

## Personal information

Name / Surname **Andrea Ghiglietti**  
Personal Email andrea.ghiglietti@unito.it  
Nationality Italian  
Date of birth 18 May 1986



## Current employment

Dates 03/2022–today  
Name and type of organization Università degli Studi di Torino,  
Lungo Dora Siena 100/A, 10153 Turin (Italy)  
Employment **Assistant Professor - rtdb**

## Previous employments

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) <b>Phd cum Laude in Mathematical Models and Methods in Engineering – XXVI cycle</b>
Advisor	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	<b>Master degree in Mathematical Engineering, Specialization Statistics.</b>
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	<b>Bachelor degree in Mathematical Engineering, Specialization Statistics.</b>
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	<b>Maturità Scientifica.</b>
Grade	100/100

## Abilitazione Scientifica Nazionale

Periodo di validita'	16 July 2018–16 July 2027
Fascia	Seconda
Settore Concorsuale	13/D1 Statistica

## Publications

- 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

- 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 11<sup>th</sup> 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 11<sup>th</sup> 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 48<sup>th</sup> 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 10<sup>th</sup> 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 47<sup>th</sup> 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 46<sup>th</sup> Scientific meeting of the Italian Statistical Society, Rome, 20-22 June, 2012.

## Participation to schools, workshops and conferences

11<sup>th</sup> 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

**1<sup>st</sup> 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"

**13<sup>th</sup> 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

**9<sup>th</sup> 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

**5<sup>th</sup> 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".

**48<sup>th</sup> 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

**10<sup>th</sup> 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

**8<sup>th</sup> 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”.

**47<sup>th</sup> 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”

**7<sup>th</sup> 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

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

## 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 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**

<b>2016 - 2016</b>	Responsible for the statistical consulence for WebScience S.r.l.
<b>2014 - 2015</b>	Responsible for the statistical consulence for the Department of Bio-engineering, Politecnico di Milano.
<b>2011 - 2014</b>	Responsible for the statistical consulence for the Parkinson Center ICP.

### **Co-advisor for MD Theses**

Date	September 2016
Title	"Classification Algorithms for Multivariate Functional Data"
University	Politecnico di Milano
Candidate	Andrea Martino
Date	April 2016
Title	"Branching Diffusions and Urn Models: Asymptotics and Simulations"
University	Università degli Studi di Milano
Candidate	Alessia Senese
Date	April 2015

Title "Modelli Statistici per Variabili di Conteggio: un'applicazione ai Processi di Ospedalizzazione di Pazienti affetti da Scompenso Cardiaco"  
University Università degli Studi di Milano  
Candidate Francesca Carnevale

## Language skills

Mother tongue

**Italian**

*Self-assessment  
European level*

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

**English**

**Spanish**

## Computer and programming skills

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