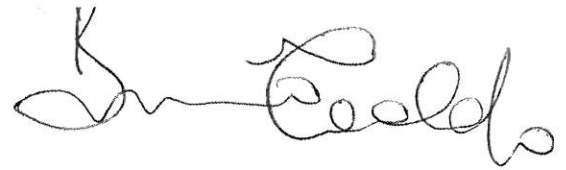


Rome, 02/07/2014



Stanza 39, Dipartimento di Scienze Statistiche  
Sapienza - Università di Roma  
P.le Aldo Moro 5, 00185, Roma - Italy

# Bruno Toaldo

## Scientific Curriculum Vitae

### Current Position

1st December 2013 – present **Research fellow**, Department of Statistical Sciences, Sapienza - University of Rome, Italy,  
*supervisor*: Enzo Orsingher.  
**Research branch**: MAT/06, Probability and Mathematical Statistics.

### Research

Major fields of study

- Subordinators, Lévy processes, Poisson point processes, counting processes
- Abstract Cauchy problems, semigroups theory, Bochner subordination, time-changed semi-groups
- Pseudoprocesses and related PDEs of fractional and integer high-order
- Anomalous diffusions, diffusions on fractals
- Random motions in hyperbolic spaces

Publications

Published/Accepted

- **B. Toaldo**. Convolution-type derivatives, hitting-times of subordinators and time-changed  $C_0$ -semigroups. *Potential Analysis*, in press. Online since 3rd July 2014.
- E. Orsingher & **B. Toaldo**. Pseudoprocesses related to space-fractional higher-order heat-type equations. *Stochastic Analysis and Applications*, 32: 619 – 641, 2014.
- M. D'Ovidio, E. Orsingher & **B. Toaldo**. Fractional telegraph-type equations and hyperbolic Brownian motion. *Statistics and Probability Letters*, 89: 131 – 137, 2014.
- E. Orsingher & **B. Toaldo**. Shooting randomly against a line in euclidean and non-euclidean spaces. *Stochastics*, 86(1): 16 – 45, 2014.

Submitted to  
international  
peer-reviewed  
Journals

- **B. Toaldo**. Lévy mixing related to distributed order calculus, subordinators and slow diffusions. *Submitted*, arXiv:1406.4669
- E. Orsingher & **B. Toaldo**. Counting processes with Bernstein intertimes and random jumps. *Submitted*, arXiv:1312.1498
- E. Orsingher & **B. Toaldo**. Even-order pseudoprocesses on a circle and related Poisson kernels. *Submitted*. arXiv:1212.5786
- E. Orsingher & **B. Toaldo**. Space-time fractional equations and the related stable processes at random time. *Submitted*, arXiv:1207.3284
- M. D'Ovidio, E. Orsingher & **B. Toaldo**. Time-changed processes governed by space-time fractional telegraph equations. *Submitted*, arXiv:1206.2511

Other

- M. D'Ovidio, E. Orsingher & **B. Toaldo**. *Space-fractional operator and higher-order time derivative related to subordinated Bessel processes*. Technical Report num 15, Agosto 2011, Department of Statistical Sciences, Sapienza - University of Rome, Italy.

In  
preparation

- E. Orsingher, C. Ricciuti & **B. Toaldo**, Subordinate birth processes.
- E. Orsingher & **B. Toaldo**, Fractional equations with elastic barriers.
- M. D'Ovidio & **B. Toaldo**, Fractional power operators and their higher-order counterparts related to subordinated euclidean and hyperbolic random distances.

Referee for

- International Journal of Stochastic Analysis
- International Journal of Modern Theoretical Physics

Talks & Posters

Talks

- *Convolution-type derivatives, subordinators and their hitting-times*. International conference on Fractional Differentiation and its applications, University of Catania, 23-25 June 2014.
- *Evolution equations and time-changed processes*. Riunione Scientifica della Scuola di Dottorato in Scienze Statistiche. Dipartimento di Scienze Statistiche, Sapienza - Università di Roma. September 27, 2013.
- *Fractional order PDEs and processes with randomly varying time*. Dipartimento di Scienze di Base e Applicate per l'Ingegneria - Sezione Matematica. Sapienza - Università di Roma. Rome - May 3, 2013.
- *Time-changed processes and fractional PDEs*. XXXVII Summer School on Mathematical Physics, Ravello - September 17-29, 2012.

Posters

- *Shooting randomly against a line in euclidean and non-euclidean spaces*. Biocomp 2012 - Mathematical Modeling and Computational Topics in Biosciences. Vietri sul mare - Salerno, June 4-8, 2012.

Summer Schools

- 43 ème Ecole d'été de Probabilités. Saint-Flour (Cantal), July 7 - 20, 2013.
- XXXVII Summer School on Mathematical Physics. Ravello, September 17 - 29, 2012.

Publications in other fields

- P. Palazzo, C. Balucani, K. Barlinn, G. Tsivgoulis, Y. Zhang, L. Zhao, J. DeWolfe, **B. Toaldo**, E. Stamboulis, F. Vernieri, P.M. Rossini, and A.V. Alexandrov, *Association of reversed Robin Hood syndrome with risk of stroke recurrence*, Neurology, November 30, 2010 75:2003-2008.

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## Teaching

2013/2014 Assistant for the following courses:

- Stochastic Processes, (MAT/06), Prof. Enzo Orsingher, Department of Statistical Sciences, Sapienza - University of Rome.
- Mathematics I, (MAT/03), Prof. Enrico Casadio Tarabusi, Department of Statistical Sciences, Sapienza - University of Rome.
- Mathematics I, (MAT/03), Prof. Roberto Pignoni, Department of Statistical Sciences, Sapienza - University of Rome.
- Mathematics II, (MAT/05), Prof. Dario Sacchetti, Department of Statistical Sciences, Sapienza - University of Rome.

2012/2013 Assistant for the following courses:

- Mathematics II, (MAT/05), Prof.ssa Silvia Mazzone, Department of Statistical Sciences, Sapienza - University of Rome.
- Mathematics II, (MAT/05), Prof. Dario Sacchetti, Department of Statistical Sciences, Sapienza - University of Rome.

- Probability I, (MAT/06), Prof. Enzo Orsingher, Facoltà di Ingegneria dell'Informazione, Informatica e Statistica (Corso di Laurea in Ingegneria Elettronica), Sapienza - University of Rome.
  - Mathematics I, (MAT/03), Prof. Enrico Casadio Tarabusi, Department of Statistical Sciences, Sapienza - University of Rome.
  - Mathematics I, (MAT/03), Prof. Roberto Pignoni, Department of Statistical Sciences, Sapienza - University of Rome.
- 2011/2012 Assistant for the following courses:
- Mathematics II, (MAT/05), Prof.ssa Silvia Mazzone, Department of Statistical Sciences, Sapienza - University of Rome.
  - Mathematics II, (MAT/05), Prof. Dario Sacchetti, Department of Statistical Sciences, Sapienza - University of Rome.
  - Mathematics I, (MAT/03), Prof. Enrico Casadio Tarabusi, Department of Statistical Sciences, Sapienza - University of Rome.
  - Mathematics I, (MAT/03), Prof. Roberto Pignoni, Department of Statistical Sciences, Sapienza - University of Rome.
  - Mathematics III, (MAT/05), Prof. Attilio Le Donne, Department of Statistical Sciences, Sapienza - University of Rome.
  - Mathematics III, (MAT/05), Prof. Paolo Papi, Department of Statistical Sciences, Sapienza - University of Rome.

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## Education

- November 2010 – **Ph.D. in Methodological Statistics**, *Department of Statistical Sciences, Sapienza - University of Rome, Italy*, *Supervisor: Enzo Orsingher.*
- October 2013 **Research branch: Probability and Mathematical Statistics (MAT/06). Ph.D. Thesis: Partial differential equations related to time-changed processes and pseudoprocesses.**
- October 2009–April 2010 **Research project: Extents and determinants of Panel Attrition in the EU-SILC**, *Istituto Nazionale di Statistica (ISTAT), Via Adolfo Ravà, 150, Rome, Italy.*  
*Supervisor: Lucia Coppola (ISTAT).*
- October 2007 – March 2010 **Master's Degree in Statistical, Economic and Actuarial Sciences**, *Università Cattolica del Sacro Cuore, Milan, Italy, Grade: 109/110.*  
*Supervisor: Alessandro Rosina (Sez. di Demografia e statistica sociale). Title of Dissertation: Extents and determinants of attrition in the EU-SILC (in italian).*
- October 2004 – October 2007 **Bachelor's Degree in Economic and Social Sciences**, *Università Commerciale Luigi Bocconi, Milan, Italy.*  
*Supervisor: Renata Targetti Lenti. Title of Dissertation: Libertà, democrazia e sviluppo nel pensiero di Amartya Sen. Published online on: <http://www.csspd.it/index.php?method=section&action=zoom&id=969>.*

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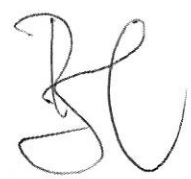
## Languages

English	Level B2	<i>Listening, Speaking, Reading and Writing</i>
French	Level B1	<i>Listening, Speaking, Reading and Writing</i>
Italian	Fluent	<i>My native language</i>

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## Computer skills

OS	Linux, Windows.
Scientific	R, Axiom, Matlab, Mathematica, SPSS, SAS, GIS.
Office	L <sup>A</sup> T <sub>E</sub> X, Office.
Programming Languages	R, SQL, html.



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References

Enzo Orsingher - [enzo.orsingher@uniroma1.it](mailto:enzo.orsingher@uniroma1.it)

Enrico Casadio Tarabusi - [enrico.casadio\\_tarabusi@mat.uniroma1.it](mailto:enrico.casadio_tarabusi@mat.uniroma1.it)

Mirko D'Ovidio - [mirko.dovidio@uniroma1.it](mailto:mirko.dovidio@uniroma1.it)