

CURRICULUM VITAE ET STUDIORUM

CARLO
BIANCA



**Full Professor (HDR)
Preparatory Cycle Manager**

Laboratoire Quartz (EA 7393)

Laboratoire de Recherche en Eco-innovation Industrielle et Energétique

École Supérieure d'Ingénieurs en Génie Électrique, Productique et Management Industriel

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HomePage: <http://carlobianca.fr>

PERSONAL DATA

FIRST NAME	Carlo
LAST NAME	Bianca
DATE OF BIRTH	September 22, 1980
PLACE OF BIRTH	Catania, Italy
NATIONALITY	Italian

EMPLOYMENT

SEP 16 - PRESENT	Full Professor, HDR
AFFILIATION	Laboratoire Quartz, Laboratoire de Recherche en Eco-innovation Industrielle et Energétique, ECAM-EPMI, Cergy Pontoise, France
SEP 18 - PRESENT	Preparatory Cycle Manager (ECAM-EPMI)
SEP 16 - PRESENT	Member of "Licence De Mathematique", UPMC Paris 06, France
SEP 16 - JUN 18	Principal Investigator DGA Project: "Conception d'un réseau de surveillance de la pollution de l'air d'un site sensible" Direction Générale de l'Armement (DGA), Ministère de la Défense, France
SEP 15 - AUG 16	Temporary Associate Professor (ATER-UPMC), HDR
AFFILIATION	Laboratoire de Physique Statistique, Ecole Normale Supérieure, Paris, France

- JAN 14 - AUG 15** Research Fellow
ANR T-KiNeT Project:
“Modulation Thermique et Lecture Fluorescence/Raman pour l’Analyse Cinétique de Réseaux de Réactions Chimiques/Biologiques”,
AFFILIATION Laboratoire de Physique Théorique de la Matière Condensée,
Sorbonne Universités, UPMC Paris 06, France
- JAN 10 - DEC 13** Research Fellow
MIUR-FIRB project RBID08PP3J:
“Metodi Matematici e Relativi Strumenti per la Modellizzazione e la Simulazione della Formazione di Tumori, Competizione con il Sistema Immunitario e Conseguenti Suggerimenti Terapeutici”,
AFFILIATION Department of Mathematics, Politecnico of Turin, Italy
- JAN 09 - DEC 10** Research Fellow
CoFinanced by Compagnia di San Paolo, Turin-Project:
“Modelli Matematici nella Ricerca sui Tumori”,
AFFILIATION Department of Mathematics, Politecnico of Turin, Italy
- JAN 09 - DEC 09** Research Fellow
EU-Project FP7-HEALTH-F4-2008-202047:
“RESOLVE: Resolve Chronic Inflammation and Achieve Healthy Ageing by Understanding Non-regenerative Repair”,
<http://resolve.punkt-international.eu/>
AFFILIATION Department of Mathematics, Politecnico of Turin, Italy
- 29TH MAY 08 - 31ST DEC 08** Research Fellow,
EU-Project FP6-IST-4-2004-028069:
“The European Virtual Human Immune System Project”,
<http://www.immunogrid.org/>
AFFILIATION Department of Mathematics & Computer Science,
University of Catania, Italy
- JAN 05 - DEC 07** Ph.D. Student
Grant Financed by Lagrange-CRT foundation
<http://www.progettolagrange.it/>
PH. D. COURSE Mathematics for Engineering Sciences
AFFILIATION Department of Mathematics, Politecnico of Turin, Italy

EDUCATION

- FEB 16** Qualification Professeur des Universités (Full Professor), France
SECTION 26: *Mathématiques Appliquées et Applications des Mathématiques*
29: *Constituants Élémentaires*, 30: *Milieux Dilués et Optique*
- 3ND DEC 15** Habilitation à Diriger des Recherches (HDR)
Pierre and Marie Curie University, Paris, France
- 3ND DEC 13** Habilitation Associate Professor, Italy
SECTION 01/A4: *Mathematical Physics*

5TH FEB 13 SECTION	Qualification à <i>Maître de Conférences</i> , France 26: <i>Mathématiques Appliquées et Applications des Mathématiques</i>
12TH - 16TH JUNE 09 ORGANIZED BY	Intensive Course: <i>"Mathematical Tools Towards the Modelling of Complex Living Systems"</i> , Granada University, Postgrado-Máster en Física y Matemáticas (Fisymat)
29TH SEP 08 - 6TH OCT 08 ORGANIZED BY	Intensive Course: <i>"Formazione sul Calcolo Parallelo ad Alte Prestazioni"</i> INAF, INFN, COMETA, CINECA
2008 AFFILIATION	Ph.D. in Mathematics for Engineering Science (XX-ciclo) Department of Mathematics, Politecnico of Turin, Italy
PH.D. DISSERTATION SUPERVISOR	<i>"Chaotic and Polygonal Billiards as Model of Mass Transport in Microporous Media"</i> Prof. Lamberto Rondoni, Professor of Mathematical Physics, Politecnico of Turin, Italy
1ST AUG 04 - 4TH SEP 04 ORGANIZED BY AFFILIATION COURSES	Summer Course in Mathematics: SMI <i>"Scuola Matematica Interuniversitaria"</i> , http://www.matapp.unimib.it/smi/ INDAM, MIUR, UNESCO ROSTE (Venice) University of Perugia, Italy Complex Analysis, Differential Equations in Mathematical Physics
6TH APR 04 FINAL DEGREE MARK TITLE OF THESIS SUPERVISOR	Master Degree in Mathematics, University of Catania, Italy Magna cum Laude <i>"The Boltzmann equation: Theory and Monte Carlo Methods"</i> Prof. Giovanni Russo, Professor of Numerical Analysis, University of Catania, Italy,
16TH JULY 1999 EXAMINATION MARK HIGH SCHOOL	Geometric Technical Diploma 100 (out of 100) Istituto Tecnico per Geometri "G.B. Vaccarini", Catania, Italy

LANGUAGES

ITALIAN	Mother tongue
ENGLISH	First certificate of proficiency: <i>"International English Language Testing System (IELTS)"</i>
FRENCH	Courant
SPANISH	Intermediate level

COMPUTER SKILLS

SYSTEMS	Windows, Unix
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SKILLS Parallel Computing, Fortran, Python, Matlab, Mathematica, C++, Latex

TEACHING ACTIVITY

SEP 16 - PRESENT	<i>"Mathematical Analysis"</i> , Ingénieur généraliste 1AP, Lecture (in French) <i>"Linear Algebra"</i> , Ingénieur généraliste 1AP, Lecture (in French) <i>"Geometry"</i> , Ingénieur généraliste 1AP, Lecture (in French)
AFFILIATION	ECAM-EPMI, Cergy Pontoise, France
SEP 17 - DEC 2018	<i>"Introduction to Mathematica"</i> , Licence 1, Lecture (in French) <i>"Séries de fonctions et intégrales dépendant d'un paramètre"</i> , Licence 2, Teaching assistant (in French)
AFFILIATION	Pierre and Marie Curie University, Paris, France
SEP 16 - AUG 17	<i>"Introduction to Mathematica"</i> , Licence 1, Lecture (in French) <i>"Calculus"</i> , Licence 1, Teaching assistant (in French) <i>"Physics of Continuous Media"</i> , Licence 3, Teaching assistant (in French)
AFFILIATION	Pierre and Marie Curie University, Paris, France
SEP 15 - AUG 16	<i>"Introduction to Mathematica"</i> , Licence 1, Lecture (in French) <i>"Concepts and Methods of Physics"</i> , Licence 1, Teaching assistant (in French) <i>"Physics of Continuous Media"</i> , Licence 3, Teaching assistant (in French) <i>"Thermodynamics and Introduction to Statistical Physics"</i> , Licence 3, Teaching assistant (in French)
AFFILIATION	Pierre and Marie Curie University, Paris, France
SEP 13 - JAN 14	Teaching assistant in <i>"Mathematical Analysis I"</i> , Engineering students (Prof. Luisa Mazzi),
AFFILIATION	Politecnico of Turin, Italy
OCT 13 - JAN 14	Teaching assistant in <i>"Calculus"</i> (In English), Architecture students (Prof. Jacobo Pejsachowicz),
AFFILIATION	Politecnico of Turin, Italy
FEB 13 - JUN 13	Lecture in <i>"Mathematical and Statistical Models"</i> , Sustainability Design students,
AFFILIATION	Politecnico of Turin, Italy
SEP 12 - JAN 13	Teaching assistant in <i>"Mathematical Analysis I"</i> , Engineering students (Prof. Luisa Mazzi),
AFFILIATION	Politecnico of Turin, Italy
MAR 12 - JUN 12	Teaching assistant in <i>"Calculus"</i> , Territorial, Urban, Environmental and Landscape Planning students (Prof. Roberto Monaco),
AFFILIATION	Politecnico of Turin, Italy
OCT 11 - JAN 12	Teaching assistant in <i>"Mathematical Analysis I"</i> , Aerospace Engineering students (Prof. Luisa Mazzi),
AFFILIATION	Politecnico of Turin, Italy

- MAR 11 - JUN 11** Locum Teacher in "Calculus",
Territorial, Urban, Environmental and Landscape
Planning students (Prof. Claudio Tebaldi),
AFFILIATION Politecnico of Turin, Italy
- FEB 11** Teacher in "Matematics",
AFFILIATION High School "Convitto Nazionale Umberto I", Turin, Italy
- SEP 09 - JAN 10** Teaching assistant in "Laboratory of Mathematical Physics",
Electronic Engineering students,
AFFILIATION Politecnico of Turin, Italy
- SEP 09 - DEC 09** Teaching assistant in "Equations of Mathematical Physics",
Mathematical Modelling in Engineering students
AFFILIATION Politecnico of Turin, Italy
- SEP 09 - DEC 09** Teaching assistant in "Mathematical Analysis I",
Technology and International Business students
(Prof. Luisa Mazzi),
AFFILIATION Politecnico of Turin, Italy
- MAR 09 - JUNE 09** Teaching assistant in "Geometry",
Environmental Engineering students (Prof. Giulio Tedeschi),
AFFILIATION Politecnico of Turin, Italy
- 25TH JAN 08 - 16TH FEB 08** Teacher in "Matematics"
AFFILIATION High School "Bodoni-Paravia", Turin, Italy
- SEP 07 - DEC 07** Teaching assistant in "Mathematical Analysis I",
Aerospace Engineering students (Prof. Andrea Bacciotti),
Biomedical Engineering students (Prof. Andrea Bacciotti),
Chemical Engineering students (Prof. Andrea Bacciotti),
Electrical Engineering students (Prof. Andrea Bacciotti),
Energy Engineering students (Prof. Andrea Bacciotti),
Mechanical Engineering students (Prof. Andrea Bacciotti),
AFFILIATION Politecnico of Turin, Italy
- SEP 06 - DEC 06** Teaching assistant in "Mathematical Analysis I",
Aerospace Engineering students (Prof. Andrea Bacciotti),
Biomedical Engineering students (Prof. Andrea Bacciotti),
Chemical Engineering students (Prof. Andrea Bacciotti),
Electrical Engineering students (Prof. Andrea Bacciotti),
Energy Engineering students (Prof. Andrea Bacciotti),
Mechanical Engineering students (Prof. Andrea Bacciotti),
AFFILIATION Politecnico of Turin, Italy
- NOV 05 - JAN 06** Teaching assistant in "Mathematical Analysis II",
Computer Science Engineering students (Prof. Paolo Tilli),

AFFILIATION

Electronic Engineering students (Prof. Paolo Tilli),
Physical Engineering students (Prof. Paolo Tilli),
Telecommunication Engineering students (Prof. Paolo Tilli),
Politecnico of Turin, Italy

PRESENT RESEARCH INTERESTS

- 1 Mathematical Modelling of Living Systems:**
Biological and Chemical Systems, Traffic and Crowds Dynamics, Economic Systems
Renewable Energy Sources Network
- 2 Nonequilibrium Statistical Mechanics and Dynamical Systems:**
Billiard Theory, Chaos, Hopf Bifurcations, Transport in Microporous Media,
Fluctuations, Cross-Correlation Functions, Information Theory
- 3 Numerical Methods for Kinetic Equations**
Particle Methods, Monte Carlo Methods, MWF Method
- 4 Inverse Problems in Engineering**
Source Localization, Signal Reconstruction, Renormalization in Field Theory

AWARDS

- 2010 INDAM-SIMAI Prize:**
Best Italian Ph.D. Dissertation - Period 2007-2009.

SCIENTIFIC COMMUNICATIONS AND CONFERENCES

- 18TH DEC 19** **Communication** at the Conference:
"6th International Conference on Energy and City of the Future",
Pune, India
- TITLE** "A thermostatted model for a network of energy sources:
Analysis on the initial condition"
- 5TH DEC 18** **Communication** at the Conference:
"2018 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)",
Madrid, Spain
- TITLE** "Optimal control in a mathematical model for tumor escape"
- 26TH OCT 18** **Communication** at the Conference:
"4th International Symposium Energy and City of the Future",
Fès, Maroc
- TITLE** "On the urban development of a city: A Fokker-Planck approach"
- 25TH JUL 18** **Communication** at the Conference:
"31st International Symposium on Rarefied Gas Dynamics",
Glasgow, United Kingdom
- TITLE** "Thermostatted kinetic theory approach to the competition between
cancer and immune system cells in an inhomogenous system"

- 25TH MAY 18** **Communication** at the Conference:
 “Journées Théorie, Modélisation et Simulation”,
 ENS, Paris, France
TITLE “On the effect of learning control in the competition between
 cancer cells and immune system cells”
- 13TH NOV 17** **Communication** at the Conference:
 “2017 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)”,
 Kansas City, MO, USA
TITLE “Tumor escape: A mathematical model”
- 19TH FEB 15** **Invited Speaker** at the Conference: “MATHMOD 2015”,
 University of Technology, Vienna, Austria
TITLE “Reaction-diffusion approach to somite formation”
- 18TH FEB 15** **Invited Speaker** at the Conference: “MATHMOD 2015”,
 University of Technology, Vienna, Austria
TITLE “Multiscale Analysis of a Retarded Equation:
 From Kinetic to Macroscopic Scale”
- 26TH NOV 14** **Invited Speaker** at Laboratoire de Physique Statistique,
 École Normale Supérieure de Paris, Paris, France
TITLE “Cancer-Tissue Evolution from Cell-Cell Interactions:
 From Kinetic to Macroscopic equations”
- 26ND - 8TH NOV 14** **Speaker** at the Conference: “BIOMAT 2014”,
 14th International Symposium on Mathematical and Computational Biology,
 Stefan Banach International Mathematical Center, Bedlewo, Poland
TITLE “From Cellular to Tissue Scales by Asymptotic Limits of
 Thermostatted Kinetic Models”
- 7TH - 10TH JUL 14** **Communication** at the Conference: “SIMAI 2014”,
 Hotel Villa Diodoro, Taormina, Italy
TITLE “Multiscale Modelling of Living Systems: A Mathematical
 and Computational Perspective”
- 14TH OCT 13** **Invited Speaker** at Laboratoire de Physique Théorique de la Matière
 Condensée: Sorbonne et PMC Universités, Paris, France
TITLE “Mathematical Modeling of Physical and Biological Systems:
 Transport, Tumor Growth and Immune System Competition”
- 19TH JUN 13** **Invited Speaker** at SUTD/MIT:
 Singapore, Malay Peninsula
TITLE “Mathematical Modelling of Life Science Systems: Chaos,
 Complexity, Thermostats and Simulations”

- 21TH - 27TH SEP 13** **Communication** at the Conference:
"The 11th International Conference of Numerical Analysis and Applied Mathematics, ICNAAM 2011", Rhodes, Greece
- TITLE** *"Persistence Analysis in a Kolmogorov-Type Model for Cancer-Immune System Competition"*
- 21ST JUN 12** **Invited Speaker** at the Scientific Meeting:
"Journée Scientifique sur les Equations Cinétiques", (Prof. L. Desvillettes)
 Centre de Mathématiques et de Leurs Applications
 Ecole Normale Supérieure de Cachan, Paris, France
- TITLE** *"A Kinetic for Active Particles Model for Virulent Keloid Formation "*
- 4TH - 6TH JUN 12** **Invited Speaker** at the Workshop:
"Mathways into Cancer", Almagro, Ciudad Real, Spain
- TITLE** *"Triplex Vaccine in Mammary Carcinoma: A Mathematical Model in Tune with SimTriplex"*
- 30TH NOV - 2ND DEC 11** **Speaker** at the CIMAB & GASVA SIMAI Workshop:
"Young Researcher Workshop on Theoretical Approaches and Related Mathematical Methods in Biology and Medicine", L'Aquila, Italy
- TITLE** *"Kinetic Modelling for Keloid Genesis: The Parameters Role on the Moments Evolution"*
- 19TH - 25TH SEP 11** **Communication** at the Conference:
"The 9th International Conference of Numerical Analysis and Applied Mathematics, ICNAAM 2011", Halkidiki, Greece
- TITLE** *"Immune System Network and Cancer Vaccine"*
- 26TH - 30TH JUN 11** **Communication** at the Conference:
"The 11th International Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE 2011", Alicante, Spain
- TITLE** *"The MWF Method for Kinetic Models: An Overview and Research Perspective"*
- 26TH - 30TH JUN 11** **Communication** at the Conference:
"The 11th International Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE 2011", Alicante, Spain
- TITLE** *"Compartmental Mathematical Modeling of Immune System Melanoma Competition"*
- 8TH APR 11** **Invited Speaker** at the SIMAI Workshop:
"Prospettive di Sviluppo della Matematica Applicata in Italia 2011, In memoria di Vinicio Boffi", Rome, Italy
- TITLE** *"Mathematical Modelling in Medicine and Biology: Chaos, Complexity, and Transport"*

- 28TH SEPT 10** **Speaker** at the Conference:
"Fifth China-Italy Colloquium on Applied Mathematics",
 Park Hotel Capomulini, Acireale (CT), Italy
TITLE "A Cellular Scale Based Model for the Keloid
 Formation and Malignant Effects"
- 26TH - 30TH JUN 10** **Communication** at the Conference:
*"The 10th International Conference on Computational and
 Mathematical Methods in Science and Engineering, CMMSE 2010"*, Almeria, Spain
TITLE "Modeling Artificial Immunity Against Mammary Carcinoma"
- 24TH JUNE 10** **Speaker** at the Conference: "The 10th Congress of SIMAI",
 Faculty of Architecture, University of Cagliari, Italy
TITLE "A Kinetic Model for the Keloid Genesis:
 Malignant Effects and Immune System Response"
- 21ST JUNE 10** **Speaker** at the Conference: "The 10th Congress of SIMAI",
 Faculty of Architecture, University of Cagliari, Italy
TITLE "Genetic Mutations and Immune System Competition"
- 21ST - 22ND MAY 10** **Invited Speaker** at the Scientific Meeting:
"Complexity in Life and Socio-Economic Sciences",
 Department of Mathematics, University of Bologna, Italy
TITLE "A Kinetic for the Keloid Formation Triggered by Virus:
 Malignant Effects and Immune System Competition"
- 15TH APR 10** **Invited Speaker** at the *"Third Annual Consortium Meeting RESOLVE"*,
 Hotel Saray, Granada, Spain
TITLE "Kinetic of Active Particles Models for Wound Healing Diseases:
 Malignant Effects and Immune System Competition"
- 29TH JAN 10** **Invited Speaker** at the Scientific Meeting:
"Complessita in Scienze della Vita e Scienze Socio-economiche",
 Department of Mathematics, Politecnico of Turin, Italy
TITLE "Un Modello Matematico per la Genesi, l'Eterogeneità Genetica di Cellule
 Mutate e Competizione con il Sistema Immunitario"
- 17TH - 19TH DEC 09** **Speaker** at the *"White Workshop on Mathematical Biology"*, Trento, Italy
TITLE "On the Modelling Genetic Mutations and Immune System Competition by
 the Kinetic Theory for Active Particles"
- 9TH OCT 09** **Speaker** at the SIMAI Workshop:
*"Prospettive di Sviluppo della Matematica Applicata in Italia 2009,
 In memoria di Angelo Marcello Anile"*, Rome, Italy
TITLE "Genetic Mutations and Immune System Competition: An Explorative
 Model from the Mathematical Kinetic Theory for Active Particles"

- 26TH MAR 09** **Speaker** at the “*Second Annual Consortium Meeting RESOLVE*”,
Faculty of Education, University of Verona, Italy
TITLE “Mathematics Fosters Fibrosis Modelling”
- 20TH OCT 08** **Invited Speaker**,
Department of Mathematics, University of Bologna, Italy
TITLE “The Nonequilibrium Ehrenfest Gas: a Chaotic Billiard with
Polygonal Obstacles?”
- 3RD - 6TH JUN 08** **Communication** at the Conference:
“*The 10th Experimental Chaos Conference*”,
Faculty of Engineering, University of Catania, Italy
POSTER TITLE “Thermostatted Planar Billiards as Simple Model of Mass
Transport in Microporous Membranes”
- 19TH - 21ST MAY 08** “*CancerSim2008: Euroconference on Modeling and Simula-
tion of Cancer Growth and Therapy*”,
Politecnico of Turin, Italy
- 15TH - 16TH NOV 07** “*Nuove Frontiere della Matematica per le Scienze Applicate*”,
University of Ferrara, Italy
- 18TH - 19TH MAY 07** **Speaker** at the SIMAI Workshop:
“*Prospettive di Sviluppo della Matematica Applicata in Italia 2007*”
Rome, Italy
TITLE “Billiards as Simple Model of Microporous Membranes”
- 15TH DEC 06** **Speaker** at the “*Ph.D. Day*”,
Department of Mathematics, Politecnico of Turin, Italy
TITLE “Periodic Orbits and Chaos of the Nonequilibrium Ehrenfest
Wind-Tree Model”
- 24TH - 27TH MAY 05** “*Recent and Future Developments in Hamiltonian System:
Theory and Applications*”
Institute Henry-Poincaré, Paris, France
- 1324TH JUNE 03** **Speaker** at the College of Engineering,
University of Catania, Italy
TITLE “The Heat Equation: Fundamental Solution and Properties”

AFFILIATIONS

- JAN 10 - PRESENT** Member of “European Mathematical Society”, (EMS)
WEBSITE <http://www.emis.de/>
- JAN 10 - PRESENT** Member of “Unione Matematica Italiana”, (UMI)
WEBSITE <http://umi.dm.unibo.it/>

- JAN 10 - PRESENT Member of “Centro Interuniversitario per la Matematica Applicata a Biologia, Medicina ed Ambiente”, (CIMAB)
WEBSITE <http://www.mat.unimi.it/users/CIMAB/>
- JAN 06 - PRESENT Member of “Gruppo Nazionale della Fisica Matematica”, (GNFM)
WEBSITE <http://gruppi.altamatematica.it/gnfm/>
- OCT 13 - PRESENT Permanent Member of “Fractional Calculus and Applications Group”
WEBSITE <http://fcag-egypt.com/>
- JAN 10 - DEC 13 Member of “Societa’ Italiana di Matematica Applicata e Industriale”, (SIMAI)
WEBSITE <http://www.simai.eu/>
- JAN 06 - DEC 08 Member of “Consorzio Nazionale Interuniversitario per le Scienze Fisiche della Materia”, (CNISM)
WEBSITE <http://www.cnism.it/>

SCIENTIFIC PUBLICATIONS

106. AUTHORS M. Dalla Via, C. Bianca, I. El Abbassi, A-M. Darcherif
TITLE *On the modeling of a solar, wind and fossil fuel energy source by means of the thermostatted kinetic theory*
JOURNAL The European Physical Journal Plus **135** (2020), 128
105. AUTHORS C. Bianca, M. Menale
TITLE *Mathematical analysis of a thermostatted equation with a discrete real activity variable*
JOURNAL Mathematics **8** (2020), 57
104. AUTHORS M. Dalla Via, C. Bianca, I. El Abbassi, A-M. Darcherif
TITLE *A thermostatted kinetic theory model for a hybrid multisource system with storage*
JOURNAL Applied Mathematical Modelling **78** (2020), 232-248
103. AUTHORS C. Bianca, M. Menale
TITLE *On the convergence toward nonequilibrium stationary states in thermostatted kinetic models*
JOURNAL Mathematical Methods in the Applied Sciences **42** (2019), 6624-6634
102. AUTHORS C. Bianca, M. Menale
TITLE *On the interaction domain reconstruction in the weighted thermostatted kinetic framework*
JOURNAL The European Physical Journal Plus **134** (2019), 143
101. AUTHORS C. Bianca, M. Menale
TITLE *Existence and uniqueness of nonequilibrium stationary solutions in discrete thermostatted models*
JOURNAL Commun Nonlinear Sci Numer Simulat **73** (2019), 25-34

100. AUTHORS C. Bianca, C. Dogbe
 TITLE *Regularity of entropy solutions to a class of conservation laws*
 JOURNAL Nonlinear Studies **26** (2019), 129-157
99. AUTHORS C. Bianca, M. Menale
 TITLE *A convergence theorem for the nonequilibrium states in the discrete thermostatted kinetic theory*
 JOURNAL Mathematics **7** (2019), 673
98. AUTHORS L. Masurel, C. Bianca, A. Lemarchand
 TITLE *Thermostatted kinetic theory approach to the competition between cancer and immune system cells in an inhomogeneous system*
 JOURNAL AIP Conference Proceedings **2131** (2019)
97. AUTHORS C. Bianca, M. Dalla Via, C. Dogbe
 TITLE *A master equation-based framework for the modeling of pedestrian dynamics*
 JOURNAL Mathematics in Engineering, Science and Aerospace **10** (2019), 129-142
96. AUTHORS C. Bianca, M. Menale
 TITLE *On the weighted interactions in the discrete thermostatted kinetic theory*
 JOURNAL Nonlinear Studies **26** (2019), 95-108
95. AUTHORS C. Bianca, S. Motta
 TITLE *Optimal control in a mathematical model for tumor escape*
 JOURNAL IEEE BIBM (2019), 1357-1360
94. AUTHORS C. Bianca, C. Mogno
 TITLE *A thermostatted kinetic theory model for event-driven pedestrian dynamics*
 JOURNAL The European Physical Journal Plus **133** (2018), 213
 HIGHLIGHTS <https://www.epj.org/epjplus-news/1502-epjplus-highlight-rush-hour-metro-crowd-governed-by-peoples-eagerness-to-go-home>
 <https://www.europhysicsnews.org/highlights>
93. AUTHORS C. Bianca, C. Mogno
 TITLE *Modelling pedestrian dynamics into a metro station by thermostatted kinetic theory methods*
 JOURNAL Mathematical and Computer Modelling of Dynamical Systems **24** (2018), 207-235
92. AUTHORS L. Masurel, C. Bianca, A. Lemarchand
 TITLE *On the learning control effects in the cancer-immune system competition*
 JOURNAL Physica A: Statistical Mechanics and its Applications **506** (2018), 462-475
91. AUTHORS C. Bianca, C. Mogno
 TITLE *Qualitative analysis of a discrete thermostatted kinetic framework modeling complex adaptive systems*
 JOURNAL Commun Nonlinear Sci Numer Simulat **54** (2018), 221-232
90. AUTHORS C. Bianca, C. Dogbe
 TITLE *A new criterium for the ergodicity of Hamilton-Jacobi-Bellman type equations*
 JOURNAL Global and Stochastic Analysis **5** (2018), 67-99

89. **AUTHORS** C. Bianca, R. Sasportas, X. Busch
 TITLE *A two-dimensional maximum-entropy-based model for the source reconstruction in a monitoring network*
 TITLE *in a monitoring network*
 JOURNAL Nonlinear Studies **25** (2018), 1-13
88. **AUTHORS** C. Bianca, L. Brézin
 TITLE *Modeling the antigen recognition by B-cell and T-cell receptors through thermostatted kinetic theory methods*
 JOURNAL International Journal of Biomathematics **10** (2017), 1750072
87. **AUTHORS** C. Bianca, C. Dogbe
 TITLE *On the existence and uniqueness of invariant measure for multidimensional diffusion processes*
 JOURNAL Nonlinear Studies **24** (2017), 437-468
86. **AUTHORS** C. Bianca, R. Sasportas
 TITLE *A one-dimensional mathematical model for the source reconstruction by the maximum entropy principle*
 JOURNAL Applied Mathematics & Information Sciences **11** (2017), 1803-1809
85. **AUTHORS** C. Bianca, A. Kombargi
 TITLE *On the modeling of the stock market evolution by means of the information-thermostatted kinetic theory*
 JOURNAL Nonlinear Studies **24** (2017), 935-944
84. **AUTHORS** C. Bianca, G.M. Gallo, S. Motta
 TITLE *Tumor escape: A mathematical model*
 JOURNAL IEEE BIBM (2017), 1401-1405
83. **AUTHORS** C. Bianca, A. Kombargi
 TITLE *On the inverse problem for thermostatted kinetic models with application to the financial market*
 JOURNAL Applied Mathematics & Information Sciences **11** (2017), 1463-1471
82. **AUTHORS** C. Bianca
 TITLE *A new approach for the source problem based on the maximum entropy principle*
 JOURNAL Nonlinear Studies **24** (2017), 715-723
81. **AUTHORS** C. Bianca
 TITLE *On the coupling of the thermostatted kinetic theory with the information theory*
 JOURNAL Applied Mathematics & Information Sciences **11** (2017), 1767-1772
80. **AUTHORS** M. Ben Amar, C. Bianca
 TITLE *Onset of nonlinearity in a stochastic model for auto-chemotactic advancing epithelia*
 JOURNAL Nature Scientific Reports **6** (2016), 33849
79. **AUTHORS** C. Bianca, A. Lemarchand
 TITLE *Miming the cancer-immune system competition by kinetic Monte Carlo simulations*
 JOURNAL Journal of Chemical Physics **145** (2016), 154108

78. **AUTHORS** J. Liu, C. Bianca, L. Guerrini
 TITLE *Dynamical analysis of a computer virus model with delays*
 JOURNAL Discrete Dynamics in Nature and Society **2016** (2016), 5649584
77. **AUTHORS** M. Ben Amar, C. Bianca
 TITLE *Towards a unified approach in the modelling of fibrosis: A review with research perspectives*
 JOURNAL Physics of Life Reviews **16** (2016), 61-85
76. **AUTHORS** M. Ben Amar, C. Bianca
 TITLE *Multiscale modeling of fibrosis - What's next?*
 JOURNAL Physics of Life Reviews **16** (2016), 118-123
75. **AUTHORS** C. Bianca, C. Dogbe
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PUBLICATIONS IN CONFERENCE PROCEEDINGS

5. **AUTHORS** A. Lemarchand and C. Bianca
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PARIS, MARCH 8TH, 2020

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NEWSPAPER

Una Scuola di Cervelloni
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NEWSPAPER ARTICLES

AUTHORS C. Bianca
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- AUTHORS** C. Bianca, B. Carbonaro, M. Menale
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MATHMOD 2021 10th Vienna International Conference on Mathematical Modelling
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Computational Mathematics
Langkawi, Malaysia, 4-5 July, 2019
<https://www.iccscm.com/cms/>

- MATHMOD 2018** 9th Vienna International Conference on Mathematical Modelling
Vienna, Austria, 21-23 February, 2018
<http://www.mathmod.at/>
- ICCC 2018** 4th IEEE International Conference on Computer and Communications
Chengdu, China, 7-10 December, 2018
<http://www.iccc.org/index.html>
- ICAEM 2017** International Conference of Applied and Engineering Mathematics
London, U.K., 5-7 July, 2017
<http://www.iaeng.org/WCE2017/ICAEM2017.html>
- ICCC 2017** 3rd IEEE International Conference on Computer and Communications
Chengdu, China, 13-16 December, 2017
<http://www.iccc.org/>
- ICNPAA 2016** 11th International Conference on Mathematical Problems in
Engineering, Aerospace and Sciences
La Rochelle, France, 5-8 July, 2016
<http://www.internationalmathematics.com/icnpaa/>
- MATHMOD 2015** 8th Vienna International Conference on Mathematical Modelling
Vienna, Austria, 18-20 February, 2015
<http://www.mathmod.at/>
- ICNPAA 2014** 10th International Conference on Mathematical Problems in
Engineering, Aerospace and Sciences
Narvik, Norway, 15-18 July, 2014
<http://icnpaa.com/index.php/icnpaa/2014>
- BIOSTATISTICS 2014** 3rd International Conference and Exhibition on Biometrics &
Biostatistics
New Orleans, USA, 23-25 June, 2014
<http://www.omicsgroup.com/biometrics-biostatistics-conference-2014/>
- ICAEM 2013** International Conference of Applied and Engineering Mathematics
London, U.K., 3-5 July, 2013
<http://www.iaeng.org/WCE2013/ICAEM2013.html>

EDITOR OF SPECIAL ISSUES

- TITLE** *Symmetry in nonequilibrium statistical mechanics and dynamical systems*
JOURNAL Symmetry (2020), in progress
<https://www.mdpi.com/journal/symmetry>
- TITLE** *Theoretical frameworks and models for biological systems*
JOURNAL AIMS Biophysics (2020), in progress
<http://www.aimspress.com/newsinfo/1366.html>

TITLE *Mathematical and numerical analysis of nonlinear evolution equations: Advances and perspectives*
JOURNAL Mathematics (2019)
<https://www.mdpi.com/journal/mathematics>

TITLE *Time delayed equations as models in nature and society*
JOURNAL Discrete Dynamics in Nature and Society **2015** (2015)
<http://www.hindawi.com/journals/ddns/osi/>

TITLE *Fractional calculus and applications*
JOURNAL Journal of King Saud University: Engineering Science **2015**
<http://www.journals.elsevier.com/journal-of-king-saud-university-engineering-sci>

TITLE *Nonlinear evolution equations modeling complex phenomena: Recent and future trends*
JOURNAL The Scientific World Journal **2014** (2014), 629624
<http://www.hindawi.com/journals/tswj/si/629624/cfp/>

TITLE *Nonlinear dynamics in applied sciences systems: Advances and perspectives*
JOURNAL Abstract and Applied Analysis **2013** (2013), 259718
<http://www.hindawi.com/journals/aaa/si/259718/>

TITLE *Complex dynamic systems: Nonlinear methods, mathematical models and thermodynamics*
JOURNAL Mathematics in Engineering, Science and Aerospace **3** (2012), 221-339
<http://nonlinearstudies.com/index.php/mesa/issue/view/98>

EDITOR IN CHIEF

JOURNALS Journal of Mathematics and Statistics
Journal of Applied & Computational Mathematics (Until 2017)
Stochastics Modelling and Applications

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Advances in Nonlinear Science
Bulletin of Mathematical Analysis and Applications
Journal of Mathematical Analysis
Waves Wavalets and Fractals-Advanced Analysis
International Journal of Numerical Methods and Applications
Global and Stochastic Analysis
Journal of Analysis & Number Theory
Global Journal of Mathematical Analysis

Research and Communications in Mathematics and Mathematical Sciences
International Journal of Innovative Research in Pure and Engineering Mathematics
Electronic Journal of Mathematical Analysis and Applications
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Journal of Fractional Calculus and Applications
UPI Journal of Mathematics and Biostatistics
Asian Journal of Mathematics and Computer Research
Enliven: Biostatistics and Metrics.
Computer Simulation in Application

BOOK SERIES

EDITOR OF BOOK SERIES

Mathematics and Applied Mathematics, Cambridge Scholars Publishing

JOURNALS

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Mathematical and Computer Modelling of Dynamical Systems
Mathematical Methods in the Applied Sciences
Computational and Mathematical Methods in Medicine
Computers & Mathematics with Applications
Applied Mathematics and Computation
Mathematical and Computer Modelling
International Journal of Bifurcation and Chaos
Abstract and Applied Analysis
Chaos, Solitons & Fractals
Royal Society Open Science
Boundary Value Problems
Journal of Applied Mathematics and Computing
Bulletin of the Malaysian Mathematical Sciences Society
Advances in Difference Equations
European Journal of Physics
Physics Letters A
Physica Scripta
Nonlinearity
Plos One
Measurement
BMC Medical Informatics and Decision Making
Journal of Informatics and Mathematical Sciences
SpringerPlus
Algorithms
System Science & Control Engineering
International Journal of Dynamical Systems and Differential Equations
Analele Stiintifice ale Universitatii Ovidius Constanta
Journal of Mathematics and System Science
Journal of Computer Technology & Applications
Nonlinear Engineering Modeling and Application
Punjab University Journal of Mathematics
Population and Environment

IEEE/ACM Transactions on Computational Biology and Bioinformatics
IEEE Transactions on Intelligent Transportation Systems
Swarm and Evolutionary Computation

INVITED AUTHOR OF REVIEWS

JOURNAL Mathematical Reviews
DATABASE MathSciNet (American Mathematical Society)

JOURNAL Earth Systems and Environmental Science
DATABASE Earth Systems and Environmental Science (Elsevier)

INVOLVEMENT IN RESEARCH PROJECTS

OCT 2016 - JUN 2018 DGA Projet
“Conception d’un réseau de surveillance de la pollution de l’air d’un site sensible”
FUNDED BY MINISTÈRE DE LA DÉFENSE, FRANCE
POSITION PRINCIPAL INVESTIGATOR

JAN 2014 - AVR 2015 ANR T-KiNeT Projet
“Modulation Thermique et Lecture Fluorescence/Raman pour l’Analyse Cinétique de Réseaux de Réactions Chimiques/Biologiques”
FUNDED BY AGENCE NATIONALE DE LA RECHERCHE
POSITION PARTICIPANT

2009 - 2013 FIRB-Project, RBID08PP3J
TITLE *Metodi Matematici e Relativi Strumenti per la Modellizzazione e la Simulazione della Formazione di Tumori, Competizione con il Sistema Immunitario e Conseguenti Suggestimenti Terapeutici*
FUNDED BY MIUR
(MINISTERO DELL’ISTRUZIONE, DELL’UNIVERSITÀ E DELLA RICERCA)
POSITION PARTICIPANT

JUN 2011 - JUN 2012 Young Researchers-Project, Prot. n. 43
TITLE *Mathematical Modelling for the Cancer-Immune System Competition Elicited by a Vaccine*
FUNDED BY INDAM-GNFM
(ISTITUTO NAZIONALE DI ALTA MATEMATICA)
(GRUPPO NAZIONALE DELLA FISICA MATEMATICA)
POSITION COORDINATOR

2009 - 2010 Compagnia di San Paolo-Project, Prot. n. 943
TITLE *Modelli Matematici nella Ricerca sui Tumori*
FUNDED BY Compagnia di San Paolo, Turin
POSITION PARTICIPANT

2009 European-Project, FP7-HEALTH-F4-2008-202047
TITLE *Resolve Chronic Inflammation and Achieve Healthy Ageing by Understanding Non-regenerative Repair (RESOLVE)*
FUNDED BY European Research Council
POSITION PARTICIPANT

2008 European-Project, FP6-IST-4-2004-028069
TITLE *The European Virtual Human Immune System Project (IMMUNOGRID)*
FUNDED BY European Research Council
POSITION PARTICIPANT

2005-2007 Lagrange-Project
TITLE *Transport Phenomena in Microporous Membranes and Large Deviations in Nonequilibrium Statistical Mechanics*
FUNDED BY CRT Foundation
POSITION PARTICIPANT