience

INVITED TALKS AND RESEARCH VISITINGS

Invited Talks and Research Visitings

- Visiting Researcher at Erasmus University (Rotterdam, Nederland) and at several universities outside Europe (Fudan University, George Mason University, The Hebrew University of Jerusalem, Bar-Ilan University, Vanderbilt University, Stanford University, and others).
- Invited Speaker in many seminars and conferences.

COURSES (SINCE SEPTEMBER 2009)

Courses (Since September 2009)

ACADEMIC YEAR 2020/2021
- Laboratory of Mathematical Statistics (24 h)
- Statistical Methods in Environmental Studies (20 h)
- Mathematics (24 h)
- Advanced Mathematical Statistics (52 h)

ACADEMIC YEAR 2019/2020
- Probability Theory and Mathematical Statistics 2 (24 h)
- Statistics and Econometrics (20 h)
- Mathematics (24 h)
- Mathematical Statistics (52 h)
- Lab. of Mathematical Modeling (12 h)

ACADEMIC YEAR 2018/2019
- Probability Theory (21 h)
- Probability Theory and Mathematical Statistics 2 (24 h)
- Statistics and Econometrics (20 h)
- Mathematics (32 h)
- Mathematical Statistics (14 h)
- Lab. of Mathematical Modeling (12 h)

ACADEMIC YEAR 2017/2018
- Probability Theory (48 h)
- Probability Theory and Mathematical Statistics 2 (53 h)
- Statistics and Econometrics (20 h)
- Lab. of Mathematical Modeling (12 h)
- Financial data science for risk analysis (10 h)

ACADEMIC YEAR 2016/2017: sabbatical year

ACADEMIC YEAR 2015/2016
- Probability Theory (68 h)
- Statistics of Stochastic Processes (Big Data, 50 h)

ACADEMIC YEAR 2014/2015
- Probability Theory (68 h)
- Stochastic Calculus and Applications (52 h)

ACADEMIC YEAR 2013/2014
- Lab. of Mathematical Modeling (24 h)
- Probability Theory (42 h)
- Statistical inference of signals and images (Markov Random Fields, 7h)
- Stochastic Calculus and Applications (52 h)

ACADEMIC YEAR 2012/2013
- Lab. of Mathematical Modeling (24 h)
- Probability Theory (42 h)
- Statistical inference of signals and images (Markov Random Fields, 7 h)
- Statistics of Stochastic Processes (Hidden Markov Models, 50 h)

ACADEMIC YEAR 2011/2012
- Lab. of Mathematical Modeling (24 h)
- Probability Theory (42 h)

MASTER THESIS SUPERVISOR (SINCE SEPTEMBER 2012)

Master Thesis Supervisor (since September 2012)

, * INTERNAL ADVISOR

- Maximum likelihood estimation of a monotone probability mass function with unknown labels*
- Modelli statistico-matematici per la valutazione dell'aderenza alla dieta Mediterranea
- Modelli dinamici di scelta discreta su una grande mole di dati. Applicazione allo studio degli effetti delle politiche *gre en* in Lombardia
- Filtri Bayesiani per Insiemi Aleatori Finiti
- Stime analitiche per la precisione di algoritmi di conteggio probabilistico
- Stimatori BLUE per parametri di processi stocastici
- Il Modello Multi-Armed Bandit nelle Politiche di Prezzo

del Commercio On-line

- Nearest neighbor search on a surface by hexagonal tessellation
- Some Mathematical and Statistical Issues in Quantile Regression for Large Datasets
- Mathematical aspects of chaotic indices for the quantitative assessment of motor rehabilitation activities
- Theoretical analysis of an algorithm for simulating quasi-stationary distributions*
- Classi di modelli statistici lineari ad alte dimensioni: da un approccio algebrico-formale a una visione funzionale
- Stime in modelli sparsi: Il metodo lasso
- L'equazione del calore stocastica. Un approccio mediante il calcolo di Malliavin
- Strategie di portafoglio basate sul rischio specifico
- Holt-Winters method within the state-space framework and applications to electricity consumption loads*
- Numerical methods for parabolic PDEs with random coefficients*
- Bootstrap confidence intervals in Aalen's additive regression model for right-censored survival data: a study of risk factors for type 2 diabetes in dynamic path analysis framework*
- Modelling regulating electricity prices with sarima model and Markov process*
- Denoising per identificazione di eventi su segnali neuronali
- Parameter estimation for chaotic or stochastic dynamics*
- Interest rate modelling after the financial crisis: a new Heath-Jarrow-Morton framework*
- Asymptotic results for occupation times of delayed alternating renewal processes*
- Probabilistic obfuscation strategies for GPS tracks sharing
- Branching diffusions and urn models: asymptotics and simulations
- Modelli per le serie storiche finanziarie e strategie di trading con costi di transazione
- Holt-Winters method within the state-space framework and applications to electricity consumption loads*
- Numerical methods for parabolic PDEs with random coefficients
- Bootstrap confidence intervals in Aalen's additive regression model for right-censored survival data: a study of risk factors for type 2 diabetes in dynamic path analysis framework*
- Modelling regulating electricity prices with sarima model and Markov process*
- Denoising per identificazione di eventi su segnali neuronali
- Theoretical analysis of an algorithm for simulating quasi-stationary distributions*
- Classi di modelli statistici lineari ad alte dimensioni: da un approccio algebrico-formale a una visione funzionale
- L'equazione del calore stocastica. Un approccio mediante il calcolo di Malliavin
- Strategie di portafoglio basate sul rischio specifico
- Processi di branching: approssimazione e diffusione spaziale, da Galton-Watson ai superprocessi
- Stima di modelli di zero coupon bond
- Problema di arresto ottimale ed applicazioni alla matematica finanziaria
- Processi rigenerativi e semi-markoviani con applicazioni al rischio di credito
- Inference for discrete alpha-stable process. Methods and their comparison*
- Modelling dependence of stock returns through copulas*
- Generalized Eden model: asymptotic behavior and shape*
- Moment model for the dynamics of a pair of quasi-geostrophic vortices*
- Parametric inference for stochastic differential equations
- Estimating volatility and parameters of stochastic volatility models using particle filter*
- Stime di concentrazione per somme di variabili aleatorie dipendenti e applicazioni
- Topology influence and control theory in consensus problems
- Modelli di markov nascosti per serie temporali. Applicazione al riconoscimento vocale
- Distribuzione delle distanze su grafi aleatori
- Probabilistic topic models

OTHER ACADEMIC ACTIVITIES (SINCE 2007)

Other Academic Activities (since 2007)

- 2018: Member of the Committee for competitive selection for Associate Professorship Positions
- 2017-now: Coordinator of the IT Committee of the Department
- 2013-2019: Member of different evaluation committees for PhD title outside UNIMI, including University of Poitiers, France
- 2011-2014: Member of the Committee for three competitive selections for PostDoc Positions
- 2013: Member of the Committee for a competitive selection for Assistant Professor
- 2019-2012: President of the IT Committee of the Department
- 2012-2017: Member of the Master's Committee for incoming students
- 2007-2009: Member of the IT Committee of the Department
- 2007-2011: Member of the Faculty Executive Group for students' orientation
- 2007-2016: Personal tutor of incoming students (~6/year)

OTHER SCIENTIFIC ACTIVITIES

Other Scientific Activities

- 2019-now Vice Director of the Department of Environmental Science and Policy, University of Milan
- 2001-now Member of ADAMSS (Advanced Applied Mathematical and Statistical Science) Centre. ADAMSS Centre is the prosecution of MIRIAM (MIlan Research center for Industrial and Applied Mathematics). Attainder of the largest amount of funds for the Center.
- 2014-2015 Organizer of the weekly Reading Group Seminar (Department of Mathematics, Milan and IIT, Genova). More than 30 talk
- 2001-2016 Organizer for Applied Math Seminar (Probability) (Department of Mathematics, Milan).
- 2004-2005 Member of the Organizing Committee of the conference "ECS10 The 10th European Congress of Stereology and Image Analysis". MILANO, 22-29 June, 2009
- 2004-2005 Member of the Organizing Committee of the conference "MATH EVERYWHERE. Deterministic and Stochastic Modelling in Biomedicine, Economics and Industry". A workshop to celebrate Vincenzo Capasso's 60th birthday! MILANO, 4-6 September 2005.
- 2002 Logistic and technical manager during ECMTB 2002 (Mathematical Modelling & Computing in Biology and Medicine) –almost 500 participants-.
- 2012–2015 Editorial Board of ISRN Probability and Statistics.
- 2004-now Referee for several international journals (Statistics and Computing, Stochastic Process and their Applications, Advances in Applied Probability, Electronic Journal of Probability, and several others).
- 2001-now Reviewer for Mathematical Reviews.

DRIVING LICENCE

Driving Licence: **A**
Driving Licence: **B**