

Current position

Full Professor of Probability (MAT06)

Sapienza University of Rome

P.le Aldo Moro, 5

00185 Roma, Italy

Tel. +39 0649910585 Fax +39 064959241

mail : enzo dot orsingher at uniroma1 dot it

Known languages

Fluent in English, French, Russian.

Scientific interests

Random motions, Random fields, Pseudo-processes governed by heat-type equations, Fractional calculus and fractional differential equations.

Recent scientific curiosities

Diffusions with branching, Motions in non-euclidean spaces

Ph.D Students

[Luisa Beghin](#), Samantha Leorato, Alessandro De Gregorio, Pierpaolo Ferrante, [Valentina](#)

[Cammara](#), [Federico Polito](#), [Mirko D'Ovidio](#), [Bruno Toaldo](#), Costantino Ricciuti, [Roberto Garra](#)

Quotations

- [MathSciNet](#)
- [Google Scholar](#)
- [Scholar Citations](#)
- [arXiv](#)
- [Scopus](#)



Books

Probabilità e modelli aleatori. Enzo Orsingher, Luisa Beghin. ARACNE editrice 2006, Roma.

Introduzione alla probabilità. Enzo Orsingher, Luisa Beghin. Carocci editore 2009,

Publications on Scientific International Journals

ACCEPTED PAPERS

1. Hyper-Cauchy and higher-order Laplace equations (2011) (with M. D'Ovidio), *Journal of Theoretical Probability*, Online since 28th Feb 2013. [VIEW PAPER](#)
2. Random flights governd by Klein-Gordon-type partial differential equations (2014) (with R. Garra). *Stochastic Processes and their Applications*, Vol 124, page 2171 - 2187. [VIEW PAPER](#)
3. Fractional telegraph-type equations and hyperbolic Brownian motion (2013) (with M. D'Ovidio and B. Toaldo). *Statistics and Probability Letters*, 89: 131 - 137, 2014. [VIEW PAPER](#)
4. Fractional Klein-Gordon equations and related stochastic processes (2013) (with R. Garra and F. Polito). *Journal of Statistical Physics*, 155: 777 – 809, 2014. [VIEW PAPER](#)
5. State-dependent Fractional Point Processes (2013) (with R. Garra and F. Polito), *Accepted Journal of Applied Probability*, 2015.
6. Pseudoprocesses related to space-fractional higher-order heat-type equations (2013) (with B. Toaldo), To appear in *Stochastic Analysis and Applications*.

SUBMITTED PAPERS

1. Time-changed processes governed by space-time fractional telegraph equations (2012) (with B. Toaldo and M. D'Ovidio)
2. Space-time fractional equations and the related stable processes at random time (2012) (with B. Toaldo)

3. Even-order pseudoprocesses on a circle and related Poisson kernels (2012) (with B. Toaldo)
4. Counting processes with Bernstein intertimes and random jumps (2013) (with B. Toaldo)
5. Fractional Klein-Gordon equation for linear dispersive phenomena: analytical methods and applications (2013) (with R. Garra and F. Polito)

PUBLISHED PAPERS

1. Shooting randomly against a line in euclidean and non-euclidean spaces (with B. Toaldo) (2012), *Stochastics*, Vol 86, No.1, 16 - 45. [VIEW PAPER](#)
2. Reflecting diffusions and hyperbolic Brownian motions in multidimensional spheres (2012) (with A. De Gregorio and O. Aryasova), *Lithuanian Journal of Mathematics*, Vol. 53, No. 3, pp. 241 - 263. [VIEW PAPER](#)
3. On the Integral of Fractional Poisson Processes (2013) (with F. Polito) *Statistics & Probability Letters* Vol.83 (4) pag.1006-1017. [VIEW PAPER](#)
4. Randomly stopped nonlinear fractional birth processes (with F. Polito) (2013), *Stochastic Analysis and Applications* Vol.31 (2) pag.262-292 [VIEW PAPER](#)
5. Hitting spheres on hyperbolic spaces (with V.Cammarota) (2012). *Theory of Probability and its Applications*, vol. 57, No 3, pp. 560-587. [VIEW PAPER](#)
6. Probabilistic representation of fundamental solutions to $\frac{\partial u}{\partial t} = \kappa_m \frac{\partial^m u}{\partial x^m}$ (with M.D'Ovidio)(2012) *Electronic Communications in Probability* Vol. 17: article 34, 1-12. [VIEW PAPER](#)
7. Compositions, random sums and continued random fractions of Poisson and fractional Poisson processes (with F.Polito) (2012) *Journal of Statistical Physics* Vol.148: 233-249. [VIEW PAPER](#)
8. The Space-Fractional Poisson Process (with F. Polito) (2012), *Statistics & Probability Letters* Vol.82, pages 852-858. On line since January 3rd 2012. [VIEW PAPER](#)

9. Poisson process with different Brownian clocks (with L. Beghin). *Stochastics* (2012). Vol.84, Issue 1, pages 79-112. On line since 15th September 2011. [VIEW PAPER](#)
10. Flying randomly in \mathbb{R}^d with Dirichlet displacements (with A. De Gregorio). *Stochastic Processes and their Applications* 122 (2012), 676 – 713. Published on line since October 25th, 2011. [VIEW PAPER](#)
11. Vibrations and fractional vibrations of rods, plates and Fresnel pseudoprocesses (with M.D'Ovidio) (2011). *Journal of Statistical Physics* Vol. 145, pag. 143 - 174. Published online: 01 September 2011. [VIEW PAPER](#)
12. Composition of processes and related partial differential equations (2009) (with M.D'Ovidio). *Journal of theoretical probability* (2011) Vol.24 pag.342-375. Published on line 21st April 2010. [VIEW PAPER](#)
13. On a fractional Linear birth and death process (2011) (with. F.Polito) *Bernoulli* Vol.17 (1) pag.114-137. On line since 3rd February 2010. [VIEW PAPER](#)
14. Bessel processes and hyperbolic Brownian motions stopped at different random times (with Mirko d'Ovidio) (2011) *Stochastic Processes and their Applications*. On line since 12th November 2010, Vol.121, pag.441-465. [VIEW PAPER](#)
15. Fractional Pure birth processes (with F.Polito) *Bernoulli* (2010) Vol.16 (3) 858-881. On line since 13th September 2009. [VIEW PAPER](#)
16. Fractional diffusion equations and processes with randomly-varying time (with L.Beghin), *The Annals of Probability*, Vol 37, n1, 206-249 (2009). Published on line 11th March 2008 . [VIEW PAPER](#)
17. Angular processes related to Cauchy random walks (2010)(with V.Cammarota). *Theory of Probability and its Applications*. Vol.55 (3), pag.489-506 [VIEW PAPER](#)
18. Fractional nonlinear, linear and sublinear death process (with F.Polito and L.Sakhno) (2010) *Journal Statistical Physics*, Vol.141 (1) pag.68-93. Published on line 18th August 2010 [VIEW PAPER](#)

19. Poisson-type processes governed by fractional and higher-order recursive differential equations (with L.Beghin) *Electronic Journal of Probability* (2010) Vol.15, Paper n.22, pages 684-709. [VIEW PAPER](#)
20. Equations of mathematical physics and compositions of Brownian and Cauchy processes (with L.Beghin and L.Sakhno) (2011). *Stochastic Analysis and Applications Vol. 29, Issue 4, pages 551 - 569* [VIEW PAPER](#)
- 21.- Moving randomly amid scattered obstacles (with L.Beghin) – *Stochastics (2010). Vol. 82. No.2 pp.200-229*. Published on line 12th February 2010. [VIEW PAPER](#)
- 22.- Fractional Poisson processes and related random motions. (2009) (with L.Beghin) *Electronic Journal of Probability*, Vol. 14, paper n.61, pages 1790-1826. [VIEW PAPER](#)
- 23.- Travelling randomly on the Poincaré half-plane with a Pythagorean compass.(with V.Cammarota). *Journal of Statistical Physics* (2008) Vol.130, 455-482. Published on line 3rd October 2007. [VIEW PAPER](#)
- 24.- Some Darling-Siebert relationships connected with random flights (with V.Cammarota and L.Lachal) – *Statistics and Probability Letters*, published on line 15th August 2008, Vol.79 (2009) .243-254. [VIEW PAPER](#)
- 25.- Cascades of particles moving at finite velocity in hyperbolic spaces (with V.Cammarota)- *Journal of Statistical Physics*, published on line 22nd November 2008, Vol.133 (2008), 1137-1159. [VIEW PAPER](#)
- 26.- Random motions at finite velocity in a Non-Euclidean space. (with A.De Gregorio) *Advances in Applied Probability* Vol 39. n.2 (2007), 588-611. [VIEW PAPER](#)
- 27.- Iterated elastic Brownian motions and fractional diffusion equations (with L.Beghin), *Stochastic Processes and their Applications (2009) Vol.119, n.6 p.1975-2003*, published on line 9th October 2008. [VIEW PAPER](#)
- 28.- Branching on a Sierpinski graph.(with.S.Leorato), *Statistics and Probability Letters*, published on line 6th August 2008, Vol 79 (2009), 145-154. [VIEW PAPER](#)

- 29.- On the solutions of linear odd-order heat-type equations with random initial conditions (with L.Beghin, Yu.Kozachenko, L.Sakhno, *Journal of Statistical Physics*, v.127, n.4 (2007), 721-739. On line since 23rd February 2007. [VIEW PAPER](#)
- 30.- A Darling-Siebert formula relating some Bessel integrals and random walks.(with A.De Gregorio) . *Statistics and Probability Letters* (2007), Vol.77 pag. 667-680. Published on line October 2006. [VIEW PAPER](#)
- 31.- Some results on random flights.(with A.De Gregorio) *Sci.Math.Jpn.*64 (2006) n.2, 351--356. [VIEW PAPER](#)
- 32.-Random flights in higher spaces (with A.De Gregorio). *Journal of Theoretical Probability* (2007).Vol. 20, pag.769-806. Published online 12-5-2007. [VIEW PAPER](#)
- 33.- Hyperbolic and fractional hyperbolic Brownian motion with some applications (with L.Lao). *Stochastics* (2007) Vol 79, 6 pag.505-522. [VIEW PAPER](#)
- 34.- Minimal cyclic random motion in R^n and hyper-Bessel functions (with A. Lachal and S. Leorato). *Les Annales de l'Institut Henri Poincaré* (2006) Vol. 42, 753-772. [VIEW PAPER](#)
- 35.- Sharp small ball asymptotics for Slepian and Watson processes in Hilbert norm.(with Y.Nikitin). *Zapiski nauchn.Semin. POMI*, v.320 (2004), 120-127. [VIEW PAPER](#)
- 36.- A planar random motion with an infinite number of directions controlled by the damped wave equation. (with A. Kolesnik) *Journal of Applied Probability* (2005), Vol.42, n.4, 1168-1182. [VIEW PAPER](#)
- 37.- A grain of dust falling through a Sierpinski gasket (with S.Leorato). *Acta Mathematica Sinica*, vol.23 (6), (2007), 1095-1108. Published on line 24.06.2006. [VIEW PAPER](#)
- 38.- Some universal limits for nonhomogeneous birth and death processes (with S.Leorato, Ya.Satin, G.Shilova, A.Zeifman), *Queueing Systems Theory and Applications*, 52, pp. 139-151, (2006). [VIEW PAPER](#)
- 39.- The distribution of the local time for "pseudoprocesses" and its connection with fractional diffusion equations (with L.Beghin), *Stochastic Processes and their Applications*, v.115, n.6 (2005), pp.1017-1040. [VIEW PAPER](#)

- 40.- Bose-Einstein-type statistics, order statistics and planar random motions with three directions (with S.Leorato), *Advances in Applied Probability* (2004), Vol. 36, n.3, pp. 937-970. [VIEW PAPER](#)
- 41.- A cyclic random motion in \mathbb{R}^3 with four directions and finite velocity (with A.M.Sommella), *Stochastics and Stochastics Reports*, Vol.76, n.2 (2004), pp. 113-133. [VIEW PAPER](#)
- 42.- Motions with finite velocity analyzed with order statistics and differential equations (with A.De Gregorio, L. Sakhno), *Probability Theory and Mathematical Statistics*, vol.71 (2004), 57-71. [VIEW PAPER](#)
- 43.- Exact distributions of random motions in inhomogeneous media (with N.Ratanov), *Probability Theory and Mathematical Statistics*, Vol 76, pag. 125-137 (2007) [VIEW PAPER](#)
- 44.- An alternating motion with stops and the related planar, cyclic motion with four directions (with S.Leorato and M.Scavino), *Advances in Applied Probability* (2003), vol.35, n.4, pp.1153-1168. [VIEW PAPER](#)
- 45.- The telegraph process stopped at stable-distributed times and its connection with the fractional telegraph equation (with L.Beghin), *Fractional Calculus and Applied Analysis* (2003), Vol.6, n.2, pagg.187-204.
- 46.- Bessel functions of third order and the distribution of cyclic planar motions with three directions, *Stochastics and Stochastics Reports* (2002), Vol.74, n.3-4, pp. 617-631. [VIEW PAPER](#)
- 47.- Exact small ball constants for some Gaussian processes under L^2 -norm (with L.Beghin, Y.Nikitin), *Zapiski Nauchn. Semin. POMI* (2003), Vol. 298, pp. 5 – 21. [VIEW PAPER](#)
- 48.- Random motions at finite velocity and their connections with hyperbolic equations (with L.Beghin), *Recent Research Developments in Statistical Physics* (2002), vol. 2, pp.1-20.
- 49.- Time-fractional telegraph equations and telegraph process with Brownian time (with L.Beghin), *Probability Theory and Related Fields*, (2004) Vol.128, pp.141-160. Published on line 12 November 2003. [VIEW PAPER](#)

- 50.- The space-fractional telegraph equation and the related fractional telegraph process (with X.Zhao), *Chinese Annals of Mathematics* (2003), Vol.24 B, n.1, pp.1-12. [VIEW PAPER](#)
- 51.- How sojourn time distributions of Brownian motion are affected by different forms of conditioning (with L.Beghin and Y.Nikitin), *Statistics and Probability Letters* (2003) Vol.65 n.4, pp 291-302. [VIEW PAPER](#)
- 52.- Planar random motions with drift (with N.Ratanov), *Journal of Applied Mathematics and Stochastic Analysis* (2002), Vol.15, n.3, pp.205-221. [VIEW PAPER](#)
- 53.- Joint distributions of the maximum and the process for higher-order diffusions (with L.Beghin and T.Ragozina), *Stochastic Processes and their Applications* (2001), Vol.94, n.1, pp. 71-93. [VIEW PAPER](#)
- 54.- Probabilistic analysis of the telegrapher's process with drift by means of relativistic transformations (with L.Beghin and L.Nieddu), *Journal of Applied Mathematics and Stochastic Analysis* (2001), Vol.14, n.1, pp. 11-25. [VIEW PAPER](#)
- 55.- Analysis of a finite-velocity planar random motion with reflection (with A.Kolesnik), *Theory of Probability and its Applications* (2001), vol.46, n.1, pp. 138-147. [VIEW PAPER](#)
- 56.- Gaussian limiting behaviour of the rescaled solution to the linear Korteweg-de Vries equation with random initial conditions (with L.Beghin, V.P.Knopova, N.N.Leonenko), *Journal of Statistical Physics* (2000), n.99 (3/4), pp.769-781. [VIEW PAPER](#)
- 57.- Conditional maximal distributions of processes related to higher-order heat-type equations (with L.Beghin, K.Hochberg). *Stochastic Processes and their Applications* (2000), 85, pp.209-223. [VIEW PAPER](#)
- 58.- The intermediate arc-sine law (with Y.Nikitin), *Statistics and Probability Letters* (2000), 49, pp.119-125. [VIEW PAPER](#)
- 59.- Conditional sojourn distributions of processes related to some higher-order heat-type equations (with Y.Nikitin), *Journal of Theoretical Probability*, (2000), vol.13, n.4, pp.997-1012. [VIEW PAPER](#)
- 60.- Exact joint distribution in a model of planar random motion with constant velocity. *Stochastics and Stochastics Reports* (2000), Vol.69, 1-2, pp.1-10. [VIEW PAPER](#)

- 61.- On the maximum of the generalized Brownian bridge (with L.Beghin), *Lithuanian Mathematical Journal* (1999), T.39, n.2, pp.200-213. [VIEW PAPER](#)
- 62.- Iterated processes and their applications to higher order differential equations (with Xuelei Zhao), *Acta Mathematica Sinica* (1999), Vol.15, n.2, pp.173-180. [VIEW PAPER](#)
- 63.- On the vector process obtained by iterated integration of the telegraph signal, *Georgian Journal of Mathematics* (1999), Vol.6, pp.169-178. [VIEW PAPER](#)
- 64.- On the distribution of the position of a randomly accelerated particle (with P.L. Conti). *Probability Theory and Math. Statistics* (1997), Vol.56, pp.161-168.
- 65.- Limiting distributions of randomly accelerated motions (with P.L. Conti). *Lithuanian Journal of Mathematics* (1997), Vol.37, n.3, pp.295-308. [VIEW PAPER](#)
- 66.- Asymptotic expansion of fundamental solutions of higher order heat equations (with Gabriele Accetta). *Random Operators and Stochastic Equations* (1997), Vol.5, n.3, pp.217-227. [VIEW PAPER](#)
- 67.- Detailed probabilistic analysis of the integrated three-valued telegraph signal (with I. Di Matteo). *Journal of Applied Probability* (1997), 34, pp.671-684. [VIEW PAPER](#)
- 68.- Explicit distribution of a planar random motion governed by a fourth-order hyperbolic equation (with A.Kolesnik). *Theory of Probability and its Applications*, Vol.41 (2) (1996) pp.451-459.
- 69.- General solution of an hyperbolic equation emerging in the study of a motion with random acceleration (with A.Glusak) (in Russian). *Probability Theory and Mathematical Statistics* (1996), Vol.55, pp.50-54.
- 70.- Composition of stochastic processes and related higher-order equations (with K.Hochberg). *Journal of Theoretical Probability* , Vol.9, n.2 (1996), pp.511-532. [VIEW PAPER](#)
- 71.- On the rate of convergence to the normal law for solutions of the Burgers equation with singular initial data (with N.N. Leonenko and V.N. Parkhomenko). *Journal of Statistical Physics*, Vol.82, (1996), pp.915-930. [VIEW PAPER](#)

- 72.- Planar random evolutions governed by hyperbolic equations. Proceedings of the Zolotariev Seminar - Kazan. *Journal of Mathematical Science* (1996), Vol.81, n.5, pp.2980-2986. [VIEW PAPER](#)
- 73.- Processes governed by parabolic and hyperbolic equations of higher order. In: *Seminari di Probabilità e Stat. Matem.*, a.a.1995/6-1996/7, A.Freddi ed., pp.21-34.
- 74.- Planar random evolution with three directions (with A. San Martini). In: *Exploring Stochastic Laws*, Skorokhod and Borovskikh eds., VSP (1995), pp.357-366.
- 75.- Scaling limits of solutions of the Burgers equation with singular non-Gaussian data (with N.N. Leonenko and V.N.Parkomenko). *Random Operators and Stochastic Equations* (1995), Vol.3, n.2, pp.101-112. [VIEW PAPER](#)
- 76.- Multidimensional Burgers equation with random initial conditions (with N.N. Leonenko and Rybasov) *I e II Ukranian Journal of Mathematics* (1994), Vol. 46, pp. 870-877 and pp.1003-1010 (in Russian).
- 77.- Limit theorems for solutions of the Burgers equation with Gaussian and non-Gaussian initial conditions. (with N.N.Leonenko). *Theory of Probability and Applications* (1995) Vol.46, n.2, pp.387-403. [VIEW PAPER](#)
- 78.- Motions with reflecting and absorbing barriers driven by the telegraph equation. *Random Operators and Stochastic Equations* (1995), n.1, pp.9-21. [VIEW PAPER](#)
- 79.- On the solution of a telegraph-type equation with non-constant coefficients emerging in random evolutions. (with M. Kelbert). *Problems of Information Trasmision* (1994), Vol.30, pp.99-103 (in Russian).
- 80.- Distributions of processes governed by hyperbolic equations when also boundary conditions are assumed. In: *Proceedings of the 6th Vilnius Conference on Probability Theory and Mathematical Statistics* (1994), pp.605-611.
- 81.- The arc-sine law and its analogues for processes governed by signed and complex measures (with K. Hochberg). *Stochastic Processes and their Applications* (1994), Vol.52, pp.252-273. [VIEW PAPER](#)

- 82.- On a $2n$ -valued telegraph signal and the related integrated process (with B. Bassan) *Stochastics and Stochastics Reports* (1992), 38, pp.159-173. [VIEW PAPER](#)
- 83.- Processes governed by signed measures connected with third-order "heat-type" equations. *Lietuvos Matematikos Rinkinys* (1991), pp.323-336. [VIEW PAPER](#)
- 84.- Random motions governed by third order equations. *Advances in Applied Probability* , Vol. 22, n.4 (1990), pp.915-928. [VIEW PAPER](#)
- 85.- Probability law, flow function, maximum distribution of wave-governed random motions and their connections with Kirchhoff's laws. *Stochastic Processes and their Applications*, Vol.34 (1990), pp.49-66. [VIEW PAPER](#)
- 86.- On the comparison of the distribution of the supremum of random fields represented by stochastic integrals (with B.Bassan), *Advances in Applied Probability* , Vol.21 (1989), pp.770-780. [VIEW PAPER](#)
- 87.- On the maximum of Gaussian Fourier series emerging in the analysis of random vibrations. *Journal of Applied Probability* (1989), Vol.26, pp.182-188. [VIEW PAPER](#)
- 88.- On the maximum of Gaussian Fourier series connected with random vibrations. In: *Biomathematics and Related Computational Problems*, (Ricciardi ed.) pp.555-558. Kluwer Academic Publisher (1988).
- 89.- On the maximum of random fields represented by stochastic integrals over circles. *Journal of Applied Probability* (1987), Vol.24, pp.574-585. [VIEW PAPER](#)
- 90.- Probabilistic derivation of wave equations. *Boll. Univ. Mat. Italiana* (1987), 1-B (7), pp.423-438.
- 91.- Stochastic motions on the 3-sphere governed by wave and heat equations. *Journal of Applied Probability* (1987), Vol.24, n.2, pp.315-327. [VIEW PAPER](#)
- 92.- Stochastic motions driven by wave equations. *Rendiconti del Seminario Matematico e Fisico di Milano* (1987), Vol.LVII, pp.365-380.
- 93.- Brownian fluctuations in space-time with applications to vibrations of rods. *Stochastic Processes and their Applications* (1986), Vol.23, pp.221-234. [VIEW PAPER](#)

- 94.- A planar random motion governed by the two-dimensional telegraph equation. *Journal of Applied Probability* (1986), Vol.23, pp.385-397. [VIEW PAPER](#)
- 95.- How the maximum of Gaussian random walks and fields is influenced by changes of the variances. *Stochastica* (1985), Vol.IX, n.1, pp.75-84. [VIEW PAPER](#)
- 96.- Evaluating the area of gaussian isotropic fields on the sphere. *Revue Roumaine de Mathematiques Pures et Appliquees* (1985), Vol.XXX, n.2, pp.111-129.
- 97.- Vibrations with random initial conditions. *Boll. Union. Mat. Italiana* (1985), Vol.4, B(6), pp.541-556.
- 98.- Hyperbolic equations arising in random models. *Stochastic Processes and their Applications* (1985), Vol.21, n.1, pp.93-106. [VIEW PAPER](#)
- 99.- Connections and analogies between the Cauchy process and Brownian motion. *Publications Inst. Stat. - Univ. Paris* (1984), Vol.29, 2, pp.69-84.
100. - Upper bounds for the distribution of maximal displacement of a one-dimensional, polarized vibrating system forced by white-noise. *Publ. Dep. Stat., Prob. and Appl. Stat., Univ. of Rome "La Sapienza" Series A (Research)* (1984), n.5. Proceedings I.C.N.O. - X Varna (Bulgaria) Sept.1984 - pp.712-715, (short version).
101. - Shot noise fields on the sphere. *Boll. Unione Mat. Italiana* (1984), Series VI, Vol.8, pp.477-496.
102. - Damped vibrations excited by white noise. *Advances in Applied Probability* (1984), Vol.16, pp.562-584. [VIEW PAPER](#)
103. - Analisi spettrale dei campi aleatori, (with F.Battaglia). In: *Analisi Moderna delle Serie Storiche*, (D.Piccolo ed.). F.Angeli, Milano (1983), pp.299-312.
104. - Some results on geometry of gaussian random fields. *Revue Roumaine de Mathematiques Pures et Appliquees* (1983), Vol.XXVIII, n.6, pp.493-511.
105. - Randomly forced vibrations of a string. *Annales Inst. Henri Poincarè*, (1982) Sec.B, Vol.XVIII, n.4, pp.367-394. [VIEW PAPER](#)

106. - Probability distributions and level crossings of shot noise models (with F.Battaglia). *Stochastics* (1982), Vol.8, pp.45-61. [VIEW PAPER](#)
107. - Upcrossings and conditional behaviour of the lognormal process. *Boll. Unione Mat. Italiana* (1981), (5), Vol.18-B, pp.1017-1034.
108. - Modelli stocastici. Workshop for research training in "Modelli Idrologici e Idrogeologici" C.N.R. Prog. Finalizzato "Conservazione del Suolo". Istituto di Ricerca per la Protezione idrogeologica dell'Italia Centrale. Perugia (1980).
109. - Planar gaussian motions generated by crossing events. *Pub. Inst. Stat. - Univ. Paris.* (1980), Vol.XXV, 3, pp.61-86.
110. - Extreme values of a sequence of random variables associated with linear birth and Polya process. *Biometrie-Praximetrie* (1980), Vol.XX, pp.47-58.
111. - Level crossings of trasformations of stationary gaussian process. *Metron* (1979), Vol.XXXVIII, n.1-2, pp.81-100.
112. - Record values in Poisson and randomized Poisson models (with F. Battaglia). *Publ. Inst. Stat. - Univ. Paris* (1979), Vol.XXIV - 3-4, pp.69-78.
113. - Un modello poissoniano doppiamente stocastico per l'espansione aleatoria di regioni piane. *Statistica* (1979). Vol.39, n.4 , pp.539-554.
114. - Sul danno record di piene poissoniane (with F.Battaglia). Workshop on: Estremi idrologici e modelli di previsione (1978), pp.205-208. C.N.R. Progetto finalizzato "Conservazione del Suolo", Perugia.
115. - Modello di mosaici ad elementi rettangolari. In: Scritti in onore di G. De Meo (1978), pp.737-747.
116. - Movimenti aleatori nel piano. *Metron* (1978), Vol.XXXVI, n.1-2, pp.51-64.
117. - La passeggiata aleatoria elastica e massa crescente. *Metron* (1976), Vol. XXXIV, n.1-2, pp. 93-100.

118. - Passeggiate aleatorie ed equazioni del calore. Pubblicazioni Istituto di Calcolo delle Probabilità dell'Università di Roma (1975), n.10 (with C. De Antoni, Dip. di Matematica, Università di Roma "La Sapienza").

Journals for which I refereed

Probability Theory and Related Fields (1), Stochastic Processes and their Applications (9), Journal of Applied Probability (11), Advances in Applied Probability, Annals of Applied Probability (1), Journal of Mathematical Physics (2), Bollettino dell'Unione Matematica Italiana (1), Le Matematiche (1), Journal of the Italian Statistical Society, Metron, Stochastics and Stochastics Reports (3), Random Operators and Stochastic Equations (1), Bernoulli (1), Statistics and Probability Letters (3), ITEM (1), Applied Stochastic Models in Business and Industry (2), Electronic Journal of Probability (2), Journal of Applied Mathematics and Stochastic Analysis (3), Journal of Computational and Applied Mathematics (1), Theory of Probability and Mathematical Statistics (1), Comptes Rendus de l'Academie des Sciences (1), Journal of Mathematical Analysis and Applications (1), Journal of Statistical Physics (1), Applied Mathematical Modelling (1), Journal of Applied statistics, Lithuanian Journal of mathematics, Nonlinear analysis: modelling and control, Advances in Engineering Software, Mathematical modelling and Analysis, Numerical methods for partial differential equations, International Journal of Computer Mathematics, Theory of stochastic processes, The Annals of Probability, Potential Analysis, London Journal of mathematics, Methodology and computing in Applied Probability (2), International Journal of mathematics and mathematical sciences, Journal of differential equations, International Journal for differential equations, Journal of probability and statistics, Zeitung fur Naturforschung, Abstract and Applied Analysis, Statistics and Computing, Journal of theoretical probability (2).

Editor of

Random Operators and Stochastic Equations, Journal of Applied Mathematics and Stochastic Analysis, International Journal of Stochastic Analysis, Theory of Probability and Mathematical Statistics, Tomsky Vestnik

SEMINARS AND INVITED LECTURES

1978 Perugia - Applicazioni di modelli probabilistici in ambito idrogeologico;

1980 Perugia - Seminars on stochastic processes and their applications;

1981 Lecce - Seminars on Gaussian processes;

1983 Lyon - Journées de Statistique, Seminar on Cauchy process;

1984 Varna - Seminar: On the maximum distributions of processes related to vibrations forced by white noise. I

1986 Lille - Journées de Statistique. Lecture: On processes governed by hyperbolic equations;

Tashkent - First World Congress of the Bernoulli Society;

1987 Milano - Invited lecture: Processes governed by telegrapher's equation (Politecnico);

Prague - Invited lecture: On the maximum of random fields;

1988 Roma - Meeting on Stochastic Processes. Lecture: On the maximum of processes generated by random vib

Nancy - Lecture: On the maximum of random processes;

1989 Parma - Lessons on the relationship between analysis and probability;

Vilnius - V° International Congress of Probability and Statistics. Lecture: On models governed by third-order hy

1990 Tartu - Invited Lecture: On hyperbolic equations in the theory of random processes;

Eisenach - Congress of Stochastic Processes. Lecture: On the integrated n-valued telegraph signal;

Kiev - Invited lecture: On the maximum of random fields;

Milano - Invited lecture on inequalities for the maximal distribution;

1991 Vilnius - Invited lecture: On processes directed by signed measures;

Tel Aviv - Invited lecture: On hyperbolic equations with non-constant coefficients related to some random models;

1992 Kazan - Invited lecture: On random motions directed by hyperbolic equations;

Milano - Invited lecture on the arcsine law for processes governed by signed and complex measures;

Kiev - Congress devoted to Kravchuk. Seminar on processes governed by signed measures;

1993 Camerino - Lecture on finite velocity stochastic models;

Voronez - Invited lecture on: Solutions of Cauchy problems of hyperbolic equations for the derivation of explicit formulas;

Vilnius - International Conference on Probability and Mathematical Statistics. Invited lecture on: Random models;

Kisinev - Invited lecture on: Processes directed by signed measures;

1994 Beijing - (Normal University) two lectures on: Random processes related to hyperbolic equations.

(Normal University) Invited lecture: Signed measures;

(Bejda Univ.) Lesson on: Planar models with finite velocity;

Tientsin - (Nankai Univ.), Lesson on: Planar models governed by hyperbolic equations;

Udine - MURST Meeting on stochastic models;

Montevideo - Three invited lectures on various topics;

1995 Yerevan - (Armenia) Conference on Mathematical Physics of Mount Aragats;

Kazan - Zolotariev Seminar: Planar random motions governed by hyperbolic equations;

Ushgorod - First Ukrainian-Scandinavian meeting on Mathematical Statistics and Probability; Pseudoprocesses and

Yaroslavl - Invited Lecture on: Random motions related to hyperbolic equations (in Russian);

Two conferences on the structure of the Italian universities;

1996 St. Petersburg – (Russia) Invited lecture on: The one-dimensional processes at finite velocity – June 1996;

Tbilisi - (Georgia), Invited lecture on: Processes with signed and complex measures: functionals and their distributions;

Kutaisi - (Georgia), Lecture on the Italian university system (in Russian) October 1996;

Shantou - (China), three invited lectures on: The Feynman-Kac functional and applications. On the maximum of a process;

1997 Nishnj Novgorod - (Russia), invited lecture on: Planar motions with derivation of the distribution (in Russian);

Seminar on the Italian school (in Russian) - June 1997.

Fergana - (Uzbekistan), invited lecture on: Processes governed by signed measures (in Russian) - October 1997;

1998 St. Petersburg – (Russia), Lecture on: Conditional laws for sojourn times processes governed by third-order heat equations;

Vologda - (Russia), 1- Exact distribution of planar motions with four orthogonal directions;

2- Conditional laws for sojourn times - September 1998;

1999 Kiev - (Ukraine) Lecture on: Planar random motions at constant velocity.

2000 Celjabinsk - (Russia) Lecture on processes governed by third and fourth-order heat equations (in Russian);

Ufa - (Russia) Seminar on processes governed by hyperbolic equations (in Russian).

Functionals of processes governed by signed measures (in Russian).

Miass -(Russia) Stochastic motion models and their probabilistic properties (in Russian).

Tbilisi - (Georgia) General presentation of recent scientific activity (in Russian)

Tashkent - (Uzbekistan) Random motions in the plane (in Russian).

Fergana - (Uzbekistan) Educational system in Italy (in Russian).

2001 Lublin - (Poland) Seminar on random motions.

Shanghai - (China) Jiao Tong University: Seminar on the fractional Black-Scholes equation.

Fudan University: two seminars on fractional diffusion equations and financial mathematics.

Eastern China Normal University: seminar on planar random motions.

Moscow - (Russia) Conference "Infinite dimensions: the Minlos effect in mathematics and Physics": Seminar on

Kiev - (Ukraine) Seminar on: Different forms of the arc-sine law for Brownian motion.

2002 Bologna - (29/3/2002) Fractional calculus and fractional telegraph equation.

St. Petersburg - (3/6/2002) Planar random motions with finite velocity (with three and four directions): explicit

Vologda (Russia) - (11/6/2002) Introduction to fractional calculus and its applications (In Russian).

Educational system in Italy (In Russian).

Vilnius - (25/6/2002) Fractional telegraph equations and the telegraph process with a brownian time.

Baku - (26/8/2002) Telegraph process and its extensions (In Russian).

Tbilisi - (1-7/9/2002) Bessel functions of third order and planar random motions with three directions.

2003 Sudak - (Ukraine) (30/5- 2/6/2003) Conference: Stochastic Dynamical Systems. Seminar on: Fractional tel

Moscow - (16-21/6/2003) Conference: Kolmogorov and Contemporary Mathematics. Seminar on: Fractional telegraph processes.

Irkutsk - (Russia- Siberia) (14/8/2003) Seminar entitled: Random motions at finite velocity on the line, on the plane and in the space.

Tbilisi and Borjomi (Georgia) (21-27 September 2003) Conference in Probability Theory and Mathematical Statistics.

2004 Cardiff - (28/1/2004) Introduction to fractional calculus and fractional equations.

Oxford - (2/2/2004) Fractional telegraph equations and telegraph processes.

Torino – (2/3/2004) Introduction to fractional calculus.

Shanghai – Fudan University (26/3/2004) Fractional telegraph equations and fractional telegraph process;

(1/4/2004) Functionals of pseudoprocesses related to higher-order heat-type equations (two hours).

Sankt-Petersburg - (28/5/2004) The distribution of the local time for "pseudoprocesses" and its connection with the theory of random motions.

Syktyvkar (Komi Republic, Russia) - (8/6/2004) Random motions on the line and in the plane with finite velocity.

Almaty (Kazakhstan) - (19/08/2004) Random motions on the line and in the plane (one hour and a half).

2005 New Delhi - (4/3/2005) Random motions in the plane.

Chandigarh - (1/3/2005) Random motions in the plane and the related hyperbolic equations.

Sankt-Petersburg - (20/9/2005) Random motions with an infinite number of directions.(two hours in Russian)

Vietri sul Mare – (15/12/2005) Random motion with infinite directions and applications to biology

2006 Salerno- (9-2-2006) Hyperbolic Brownian motion

-(9-2-2006) Moti aleatori piani a velocità finita

-(10-2-2006) Il funzionale di Feynman-Kac e applicazioni

Tobolsk (18th May 2006) On the Italian educational system (In Russian)

- Vologda (May 23006) Introduction to Brownian motion (In Russian)

- Sankt Petersburg (26th May 2006) Hyperbolic Brownian motion (In Russian)

Kiev (23 June 2006) Random motions at finite velocity

Foros (Crimea) June 27 Introduction to telegraph process

2007 -Sankt Petersburg (16th March 2007) Fractional diffusion equations and their probabilistic interpretation (I

- Vologda (5 th March – 13th March 2007) Special course on mathematical ecology (In Russian)

- Potenza (17th April) Fractional equations and fractional calculus (18th April) Random motions in the Poincaré

- Chania (1st June) Hyperbolic Brownian motion and motions at finite velocity on the Poincaré half-plane

- Tbilisi (5th September) Fractional diffusion equations and Iterated Brownian motion (In Russian). 2008

(24th January) Fractional diffusion equations and various types of random processes (Université Evry-Val d'Ess

(27th February) Hyperbolic Brownian motion and other types of motion in hyperbolic spaces (University of Mil

(31st March) Random motions and branching random motions at finite velocity in hyperbolic spaces (Sankt Pete

(3rd, 4th ,7th ,8th and 8th April) Introduction to Probability theory, Vologda (In Russian)

(3rd April) Hyperbolic Brownian motion (Vologda University) (In Russian)

(11th April) Mahachkala The Italian educational system (In Russian)

(14th April) Derbent. Conference on the educational system in Italy (In Russian)

(2nd May, Ashgabat. Conference “Education, Science, sports and tourism”

(10th September, Baku) Conference “Problems of Cybernetics and informatics” Hyperbolic Brownian motion and

(17th January) Various types of fractional differential equations and related stochastic processes (Jodhpur- India)

(20th April, Krasnoyarsk) Fractional calculus and its connection with probability theory – 2 hours in Russian

(21st April, Krasnoyarsk) Fractional calculus and its connection with probability theory (continuation)– 2 hours

(22nd April, Krasnoyarsk) Stochastic processes in Non-Euclidean spaces – 2 hours – In Russian

(23th April, Krasnoyarsk) Stochastic Processes in Non-Euclidean spaces (continuation) – 2 hours-In Russian

(24th April, Krasnoyarsk) (8th International Conference FAM 2009) Fractional Poisson processes and related problems

(22th April, Krasnoyarsk) Meeting with students of Krasnoyarsk University (Sibirski Federalny Universitet) about

16th June Lviv (Ukraine) Random motions in hyperbolic spaces (Stochastic analysis and random dynamics)

3rd July, Sankt Petersburg Random motions in hyperbolic spaces (6th St:Petersburg workshop on simulation) 20

8th July (Madrid) IWAP – Some fractional point processes

7th September (Baku) PCI -2010 conference – A brief review on some fractional point processes.

11th September (Kiev) Modern stochastics II (ICMS) Fractional point processes 2011

5th May (Tomsk) Random motions at finite velocity on the line and in space (In russian)

10th May (Tomsk) Introduction to fractional calculus and fractional diffusion equations (In russian)

8th June (Rome) ASMDA Conference Last results on the telegraph process¹

2nd December ENEA (Frascati) Vibrations of rods and Fresnel pseudoprocesses

2012

27th February (Kiev) Fractional Poisson process

23rd March (Sankt Petersburg) Fractional point processes (Fontanka) (in Russian)

24th March, 26th March, 28th March, 31st March, 2nd April and 4th April (Sankt Petersburg) Minicourse on Fractional

4th June (Biocomp 2012) Fractional point processes

28th June (Moscow Gnedenko-100) Odd-order pseudo-processes and stable laws

6th September 2012 - Yerevan, Armenia - IX International conference "Stochastic and analytic methods in Math

13rd September 2012 - Kyiv, Ukraine - Internatioal conference modern Stochastics: Theory and Application III -

2013

15-18th March 2013 Petrozavodsk (Russia) - [Fractional calculus and related stochastic processes](#)

24-26th April 2013 Kyiv - Short Course: functional of Brownian motion.

7-10 October 2013 Vologda (Russia) Conference: Mathematics in Contemporary world: Fractional calculus and f

2014

11th February 2014, Università di Pisa. Random Flights.

20th February 2014, Università di Salerno. Fractional extesions of Poisson process.

18-19-21-22-24 March 2014. Pacific Ocean University of Khabarovsk. Course in Fractional Calculus and Appli

20 March 2014. Pacific Ocean University of Khabarovsk. Seminar on Random Flights.

27 March 2014. University of Vladivostok. Seminar of Fractional Extensions on Poisson process.