

Personal information

Name / Surname

Andrea Ghiglietti

Personal Email

andrea.ghiglietti@unimib.it

Nationality

Italian

Date of birth

18 May 1986



Current employment

Dates

09/2022–today

Name and type of organization

Università degli Studi di Milano-Bicocca,
via Bicocca degli Arcimboldi 8, 20126 Milan (Italy)

Employment

Assistant Professor - rtdb

Previous employments

Dates

03/2022–08/2022

Name and type of organization

Università degli Studi di Torino,
Lungo Dora Siena 100/A, 10153 Turin (Italy)

Employment

Assistant Professor - rtdb

Dates

03/2019–02/2022

Name and type of organization

Swissblock Technology AG,
Bahnhofplatz, 06300, Zug (Switzerland)

Employment

Statistical consultant

Dates

02/2020–03/2021

Name and type of organization

Università della Svizzera Italiana,
Via Buffi 13, 06900 Lugano (Switzerland)

Employment

Research Fellow

Dates

04/2018–08/2019

Name and type of organization

Livanova PLC,
Via Benigno Crespi, 17, 20159 Milan (Italy)

Employment

Quality Statistician

Dates

12/2017–03/2018

Name and type of organization

Università Cattolica del Sacro Cuore,
Largo Gemelli 1, 20123 Milan (Italy)

Employment

Assistant Professor - rtda

Dates

06/2014–11/2017

Name and type of organization

Università degli Studi di Milano,
Via Cesare Saldini 50, 20133 Milan (Italy)

Employment

Postdoctoral Researcher

Title of the project

“Statistical inference for counting processes”

Dates

02/2014–05/2014

Name and type of organization

Politecnico di Milano,
P.za Leonardo Da Vinci 32, 20133 Milan (Italy)

Employment	Scientific collaborator
Title of the project	"Use of database of the Regional Sanitary Service for epidemiology evaluation, of short terms results, and process indices in hospitalized patients for heart diseases"
Education	
Dates	2011–2014
Name and type of organization providing education	Politecnico di Milano, P.za Leonardo Da Vinci 32, 20133 Milan (Italy) Phd cum Laude in Mathematical Models and Methods in Engineering – XXVI cycle
Advisor	Specialization Statistics. Prof. Anna Maria Paganoni.
Title of Thesis	"Statistical properties of urn models in Response-Adaptive Designs"
Dates	2008–2010
Name and type of organization providing education	Politecnico di Milano, P.za Leonardo Da Vinci 32, 20133 Milano (Italy)
Title of qualification awarded	Master degree in Mathematical Engineering, Specialization Statistics.
Grade	110/110.
Advisor	Prof. Anna Maria Paganoni.
Title of Thesis	"Urn Models for the adaptive design of clinical trials"
Dates	2005–2008
Name and type of organization providing education	Politecnico di Milano, P.za Leonardo Da Vinci 32, 20133 Milan (Italy)
Title of qualification awarded	Bachelor degree in Mathematical Engineering, Specialization Statistics.
Grade	110/110
Advisor	Prof. Anna Maria Paganoni.
Title of Thesis	"Sequential Tests"
Dates	2000–2005
Name and type of organization providing education	Liceo Scientifico Giambattista Vico, informatic orientation Viale Italia 26, 20094 Corsico (MI) (Italy)
Title of qualification award	Maturità Scientifica.
Grade	100/100
Abilitazione Scientifica Nazionale	
Periodo di validita'	16 July 2018–16 July 2027
Fascia	Seconda
Settore Concorsuale	13/D1 Statistica
Publications	
2024	- G. Aletti, I. Crimaldi, A. Ghiglietti:

- "Networks of reinforced stochastic processes: a complete description of the first-order asymptotics"
Stochastic Processes and their Applications, 176, 104427
- 2024 - G. Aletti, I. Crimaldi, A. Ghiglietti:
"Networks of reinforced stochastic processes: probability of asymptotic polarization and related general results"
Stochastic Processes and their Applications, 174, 104376
- 2023 - G. Aletti, I. Crimaldi, A. Ghiglietti:
"Interacting innovation processes"
Scientific Reports, 13, 17187
- 2020 - G. Aletti, I. Crimaldi, A. Ghiglietti:
"Interacting reinforced stochastic processes: Statistical inference based on the weighted empirical means"
Bernoulli, vol. 26, 2, 1098–1138
- 2019 - G. Aletti, I. Crimaldi, A. Ghiglietti:
"Networks of reinforced stochastic processes: Asymptotics for the empirical means"
Bernoulli, vol. 25, 4B, 3339-3378
- 2019 - A. Martino, A. Ghiglietti, F. Ieva, A.M. Paganoni:
"A k-means procedure based on a Mahalanobis type distance for clustering multivariate functional data"
Statistical Methods and Applications, vol. 28, 301-322
- 2018 - G. Aletti, A. Ghiglietti, W.F. Rosenberger:
"Nonparametric covariate-adjusted response-adaptive design based on a functional urn model"
The Annals of Statistics, vol. 46, 6B, 3838-3866
- 2018 - A. Ghiglietti, M.G. Scarale, R. Miceli, F. Ieva, L. Mariani, L. Gavazzi, A.M. Paganoni, V. Edefonti :
"Urn models for response-adaptive randomized designs: a simulation study based on a non-adaptive randomized trial"
Journal of Biopharmaceutical Statistics, vol. 28, 6, 1203-1215
- 2018 - G. Aletti, A. Ghiglietti, A.N. Vidyashankar:
"Dynamics of an adaptive randomly reinforced urn"
Bernoulli, vol. 24, 3, 2204-2255
- 2017 - A. Ghiglietti, A.M. Paganoni:
"Exact tests for the means of Gaussian stochastic processes"
Statistics & Probability Letters, vol. 131, 102-107
- 2017 - G. Aletti, I. Crimaldi, A. Ghiglietti:
"Synchronization of reinforced stochastic processes with a network-based interaction"
The Annals of Applied Probability, vol. 27, 6, 3787-3844
- 2017 - A. Ghiglietti, A.N. Vidyashankar, W.F. Rosenberger:

- "Central limit theorem for an adaptive randomly reinforced urn model"
The Annals of Applied Probability, vol. 27, 5, 2956-3003
- 2017 - G. Aletti, A. Ghiglietti:
"Interacting generalized Friedman's urn systems"
Stochastic Processes and their Applications, vol. 127, 8, 2650-2678
- 2017 - A. Ghiglietti, F. Ieva, A.M. Paganoni:
"Statistical inference for stochastic processes: two sample hypothesis tests"
Journal of Statistical Planning and Inference, vol. 180, 49-68
- 2017 - A. Ghiglietti, F. Ieva, A.M. Paganoni, G. Aletti:
"On linear regression models in infinite dimensional spaces with scalar response"
Statistical Papers, vol. 58, 2, 527-548
- 2016 - A. Ghiglietti, A.M. Paganoni:
"An urn model to construct an efficient test procedure for response adaptive designs"
Statistical Methods and Applications, vol. 25, 2, 211-226
- 2015 - M. Rasponi, A. Gazaneo, A. Bonomi, A. Ghiglietti, P. Occhetta, G.B. Fiore, A. Pessina:
"Lab-on-chip for testing myelotoxic effect of drugs and chemicals"
Microfluidics and Nanofluidics, vol. 19, 4, 935-940
- 2014 - A. Ghiglietti, A.M. Paganoni:
"Statistical properties of two-color randomly reinforced urn design targeting fixed allocations"
Electronic Journal of Statistics, vol. 8, 708-737
- 2014 - R. Cilia, C. Siri, D. Rusconi, R. Allegra, A. Ghiglietti, G. Sacilotto, M. Zini, A.L. Zecchinelli, R. Asselta, S. Duga, A.M. Paganoni, G. Pezzoli, M. Seia, S. Goldwurm:
"LRRK2 mutations in parkinson's disease: confirmation of a gender effect in the Italian population"
Parkinsonism and Related Disorders, vol. 20, 8, 911-914
- 2013 - G. Aletti, A. Ghiglietti, A.M. Paganoni:
"Randomly reinforced urn designs with prespecified allocations"
Journal of Applied Probability, vol. 50, 2, 486-498

Contributions to books

- 2023 - G. Aletti, I. Crimaldi, A. Ghiglietti:
"Networks of reinforced stochastic processes"
Oberwolfach Reports, ISSN 1660-8933. Proceedings of MATRIX-MFO Tandem Workshop: Stochastic Reinforcement Processes and Graphs, Creswick, Australia, 5-11 March, 2023.

- 2016 - A. Ghiglietti:
 “Asymptotic Properties of an Adaptive Randomly Reinforced Urn model”
 mODa 11 - Advances in Model-Oriented Design and Analysis, pp. 113-121. Springer.
- 2015 - L. Azzimonti, M.A. Cremona, A. Ghiglietti, F. Ieva, A. Menafoglio, A. Pini, P. Zanini :
 “BarCamp: Technology Foresight and Statistics for the Future”
 Advances in Complex Data Modeling and Computational Methods in Statistics, Contributions to Statistics, pp. 149-160. Springer.
- 2013 - A. Ghiglietti, A.M. Paganoni:
 “Randomly reinforced urn designs whose allocation proportions converge to arbitrary prespecified values”
 mODa 10 - Advances in Model-Oriented Design and Analysis, pp. 99-106. Springer.

Proceedings

- 2017 - A. Ghiglietti, F. Ieva, A.M. Paganoni:
 “A generalized Mahalanobis distance for the classification of functional data”
 Proceedings of 11th Scientific meeting of the Classification and Data Analysis Group, Milan, Italy, 13-15 September, 2017.
- 2017 - A. Martino, A. Ghiglietti, A.M. Paganoni:
 “Classification methods for multivariate functional data with applications to biomedical signals”
 Proceedings of 11th Scientific meeting of the Classification and Data Analysis Group, Milan, Italy, 13-15 September, 2017.
- 2016 - A. Ghiglietti:
 “Adaptive Randomly Reinforced Urn design and its asymptotic properties”
 Proceeding of 48th Scientific meeting of the Italian Statistical Society, Fisciano, Italy, 8-10 June, 2016.
- 2015 - A. Ghiglietti, A.M. Paganoni:
 “A generalized distance for inference on functional data”
 Proceedings of 10th Scientific meeting of the Classification and Data Analysis Group, Santa Margherita di Pula, Italy, 8-10 October, 2015.
- 2014 - A. Ghiglietti, A.M. Paganoni:
 “Statistical properties of urn designs in clinical trials”
 Proceeding of 47th Scientific meeting of the Italian Statistical Society, Cagliari, 11-13 June, 2014.
- 2013 - A. Ghiglietti, A.M. Paganoni:
 “Asymptotic statistical properties of a response adaptive design based on a two colours urn model”

Proceedings of S.Co.2013 Complex Models and Computational Intensive Methods for Estimation and Prediction, Milano, September 9-11, 2013.

- 2012 - G. Aletti, A. Ghiglietti, A.M. Paganoni:
“Randomly reinforced urn designs whose allocation proportions converge to arbitrary prespecified values”
Proceeding of 46th Scientific meeting of the Italian Statistical Society, Rome, 20-22 June, 2012.

Preprints

- 2024 - G. Aletti, A. Baldi Antognini, I. Crimaldi, R. Frieri, A. Ghiglietti:
“Design and inference for multi-arm clinical trials with informational borrowing: the interacting urns design”
Technical Report: arXiv:2407.20819.

Participation to schools, workshops and conferences

4th Italian National Meeting on Probability and Mathematical Statistics,

Università Sapienza. Rome, Italy, 10-14 June, 2024

Talk: “Asymptotic behavior of interacting innovation processes”

IMS 2023 International Conference on Statistics and Data Science (ICSIDS),

Centro cultural de Belém. Lisbon, Portugal, 18-21 December, 2023

Talk: “Interacting Innovation Processes”

MATRIX-MFO Tandem Workshop: Stochastic Reinforcement Processes and Graphs,

University of Melbourne. Creswick, Australia, 5-11 March, 2023

Talk (Invited): “Networks of Reinforced Stochastic Processes”

3rd Italian National Meeting on Probability and Mathematical Statistics,

Università di Bologna. Bologna, Italy, 13-16 June, 2022

Talk: “Dynamics of Reinforced Stochastic Processes with a network-based interaction”

Pólya urns, stochastic approximation and quasi-stationary distributions: new developments,

University of Bath. Bath, England, 11-14 April, 2022

Talk (Invited): “Asymptotics of Reinforced Stochastic Processes with a network-based interaction”

11th Scientific meeting of the Classification and Data Analysis Group,

Università Bicocca. Milan, Italy, 13-15 September, 2017

Talk: “A generalized Mahalanobis distance for the classification of functional data”,

Session: Classification of Multiway and Functional Data

1st Italian National Meeting on Probability and Mathematical Statistics,

Politecnico di Torino. Turin, Italy, 19-22 June, 2017

Talk: "Systems of Reinforced Stochastic Processes with a network-based interaction"

13th Workshop on Stochastic Models, Statistics and their Applications,

Humboldt Universität of Berlin. Berlin, Germany, 20-24 February, 2017

Talk (Invited): "A functional urn model for CARA designs",

Session: Sequential Experimental Design

9th International Conference on the ERCIM WG on Computational and Methodological Statistics,

University of Seville. Seville, Spain, 9-11 December, 2016

Talk (Invited): "Inference on the means of functional data based on a Generalized Mahalanobis distance",

Session: Non- and semi-parametric approaches in functional statistics

5th Early Phase Adaptive Trials Workshop,

Politecnico di Torino. Turin, Italy, 28-30 September, 2016

Model-Oriented Data Analysis and Optimum Design (MODA 11),

Technische Universität Dortmund. Hamminkeln Dingden, Germany, 13-17 June, 2016

Talk (Invited): "Asymptotic Properties of an Adaptive Randomly Reinforced Urn model".

48th Scientific meeting of the Italian Statistical Society,

Università di Salerno. Fisciano, Italy, 8-10 June, 2016

Talk: "Adaptive Randomly Reinforced Urn design and its asymptotic properties",

Session: Sampling Methods

10th Scientific meeting of the Classification and Data Analysis Group,

Università di Cagliari. Santa Margherita di Pula, Italy, 8-10 October, 2015

Talk: "A generalized distance for inference on functional data",

Session: Functional data analysis

8th International Workshop on Simulation,

Alpen-Adria Universität. Vienna, Austria, 21-25 September, 2015

Talk (Invited): "An adaptive randomly reinforced urn model with random thresholds",

Session: Recent Developments in Adaptive Designs

StaTalk on Biostatistics

Università degli Studi di Milano. Milan, Italy, 24 April, 2015

Talk (Invited): "Urns, Coins and Clinical Trials".

47th Scientific meeting of the Italian Statistical Society,

Università di Cagliari. Cagliari, Italy, 11-13 June, 2014

Talk: "Statistical properties of urn designs in clinical trials",

Session: Clinical Designs

Barcamp @ Polimi

Politecnico di Milano, Milan, Italy, 12 September, 2013

S.Co.2013 Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction,

Politecnico di Milano, Milan, Italy, 9-11 September, 2013

Talk: "Asymptotic statistical properties of a response adaptive design based on a two colours urn model"

Session: Epidemiology

Model-Oriented Data Analysis and Optimum Design (MODA 10),

Uniwersitet Zielonogorski. Lagow Lubuski, Poland, 10-14 June, 2013

Talk (Invited): "Randomly reinforced urn designs whose allocation proportions converge to arbitrary prespecified values"

7th International Workshop on Simulation,

Università di Bologna. Rimini, Italy, 21-25 May, 2013

Talk (Invited): "Randomly reinforced urn designs with prespecified allocations",

Session: Response adaptive randomization

46th Scientific meeting of the Italian Statistical Society,

Università la Sapienza. Rome, Italy, 20-22 June, 2012

Talk: "Randomly reinforced urn designs whose allocation proportions converge to arbitrary prespecified values",

Session: Estimation methods

Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction,

Università di Padova. Padua, Italy, 19-21 September, 2011

Summer school on Statistical experimental design

Almagro, Spain, 6-10 June, 2011.

Workshop of Game Theory

Politecnico di Milano. Milan, Italy, 12-13 May, 2011.

Seminars

Date	31 May 2016
Name of the organization	Department of Mathematics, Politecnico di Torino
Event	Seminar
Presentation Title	Asymptotic results on a general class of Adaptive Randomly Reinforced Urn designs

Date	1 February 2016
Name of the organization	Department of Mathematics, Politecnico di Milano
Event	Bio-MOX Seminar
Presentation Title	Interacting Generalized Pólya Urn Systems
Date	13 February 2015
Name of the organization	George Mason University
Event	Seminar
Presentation Title	Statistical properties of urn models in response-adaptive designs
Date	17 July 2014
Name of the organization	Department of Mathematics, Università degli Studi di Milano
Event	Seminar
Presentation Title	Asymptotic properties of response-adaptive urn models
Date	30 January 2014
Name of the organization	Chalmers University of Technology
Event	Seminar
Presentation Title	A two-color Randomly Reinforced Urn design targeting fixed allocations
Date	6 June 2012
Name of the organization	Department of Mathematics, Politecnico di Milano
Event	MOX Seminar
Presentation Title	Randomly reinforced urn designs with prespecified allocations

Referee activity for ISI Journals

Annals of Applied Probability
Journal of Applied Statistics
International Journal of Mathematics and Statistics

Visiting experiences

Period	November-December 2016
University	George Mason University
Place	Fairfax, VA, United States
Period	January-March 2015
University	George Mason University
Place	Fairfax, VA, United States
Period	January-March 2013
University	George Mason University
Place	Fairfax, VA, United States

Teaching

Academic year 2024-2025

Course	Statistical Methods
University	Università degli Studi di Milano-Bicocca
Dates	September 2024-January 2025

Activity	Teaching
Academic year 2023-2024	
Course	Calculus of the Probabilities
University	Università degli Studi di Milano-Bicocca
Dates	February 2024-June 2024
Activity	Teaching
Course	Statistical Methods
University	Università degli Studi di Milano-Bicocca
Dates	September 2023-January 2024
Activity	Teaching
Academic year 2022-2023	
Course	Statistics I
University	Università degli Studi di Milano-Bicocca
Dates	March 2023-June 2023
Activity	Teaching
Course	Data Mining and Statistical Learning
University	Università degli Studi di Torino
Dates	September 2022-January 2023
Activity	Teaching
Course	Statistical Methods
University	Università degli Studi di Milano-Bicocca
Dates	September 2022-January 2023
Activity	Teaching
Academic year 2020-2021	
Course	Statistical Methods in Environmental Studies
University	Università degli Studi di Milano
Dates	February 2021-June 2021
Activity	Teaching assistant
Academic year 2019-2020	
Course	Linear Models
University	Università degli Studi di Genova
Dates	October 2019-December 2019
Activity	Teaching in seminars
Academic year 2017-2018	
Course	Applied Statistics
University	Università Cattolica del Sacro Cuore
Dates	February 2018-April 2018
Activity	Teaching
Academic year 2016-2017	
Course	Mathematical Statistics
University	Università degli Studi di Milano
Dates	March 2017-June 2017

Activity	Teaching assistant
Course	Models and Methods for the Inferential Statistics
University	Politecnico di Milano
Dates	March 2017-June 2017
Activity	Teaching assistant
Course	Statistics
University	Politecnico di Milano
Dates	March 2017-June 2017
Activity	Teaching assistant

Academic year 2015-2016

Course	Mathematical Statistics
University	Università degli Studi di Milano
Dates	March 2016-June 2016
Activity	Teaching assistant
Course	Models and Methods for the Inferential Statistics
University	Politecnico di Milano
Dates	March 2016-June 2016
Activity	Teaching assistant
Course	Probability Calculus and Mathematical Statistics 2
University	Università degli Studi di Milano
Dates	September 2015-February 2016
Activity	Tutoring

Academic year 2014-2015

Course	Models and Methods for the Inferential Statistics
University	Politecnico di Milano
Dates	March 2015-June 2015
Activity	Teaching assistant
Course	Laboratory of Mathematical Modelling
University	Università degli Studi di Milano
Dates	March 2015-June 2015
Activity	Teaching assistant

Academic year 2013-2014

Course	Statistics for Energy Engineering
University	Politecnico di Milano
Dates	October 2013-February 2014
Activity	Teaching assistant

Academic year 2012-2013

Course	Statistics
University	Politecnico di Milano
Dates	March 2013-May 2013
Activity	Teaching assistant

Course	Statistics
University	Politecnico di Milano
Period	March 2013-May 2013
Activity	Teaching assistant in laboratory
Course	Statistics
University	Politecnico di Milano
Period	March 2013-July 2013
Activity	Teaching assistant in laboratory
Course	Statistics for Energy Engineering
University	Politecnico di Milano
Period	March-July 2013
Activity	Tutoring in laboratory

Academic year 2011-2012

Course	Statistics
University	Politecnico di Milano
Dates	March 2012-May 2012
Activity	Teaching assistant
Course	Statistics
University	Politecnico di Milano
Period	March 2012-May 2012
Activity	Teaching assistant in laboratory
Course	Statistics
University	Politecnico di Milano
Period	March 2012-July 2012
Activity	Teaching assistant in laboratory
Course	Medical Statistics
University	Politecnico di Milano
Period	November 2011-January 2012
Activity	Tutoring course on-line

AA 2010-2011

Course	Statistics for Energy Engineering
University	Politecnico di Milano
Period	March-July 2011
Activity	Tutoring in laboratory
Course	Medical Statistics
University	Politecnico di Milano
Period	November 2010-January 2011
Activity	Tutoring course on-line

Scientific and management activities

2016 - 2016	Responsible for the statistical consulence for WebScience S.r.l.
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2014 - 2015

Responsible for the statistical consulence for the Department of Bio-engineering, Politecnico di Milano.

2011 - 2014

Responsible for the statistical consulence for the Parkinson Center ICP.

Language skills

Mother tongue

Italian

*Self-assessment
European level*

English

Spanish

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user
C2 Proficient user	C2 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user

Computer and programming skills

Python, R, SAS, Matlab, Latex, Office
Licence awared E.C.D.L.