ELVIRA DI NARDO

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Education

1996	PhD in Applied Mathematics and Computer Science, Dept. Mathematics and Applications, University of Napoli, Italy • Dissertation: "Eigenvalue computation for symmetric matrices and computational statistics problems for correlated normal processes." Advisor: Prof. L.M. Ricciardi.
1992	BA (magna cum laude), University of Napoli, Italy • Dissertation: "Algorithms and procedures for generating pseudo-random numbers with applications to numerical statistical problems." Advisor: Prof. L.M. Ricciardi.

Experience

1995–present	Researcher (assistant professor), Engineering Faculty, University of Basilicata, Italy • (CODE: 01/A) - SSD – MAT/06 – Probability and Mathematical Statistics
1994-1995	Visiting scholar at Dept. Pure and Applied Mathematics (University of Padova)
(04/07)1993	Visiting scholar at Dept. Science (University of Eötvös Loránd, Budapest), TEMPUS project.
1991-1995	PhD student in Applied Mathematics and Computer Science, Dept. Mathematics and Applications, University of Napoli, Italy

Research interests

- symbolic methods in statistics, with applications to computational statistics and stochastic processes;
- first passage time density estimations for linear stochastic processes, Gaussian Markovian and non Markovian processes, with applications in biomathematics;
- simulation of special stochastic processes and study of their main statistical properties.

Post-degree education

1998	Cortona – Italy • *Combinatorics*, Prof. G.C. Rota (MIT)
1997	Potenza – Italy • *Umbral calculus and polynomial zeros*, Prof. G.C. Rota (MIT) Aosta – Italy • *Statistics,* Prof. M. Tarter (Aosta)
1996	Napoli – Italy • *Computational Statistics*, Prof. V. Lanskà (Univ. Prague) Bologna – Italy • *Parallel and vectorial computing*, CINECA
1995	Cortona – Italy • *Probability*, Prof. P. Billingsley (Univ. Chicago), *Statistics*, Prof. Cifarelli

(Bocconi)

1994 Aosta – Italy

- *Convergence of distributions with applications in statistics*, Prof. P. Billingsley (Univ. Chicago), *Multivariate statistical analysis* Prof.A.Rukhin (Univ. Maryland ; *Multivariate distributions* Prof.V.V.Sazanov (Steklov Mathematical Institute, Mosca)

1994 Budapest – Hungary

- *Computational Statistics* Prof. T. Pröhle (Eötvös Loránd), *Coding theory*, Prof. T. Szõnyi Eötvös Loránd)

1994 Napoli – Italy

- Various PhD Courses.

Presentations and Invited Lectures

2013 Budapest - 29th European Meeting of Statisticians

- Talk: Symbolic representation of non-central Wishart random matrices with applications.

2013 Wroclaw - 7th International Conference on Lévy Processes: Theory and Applications

- Selected poster: A symbolic approach to multivariate polynomial Lévy processes.

2012 Roma - 46th Scientific meeting of the Italian Statistical Society

- Poster: k-statistics: from simple random sampling to spectral sampling via moment symbolic calculus.

2012 Vietri (SA) Italy - Mathematical modeling and Computational Topics in Biosciences

- Poster: On some applications of a symbolic representation of non-centered Lévy processes.

2011 Dublin - Invited Speaker – 58th World Statistics Congress of the International Statistical Institute

- Panel session: New challenges and future developments in Mathematical Statistics - Chairman: Prof. P.McCullagh

2011 Bologna - Invited Lecturer – 67th Séminaire Lotharingien de Combinatoire

- Lectures**:** Moment symbolic calculus in probability and in statistics

2011 Roma - Chairman – XIV Applied Stochastic Models and Data Analysis

- Session**:** Stochastic processes

2010 Lisbona - Invited Lecturer - Centro des Estruturas Lineares e Combinatorias

- Lectures**:** The eleventh and twelveth problems of Rota's Fubini Lectures: from cumulants to free probability theory

2008 Singapore - 7th world congress in Probability and Statistics

- Talk: Umbral methods in statistics.

2007 Vietri (SA) Italy - Collective Dynamics: Topics on Competition and Cooperation

- Poster: On the first passage time for non linear processes

Univ. Salerno, Italy - Invited Lecturer

- Lecture: Applications of the umbral calculus in probability and statistics.

2006 Univ. Torino, Italy - Invited Lecturer

- Lecture: Cumulants and k-statistics via the classical umbral calculus.

2005 Vietri (SA) Italy - Diffusion processes in Neurobiology and Sub cellular Biology

- Poster: On Some Bounds for the First-Crossing-Time Probabilities of a Jump-Diffusion Process.

Las Palmas - 11th International Conference on Computer Aided Systems Theory

- Talk: Simulations of Gaussian processes and neuronal modeling.

2004 Maratea (PZ) Italy - XI Incontro italiano di Combinatoria Algebrica
- Talk: The classical umbral calculus.

2003 Las Palmas - 9th International Conference on Computer Aided Systems Theory
- Talk: Computational methods for the evaluation of neuron's firing densities.

2002 Vienna - 16th European Meeting on Cybernetics and Systems Research
- Talk: Gaussian processes and neuronal modeling: an asymptotic analysis.

L'Aquila (Italy) - Gian-Carlo Rota memorial conference
- Talk: Umbral nature of the Poisson random variables.

Vietri (SA) Italy - Topics in Biomathematics and related computational problems
- Talk: Computational approaches to neuronal firing by Gaussian processes.

2000 Vienna - 15th European Meeting on Cybernetics and Systems Research
- Talk: First passage time densities evaluation for simulated Gaussian processes.

1999 Levico Terme (TR) Italy - Methods and mathematical models in the study of biological systems
- Talk: Computational approaches to first-passage-time problems in neurobiological modeling.

Roma Italy - Annual conference of Italian Society for Computer Simulation
- Talk: Evaluation of upcrossing first passage time densities for Gaussian processes via a simulation procedure.

Vienna - 7th International Workshop on Computer Aided Systems Theory
- Talk: Simulation of Gaussian processes and first passage time densities evaluation.

1999 Levico Terme (TR) Italy - Methods and mathematical models in the study of biological systems
- Talk: Computational approaches to first-passage-time problems in neurobiological modeling.

1997 Napoli, Italy - Methods and mathematical models in the study of biological systems
- Talk: Estimating upcrossing FPT densities via simulation of Gaussian processes.

1996 Oxford - International euroconference on metrology
- Talk: On a grouping rule for random samples.

Roma - Annual conference of Italian Society for Computer Simulation
- Talk: Evaluation of first passage time densities for normal processes via a simulation procedures.

Univ. Basilicata - Invited Lecturer
- Lectures on Probability for Chemists.

1995 Univ. Napoli - Invited Lecturer
- Lectures on Computational Statistics for Statisticians.

Conference organizing committees

2012 XVIII Incontro Italiano di Combinatoria Algebrica: "Combinatorial methods in stochastic calculus"

2012	BIOCOMP: Mathematical modeling and Computational Topics in Biosciences
2007	BIOCOMP: Collective Dynamics: Topics on Competition and Cooperation
2005	BIOCOMP: Diffusion processes in Neurobiology and Sub cellular Biology
2002	BIOCOMP: Topics in Biomathematics and related computational problems.
1999	VI Incontro Italiano di Combinatoria Algebrica: International Conference dedicated to the memory of G.C. Rota

Conference scientific committees

2012	XVIII Incontro Italiano di Combinatoria Algebrica: "Combinatorial methods in stochastic calculus"

Visiting Professor

May 2009/July 2009 Dept. Statistics (Univ. Chicago) .

March 2010: CELC – Centro des Estruturas Lineares e Combinatorias (Lisboa)

Editorial and Referring Activity

Referee for Mc-Graw Hill. Referee for MIUR.

Referee for American Mathematical Society.

Referee for international journals: Statistics and Computing, Discrete Mathematics, Communications in Statistics, Stochastic Models, Symmetries, Probability Theory and Related Fields, Computational Statistics and Data Analysis, Methodology and Computing in Applied Probability, Computational geophisycs, Arab Journal of Mathematical Sciences, Brazilian Journal of Probability and Statistics, Annals of Combinatorics, Scientiae Mathematicae Japonicae, Journal of Computational and Applied Mathematics.

Editorial Board ISRN Applied Mathematics

Referee for the following books:

- *Algebraic Combinatorics and Computer Science: a tribute to G.C. Rota* (eds. H. Crapo, D. Senato), Springer-Verlag Italia. 2000.
- A. Di Crescenzo, L.M. Ricciardi *Elementi di Statistica.* Liguori Editore. 2000.
- D. Piccolo *Statistica*. Il Mulino 2000.
- P. Erto *Probabilità e statistica per le Scienze e l'Ingegneria* McGraw Hill (2008).

Professional Memberships

BS – Bernoulli Society, SIS – Società Italiana di Statistica, IMS – Institute of Mathematical Statistics, ASA – American Statistical Association, ISI – International Institute of Statistics; Elected Member; Sponsors: Prof. V. Capasso (Milano, Italy), Prof. P. McCullagh (Chicago, USA), Prof. E. Ragazzini (Pavia, Italy).

National Society for Computer Science and Mathematics (GNIM).

Italian Society for Computer Simulation (ISCS)

National Society for Scientific Computing (GNCS)

Research projects

2013	Member of PRIN (proposal): *Models for complex systems: advances in inference and prediction with applications in health economics, biology and enviromental analysis*. (chairman Prof. P. Vidoni)
2008	Member of PRIN: Stochastic models for the transmission of information in neuronal systems theory and computation. (chairman Prof. Aniello Buonocore, Univ. Napoli).
2008	Statistical advisor in: *Trattamento con imatinib mesilato (Glivec) della GVH cronica severa scleroderma-like, refrattaria alla terapia immunosoppressiva*

convenzionale, San Carlo Hospital (Potenza)

2007 Statistical advisor in: *A test for checking earthquake aperiodicity estimates from small Samples* by M.Mucciarelli, work pubblished on **Nat. Hazards Earth Syst. Sci**., 7, 399–404, 2007.

2005-2007 Member of PRIN: Processing and transmitting information in neuronal systems under stochastic evolution (chairman Prof. L.M. Ricciardi, Univ. Napoli).

2005 Member of a GNCS project: Algorithms and procedures for simulating and modeling the actin/myosin system (chairman Prof. L.M. Ricciardi, Univ. Napoli).

Chair of a USB project: First passage time analysis for normal stochastic processes and historical series.

Statistical advisor for PCA and CA in a USB project devoted to Intellectual Capital Index.

2004-2005 Member of PRIN: Methods, algorithms and codes for the analysis and the simulation of neuronal unities under stochastic evolution and high reliability. (chairman Prof. L.M. Ricciardi, Univ. Napoli).

2003 Member of a GNCS project: Methods, algorithms and codes for neuronal models and in nanobiology (chairman Prof. L.M. Ricciardi, Univ. Napoli).

Statistical advisor for ANOVA in: *Lipoxygenase activity and proline accumulation in leaves and roots of olive trees in response to drought stress* by Adriano Sofo, Bartolomeo Dichio, Cristos Xiloyannis, Andrea Masia, work pubblished on **Physiologia Plantarum** 121 (1) , 58–65, 2004, *Effects of different irradiance levels on some antioxidant enzymes and on malondialdehyde content during rewatering in olive tree,* by Adriano Sofo, Bartolomeo Dichio, Cristos Xiloyannis, Andrea Masia, work pubblished on **Plant Science** 166 (2) , 293-302, 2004.

2002 Member of a CINECA project: Development and implementation of simulation algorithms for Gaussian processes with applications in theoretical neurobiology. (chairman Prof. L.M. Ricciardi, Univ. Napoli).

2001-2002 Member of PRIN for 2001, Local Chair of PRIN 2002: Analysis, simulation and predicting methods for processing and transmitting information in neuronal systems stochastically stimulated, (chairman Prof. L.M. Ricciardi, Univ. Napoli).

Chair of a USB project: First passage time analysis for long memory stochastic processes.

2001 Member of a GNIM project: Computational methods in modeling the neuronal activity. (chairman Prof. L.M. Ricciardi, Univ. Napoli).

2000-2001 Member of a PRIN project: Analysis, simulation and predicting methods for processing and transmitting information in neuronal systems stochastically stimulated. (chairman Prof. L.M. Ricciardi, Univ. Napoli).

2000 Member of a USB project: Development of stochastic models and methods with applications in biomathematics. (chairman Prof. A.Di Crescenzo, Univ. Basilicata).

1998-1999 Member of a PRIN project: Numerical analysis: methods and mathematical software. (chairman Prof.ssa V. Ruggiero, Univ. Ferrara).

Member of a USB project L: Orthogonal polynomials and their applications. (chairman Prof. G.Mastroianni, Univ. Basilicata).

1998 Member of a CNR project: Mathematical methods and models in the study of biological phenomena (chairman Prof. D.Iannelli, Univ. Trento).

Member of a CINECA project: Parallel simulating in first passage time problems

for Gaussian processes. (chairman Prof. L.M.Ricciardi, Univ. Napoli).

Statistical advisor for statistical inference within the research program FEOGA on the improvement and enhancement of the wines obtained from South-Italy autochthonous by means of the study and the control of some critical factors determine its sensorial typicalness.

PhD Boards

2013-	*Mathematics and Computer Science,* Univ. Basilicata in joint with Univ. Salento
2012	Member of Jury for the PhD final exam in Probability at the *University of Bari*
2011-	*Mathematics and Computer Science,* Univ. Basilicata
2009-2011	Advisor of Dott. Imma Oliva, PhD in Mathematics, Univ. Bologna
2007-2008	*Applied Mathematics and Computer Science,* Univ. Basilicata
2005-2007	*Mathematical Methods and Models for dynamical systems*, Univ. Basilicata.
2004	Member of Jury for the PhD final exam in Mathematics, Computer Science and Applications to human sciences, at the *Ecole des hautes etudes en sciences sociales* (Paris), chairman Prof. P.Cartier (CNRS).

Local Committees

2005-	Statistical advisor in Ethical Committees for various local health authorities.
1999-	Member of various committees for graduations.
1999-	Chair of examination committees in: Applied Mathematics, Laboratory of Statistics, Statistics and Probability, Complements of Probability and Statistics, Statistics, Laboratory of statistical methodologies, Probability I, Probability II, Probability
2006-2008	Graduate Staff Council in Mathematics, and in Computer Science, Univ. Basilicata.
2005-2008	Equal opportunity committee, Univ. Basilicata.
2002-2008	Graduate Staff Council in Mechanics Engeneering, Univ. Basilicata
2001-2003	Graduate Staff Council in Biotechnologies, Univ. Basilicata.
1998-1999	Various committees devoted to teaching reorganizations, Univ. Basilicata.

Teaching experiences

PhD and Master

a.a.2011/12	*Geostatistics* (3CFU) Master GEORIS (head office - USB).
a.a.2009/10	*Stochastic methods fo dynamical systems.* (3CFU) PhD in Models for earthquake risk (head office - USB).
a.a.2007/08	*Data Analysis* (2 CFU) Master in Engineering and economy of the rewable energies (ENEA-MT)
a.a.2006/07	*Statistics* (3 CFU) Master in Business Administration (USB) *Stochastic dynamical systems* (6 CFU) PhD in Methods and models for dynamical systems (head office - USB).
a.a.2005/06	*Stochastic processes I* (6 CFU)

	PhD in Methods and models for dynamical systems (head office - USB).
	Stochastic processes II (6 CFU) PhD in Methods and models for dynamical systems (head office - USB).
a.a.2004/05	*Stochastic dynamical systems. Concepts, numerical methods and data analysis* (6 CFU) PhD in Methods and models for dynamical systems (head office - USB).
a.a.1999/00	*Probability and Statistics* Postgraduate course ex DPR 970/75. *Statistical quality control* Master in expert of International Marketing for Italian agricultural and food industry promotion, USB
a.a.1998/99	*Mathematics and Statistics* European Master ENSEMA "Aquaculture Managemement"(head office - Ecole d'Agriculture de Poisy, France).

Training courses

a.a. 2009/10	*Biostatistics* San Carlo Hospital, Potenza
a.a.1998/99	*Statistical quality control* Company A.S.D. Pantanello di Metaponto

Degree of II level

a.a. 2010/11 a.a. 2011/12 a.a. 2012/13	*Realiability Theory and Statistical control quality (6 CFU)* Mechanics Engineering and for the environment, USB
a.a. 2009/10 a.a. 2008/09 a.a. 2007/08 a.a. 2006/07 a.a. 2005/06 a.a. 2004/05 a.a. 2003/04	*Complements of Probability and Statistics* (3 CFU) Mechanics Engineering and for the environment, USB
a.a. 2012/13 a.a. 2007/08 a.a 2006/07 a.a. 2005/06	*Probability and statistics II* (6 CFU) Mathematics, USB
a.a. 2003/04	*Laboratory of experimental statistics methods* (3 CFU) Biotechnology, USB
a.a.1999/00 a.a. 2000/01	*Probability* (6 CFU) Mechanics Engineering, USB

Degree of I level

a.a 2007/08 a.a. 2006/07 a.a. 2005/06 a.a. 2004/05 a.a. 2003/04 a.a. 2002/03	*Statistics and Probability* (4.5 CFU) Mechanics Engineering, Engineering for the environment and Civil Engineering, USB
a.a. 2007/08	*Probability and Statistics I* (6 CFU)

a.a. 2006/07 a.a. 2005/06	Mathematics, Computer Science, USB
a.a. 2003/04 a.a. 2002/03 a.a. 2001/03	*Statistics* (3 CFU) Vegetable biotechnologies, USB
a.a. 2002/03 a.a. 2001/02 a.a. 2000/01 a.a. 1999/00	*Applied Mathematics* (7.5 CFU) Mechanics Engineering, Engineering for the environment and Civil Engineering, Potenza, USB
a.a. 2002/03	*Applied Mathematics* (7.5 CFU) Mechanics Engineering, Engineering for the environment and Civil Engineering, Matera, USB
a.a. 2001/02	*Numerical Analysis* Mechanics Engineering, USB
a.a. 2001/02 a.a. 2000/01 a.a. 1999/00	*Laboratory of statistics* Mechanics Engineering, Engineering for the environment and Civil Engineering, USB
a.a. 1999/00	*Probability I* Statistical and actuarial sciences, Univ. Sannio
a.a. 1998/99	*Statistics and Probability* (co-teaching) Logistic and production engineering – FIAT, Melfi, PZ (head office School of engineering Torino)
a.a. 1995/96	*Computational Statistics* Statistics (Univ. Napoli)

Teaching assistance

a.a. 2004/05 a.a. 2003/04 a.a. 2001/02 a.a. 1997/98	*Mathematics for Engineering*
a.a. 1997/98 a.a. 1996/97 a.a. 1995/96	*Calculus* Mechanics Engineering, Engineering for the environment and Civil Engineering, USB
a.a. 1998/99	*Probability* Mechanics Engineering, USB

Tutoring

Tutor for the students of Engineering Faculty.

Seminars at some high-schools of Potenza: texts available at the web page http://www.unibas.it/utenti/dinardo/didattica.html

In the local board of "Progetto lauree scientifiche" for teaching Statistics in High Schools.

Web-manager of the following web page http://www.unibas.it/utenti/dinardo/didattica.html where students can find notes, slides, exercices and examination tests of courses.

Advisor of the following dissertations for graduation:

- *Statistical inference in the multivariate sensorial analysis*
- *A combinatorial approach to stochastic integration (with Prof. Senato)*
- *Analysis of first passage time density for Gauss-Markov processes in R*
- *A new algorithm for computing k-statistics in R.*
- *On the stochastic integration and its application in mathematical finance.*

Technical Skills

General skills in statistics, biomathematics, computing. Specific expertise and interests in:

- Computational Statistics: symbolic computations, simulation, monte Carlo Methods
- Statistics for industry: Manufacturing Process Control and Statistical Quality Control, Robust Design, DOE
- Computing platforms: UNIX, Windows 2000/NT; Macintosh.
- Programming languages: C++, FORTRAN, MPI: parallel and vectorial computing.
- Statistical software: Matlab, Maple, Mathematica, SPSS.
- Text formatting and office computing: LaTeX, Word, Excel, PowerPoint

Pubblications

Papers on journals

2013 [1] Di Nardo E., Oliva I. *On some applications of a symbolic representation of non-centered Lévy processes*. **Comm. Statist. Theory Methods.** vol. 42, 1-15.
[2] Di Nardo E., McCullagh P., Senato D. *Natural spectral k-statistics.* **Annals of Statistics.** vol. 41. no. 2, 982-1004.
[3] Di Nardo E. *On a representation of time space-harmonic polynomials via symbolic Lévy processes***. Scientiae Math. Japonica.** vol. 76, no. 1, 99–118.
[4] Di Nardo E., Oliva I. *Multivariate time-space harmonic polynomials: a symbolic approach***. Math. Methods Econ. Finance.** In press.
[5] Di Nardo E. *On a symbolic representation of non-central Wishart random matrices with applications***. Jour. Mult. Anal**.

2012 [6] Di Nardo E., Oliva I. *Multivariate Bernoulli and Euler polynomials via Lévy processes.* **Appl. Math. Letters.** vol. 25, no. 9, 1179–1184.
[7] Di Nardo E., Oliva I. *On a new representation of space-time harmonic polynomials with respect to Lévy processes.* **Ann. Mat. Pura Appl.** 10.1007/s10231-012-0252-3
[8] Di Nardo E., Senato D. *Symbolic solutions of some linear recurrences.* **Jour. Statist. Plann. Inference.** vol. 142, no. 2, 423-429.
[9] Di Nardo E., Liseo B. *Il lato oscuro dell'incertezza e i mille colori delle regole del caso: riflessioni e materiali per la divulgazione della probabilità.***Induzioni** vol. 44, 29—54
[10] Di Nardo E. *Cattive abitudini, ovvero quando l'intuizione prende il posto della conoscenza*. **Induzioni**, vol. 45, no. 2, 20-23.
[11] Attolico I., Pavone V., Ostuni A., Rossini B., Musso M., Crescimanno A., Martino M., Iacopino P., Milone G., Tedeschi P., Coluzzi S., Nuccorini R. , Pascale A., Di Nardo E., Olivieri A. *Chemo-mobilization followed by G-CSF, and additioned by Plerixafor, is safe and allows adequate PBSC collection in Multiple Myeloma and Lymphoma patients predicted poor mobilizers.* **Biology of Bone and Marrow Transplantation,** vol. 18, 241-249,

2011 [12] Di Nardo E., Niederhausen H., Senato D. *A symbolic handling of Sheffer sequences*. **Ann. Mat. Pura Appl.** vol. 190, no. 3, 489-506.
[13] Di Nardo E., Guarino G., Senato D. *A new algorithm for computing the multivariate Faà di Bruno's formula*. **Appl. Math. Comp.** vol. 217, no. 13**,** 6286-6295.

2010 [14] Di Nardo E., Petrullo P., Senato D. *Cumulants and convolutions via Abel polynomials.* **Europ. Jour. Combinatorics.** vol. 31, No. 7, 1792-1804.
[15] Di Nardo E. *A new approach to Sheppard's corrections*. **Mathematical Methods in Statistics**. vol. 12, No. 2, 151-162.

2009 [16] Di Nardo E., Guarino G., Senato D. *A new method for fast computing unbiased estimators of cumulants.* **Statistics and Computing** vol. 19, 155–165.
[17] Di Nardo E., Oliva I. *On the computation of classical, boolean and free cumulants.* **Appl. Math. Comp.,** vol. 208 (2) 347-354.
[18] Di Nardo E., Liseo B. *L'arte di raccontare bugie con l'ausilio dei grafici e non solo.* **Induzioni.** vol. 38, 75-96.

2008 [19] Di Nardo E., Guarino G., Senato D. *An unifying framework for k-statistics, polykays and their multivariate generalizations*. **Bernoulli**. vol. 14, no. 2, 440-468.
[20] Di Nardo E., Guarino G., Senato D. *Symbolic computation of moments of sampling distributions*. **Comp. Stat. Data Analysis** vol. 52, no. 11**,** 4909-4922.
[21] Di Nardo E. *On the first passage time problem for linear processes*. **Scientiae Math. Japonica.** vol. 21, 61-76.
[22] Di Nardo E., Guarino G., Senato D. *A Maple algorithm for polykays and their generalizations*. **Adv. Appl. Stat**. vol. 8, No. 1, 19 – 36.

2007 [23] Di Nardo E., Nobile A.G., Pirozzi E., Ricciardi L.M. *Gaussian processes and neuronal modeling*. **Natural Computing.** vol. 6, No. 3, 283-310**.**

2006 [24] Di Nardo E. e Senato D. *An umbral setting for cumulants and factorial moments.* **Europ. Jour. Comb.** vol. 27, No. 3, 394-413.
[25] Di Crescenzo E., Di Nardo E., Ricciardi L.M. (2006) *On certain bounds for first-passage-time probabilities of a jump-diffusion process*. **Scientiae Math. Japonica** vol. 64, No. 2, 449-460.
[26] Di Nardo E., Senato D. *A symbolic method for k-statistics.* **Applied Math. Letters.** vol. 19, no.9, 968-975

2005 [27] Di Crescenzo A., Di Nardo E., Ricciardi L.M. *Simulation of first-passage times for alternating Brownian motions.* **Meth. Comp. In Applied Prob.** vol. 7, 161-181**.**
[28] Di Nardo E., Nobile A.G., Pirozzi E., Ricciardi L.M. *Gaussian processes and neuronal modeling.* **Lecture Notes in Computer Science**, vol. 3561, 178-187.
[29] Di Crescenzo A., Di Nardo E., Ricciardi L.M. *Evaluation of neuronal firing densities via simulation of a jump-diffusion process.* **Lecture Notes in Computer Science**, vol. 3561, 166-175.
[30] Di Nardo E. *On the connection between orthant probabilities and first passage time problem*. **Jour. Stat. Comp. Simul**. vol. 75, No. 6, 437-445.

2004 [31] Di Nardo E., Nobile A.G., Pirozzi E., Ricciardi L.M. *Computational methods for the evaluation of neuron's firing densities.* **Lecture Notes in Computer Science.** vol. 2809, 394-403.

2003 [32] Di Nardo E., Nobile A.G., Pirozzi E., Ricciardi L.M. *On the asymptotic behavior of first passage time densities for stationary gaussian processes and varying boundaries*. **Meth. Comp. in Applied Prob**, vol. 5, 211-233.
[33] Di Nardo E., Nobile A.G., Pirozzi E., Ricciardi L.M. *Towards the modeling of neuronal firing by gaussian processes*. **Scientiae Math. Japonica**, vol. 58, No. 2, 255-264.

2002 [34] Buonocore A., Di Crescenzo A., Di Nardo E. *Input-output behaviour of a model neuron with alternating drift*. **BioSystems**, vol. 67, pp. 27-34.
[35] Di Nardo E. *On first-passage problem for a non-singular Gaussian discrete-time series*. **Quaderni di Statistica**. vol. 4, pp. 51-70.

2001 [36] Di Nardo E., Nobile A.G., Pirozzi E., Ricciardi L.M. *A computational approach to first-passage-time problem for gauss-markov processes*. **Adv. Applied Probability**, vol. 33, 453-482.
[37] Di Nardo E., Nobile A.G., Pirozzi E., Ricciardi L.M. *Computer-aided simulations of gaussian processes and related asymptotic properties*. **Lecture Notes in Computer Science**, vol. 2178, 67-73.

2000 [38] Di Nardo E., Nobile A.G., Pirozzi E., Ricciardi L.M., Rinaldi S. *Simulation of gaussian processes and first passage time densities evaluation*. **Lecture Notes in Computer Science**, vol. 1798, 319-333.
[39] Di Crescenzo A., Di Nardo E., Nobile A.G., Pirozzi E., Ricciardi L.M. *On some computational results for single neurons 'activity modeling*. **BioSystems**, vol. 58, 19-26.

1998 [40] Di Nardo E., Nobile A.G., Pirozzi E., Ricciardi L.M. *On a non-markov neuronal model and its approximations*. **BioSystems**, vol. 48, 29-35.

1997 [41] Di Nardo E., Pirozzi E. *On the estimation of first passage time densities for stationary normal processes*. **Frontiers in Artificial Intelligence and Applications**, vol. 41, 383-387.
[42] Di Nardo E., Pirozzi E., Ricciardi L.M., Rinaldi S. *Vectorized simulations of normal processes for first crossing-time problems*. **Lecture notes in computer science**, vol. 1333, 177-188.

1996 [43] Morandi Cecchi M., Di Nardo E. *The modified bordering method to evaluate eigenvalues and eigenvectors of normal matrices*. **Numerical Algorithms**, vol. 11, 285-309.
[44] Di Nardo E., Pirozzi E. *On the grouping rule for random samples*. **Series on Advances in Mathematics for Applied Sciences**, vol. 40, 248-253.
[45] Di Nardo E., Pirozzi E., Rinaldi S. *On FPT densities of normal processes with an oscillatory covariance*. **Rend. Acc. Scienze Fisiche e Matematiche**, LXIII, serie IV, 179-192.
1995 [46] Di Nardo E., Pirozzi E. *Algorithm for data sample representation by histograms with unequal cell widths.* **Cybernetics and System**, vol. 26, 343-348.

Papers on books

2009 [47] Di Nardo E., Senato D. *The problems eleven and twelve of Rota's Fubini Lectures: from cumulants to free probability theory*. In press on **From Combinatorics to Philosophy: the legacy of G.C. Rota**. (eds. E. Damiani, F. Palombi, O. D'antona, V. Marra) Springer-Verlag. Milano, 91-127.
2001 [48] Di Nardo E., Senato D. *Umbral nature of the Poisson random variables*, **Algebraic Combinatorics and Computer science: a tribute to Gian-Carlo Rota** (eds. H. Crapo, D. Senato) Springer-Verlag, 245-266.

Proceedings with referee

2011 [49] Di Nardo E., Oliva I. *On a Symbolic Version of Multivariate Lévy Processes* AIP Conf. Proc. 91-127. 1389, 345-348, doi:10.1063/1.363673 ISBN: 978-0-7354-0956-9
2004 [50] Di Crescenzo A., Di Nardo E., Ricciardi L.M. *On the first-passage-time problem of Brownian motion with alternating drift* In Atti del convegno IWAP 2004, 119-122.
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