Alberto d'Onofrio

Personal Data

- Name: Alberto d'Onofrio
- [redacted]
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- [redacted]

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Metrics

Metrics :
(1) *Stanford Ranking for Researchers (various years)*: Percentile Rank: **1st percentile** (46463 over more than 6 millions) https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/6 See the news at the home-page of Trieste University: https://web.archive.org/web/20231114082904/https://www.units.it/news/docenti-units-nellelenco-aggiornato-dei-ricercatori-pi
(2) *Google Scholar H-Index:* **45** (February 20, 2024)
(3) *Google Scholar H10-Index:* **103** (February 20, 2024)
(4) *Google Scholar Citations:* **7777**(February 20, 2024)

Research Interests

Physics and Computer Science of Complex Systems

- Behavioral Epidemiology of Infectious Diseases
- Theoretical Biophysics
- Systems Biology
- Machine Learning Methods for Complex Systems and Quantum Mechanics
- Classical and Quantum Stochastic Modeling and Simulations
- Non-equilibrium statistical physics

Professional history

1. Start–End: 1/APR/2022 – Current Position: Director of the Research Group **'Computer Science for Complex Systems'** Institution: *'Mathematics and Geosciences Department' of Trieste University, Trieste (Italy)* Status: Coordination of a Research Group
2. Start–End: 15/MAR/2022 – Current Position: Senior Researcher (with Habilitation) in Computer Sciences Institution: *'Mathematics and Geosciences Department' of Trieste University, Trieste (Italy)* Status: Full Position

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3. Start–End: 13/DEC/2021 – Current Position: Research Associate Institution: *'Systems Analysis and Computer Sciences Institute' of National Research Council, Rome (Italy)* Status: Honorary Position http://www.iasi.cnr.it/new/people.php/id_subject/244
4. Start–End: 16/JUN/2020 – 15/MAR/2022 Position: **Workless**
5. Start–End: 1/JAN/2014 – 15/JUN/2020 Position: Research Director (in italian: 'Dirigente di Ricerca') Institution: International Prevention Research Institute, Dardilly (France) Status: permanent Contract
6. Start–End: 20/APR/2017 – 30/APR/2020 Position: Visiting Professor Institution: Department of Mathematics and Statistics, Strathclyde University, Glasgow (UK) Status: Honorary Position https://web.archive.org/web/20210121061443/, https://pureportal.strath.ac.uk/en/persons/alberto-donofrio
7. Start–End: 1/JAN/2009 –31/DEC/2013 Position: Group Leader (Research Director of a Research Group) Institution: Department of Experimental Oncology, European Institute of Oncology (DEO - IEO), Milano (Italy) Status: fixed-term Contract
8. Start–End: 1/OCT/2008 –31/DEC/2008 Position: Researcher Institution: Department of Experimental Oncology, European Institute of Oncology (DEO - IEO), Milano (Italy) Status: fixed-term Contract
9. Start–End: 1/JAN/2004 – 30/SEPT/2008 Position: Researcher Institution: Division of Epidemiology and Biostatistics, European Institute of Oncology (DEB - IEO), Milano (Italy) Status: fixed-term Contract
10. Start–End: 1/JAN/2003 – 31/DEC/2003 Position: Researcher Institution: Division of Epidemiology and Biostatistics, European Institute of Oncology (DEB - IEO), Milano (Italy) Status: fixed-term Contract
11. Start–End: 1/MAR/2000 – 30/SEPT/2003 Position: PostDoc Fellow Institution: Division of Epidemiology and Biostatistics, European Institute of Oncology (DEB - IEO), Milano (Italy) Status: fixed-term Contract
12. Start–End: DEC/1997 –FEB/2000 Position: Software Consultant. Institution: Division of Animal Genetics, FAO - UNITED NATIONS, Rome (Italy) Status: Part-time Consultant
13. Start–End: AUG/1996 – MAY/1997 Position: Scientific Software Engineer Institution: 'Istituto di Analisi dei Sistemi e di Informatica' of National Research Council, Roma (Italy) Supervisor: Dr. Michele Missikoff Status: Full-time Consultant
14. Start–End: OCT/1995 – AUG/1996 Position: Pre-Doc Research Fellow (Voluntary) Institution: 'Istituto di Analisi dei Sistemi e di Informatica' of National Research Council, Roma (Italy) Status: Voluntary

Habilitations

1. 12/DEC/2023 Title: National Scientific Habilitation as Associate Professor in *Computer Science* Institution: Ministero della Universitá e Ricerca Scientifica (MUR), Rome (Italy)
2. 25/JAN/2022 Title: National Scientific Habilitation as University Full Professor in *Applied Physics* Institution: Ministero della Universitá e Ricerca Scientifica (MUR), Rome (Italy)
3. 26/JAN/2022 Title: National Scientific Habilitation as Associate Professor in *Theoretical Physics* Institution: Ministero della Universitá e Ricerca Scientifica (MUR), Rome (Italy)
4. 25/JAN/2022 Title: National Scientific Habilitation as Associate Professor in *Applied Physics* Institution: Ministero della Universitá e Ricerca Scientifica (MUR), Rome (Italy)
5. 2/DEC/2013 Title: National Scientific Habilitation as University Associate Professor in *Mathematical Physics* Institution: Ministero della Universitá e Ricerca Scientifica (MIUR),

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Rome (Italy)

6. 14/FEB/2014 TITLE: National Scientific Habilitation as University Associate Professor in *Bioengineering* INSTITUTION: Ministero della Universitá e Ricerca Scientifica (MIUR), Rome (Italy)

STUDIES

1. START–END: 18/SEP/2021 POSITION: PhD Student (Fast Track for researchers) INSTITUTION: Université *'Claude Bernard'* Lyon 1 *PhD School:* ED512 *InfoMaths* PHD THESIS ADVISOR: Professor Vitaly Volpert
2. START–END: 27/MAY/1997 – 29/MAY/2000 POSITION: PhD Student in *'Medical Computer Sciences'* INSTITUTIONS: University Rome *'Sapienza'* and 'Institute of Systems Analysis and Informatics' of National Research Council, Rome (Italy) POSITION: PhD Felloswhip (paid by a State Grant) PHD THESIS ADVISORS: Professor Paolo Atzeni (Rome 3 University) and Dr Maurizio Rafanelli (IASI-CNR). *Thesis Title* 'Computer–Aided Epidemiology'
3. START–END: 1/NOV/1985 – 7/APR/1993 TITLE: Laurea (BSc+MSc) in Electrical Engineering (similar to a MSc in Applied Mathematics) INSTITUTION: University of Pisa, Pisa (Italy) MSc THESIS ADVISOR: Professor Aldo Balestrino *Thesis Title* 'Continuous Petri Nets'

CAREER BREAKS

Start	End	Reason for interruption
15 JUN 2020	14/MAR/2022	*Firing due to (claimed) Economic Crisis*
17 MAR 2020	17 APR 2020	*COVID-19 Redundancy Fund ('Cassa Integrazione')*
APR 1993	OCT 1995	*Civil Service and Unemployment*

My professional Path had some Interruptions: 1) On 15/JUN/2020 I, 2 other Research Directors and two employees (5CDI personnel over 13 total) were fired by IPRI due to a claimed 'economic crisis'. *Prud'hommes (work tribunal)* will establish whether or not this was legal; 2) Again in 2020 I and other three colleagues were put in the state of *'technical unemployment'* (COVID-19 redundancy fund), but this action had to be cancelled for lack of background; 3) I had a delay in just after my University studies due to Civil Services bureaucratical complications and to a period of unemployment.

COMPLETE LIST OF PUBLICATIONS

8.1 Publications

8.1.1 International journals

J1. E. Pourabbas, **A. d'Onofrio**, M. Rafanelli: *A Method to estimate the incidence of communicable diseases under seasonal fluctuations with application to cholera*, 'Applied Mathematics and Computation', 118/2-3 (2001) pp 161-174 https://doi.org/10.1016/S0096-3003(99)00212-X

J2. **A d'Onofrio**, *Stability property of Pulse Vaccination Strategy in SEIR epidemic model*, 'Mathematical Biosciences', 179/1 (2002) pp. 57-72 https://doi.org/10.1016/S0025-5564(02)00095-0

J3. **A d'Onofrio**, *Pulse vaccination strategy in the SIR epidemic model: Global asymptotic stable eradication in presence of vaccine failures*, 'Mathematical and Computer Modelling', 36/4-5, (2002), pp. 473-489. https://doi.org/10.1016/S0895-7177(02)00177-2

J4. **A d'Onofrio** *Globally stable vaccine-induced eradication of horizontally and vertically transmitted infectious diseases with periodic contact rates and disease-dependent demographic factors in the population*, 'Applied Mathematics and Computation', Vol. 140/2-3, pp. 537-547, (2003) https://doi.org/10.1016/S0096-3003(02)00251-5

J5. B Jereczek-Fossa, C Garibaldi, G Catalano, **A d'Onofrio**, T De Pas, C Bocci, M Ciocca, F DePaoli, R Orecchia *Analysis of mandibular dose distribution in radiotherapy for oropharingeal cancer : Dosimetric and clinical results in 18 patients*, 'Radiotherapy and Oncology ', 66 (2003) pagg. 49-56, https://doi.org/10.1016/S0167-8140(02)00191-3

J6. A. Bertuzzi, **A. d'Onofrio**, A. Fasano, A. Gandolfi: *Modelling cell populations with spatial structure: Steady state and treatment-induced evolution of tumour cords* 'Discrete and Continuous Dynamical Systems Series B' Vol 4 n.1, 161-186 (2004) http://dx.doi.org/10.3934/dcdsb.2004.4.161

J7. A. Bertuzzi, **A. d'Onofrio**, A. Fasano, A. Gandolfi: *Regression and regrowth of tumour cords following single-dose anticancer treatment*, 'Bulletin of Mathematical Biology', (2003) 65, 903-931, https://doi.org/10.1016/S0092-8240(03)00054-5

J8. Boyle P., **d'Onofrio A.**, Maisonneuve P., Severi G., Robertson C, Tubiana M and Veronesi U *Measuring Progress Against Cancer in Europe. Has the 15% Decline targeted for 2000 come about ?*, Annals of Oncology, vol 14, pag 1312-1325 (2003), https://doi.org/10.1093/annonc/mdg353

J9. Quinn MJ, **d'Onofrio A**, Moller B and Black R, Martinez-Garcia C, Moller H, Rahu M, Robertson C, Schouten LJ, La Vecchia C, Boyle *Cancer Mortality Trends in the EU and Acceding Countries up to 2015*, Annals of Oncology pag 1148-1152 (2003), https://doi.org/10.1093/annonc/mdg307

J10. **A.d'Onofrio (Corr. Auth.)** and E. Pourabbas *Modelling temporal thematic map contents*, A.C.M. S.I.G.M.O.D. Record, vol 32, No. 2 - June 2003, pagg 34-41, https://dl.acm.org/doi/pdf/10.1145/776985.776990

J11. **A d'Onofrio** *Mixed pulse vaccination strategy in epidemic model with realistically distributed infectious and latent times* 'Applied Mathematics and Computation' 151(2004) pp 161-167 https://doi.org/10.1016/S0096-3003(03)00331-X

J12. **A.d'Onofrio** *On Pulse Vaccination Strategy in SIR model with Vertical Transmission*, Applied Mathematics Letters 18 pp 729-732 (2005) https://doi.org/10.1016/j.aml.2004.05.012

J13. **A d'Onofrio (Corr. Auth.)** and A Gandolfi, Tumor eradication by antiangiogenic therapy: analysis and extension of the model by Hahnfeldt et al (1999) , Mathematical Biosciences, 191, n2, pp 159-184 (2004) https://doi.org/10.1016/j.mbs.2004.06.003

J14. **A. d'Onofrio** *Vaccination policies and non-linear force of infection: generalization of an observation by Alexander and Moghadas (2004)*. Applied Mathematics and Computation 168 pp 613-622 (2005) https://doi.org/10.1016/j.amc.2004.09.013

J15. **A. d'Onofrio Periodically varying antiviral therapies: conditions for global stability of the virus free state**. Applied Mathematics and Computation, 168, 945-953 (2005) https://doi.org/10.1016/j.amc.2004.09.014

J16. **A. d'Onofrio** *Biomathematical Analysis and extension of the new class of epidemic models proposed by Satsuma et al. (2004)*. Applied Mathematics and Computation 170 (2005) 125-134 https://doi.org/10.1016/j.amc.2004.10.083

J17. **A. d'Onofrio** *Mathematical analysis of the Tyson model of the regulation of the cell division cycle*, Nonlinear Analysis, (62), 817-831 (2005) https://doi.org/10.1016/j.na.2005.03.094

J18. **A. d'Onofrio** *A general framework for modeling tumor-immune system competition and immunotherapy: Mathematical analysis and biomedical inferences*, 'Physica D' 208, 220-235, (2005). https://doi.org/10.1016/j.physd.2005.06.032

J19. **A. d'Onofrio** *On a family of models of Cell Division Cycle*, Chaos, Solitons and Fractals, 27, 1205-1212 (2006) https://doi.org/10.1016/j.chaos.2005.04.088

J20. **A. d'Onofrio** *Tumor Evasion from Immune Control: strategies of a MISS to become a MASS*, Chaos, Solitons and Fractals 31 261-268 (2007) https://doi.org/10.1016/j.chaos.2005.10.006

J21. **A. d'Onofrio** *Tumor-immune system interaction: Modeling the tumor-stimulated proliferation of effectors and immunotherapy* Mathematical Models and Methods in Applied Sciences 16, 1375-1401 (2006) https://doi.org/10.1142/S0218202506001571

J22. **A. d'Onofrio (Corr. Auth.)** and A. Gandolfi *The response to antiangiogenic anticancer drugs that inhibit endothelial cell proliferation.* Applied Mathematics and Computation 181 (2006) 1155–1162 https://doi.org/10.1016/j.amc.2006.01.061

J23. B A Jereczek-Fossa, F Cattani, **A d'Onofrio**, R Cambria, A Kowalczyk, A Corallo, A Vavassori, D Zerini, G B Ivaldi, O DeCobelli, R Orecchia, *Dose distribution in 3-dimensional conformal radiotherapy for prostate cancer: Comparison of two treatment techniques (six coplanar fields and two dynamic arcs)*, Radiotherapy and Oncology 81 294-302 (2006) https://doi.org/10.1016/j.radonc.2006.10.013

J24. **A d'Onofrio (Corr. Auth.)** and I P M Tomlinson *A nonlinear mathematical model of cell turnover, differentiation and tumorigenesis in the intestinal crypt* Journal of Theoretical Biology 244 367-374 (2007) https://doi.org/10.1016/j.jtbi.2006.08.022

J25. D. Alterio, B. A. Jereczeck-Fossa, B. Franchi, **A. d'Onofrio**, V. Piazzi, E. Rondi, M. Ciocca, B. Gibelli, E. Grosso, N. Tradati, L. Mariani, G. Boboc and R. Orecchia *Thyroid disorders in patients treated with radiotherapy for head and neck cancer: a retrospective analysis of seventy-three patients* International Journal of Radiation Oncology Biology and Physics 67 144-150 (2007) https://doi.org/10.1016/j.ijrobp.2006.08.051

J26. **A. d'Onofrio**, P. Manfredi and E. Salinelli *Vaccinating behaviour, information, and the dynamics of SIR vaccine preventable diseases* Theoretical Population Biology 71 301-317 (2007) https://doi.org/10.1016/j.tpb.2007.01.001

J27. Debora Beldi, Barbara A. Jereczek-Fossa, **Alberto d'Onofrio**, Giuseppina Gambaro, Maria Rosaria Fiore, Francesco Pia, Fausto Chiesa, Roberto Orecchia and Marco Krengli *Role of Radiotherapy in the Treatment of Cervical Lymph Node Metastases from an Unknown Primary Site: Retrospective Analysis of 113 Patients.* International Journal of Radiation Oncology, Biology, Physics 69 1051-1058 (2007) https://doi.org/10.1016/j.ijrobp.2007.04.039

J28. **A. d'Onofrio** *Rapidly acting antitumoral antiangiogenic therapies* Physical Review E 76 (3): Art. No. 031920 Part 1 SEP 2007 https://doi.org/10.1103/PhysRevE.76.031920

J29. **Alberto d'Onofrio** *Comment to 'Epidemic spreading on heterogeneous networks with identical infectivity [Yang et al., Phys. Lett. A 364, 189-193 (2007)]'* **(this work has been classified as comment by the journal but in reality it contains new results on network based epidemic models)** Physics Letters A 372 1722-1724 (2008) https://doi.org/10.1016/j.physleta.2007.09.055

J30. B. Jereczek-Fossa, A. Kowalczyk, **A. d'Onofrio**, G. Catalano, C. Garibaldi, G. Boboc, M.C. Leonardi, R. Cambria and R. Orecchia, Three-Dimensional Conformal or Stereotactic Reirradiation of Recurrent, Metastatic or New Primary Tumors : Analysis of 108 patients, Strahlentherapie und Onkologie 184 36-40 (2008) https://doi.org/10.1007/s00066-008-1783-9

J31. **A. d'Onofrio** *Metamodeling tumor-immune system interaction, tumor evasion and immunotherapy* Mathematical and Computer Modelling 46 614-637 (2008) https://doi.org/10.1016/j.mcm.2007.02.032

J32. **A. d'Onofrio**, P. Manfredi and E. Salinelli *Bifurcation thresholds in a SIR model with information-dependent vaccination*, Mathematical Modeling of Natural Phenomena 2 26-43 (2007) https://doi.org/10.1051/mmnp:2008009

J33. **A. d'Onofrio** *A note on the global behaviour of the network-based SIS epidemic model.* Nonlinear Analysis – Real World Applications 9 1567-1572 (2008) https://doi.org/10.1016/j.nonrwa.2007.04.001

J34. **A. d'Onofrio** *'Fuzzy oncology': Fuzzy noise induced bifurcations and their application to anti-tumor chemotherapy.* Applied Mathematics Letters 21 662-668 (2008)

J35. **A. d'Onofrio (Corr. Auth.)** and P. Cerrai *A bi-parametric model for the tumour angiogenesis and anti-angiogenesis therapy.* Mathematical and Computer Modelling 49 1156-1163 (2009) https://doi.org/10.1016/j.mcm.2008.05.001

J36. **A. d'Onofrio** *Fractal growth of tumrors and other cellular populations: Linking the mechanistic to the phenomenological modeling and vice versa.* Chaos, Solitons and Fractals 41 (2009) 875–880 https://doi.org/10.1016/j.chaos.2008.04.014

J37. **A d'Onofrio (Corr. Auth.)**, A. Gandolfi and A. Rocca *The dynamics of tumour-vasculature interaction suggests low-dose, time-dense anti-angiogenic schedulings* Cell Proliferation 42 , 317-329, (2009) https://doi.org/10.1111/j.1365-2184.2009.00595.x

J38. Urszula Ledzewicz, Heinz Schaettler and **Alberto d'Onofrio**, *'Optimal Control for Combination Therapy in Cancer'* Proceeedings of the IEEE Conference on Decision and Control CDC 2008, pages 1537-1542, Article number4738880, IEEE Press (2008) https://doi.org/10.1109/CDC.2008.4738880

J39. B. Buonomo, **A. d'Onofrio** and D. Lacitignola, *Global stability of an SIR epidemic model with information dependent vaccination.* Mathematical Biosciences 216 (2008) 9-16, https://doi.org/10.1016/j.mbs.2008.07.011

J40. **A. d'Onofrio (Corr. Auth.)**, P. Manfredi and E. Salinelli *Fatal SIR diseases and rational exemption to vaccination* Mathematical Medicine and Biology 25: 337 - 357 (2008) https://doi.org/10.1093/imammb/dqn019

J41. **A. d'Onofrio (Corr. Auth.)** and A. Gandolfi *A family of models of angiogenesis anti angiogenesis anti-cancer therapy* Mathematical Medicine and Biology 26: 63 - 95 (2009) https://doi.org/10.1093/imammb/dqn024

J42. **A. d'Onofrio (Corr. Auth.)** and P. Manfredi *Information-related changes in contact patterns may trigger oscillations in the endemic prevalence of infectious diseases* Journal of Theoretical Biology 256: 473-478 (2009) https://doi.org/10.1016/j.jtbi.2008.10.005

J43. **A. d'Onofrio**, U. Ledzewicz, H. Maurer and H. Schaettler, *On Optimal Delivery of Combination Therapy for Tumors*, Mathematical Biosciences 222: 13-26 (2009) https://doi.org/10.1016/j.mbs.2009.08.004

J44. P Manfredi, P della Posta, **A d'Onofrio**, E Salinelli, F Centrone, C Meo and P Poletti, *Rational Exemption, Vaccination choices and vaccination games: an appraisal.* Vaccine 28 : 98-109 (2009) https://doi.org/10.1016/j.vaccine.2009.09.109

J45. B. Buonomo , **A. d'Onofrio (Corr. Auth.)** and D. Lacitignola, *RATIONAL EXEMPTION TO VACCINATION FOR NON-FATAL SIS DISEASES: GLOBALLY STABLE AND OSCILLATORY ENDEMICITY.* Mathematical Biosciences and Engineering 7, 561-578 (2010) http://dx.doi.org/10.3934/mbe.2010.7.561

J46. **A. d'Onofrio**, *On the interaction between the Immune System and an exponentially replicating Pathogen* Mathematical Biosciences and Engineering 7, 579-602 (2010) http://dx.doi.org/10.3934/mbe.2010.7.579

J47. **A. d'Onofrio (Corr. Auth.)**, F. Gatti, P. Cerrai and L. Freschi, *Delay-induced Oscillatory dynamics of Tumor-Immune System Interaction.* Mathematical and Computer Modelling 51, 572-591 (2010) https://doi.org/10.1016/j.mcm.2009.11.005

J48. **A. d'Onofrio (Corr Auth)** and A. Gandolfi, *Chemotherapy of vascularised tumours: role of vessel density and the effect of vascular pruning*. Journal of Theoretical Biology 264, 253-265 (2010) https://doi.org/10.1016/j.jtbi.2010.01.023

J49. C. Cattani, A. Ciancio and **A. d'Onofrio (Corr. Auth.)** *Metamodeling the learning-hiding competition between tumours and immune system: a kinematic approach* Mathematical and Computer Modelling 52, 62-69 (2010) https://doi.org/10.1016/j.mcm.2010.01.012

J50. **A. d'Onofrio (Corr. Auth.)** and P. Manfredi, *Vaccine demand driven by vaccine side effects: Dynamic implications for SIR diseases*. Journal of Theoretical Biology 264, 237-252 (2010) https://doi.org/10.1016/j.jtbi.2010.02.007

J51. **A. d'Onofrio** *Bounded-noise-induced transitions in a tumor-immune system interplay*. Physical Review E 81, art.n. 021923 (2010) https://doi.org/10.1103/PhysRevE.81.021923

J52. **A. d'Onofrio** *Uniqueness and global attractivity of glycolytic oscillations suggested by Selkov's model* The Journal of Mathematical Chemistry 48, 339-346 (2010) https://link.springer.com/content/pdf/10.1007/s10910-010-9674-6.pdf

J53. G. Caravagna (equal contributor and corr auth), **A. d'Onofrio (equal contributor)**, P. Milazzo and R. Barbuti. *Tumour suppression by Immune system through stochastic oscillations* Journal of Theoretical Biology 264, 336-345 (2010) https://doi.org/10.1016/j.jtbi.2010.05.013

J54. **A. d'Onofrio** *Globally attractive oscillation in open monosubstrate allosteric enzyme reaction* The Journal of Mathematical Chemistry 49 531-545 (2011) https://doi.org/10.1007/s10910-010-9757-4

J55. **A d'Onofrio (Corr. Auth.)** and A. Gandolfi *Resistance to chemotherapy due to bounded-noise induced transitions* Physical Review E 82 Art. N. 061901 (2010) https://doi.org/10.1103/PhysRevE.82.061901

J56. **A. d'Onofrio (Corr. Auth.)**, P. Manfredi and P. Poletti, *The impact of vaccine side effects on the natural history of immunization programmes: an imitation-game approach*. Journal of Theoretical Biology 273 63-71 (2011) https://doi.org/10.1016/j.jtbi.2010.12.029

J57. B. A. Jereczek-Fossa, E Rondi, A Zarowski, **A d'Onofrio**, D Alterio, M Ciocca, LC Bianchi, M Krengli, L Calabrese, M Ansarin, G Giugliano, R Orecchia. *Prospective study on the dose distribution to the acoustic structures during postoperative 3D conformal radiotherapy for parotid tumors, Dosimetric and audiometric aspects*. Strahlentherapie und Onkologie 187, 350-356 (2011), https://doi.org/10.1007/s00066-011-2170-5

J58. **Alberto d'Onofrio (Corr. Auth.)**, Antonio Fasano, and Bernardo Monechi *A generalization of Gompertz law compatible with the Gyllenberg-Webb theory for tumour growth* Mathematical Biosciences 230 45-54 (2011), https://doi.org/10.1016/j.mbs.2011.01.001

J59. Alterio, D., Jereczek-Fossa, B.A., Griseri, M., **d'Onofrio, A.**, Giugliano, G., Fiore, M.R., Vitolo, V., Fossati, P., Piperno, G., Calabrese, L.S. and Verri, E. *Three-dimensional conformal postoperative radiotherapy in patients with parotid tumors: 10 years' experience at the European Institute of Oncology*. Tumori, 97: 328-334, (2011) https://doi.org/10.1177/030089161109700312

J60. F. Bertolini, P. Marighetti, I. Martin-Padura, P. Mancuso, D. D. Hu-Lowe, Y. Shaked, and **A. d'Onofrio** *Anti-VEGF and beyond: shaping a new generation of anti-angiogenic therapies for cancer Drug* Discovery Today 16 1052-1060 (2011) https://doi.org/10.1016/j.drudis.2011.08.007

J61. **A. d'Onofrio (Corr. Auth.)** and A. Ciancio, *Simple biophysical model of tumor evasion from immune system control* Physical Review E 84, Art. N. 031910, (2011) https://doi.org/10.1103/PhysRevE.84.031910

J62. **A. d'Onofrio**, **Spatiotemporal effects of a possible chemorepulsion of tumor cells by immune system effectors**, J. Theoretical Biology 296, 41-48 (2012) https://doi.org/10.1016/j.jtbi.2011.11.013

J63. B.Buonomo, **A. d'Onofrio (Corr. Auth.)**, D. Lacitignola, *Globally stable endemicity for infectious diseases with information-related changes in contact patterns.* Applied Mathematics Letters 25, 1056-1060 (2012) https://doi.org/10.1016/j.aml.2012.03.016

J64. G. Caravagna, R. Barbuti and **A. d'Onofrio (Corr. Auth.)** *Fine-tuning anti-tumor immunotherapies via stochastic simulations*, BMC Bioinformatics 12(Supp 4), Art S8 [18 + 2 pages] (2012) https://doi.org/10.1186/1471-2105-13-S4-S8

J65. M. Al-Taamemi, Mark Chaplain (co-corr Auth) and **Alberto d'Onofrio (co-corr Auth)** *Evasion of tumours from the control of the immune system: consequences of brief encounters.* Biology Direct 7, art.n. 31 (2012) https://doi.org/10.1186/1745-6150-7-31

J66. S. de Franciscis and **A. d'Onofrio (Corr. Author)**. *Spatiotemporal Bounded Noises, and transitions induced by them in Ginzburg-Landau model.* Physical Review E 86, 021118 (2012) [9 pages] https://doi.org/10.1103/PhysRevE.86.021118

J67. **A. d'Onofrio (Corr. Auth.)**, A. Gandolfi, S. Gattoni *The Norton-Simon hypothesis and the onset of non-genetic resistance to chemotherapy induced by stochastic fluctuations.* Physica A 391, 6484-6496 (2012) https://doi.org/10.1016/j.physa.2012.07.025

J68. **A. d'Onofrio**, P. Manfredi, P. Poletti. *The interplay of public intervention and private choices in determining the outcome of vaccination programmes.* PLoS One 7(10): e45653 (2012). https://doi.org/10.1371/journal.pone.0045653

J69. G. Caravagna (Eq. Contr.), A.Graudenzi, **A. d'Onofrio (Eq. Contr. and Corr. Auth.)**. *Distributed delays in a hybrid model of tumor-immune system interplay.* Mathematical Biosciences and Engineeering 10, 37-57 (2013) http://dx.doi.org/10.3934/mbe.2013.10.37

J70. B. Buonomo and **A. d'Onofrio**, *Modelling the influence of public's memory on the corruption-popularity dilemma in politics.* Journal of Optimization Theory and Applications vol. 158, p. 554-57 (2013) https://doi.org/10.1007/s10957-012-0218-z

J71. B. Buonomo, **A. d'Onofrio (Corr. Auth.)**, D. *Modeling of pseudo-rational exemption to vaccination for SEIR diseases. Journal of Mathematical Analysis and Applications* 404, 385-398 (2013) https://doi.org/10.1016/j.jmaa.2013.02.063

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8.1.2 Peer-Reviewed international conferences

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C14. Valentina Possenti, Barbara De Mei, Paola Scardetta, Anna Kurchatova, Manfred Green, Harald Drager,John Haukeland,Eva Benelli, **Alberto d'Onofrio**, Agoritsa Baka, Mitra Saadatian, Vanessa Maria Moore, Kjersti Brattekas, Ariel Beresniak, Mircea Ioan Popa, Donato Greco, Alberto Perra. *The ASSET Research Project as a Tool for Increased Levels of Preparedness and Response to Public Health Emergencies*. In: Ferri, F., Dwyer, N., Raicevich, S., Grifoni, P., Altiok, H., Andersen, H.T., Laouris, Y., Silvestri, C. Responsible Research and Innovation Actions in Science Education, Gender and Ethics. 65-78 Springer (2018) https://www.springer.com/gp/book/9783319732060

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8.1.3 Books and Special Issues

Editor of Books:

EB1. **A. d'Onofrio (Corresponding editor)**, P. Cerrai and A. Gandolfi (eds) *New Challenges for Cancer Systems Biomedicine*. Springer Verlag (2012) ISBN 978-88-470-2570-7 https://www.springer.com/gp/book/9788847025707

EB2. P. Manfredi and **A. d'Onofrio (equal contributor)** (eds) *Modeling the interplay between Human Behavior and Spread of Infectious Diseases*, Springer Verlag (2013) ISBN 978-1-4614-5473-1 https://www.springer.com/gp/book/9781461454731

EB3. **A. d'Onofrio (editor)** *Bounded Noises and their applications in Physics, Biology and Engineering*, Birkhauser Science-Springer Verlag Group (2013) https://www.springer.com/gp/book/9781461473848

EB4. **A. d'Onofrio (corresponding editor)** and A. Gandolfi *Mathematical Oncology 2013*, Birkhauser Science-Springer Verlag Group (2014) https://link.springer.com/book/10.1007/978-1-4939-0458-7

EB5. **A. d'Onofrio (equal contributor)**, Carmela Sinisgalli, Antonio Fasano, Federico Papa (eds) *Problems in Mathematical Biophysics - A volume in memory of Alberto Gandolfi*, Springer Verlag (2024) **(in press)**

Editor of Special Issues of International Journals:

SI1. **A. d'Onofrio (corresponding editor)**, P. Cerrai and A. Gandolfi (eds) Mathematical Oncology: proceedings of the Congress 'Mathematical Oncolgy: new challenges for Systems Biomedicine'- Erice September 26-30 2011 Special Issue of Mathematical Biosciences and Engineering, Vol 10(1) 2013 American Institute for Mathematical Sciences Publishing

SI2. **A. d'Onofrio (corresponding editor)**, P. Manfredi, P. Cerrai (editors) 'Proceedings of the Erice MathCompEpi Conference 2015', Special Issue of Mathematical Biosciences and Engineering 15(1), (2018)

SI3. B. Buonomo , N. Chitnis, **A. d'Onofrio (editors)**, 'The role of Heterogeneity in the Spread of Infectious Diseases', special focus number of 'Ricerche di Matematica' (Springer) (2018) **(Ricerche di Matematica is an International Peer-Reviewed Journal, published in English by Springer–Nature Group)**

SI4. E. Augeraud, M. Banerjee, J.-S. Dhersin, **A. d'Onofrio**, T. Lipniacki, S. Petrovskii, Chi Tran, A. Veber-Delattre, E. Vergu and V. Volpert (Eds.) 'Coronavirus: Scientific insights and societal aspects' special focus issue of 'Mathematical Modelling of Natural Phenomena' (EDP Sciences) (2020)

8.1.4 Other international publications

Editorial Comments

EC1. **A. d'Onofrio** *The three pillars of Wisdom in Molecular Medicine* , Ecancermedicalscience, Letters to Editor (04 March 2008) DOI: 10.3332/eCMS.2008.LTR44

EC2. **A. d'Onofrio** *E-Oncology* Ecancermedicalscience, Letters to Editor (27 November 2008) DOI: 10.3332/ecancer.2008.LTR160

EC3. **A. d'Onofrio** and P. Manfredi *#tuttiacasa!*. *Scienzainrete* of MAR/9/2020 https://www.scienzainrete.it/articolo/tuttiacasa/alberto-donofrio-piero-manfredi/2020-03-09

Prefaces

In1. **A. d'Onofrio**, P. Cerrai and A. Gandolfi Introduction to the book: A. d'Onofrio, P. Cerrai and A. Gandolfi (eds) New Challenges for Cancer Systems Biomedicine. Springer Verlag (2012) ISBN 978-88-470-2570-7

In2. P. Manfredi and **A. d'Onofrio**. Introduction to the book: P. Manfredi and A. d'Onofrio (eds) Modeling the interplay between Human Behavior and Spread of Infectious Diseases, Springer Verlag (2012)

In3. **A. d'Onofrio**, P Cerrai, A Gandolfi. Introduction to the Special Issue of Mathematical Biosciences and Engineering, Vol 10(1) 2013

In4. **A. d'Onofrio**. Introduction to the book: A. d'Onofrio (ed) Bounded Noises and their applications in Physics, Biology and Engineering, Birkhauser Science-Springer Verlag Group (2013)

In5. **A. d'Onofrio** and A. Gandolfi. Introduction to the book: A. d'Onofrio and A. Gandolfi (eds) Mathematical Oncology 2013, Birkhauser Science (2014)

In6. **A. d'Onofrio**, P Cerrai, P Manfredi. Introduction to the Special Issue on 'Erice MathCompEpi 2015 Proceedings'. Mathematical Biosciences and Engineering 15(1) (2018)

In7. B. Buonomo, N. Chitnis, **A. d'Onofrio**. Preface to the special issue on 'Demographic and temporal heterogeneities in infectious disease epidemiology', special focus number of 'Ricerche di Matematica' (Springer) 67, pages3–6 (2018)

8.1.5 Papers in Peer–Reviewed National journals

Jn1. A. Swierniak, G. Gala, **A. d'Onofrio**, A. Gandolfi, *'Angiogeneza nowotworów jako obiekt sterowania'* [Cancer angiogenesis as an object of control], Przeglad Elektrotechniczny, 84(4), 124-127 (2008) (in polish; English abstract available in the ISI-Thomson and Scopus Databases). http://pe.org.pl/abstract_pl.php?nid=1481

Medrxiv Preprints and Economy Working Papers

A1. Luciano Fanti, Piero Manfredi **Alberto d'Onofrio** 'Walrasian dynamics and the Phillips curve' Discussion papers of Economics Department of Pisa University n.141. (2012)

A2. Alessio Carrozzo-Magli, **Alberto d'Onofrio**, Piero Manfredi 'Deteriorated Covid19 control due to delayed lockdown resulting from strategic interactions between Governments and oppositions' **medRxiv** 2020.05.26.20112946 (2020) https://doi.org/10.1101/2020.05.26.20112946

EU Projects Deliverables and Papers:

E1. A. d'Onofrio. From Modelling Epidemics to Modelling Human Behaviour Impact on Epidemics: Perspectives for Science in Society. 'ASSET Papers Series' N. 1 'Public health emergencies: response and preparedness', 10-13 (2016) http://www.asset-scienceinsociety.eu/sites/default/files/paper_series_1_-_science_for_and_with_society_aiming_to_the_public_health_emergencies_response_and_preparedness_0.pdf

E2. A. d'Onofrio (co-corresponding author) and Mitra Saadatian-Elahi. Open and Responsible Research and Innovation in Pandemics. 'ASSET Papers Series' N. 2 'Epidemics and Pandemics: The response of Society', 10-15 (2016) http://www.asset-scienceinsociety.eu/sites/default/files/paper_series_2_-_democracy_and_human_rights_under_public_health_emergency_phe_threat_0.pdf

E3. A d'Onofrio and Mitra Elahis Saadatyan ASSET DELIVERABLE 'TASK 2.2 REFERENCE GUIDE OF UNSOLVED SCIENTIFIC QUESTIONS RELATED TO PANDEMICS AND EPIDEMICS' (2015) http://www.asset-scienceinsociety.eu/sites/default/files/d2.2_reference_guide_on_scientific_questions.pdf

E4. A d'Onofrio and Mitra Elahi Saadatyan ASSET DELIVERABLE 'D3.2 - Roadmap to Open and Responsible Research and Innovation in Pandemics' (2016) http://www.asset-scienceinsociety.eu/sites/default/files/d3.2_roadmap_to_open_and_responsible_research_and_innovation_in_pandemics.pdf

E5. Alberto d'Onofrio (coordinator) ASSET DELIVERABLE D5.2 'Best Practice Platform and Stakeholder Portal Report' (2017)http://www.asset-scienceinsociety.eu/sites/default/files/d5.2_-_best_practice_platform_and_stakeholder_portal_report.pdf

E6. Alberto d'Onofrio (group author) ASSET EU DELIVERABLE D5.3 'Local Initiative Report' (2017) http://www.asset-scienceinsociety.eu/sites/default/files/d5.3_-_local_initiative_report.pdf

E7. Alberto d'Onofrio (group author) ASSET EU DELIVERABLE D7.9 - 'Summer School Report 1' (2016) http://www.asset-scienceinsociety.eu/sites/default/files/d7.9_summer_school_report_1.pdf

E8. Alberto d'Onofrio (group author) ASSET EU DELIVERABLE D7.10 - 'Summer School Report 2' (2017) http://www.asset-scienceinsociety.eu/sites/default/files/d7.10_-_summer_school_report_2.pdf

E9. Alberto d'Onofrio (group author) *P-medicine* EU Project deliverable D12.1 'Architecture and information flow diagrams of the Oncosimulator and the biomechanism models' (2011) http://p-medicine.eu/fileadmin/p-medicine/public_website/downloads/p-medicine_270089_D12-1_Architecture_and_information_flow_diagrams_v6-0_01.pdf

E10. Alberto d'Onofrio (group author) *P-medicine* EU Project deliverable D12.3 'Report on the development of the Oncosimulator and the utilization of the biomechanism models' (2013) http://p-medicine.eu/fileadmin/p-medicine/public_website/downloads/p-medicine_270089_D12-3_Report_on_the_development_of_the_Oncosimulator_and_the_utilization_of_the_biomechanism_models.pdf

E11. Alberto d'Onofrio (group author) *ACGT* EU Project deliverable D8.4 'Report on the clinical adaptation and validation procedure of the Oncosimulator and its integration into the ACGT architecture' (2010) http://acgt.ercim.eu/uploads/media/ACGT_D8.4_FINAL.pdf

Organization or participation as speaker in International and National Scientific Conferences

Organization of International Conferences and Expert Panels:

1. 'Erice MathComp 2018 Mathematical and Computational Epidemiology of Infectious diseases' Erice (Italy), 28 August 2018 to 5 September 2018, at the 'Ettore Majorana Centre for the Diffusion of Scientific Knowledge'. Role: scientific chair and main organizer. Leading Scientific Conference on Mathematical, Physical and Computational Modelization of the Spread and Control of Infectious Diseases. The invited speakers were among the best computational epidemiologist worldwide (including Vittoria Colizza). This Conference was part of the Conferences Organized by School of Mathematics of the 'Ettore Majorana Centre for the Diffusion of Scientific Knowledge', one of the most prestigious organizations for the scientific networking of scientists. https://tinyurl.com/3ydhxdbs

2. 'Erice MathComp 2015 Mathematical and Computational Epidemiology of Infectious diseases – the interplay between models and public health policies', Erice (Italy), AUG 30 – SEP 5 2015 at the 'Ettore Majorana Centre for the Diffusion of Scientific Knowledge'. Role: scientific chair and main organizer. Leading Scientific Conference on Mathematical, Physical and Computational Modelization of the Spread and Control of Infectious Diseases. The invited speakers were among the best computational epidemiologist worldwide (including Alex Vespignani). This Conference was part of

the Conferences Organized by School of Mathematics of the 'Ettore Majorana Centre for the Diffusion of Scientific Knowledge', one of the most prestigious organizations for the scientific networking of scientists. https://erice2015.wordpress.com/directors-scientific-comittee/

3. 'Mathematical Oncology: new challenges for Systems Biomedicine'- Erice (Italy) September 26-30 2011 Role: scientific chair and main organizer. Leading Scientific Conference on Mathematical Oncology. The invited speakers were among the best colputational biologist of Cancer. This Conference was part of the Conferences Organized by School of Mathematics of the 'Ettore Majorana Centre for the Diffusion of Scientific Knowledge', one of the most prestigisous italian organizations for the scientific networking of scientists. https://people.dm.unipi.it/erice2011/

4. ASSET EU Project Focused Workshop 'Unsolved Scientific Questions related to Pandemics and Epidemics' Lyon 23/2/2015 (organised in collaboration with M Elahi Sadaatyan and E. Vincent of Lyonbiopole).This workshop collected interdisciplinary experts (computational epidemiologists, public health scientists , sociologists, virologists) in epidemics to discuss on the many unsolved Scientific Questions related to Pandemics and Epidemics. Among major European Experts attended to this workshop. https://lyonbiopole.com/en/actualites/lyon-accueil-les-experts-dasset

Organization of National Workshops:

1. 'Joint IEO – Pisa University Workshop on Computational Oncology' Organizers: A d'Onofrio (IEO) and R Barbuti (Dept of Computer Sciences of Pisa University), 11 MAY 2009, Milan (IT). Invted speakers from European Institute of Oncolgy, Pisa University and Calabria University

Organization of Minisymposia in International Conferences :

1. V Capasso and A d'Onofrio 'Controlling epidemics: the interplay between models and public health policies' ECMTB2020 (postponed to 2022 https://ecmtb2020.org/)

2. A d'Onofrio, F Papa, A Pugliese and C Sinisgalli 'Minisymposium in Memory of Alberto Gandolfi' ECMTB2020 (postponed to 2022 https://ecmtb2020.org/)

3. U Ledzewicz and A d'Onofrio 'Analysis of mathematical models for cancer growth and treatment, Part I' Minisymposium at ECMTB-SMB 2011: 8th European Conference on Mathematical and Theoretical Biology, and Annual Meeting of The Society for Mathematical Biology, Krakow, Poland, JUN 28 - JUL 2, 2011 https://tinyurl.com/agxy5dp5

4. U Ledzewicz and A d'Onofrio 'Analysis of mathematical models for cancer growth and treatment, Part II' (see above)

5. U Ledzewicz and A d'Onofrio 'Analysis of mathematical models for cancer growth and treatment, Part III' (see above)

6. U Ledzewicz and A d'Onofrio 'Analysis of mathematical models for cancer growth and treatment, Part IV' (see above)

7. U Ledzewicz and A d'Onofrio 'Analysis of mathematical models for cancer growth and treatment, Part V' (see above)

8. P Manfredi and A d'Onofrio 'Information, human behaviour and infection control - Part 1' Minisymposium at ECMTB 2011. *These two minisymposia are considered as the foundation step of a new scientific discipline: the Behavioural Epidemiology of infectious diseases, the computational biology discipline that modelizes and investigates the implications of topics such as 'social distancing' and 'vaccine hesitation'.* Krakow, Poland, JUN 28 - JUL 2, 2011 https://tinyurl.com/agxy5dp5

9. P Manfredi and A d'Onofrio 'Information, human behaviour and diseases - Part 2' (see above)

10. A d'Onofrio and A. Gandolfi 'Angiogenesis and antiangiogenesis in tumor growth and control'. Minisymposium at 'Joint SMB-SIAM 2006 conference on Life Sciences, Raleigh USA , JUL 31 – AUG 5 2006 https://tinyurl.com/tk78pqxi

Scientific Committees of International Conferences:

1. ICCS 2023: 23rd International Conference on Computational Science Czech Technical University in Prague Prague, Czechia, July 3-5, 2023 https://www.iccs-meeting.org/iccs2023/
2. 15th RECOMB Satellite Workshop on Computational Cancer Biology April 14-15, 2023 Istanbul, Turkey https://sites.google.com/view/recomb-ccb2023
3. Micro and Macro Systems in Life Sciences 8 - 12 JUN 2015, Stefan Banach International Mathematical Center Bedlewo (Poland) (Poland) https://tinyurl.com/u9qq4pjm
4. 'Cardioconference: international workshop on Cardiac Growth and Regeneration', Rome/Viterbo (Italy) JUN 22-26 2014
5. 'Mathways into Cancer 2' Carmona (Spain) May 27-30 2013
6. 'MathCell 2010' National Research Council Aula Magna 'Guglielmo Marconi', Rome (Italy) DEC 14-15 2010 Conference organised by the *Centro Interuniversitario per la Matematica Applicata a Biologia, Medicina e Ambiente* (CIMAB) https://tinyurl.com/5ywomxxy
7. 'Italy-UK bilateral workshop on e-Oncology', Embassy of Italy in UK, London, 27 October 2008 https://tinyurl.com/2dxcfp3o

Invited Talks at International Conferences :

1. A. d'Onofrio 'Direct and indirect randomness in some behavioral epidemiology modelss' DSABNS 2023, Bilbao (Spain) 5–8 February, 2023, https://sites.google.com/view/dsabns2023/speakers?authuser=0
2. A. d'Onofrio 'Behavior-induced Simmetry Breaking in simple Epidemic Models - a Covid-free Talk ' 'MPDEE 2022 Models in Population Dynamics, Ecology and Evolution', 13–17 June, 2022, https://sites.google.com/view/mpdee2022
3. A. d'Onofrio 'Role of chemotaxis in tumor angiogenesis' DSABNS, 8–11 February, 2022, https://sites.google.com/view/dsabns2022/speakers?authuser=0
4. A. d'Onofrio ' COVID19: what behavioral epidemiology is learning from the current pandemic' 12th International Conference on Dynamical Systems Applied to Biology and Natural Sciences DSABNS, 2-5 of February, 2021, https://tinyurl.com/y9tqnscn
5. A. d'Onofrio 'Mathematical Physics of Vaccinations: the interplay behavior-information-space when the disease is absent in the target population' *International Workshop Mathematical modelling in biomedicine*, RUDN University, Moscow (Russia) October 25-29, 2021 https://eng.rudn.ru/u/www/files/events/program-emmb-2021.pdf
6. A. d'Onofrio 'Behavioral Epidemiology: recent Past and Future'. Invited Planary Opening Lecture. International Workshop on *Mathematical Modelling of Biological Systems. Numerical analysis and High Performance Scientific Computing* of U*K-Africa Postgraduate Advanced Study Institute (UK-APASI) in Mathematical Sciences*, 15-19 MAR 2021, Edinburgh (UK).
7. A. d'Onofrio ' COVID19: what behavioral epidemiology is learning from the current pandemic' 12th International Conference on Dynamical Systems Applied to Biology and Natural Sciences DSABNS, 2-5 of February, 2021, https://tinyurl.com/y9tqnscn
8. A. d'Onofrio 'Behavioral Epidemiology: lessons learned from the current Covid19 pandemics' International Forum of Mathematics Mathematical contributions on the be-

havior of SARS-CoV-2, Autonomous University of Guerrero, 24 – 26 November 2020, Chilpancingo (Mexico) https://fimathapplied.com.mx

9. A. d'Onofrio 'Behaviour induced phase transitions in epidemiology of infectious diseases' 12th DSABNS, February 4-7, 2020, Trento, Italy https://tinyurl.com/1i8p2e0h
10. A. d'Onofrio 'Phase Transitions in Mathematical Biology' International Workshop Computational Approaches in Mathematical Biology, Organisers: Dumitru Trucu, Raluca Eftimie and Agissilaos Athanassoulis, Dundee University 17 MAY 2019 https://maths.dundee.ac.uk/cmb2019/ssi/Home.shtml
11. A. d'Onofrio. 'Behavioural Epidemiology and its limitations - I' plenary invited talk at 'Erice MathComp 2018 Mathematical and Computational Epidemiology of Infectious diseases' Erice (Italy), 28 August 2018 to 5 September 2018
12. A. d'Onofrio 'Antimicrobial Resistance: a challenge for Global Public Health' 8th National Cancer Institutes Directors Meeting July 11-13 2018 Lyon
13. A. d'Onofrio, Statistical physics of human behavior role in the spread of infectious diseases and in its mitigation, Plenary Invited Talk, 9th DSABNS Feb. 7-9, 2018 Torino, Italy https://tinyurl.com/1x58erwv
14. A. d'Onofrio, Optimal control of Public Health Intervention to increase Vaccine Propensity, Workshop 'Optimal control in Life Sciences – a conference in Honour of Urszula Ledzewicz', Porto, Portugal, July 1-5, 2017 (I could not go there for health problems)
15. A. d'Onofrio 'Human Behavior and the Spread of Infectious Diseases: a challenge for modeling', Keynote Invited Speaker and Opening Talk at the 3RD INTERNATIONAL SYMPOSIUM ON 'Modelling and Knowledge Management applications: Systems and Domains (MoKMaSD 2014)' in the 12th 'International Conference on Software Engineering and Formal Methods' - Grenoble, 2 September 2014 http://sefm2014.inria.fr/workshops/index.html
16. A. d'Onofrio 'The new mathematical theory of epidemics: cries, whispers and imitations' Keynote Invited Plenary Speaker MPDE 2014 – International conference on Models in Population Dynamics and Ecology. Torino, Italy. August 25th-29th, 2014 https://tinyurl.com/1mx9bri9
17. A. d'Onofrio 'Intracellular Pharmacodynamics of p53-targeting drug Nutlin: the role of stochastic gene switching' IInternational INDAM Meeting 'The Mathematics of Cells and Tissues' September, 2-6, 2013 Cortona, Italy. https://www.altamatematica.it/sites/default/files/ob._strategico_02.pdf
18. A. d'Onofrio 'The pharmacodynamics of p53-targeted drug Nutlin: a stochastic Systems Biology approach' International Conference 'Mathways into Cancer II', Carmona, Sevilla, Spain. May 27-30 2013
19. A. d'Onofrio 'Bounded-noise induced transitions in Cancer Dynamics' Keynote Invited Speaker and Opening Talk 'Mathways into Cancer I', Almagro, Ciudad Real, Spain. June 3–6 2012 https://t.ly/Sc8A
20. A. d'Onofrio 'Mathematical Modelling of Stem Cell Kinetics' Workshop '3rd Disputationes on Native and Induced Pluripotent Stem Cell Standardization' Florence March 19-21 2012. See pages 8 and 14 of the Abstract Book https://tinyurl.com/3jpnck8v
21. A. d'Onofrio 'A bistable tale', Workshop in honour of Boris Kholodenko: Different aspects of mathematical modeling applied to systems biology', Genova November 10 2011
22. A. d'Onofrio, Systems Biology of Tumor Dormancy, Invited Talk at the 'First Workshop on Systems Biology of Tumor Dormancy', Boston (US), July 25th-28th, 2011. (not held due health conditions) https://tinyurl.com/58jlt4y5

23. A. d'Onofrio, Mathematical modelling of Neo-angiogenesis and of antiangiogenic therapies, Workshop 'Mathematical and Computational Approaches in Biology and Medicine', June 15-16 2009, Warsaw https://tinyurl.com/16hqb0pi

24. A. d'Onofrio, 'The strange case of Dr. Immune system and Mr. Cancer', *Lectures on Modelling Cancer Growth and Treatments* December 8-9, 2008, Estoril, Portugal https://tinyurl.com/1i1xynde

25. A. d'Onofrio 'Metamodeling tumor-immune system interaction and immunotherapy: the interplay between basic science and clinical applications.' INRIA 'International Workshop on Cancer Modelling and Therapeutic Innovation: From Theory to Clinic' Lyon, September 26-27 2006. Organizers: Benjamin Ribba and **Jean Claraimbault (INRIA)** https://tinyurl.com/1kedim4a

26. A. d'Onofrio 'Mathematical oncology: modeling anti angiogenic therapy', 45th workshop of international school of mathematics 'G. Stampacchia' : Mathematics and Medical Diagnosys' at 'Ettore Majorana center for Scientific Culture', Erice (TP) Italy, 10-20 July 2006. http://www.ccsem.infn.it/ef/emfcsc2006/pdf/Gaudioso.pdf

27. A. d'Onofrio 'Interactions between biomathematicians and biomedical researchers' International workshop 'Random Geometries in biomedicine', Milan, Jan 16 2003. See page VII of the book: https://tinyurl.com/1xear5hu

28. A d'Onofrio 'Behavioural Epidemiology and its limitations' I SamMBA Seminars, Institut Pasteur, Paris, SEP 11 2018 https://tinyurl.com/p7cgen7f

29. A.d'Onofrio, 'The role of extrinsic noise and its interplay with intrinsic stochasticity in biomolecular Networks' Invited Keynote Speaker, WORKSHOP BIOLOGICAL COMPLEXITY: PAST COMMITMENTS AND FUTURE CHALLENGES, Arcidosso (Italy) 19 - 21 September, 2013 https://tinyurl.com/metdbgxw

Invited Talks at Minisymposia in International Conferences:

1. A d'Onofrio 'Vaccine opinion dynamics: imitation game reloaded' Minisymposium 'Epidemic models: from individual decision to collective dynamics' (Organiser: G. Turinici) at ECMTB 2018, Lisboa (Portugal) 22-28 July 2018 https://tinyurl.com/dk1dhfr9

2. A. d'Onofrio, 'Tumor heterogeneity: one, none and one hundred thousand', Minisymposium 'Cancer modelling: discreteness and heterogeneity', (Organizers: G. Ascolani and P. Lio) ECMTB/SMB 2016, Nottingham, UK, July 11 - 16, 2016 (I could not go there due to the birth of my son) http://www.ecmtb2016.org/

3. A. d'Onofrio, The interplay between delays and bounded noises in immune reaction to tumors, Minisymposium 'Delay Differential Equations and Applications I', (Organizers: U. Forys and M. J. Piotrowska) ECMTB/SMB 2011, Kraków, Poland, June 28 - July 2, 2011 https://tinyurl.com/agxy5dp5

4. A. d'Onofrio, Modelling the evasion of tumors from immune control, Workshop 'Mathematical Cancer Modelling' (organizers T. Hillen, U. Ledzewicz and A Chauviere), 8th AIMS conference on Dynamical Systems, Differential Equations and Applications, Dresden (GE), May 25-28 2010 https://tinyurl.com/1pcq2cbv

5. A. d'Onofrio, Population-based models of anti-tumor anti-angiogenesis therapy: theory and biomedical inferences, Minisymposium on 'Modelling, Control and Optimization of Dynamical Systems: Theory and Applications to Biomedicine' (organizers: U. Ledzewicz, H. Schattler and A. Swierniak), 23rd IFIP TC 7 Conference on System Modelling and Optimization, Cracow, Poland, July 23-27, 2007 https://tinyurl.com/1151tyrm

6. A. d'Onofrio 'Metamodels in tumor-immune system interaction and immunotherapy'. Minisymposium 'Mathematical models in tumor therapy' (organizers: M. Chaplain and

H. Henderling). SMB-SIAM 2006, July 31 – August 5 2006. (not held for health problems) https://tinyurl.com/v4uqgzre

7. A. d'Onofrio, 'Eradicationology: the mathematical art of eradicating diseases'. Minisymposium 'Differential and Integral Equations in Epidemiology and Medicine: Applications and Numerics' (organizers: H. Kuang and A. Makroglou), at HERCMA 2005, Athen , 21-24 September 2005 (Greece) https://tinyurl.com/4ooe6w6s

Invited Talks at National Conferences

1. A d'Onofrio 'Tutto inizio' con un Floppy Disk' invited Talk at the minisymposium 'Following Alberto in his excursions through biology – Minisymposium in memory of Prof. Alberto Gandolfi' Congress of the Italian Society of Applied and Industrial Mathematics (SIMAI), Parma, August 30 to September 3, 2021. http://www.simai.unipr.it/conference-program/1/
2. A d'Onofrio 'Behavioural Epidemiology of infectious diseases: going beyond its limits: why not?' invited Talk at the minisymposium 'Novel approaches in the mathematical understanding of COVID-19 epidemic' Congress of the Italian Society of Applied and Industrial Mathematics (SIMAI), Parma, August 30 to September 3, 2021. http://www.simai.unipr.it/conference-program/1/
3. A d'Onofrio 'Behaviour-induced complex behaviours in spatiotemporal Epidemic Models' invited Talk at the minisymposium 'Mathematical Models in Ecology and Epidemiology', Congress of the Italian Society of Applied and Industrial Mathematics (SIMAI), Parma, August 30 to September 3, 2021. http://www.simai.unipr.it/conference-program/1/
4. A. d'Onofrio 'The role of extrinsic bounded noises in Systems Biology, and their interplay with intrinsic stochasticity' Wivace 2013 - Italian Workshop on Artificial Life and Evolutionary Computation Milan, Italy, July 1-2, 2013 https://arxiv.org/html/1309.7122
5. Invited Plenary Keynote Talk A. d'Onofrio 'The pharmacodynamics of p53-targeted drug Nutlin: an hybrid stochastic model' CIMAB and GASVA SIMAI Workshop on 'Theoretical Approaches and Related Mathematical Methods in Biology, Medicine and Environment' April 4-6 2013 https://tinyurl.com/1dguqo0f
6. A. d'Onofrio 'A bistable tale', Workshop in honour of Boris Kholodenko: Different aspects of mathematical modeling applied to systems biology', Genova November 10 2011
7. A. d'Onofrio 'Information, Vaccinations and Bifurcations' Workshop 'La Matematica Oggi per l'Uomo e per l'Ambiente' Montecatini, 28-31 March 2007
8. Invited Plenary Speaker A. d'Onofrio'Reti complesse di regolazione genica della proliferazione-differenziamento-tumorigenesi: applicazioni della Systems Biology' Workshop on 'Mathematical dyagnosis', School of Medicine of Pisa University, 9 jan 2007

Invited Expert in International Expert Panels of EU Research Projects

1. Invited Scientific Expert to the Expert Panel/Workshop 'Dynamics of Infectious Disease Spread and Health-related Behaviours' at Lorenz Center of Leiden University, Leiden (NL) https://www.lorentzcenter.nl/dynamics-of-infectious-disease-spread-and-health-related-b
html
2. Invited Scientific Expert to the EU Expert Panel Strategic Workshop 'The Cancer-Ageing Link', at Mathematical Institute *Henri Poincaré*, 8 FEB 2008, Paris (FR) organized by the SysBioMed Specific Support Action of the EU FP6, on the value of Systems Biology in oncology (Systems Biology of Cancer) https://www.sbi.uni-rostock.de/files/Publications/Misc/SBI_Articles_Advancing-Systems-Biology-for-Medical-Applications.pdf (page 10)

3. Invited Scientific Expert at the EU Expert Panel 'Clinical needs in oncology and cardiovascular diseases as drivers for a Systems Medicine approach' of the Coordinating Action on System Medicine (CASYM) FP7. Particularly: Expert Round Table 'Systems Medicine approaches for the identification and validation of patient-tailored cancer therapeutics'. Genova (IT) 20 JAN 2014 https://www.casym.eu/GENOA_CANCER_WORKSHOP_2014876d.pdf?index=90&cmd=downloadEntry&id=280

Contributed Talks in International Scientific Conferences

1. A. d'Onofrio Mathematical modelling of the spread of infectious diseases: beyond classical approach. International Conference 'Micro and Macro Systems in Life Sciences' 8 - 12 June 2015, Bedlewo (Poland) http://microandmacro.icm.edu.pl/sites/default/files/book.pdf
2. A. d'Onofrio, The interplay between extrinsic bounded noises and various levels of intrinsic noises, Lyon BioSys 2014 International Conference on Systems Biology, Lyon I University at Villeurbanne, France, 19-21 November 2014 https://lyonsysbio.sciencesconf.org/program/graphic/date/2014-11-20.html
3. A. d'Onofrio, Mathematical models of Stem Cells: where do we stand ?' in 'Cardioconference: international workshop on Cardiac Growth and Regeneration', Rome and Viterbo (Italy) June 22-26 2014 https://web.archive.org/web/20150331022002/http://www.cardiacconference.org/abstracts/
4. A. d'Onofrio 'The pharmacodynamics of p53-targeted drug Nutlin: a stochastic Systems Biology approach' International Conference 'Mathways into Cancer II', Carmona, Sevilla, Spain. May 27-30 2013
5. A. d'Onofrio, 'The impact of side-effects on the life-time of immunization programmes', Third Conference on Computational and Mathematical Population Dynamics (3), Bordeaux, May 31- June 4 2010) See page 156 of https://hal.inrae.fr/hal-02754418/document
6. A. d'Onofrio, Kill bill quickly: rapidly acting antitumor antiangiogenic therapies, European Conference on Mathematical and Theoretical Biology ECMTB08, Edinburgh June 29 – July 5 2008 http://www.maths.dundee.ac.uk/ecmtb08/Connections/alphaList.php
7. A. d'Onofrio, Information and rumours on vaccine-related side effects: modelling their influence on spreading a vaccine-controllable SIR infectious disease, European Conference on Mathematical and Theoretical Biology, Edinburgh June 29 – July 5 2008 http://www.maths.dundee.ac.uk/ecmtb08/Connections/alphaList.php
8. A. d'Onofrio 'A general framework for modeling tumor-immune system competition and immunotherapy: mathematical analysis and biomedical inferences', Sixth European Conference on Mathematical and Theoretical Biology - ECMTB05, Dresden (GE), July 18-22 2005, Abstract Book pag 1- 360.
9. A. d'Onofrio 'A simple bifurcation study of a model of tumorigenesys in colon crypts' CMPD-2 (International Conference on Mathematical Population Dynamics), Trento, June 21–25 2004 https://web.archive.org/web/20041021200355/http://www.unitn.it/events/mpd/download/cmpd.pdf
10. A. d'Onofrio 'Tumor regression by periodic anti-angiogenic therapy' International Conference On Mathematical Biology 2003, Annual Meeting of the Society for Mathematical Biology (SMB), University of Dundee (UK) 6-9 August 2003 https://web.archive.org/web/20030817053231/http://www.maths.dundee.ac.uk/smb03/timetable.html
11. A.d'Onofrio: 'Pulse Vaccination Strategy in SIR Epidemic Model in presence of Vaccine Failures',7th European Conference on Mathematics Applied to Biology and Medicine, Milano (Italy), 2-7 July 2002, ECMTB2002 Abstract Book pag 231. https://web.archive.

org/web/20060512091350fw_/http://www.mat.unimi.it/users/ecmtb/CONTRIBUTED/ecmtb2002_abstract.ps

12. Furthermore: Co-author of a large number of other Contributed Talks (not reported here) held by coauthors

Direction o participation to the activity of a research group having national or international collaborations

1. **1 Jan 2009 to 31 Dec 2013** Director of the Research group in *Systems Biomedicine* at *Experimental Oncology Department* Istituto Europeo di Oncologia (Milano). https://web.archive.org/web/20160323023907/http://www.ifom-ieo-campus.it/research/donofriomembers.php Main research areas in SC 01B1:
   - Formal Modeling and Simulations in Computational Oncology;
   - Formal Modeling and Simulations in Computational Systems Biology;
   - Computational Epidemiology;
   - Formal Modeling and Simulations of spatio-temporal Continuous model perturbed by realistic bounded noises;
   - Hybrid Stochastic Automata;
   - Doubly Stochastic Automata: Stochastic Automata perturbed by realistic bounded continuous Stochastic Processes;
   - Stochastic Hybrid Automata with delayed transitions;
   - optimization of dynamical systems.

   Main collaborations in Area SC 01B1 and its inter–disciplinary applications:
   - *Computer Science Department* of Pisa University;
   - *Departiment of Computer, Systems and Communication Sciences* at Milan Bicocca University ;
   - *Institute of Computer and Telecommunication Sciences* Institute of National Research Council, Pisa (IT) ;
   - *Institute of Systems Analysis and Computer Sciences* of National Research Council, Rome (IT) ;
   - *Department of Mathematics*, Southern Illinois University (USA);
   - *Electrical and Systems Engineering Department* of Washington Unoversity at St Louis (USA);
   - *Department of Applied Mathematical and Numerical Analysis* of Westf'alische Wilhelms Universit'at at M'unster (Germany).
2. **Aug 2008 to Aug 2010** Member of the PRIN (*Research Project of National Interest*, funded by Natinoal Ministry of Scientific Research of Italy) Project *Mathematical Populations Theory: methods, models and data validation* at Milan University Research group. Project Coordinator : Prof Mimmo Iannelli (Trento University); Milan University Unit Coordinator: Prof Vincenzo Capasso. Final Scientific Report: https://web.archive.org/web/20210808031247/https://prin2007.miur.it/consuntivo/pdf_vis_modello.php?db=MIUR9&modello=A&PREF_X_TABELLE=CE24_07&c=20&codice=85203357320333BWEP988308371436770640

Leadership of Research and Studies, confered by public and private qualified Institutions

1. **9/OCT/2009 – 9/OCT/2012:** 'Designer' and formal coordinator, for the *Istituto Europeo di Oncologia* (IEO), of the formal agreement of research collaboration in Computer Sciences and Mathematics applied to Oncology between IEO and The Pisa University. The official agreement, signed by the then Scientific Director of IEO, prof Umberto Veronesi, and by the Dean of Pisa University can be downloaded here: https://www.unipi.it/ateneo/territorio/ConvenzioneIEO.pdf

Scientific Responsibility of National and International projects funded after peer–review

1. **August 2009- August2010.** 'Scientific unit coordinator' and 'Workpackage Leader' at IEO of the ECDC (European Centre ofr Diseases Control) international project *'Vaccine preventable diseases modelling in the European Union and EEFTA countries: forecasting the effects of introducing a new vaccine in a national/regional programme'* Grant n. 2009/002. WorkPackage leader of Workpackage 'Behavioral aspects of mass immunization', aims: 'applying the theory of nonlinear dynamical systems to investigate the possible impact of individuals' choices on the outcomes of mass immunization programs'. Unfortunately, this project was cancelled in its second year due to ECDC budget restrictions

2. **FEB/2006-JAN/2010** Key scientist and IEO unit research co-coordinator EU Project *'Advancing Clinical-Genomic Trials on Cancer'* (ACGT), led by Professor Manolis Tsinakis, then head of Medical Computer Sciences Group at FORTH, Heraklion, Greece. Project description: *'ACGT was a European Union co-funded project aiming at developing open-source, semantic and grid-based technologies in support of post genomic clinical trials in cancer research.'* I authored or co–authored 7 peer reviewed papers for the ACGT project (see full list at https://web.archive.org/web/20201229210157/http://acgt.ercim.eu/documents/publications.html) and I co–authored deliverable D8.4 *'Report on the clinical adaptation and validation procedure of the Oncosimulator and its integration into the ACGT architecture'* (2010) http://acgt.ercim.eu/uploads/media/ACGT_D8.4_FINAL.pdf

3. **FEB/2010- DEC/2013** Key scientist of EU FP7 project 'P-medicine'. Project description: *'p-medicine - From data sharing and integration via VPH models to personalized medicine' is a 4-year Integrated Project co-funded under the European Community's 7th Framework Programme aiming at developing new tools, IT infrastructure and VPH models to accelerate personalized medicine for the benefit of the patient.* Role: Key Scientists in the WP12. Grant Share: 54000 euros + Overheads. Scientific Responsible of the PostDoc fellow Dr Sebastiano de Franciscis (November 2011-Dicember 2013). List of all publications of the 'P-Medicine' project: http://p-medicine.eu/downloads/publications/ Nine computational bioomedicine papers were co–authored by me under this grant. Deliverables to which I mainly contributed in the SC 01/B1 area: D12.1 (https://tinyurl.com/ya9u2w9k) and D12.3 (https://tinyurl.com/3meww5fz)

4. **JAN/2014-DEC/2017**: Scientific Unit Head of IPRI and Task Leader in the EU FP7 project ASSET (Action plan on Science in Society related issues in Epidemics and Total pandemics) on Epidemics and Pandemics http://www.asset-scienceinsociety.eu/ The topics of the project (pandemic prevention and Science in Society) are linked with my research in Behavioural Epidemiology of Infectious Diseases. Moreover, Science in Society is a trans-disciplinary priority area for the EU https://ec.europa.eu/programmes/horizon2020/en/h2020-section/science-and-society I contributed to many deliverables of the Project (see section on Publications)

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Direction or Membership of Editorial Boards of well-known Journals, Book Series and Encyclopedias

Editorial Boards:

1. *Journal of Theoretical Biology,* Elsevier; July 2023–present https://www.sciencedirect.com/journal/journal-of-theoretical-biology/about/editorial-board
2. *Journal of Mathematical Biology,* Springer; July 2023–present https://www.springer.com/journal/285/editors
3. *Journal of Optimization: Theory and Applications,* Springer; 2010–present https://tinyurl.com/8456r9k6 Aims of the journal *'Among the areas of application covered are mathematical economics, mathematical physics and biology, all areas of engineering, and novel areas, such as artificial intelligence and quantum computing optimization'*
4. *PLoS ONE* 08/2018-present. Academic Editor for Sections: Sections: Mathematical and theoretical biology; Mathematics - Applied mathematics. https://journals.plos.org/plosone/static/editorial-board
5. *Frontiers in Applied Mathematics and Statistics* 28/12/2021–Current: Associated Editor in the Area *MAthematical Biology*
6. *ecancer.org* 2010–09/2018 : editorial board member; from 09/2018 to 05/2023 : Advisory Panel Member for the Charity 'ecancer' https://ecancer.org/en/journal/editorial-board/4
7. Book Series *Mathematical and Computational Biology and Numerical analysis,* Aracne, 2016- present https://tinyurl.com/hc9cbvlx
8. *Advances in Difference Equations,* Springer 02/2018-06/2019
9. *Abstract and Applied Analysis,* Hindawi 2011/2012 https://tinyurl.com/1i5n509m
10. *Advisory Board Member* of *Theoretical Biology Forum* (07/2017-present) https://tinyurl.com/h8cfs5hu Theoretical Biology Forum is the oldest running journal on the application of theoretical methods in biology Advisory Board members: L. Beloussov (Moskwa) · V. Benci (Pisa) · V. Capasso (Milano) · P. Cerrai (Pisa) · G. De Vico (Napoli) · A. D'Onofrio (Lyon) · R. Fani (Firenze) · A. Fasano (Firenze) · M. Forti (Pisa) · L. Fronzoni (Pisa) · M. Giovannetti (Pisa) · R. Hertel (Freiburg i. B.) · G. A. Losa (Locarno) · S. Morante (Roma) · P. Nardon (Lyon) · T. Nonnenmacher (Ulm) · L. Preziosi (Torino) · D.J. Read (Sheffield) · P. Saunders (London) ·G. Turchetti (Bologna) · G. Webster (Brighton)

Faculty Membership of PhD Schools and Other Teaching and Supervision Duties

University Full Lecturer :

- Academic Year 2022–2023 : *Stochastic Modelling and Simulation* at the Master of Science Degrees in *'Data Science and Scientific Computing', 'Mathematics'* and *'Robotic Engineering'* of Trieste University. Course Code CD2021 580SM. .
- Academic Year 2022–2023 : *Computer Science* at the Bachelor of Science Degree in 'Mathematics' of Trieste University. Course Code CD2021 185SM. Co–titular with Prof Giulio Caravagna (1/3 of the course).
- Academic Year 2021–2022 : *Stochastic Modelling and Simulation* at the Master of Science Degrees in *'Data Science and Scientific Computing', 'Mathematics'* and *'Robotic Engineering'* of Trieste University. Course Code CD2021 580SM. Co–titular with Prof Luca Bortolussi (1/3 of the course).

- Academic Year 2021–2022 : *Computer Science* at the Bachelor of Science Degree in 'Mathematics' of Trieste University. Course Code CD2021 185SM. Co–titular with Prof Giulio Caravagna (1/3 of the course) and Prof. Alberto Casagrande (1/3 of the course).

PhD Schools Faculties

- **18/APR/2022-Current:** Member of the Faculty of the *PhD School in 'Applied Data Science and Artificial Intelligence'* at the University of Trieste, one of the largest italian PhD School on Data Science and Artificial Intelligence
- **1/JUL/2012-31/JUL/2013:** Member of the Faculty of *European School of Molecular Medicine* (SEMM), one of most important European PhD Schools in Molecular Medicine. SEMM, in that period, was a consortium of some key institutions: Milan University, Naples University, *San Reffaele* University, European Institute of Oncology, IFOM, Telethon etc... SEMM included (and includes) a PhD track in *Computational Biology and Bioinformatics* https://web.archive.org/web/20120825123549/http://www.semm.it/phd_computationalbiology.php

Supervision of Post–Doc researchers

- **11/NOV/2011-23/DEC/2013**: Sebastiano de Franciscis, postdoc working in Mathematical Biology and in Statistical Physics. *Funding Entity:* GRANT from the EU FP7 Project 'P-Medicine'. *Publications*: 5 papers in International Journal (I was **CA** of all of them). *Type of supervision* Supervision of a PostDoc . *Topics*: Research topics: a) Computational Systems Biology; b) Continuous spatio–temporal systems perturbed by bounded stochastic processes; c) Doubly Stochastic Automata: Stochastic Automata perturbed by continuous bounded or left bounded Stochastic Processes; d) Noise–induced Phase Transitions, expecially in systems Biology.

Supervision of PhD students in Stage

1. FEB/2018-JUN/2018: Magdalena Ochab. *PhD Student in Stage* Pogram: *EU Erasmus+ Program* from: Technical Silesian University (Poland) *Topic of her PhD*: Systems Biology; *Topic of the Research Stage*: 'Hybrid Stochastic Modeling in Behavioural Epidemiology and Systems Biology' *PhD Advisor* Prof. K. Puszynsky. *Topics*: A) We built a hybrid stochastic model of the impact of social distancing with memory/delay during epidemic outbreaks, as well as the related simulation algorithm; B) Stochastic Automata with bounded perturnation and output in Systems Biology. *Outputs:* 1 ms submitted to *Nonlinear Dynamics* (I am corr author)
2. *PhD Student in Stage* Antonella Lupica (JAN/2019-MAR/2019, then up to JUL/2019 she was hosted by Prof Vitaly Volpert of INRIA DRACULA) From: University of Messina (Italy) *Topic of her PhD*: 'Mathematical Physics'; *Topic of the Research Stage* Spatiotemporal Social models: the evolutionary game description of vaccination propensity *PhD Advisor* Prof. A. Palumbo *Publications* :1 paper (I am **CA**) *Type of supervision*: I introduced Antonella to Behavioural Epidemiology *Topics:* We built a new integrodifferential model of spatiotemporal vaccination games and investigated the occurrence of generalized traveling waves. This work constitutes one third about of the Antonella's PhD Thesis https://tinyurl.com/5b2k85kp.
3. *PhD Student in Stage*: Rossella Della Marca (FEB/2019-APR/2019) From: University of Parma (Italy) *Topic of her PhD*: 'Mathematical Physics'; *Topic of the Research Stage*: 'Behavioral Epidemiology' *PhD Advisor*: Prof. M. Groppi *Publications*: 1 paper (I am **co-CA**) *Type of supervision*: I introduced Rossella to some topics in mathematical health sciences *Topics*: We modeled the impact of volatile public opinion on vaccine awareness campaigns, which results in a SIR model with nonlinear control. The related Optimal Control Problem is challenging, even numerically, and faced by Heuristic Optimization Algorithms. More traditional Optimal Control Algorithms did no converge, leading to a chaotic output, investigated by statistical tests for Chaotic Time Series.

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4. *PhD Student in Stage* Celia Garcia–Pareja (JAN/2019-FEB/2019) From: Karolinska Intitute, Stokholm (Sweden) *Topic of her PhD*: 'Mathematical Statistics'; *Topic of the Research Stage*: 'Impact of extrinsic noises on Cox Survival Analysis' *PhD Advisor* Prof. M. Bottai *Type of supervision*: I introduced Celia to bounded noises *Topics*: During her short stage we started to investigate the impact of extrinsic noise on Cox Survival Analysis

Supervision of Research MSc Students

1. JAN/2008-OCT/2008: Francesca Gatti *MSc Research Student* in Mathematics at Pisa University. Grade: Summa cum laude *MSc Thesis*: 'Delay-Induced Oscillatory Dynamics of Tumor-Immune System Interaction' (in English) *Other Advisors*: P. Cerrai (*pro jure*). *Research Topics*: Mathematical Oncology,Delay Differential Equations; *Publications*: 1 highly cited paper (101 citation on Google Scholar) in *Math Comp Modelling* (I was **CA**). *Official Thesis Webpage (with PDF):* https://tinyurl.com/3mfvsu8r *Type of supervision*: Supervision of a MSc Research Student . *Topics*: We defined a family of models of the Tumor-Immune System interplay, with delayed proliferation of immune effectors. Study of stability, limit cycles and chaos
2. JAN/2011-OCT/2011: Sara Gattoni *MSc Research Student in Mathematical Physics* Bologna University. Grade: Summa cum laude *Thesis*: 'Noisy Oncology: applications of bounded noise transitions in modelling tumor growth' (written in English) *Other Advisors*: M. della Posta (*pro forma*). *Research Topics*: Mathematical Biophysics and statistical Physics of Cancer; *Publications*: 1 paper in *Physica A* (I was **CA**). *Official Thesis Webpage (with PDF):* https://amslaurea.unibo.it/2650/ *Type of supervision*: Supervision of a MSc Research Student. *Topics*:We proposed multistable models of tumor growth and the impact on them of bounded noises.
3. AUG/2013-SEP/2014 Dario Domingo *MSc Research Student in Mathematics* at Pisa University. Grade: Summa cum laude *Thesis:* 'Bounded noises: new theoretical developments and applications in Pharmacokinetics' (written in English) *Other Advisors*: F. Flandoli (50%). *Research Topics*: Bounded Stochastic Processes; *Publications* 2 papers in International Journals (in 1 case I was **co-CA**). *Official Thesis Webpage (with PDF):* https://etd.adm.unipi.it/theses/available/etd-07282014-112957/ *Type of supervision*: Supervision of an exceptional MSc Research student who wrote a MSc Thesis very close to a PhD Thesis. *Topics*: Application of Stochastic Calculus to Bounded Stochastic Processes. Demonstration that a specific bounded noise can become unbounded.

Teaching at International Summer Schools :

- Summer School on Science in Society related issues in Pandemics' National Public Health Institute, Rome, Italy, 29 May - 1 June 2017 , Course on 'Vaccine hesitancy and refusal in Europe (and elsewhere)' (2 lessons)
- 'Summer School on Science in Society related issues in Pandemics' Minicourse on 'Unsolved Scientific Questions concerning Epidemics and total Pandemics: the role of Risk communication and of Human Behaviour' National Public Health Institute, Rome, Italy, September 21-24 2015 (2 lessons)
- Winter Thematic School 'Present challenges of mathematics in oncology and biology of cancer : modeling and mathematical analysis'. Minicourse (90 mins) on 'Tumors: A bistable (and noisy!) tale'. Centre International des Recherches Mathematiques, Marseille University, March 19-23 2012 https://web.archive.org/web/20121210000300/http://www.latp.univ-mrs.fr/mcc/
- 'Mathematical Modelling of Cancer Growth and Treatment summer School - Marie Curie Network'. Course on 'Tumor-Immune system interplay and Immunotherapy' (5 lessons). Dundee (UK), August 14-29 2010

- *'Biology and Computer Science: modelling and computing* a *Lipari School on Computer Science: The 30th Jacob T. Schwartz International School for scientific Research*. Course on *'Modelling of Cellular Populations'* (5 lessons). Lipari (IT), July 10-17 2010 http://old.liparischool.it/LipariSchool/CS/previousedition/edition2010cs.htm Aims of the School: *"The 30th Jacob T. Schwartz International School for Scientific Research addresses PhD students and young researchers who want to get exposed to the forefront of research activity in the field of Modelling and Computing and their applications to biology. The school will be held in the beautiful surroundings of the Island of Lipari. The theme of the school is the cross-fertilization of biology and computer science, shown by means of some examples. On the one hand, it will be shown how methods of computer science can be employed in the analysis of microarray data and in the construction of models of biological phenomena, such as cell behaviour and evolution. On the other hand, models of computing will be presented which are inspired by biology and propose new ways for representing data and elaborating them, with interesting results on the computational complexity. DNA and P systems are the models which will be described."* Directors of the school: Prof. Alfredo Ferro, (University of Catania), Co-Chair; Prof. Andrea Maggiolo Schettini, (University of Pisa), Co-Chair; Prof. Roberto Barbuti (University of Pisa), Co-Chair; Dr. Rosalba Giugno (University of Catania), Co-Chair. Dr. Alfredo Pulvirenti (University of Catania), Co-Chair

Guest University Lectures

1. A d'Onofrio 'Discrete Dynamical Systems in Behavioral Epidemiology of Infectious Diseases', 6 DEC 2022, Course on 'Discrete Dynamical Systems' (Professor F Tomarelli), Milan Polytechnical University, Milan (Italy)
2. A d'Onofrio 'Discrete Dynamical Systems in population Dynamics with applciations in Oncology', 5 DEC 2022, Course on 'Discrete Dynamical Systems' (Professor F Tomarelli), Milan Polytechnical University, Milan (Italy)
3. A d'Onofrio 'Stochastic Differential Equations', 18 OCT 2022, Course on 'Stochastic Modeling' (Professor MS Nobile), Venice University, Venice (Italy)
4. A d'Onofrio 'Elementary models of Tumour angiogenesis and anti-angiogenesis therapies', 13 JAN 2010, Course on Discrete Dynamical Systems (Professor F Tomarelli), Milan Polytechnical University, Milan (Italy)
5. A d'Onofrio 'Discrete Models in biomedicine', 13 JAN 2010, Course on Discrete Dynamical Systems (Professor F Tomarelli), Milan Polytechnical University, Milan (Italy)
6. A d'Onofrio 'Tumors: A bistable (and noisy!) tale' 14 MAY 2013, Course on (Professor D Ambrosi), Milan Polytechnical University, Milan (Italy)
7. A d'Onofrio 'Elementary models of Tumour angiogenesis and anti-angiogenesis therapies', 13 DEC 2013, Course on Discrete Dynamical Systems (Professor F Tomarelli), Milan Polytechnical University, Milan (Italy)
8. A d'Onofrio 'Discrete Models in biomedicine', 13 DEC 2013, Course on Discrete Dynamical System (Professor F Tomarelli), Milan Polytechnical University, Milan (Italy)

PhD Jurys Member ('Rapporteur' / Examiner) :

- Giulio Caravagna, PhD in Computer Sciences, University of Pisa (Italy) 21 JUN 2011 https://tinyurl.com/4bfoallg
- Chloé Gerin, PhD in Physics, 24 September 2012, ED518 *Matière condensée et interfaces*, Université Paris Diderot https://tinyurl.com/59sozsxk
- Haneen Hamam, PhD in Mathematics, Dundee University (UK) , 25 September 2017
- Sofia Jijon Albàn, PhD in Epidémiologie et Sciences de l'Information Biomédicale, Sorbonne Université; Paris (FR), *ED 393 – Epidémiologie et Sciences de l'Information Biomédicale* , 5 July 2021

Formal attribution of Research or Teaching Appointments foreign (non italian) or sovra–national well–known Universities and Research Institutes

1. **3/JAN/2014 to 15/JUN/2020** Research Director (in italian: Dirigente di Ricerca) at *International Prevention Research Institute*, Dardilly (Lyon) (France) Interdisciplinary Research on Computational Biomedicine and Epidemiology. Main Research Areas in SC 01B1 and its interdisciplinary applications:
   - Formal Modeling and Simulations in Computational Oncology;
   - Formal Modeling and Simulations in Systems Biology;
   - Computational Epidemiology;
   - Formal Modeling and Simulations of continuous models perturbed by realistic bounded noises;
   - Hybrid Stochastic Automata;
   - Doubly Stochastic Automata: Stochastic Automata perturbed by realistic continuous Stochastic Processes;
   - Stochastic Hybrid Automata with delayed transitions;
   - Heuristic global optimization for optimal control of vaccine hesitancy.

   Main Collaborations in Area SC01B1 and its interdisciplinary applications:
   - *Dipartimento di Informatica Sistemistica e Comunicazione*, Universitá di Milano Bicocca;
   - *Institute of Adaptive and Neural Computation* of the University of Edinburgh;
   - *'Cancer Evolutionary Genomics and Modeling Lab'* of the Institute of Cancer Research, London.
   - *Silesian Technical University* Gliwice (Poland)
   - *Applied Mathematics Department* at Waterloo University, Waterloo (Canada)
   - *Indian Institute of Technology* at Kanpur (India);
   - *Institute of Systems Analysis and Computer Sciences*, National Research Council, Rome (Italy);
2. **1/MAY/2017 to 30/APR/2020** Visiting Professor at the 'Department of Mathematics and Statistics', Strathclyde University, Glasgow (UK). From 1/MAY/2017 to 30/APR/2020 https://web.archive.org/web/20210121061443/https://pureportal.strath.ac.uk/en/persons/alberto-donofrio

Specific Work Experiences characterized by Research Activity concerning the SC 01B1

1. **May 1997 to 29/MAY/2000** PhD in *'Medical Computer Sciences'*, Università Roma 'Sapienza' and Istituto di Analisi dei Sistemi e Informatica del CNR (Roma),with State-funded grant. PhD Advisors: P Atzeni (Rome 3 University) and M Rafanelli (CNR) Thesis Title *Computer-Aided Epidemiology*. Research Areas: Formal Methods for Spatiotemporal Geographic Information systems; Computational and computer-aided Epidemiology of Infectious Diseases;
2. **1/MAR/2000 to 21/DEC/2002** Postdoc Fellow at the *Division of Biostatistics and Epidemiology* of Istituto Europeo di Oncologia (Milan, Italy). Research Areas SC 01B1:

- Formal Methods for Spatiotemporal Geographic Databases;
- Computational Oncology;
- Computational Epidemiology of Infectious Diseases.

Main national and international collaborations:

- *Imperial Cancer Research Fund* (later on: *Cancer Research UK*) , London (UK) ;
- *International Agency for Research on Cancer* of *World Health Organization,* Lyon (France);
- *Institute of Systems Analysis and Computer Sciences,* National Research Council, Rome (Italy);

3. **1/JAN/2003 to 21/DEC/2008** Researcher, under various fixed term contract (see IEO Certificate) at the *Division of Biostatistics and Epidemiology* (up 30/SEP/2008) and at *Department of Experimental Oncology* (30/SEP2008 to 31/DEC/2008), both of Istituto Europeo di Oncologia (Milan, Italy). Research Areas SC 01B1 :
   - Formal Modeling and Simulations in Computational Oncology;
   - Formal Modeling and Simulations in Systems Biology;
   - Computational Epidemiology of Infectious Diseases;
   - Formal Modeling and Simulations of continuous models perturbed by realistic bounded noises;
   - Formal Modeling and Simulations in Biomedicine;
   - Fuzzy nonlinear Systems;
   - Network-based modeling.

Other Main Work Experiences and Responsibilities

Academic and Scientific Committees :

1. **07/2007-12/2013** Coordinator of 'Bioinformatics and Computational Biomedicine Task Force' at the European Institute of Oncology, Milan, Italy
2. **09/2004-12/2013** External member of the M.I.R.I.A.M. and then A.D.A.M.S.S. Research Center of the Mathematics Department of Milan University.
3. **09/2004-12/2013** Member of Scientific Council of the CIMAB (Inter-University Consortium of Mathematics in Biology, Medicine and in Environmental Sciences) comittee

Reviewer for National Research Agencies (projects area SC01B1 and its inter-disciplinary applications):

1. Agence National de la Recherche (France)
2. Israel Science Foundation (Israel)
3. Foundation for Polish Science (Poland)
4. Royal Society of Edinburgh (Scotland, UK)

Invited Talks at Research Institutions
NB: in some cases dates' days are approximate, month is correct

1. Alberto d'Onofrio 'The Strange Case of Doctor Newton and Mr. Cancer', 16 Jan 2003, Dipartimento di Matematica, Milan State University, Milan (IT) http://www.stat.unipg.it/WILMA/sis/200212/msg00012.html

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2. A d'Onofrio 'Mathematical Physics of Tumors and Anti-Tumor therapies: analytical aspects and biomedical applications', 23 MAY 2005, Dipartimento di Scienze Economiche e Metodi Quantitativi, Universita' del Piemonte Orientale "A. Avogadro", Novara (IT)
3. A d'Onofrio 'Mathematical Oncology: the interplay between biology, medicine and nonlinear sciences' 27 Marzo 2007 MOX Research Centre, Department of Mathematics, Milan Polytechnical University, Milan (IT) https://www.mate.polimi.it/?view=seminari&sezione=tutte&stringa=&page=169#ancora162
4. Alberto d'Onofrio 'Mathematical physics as a new weapon in the war against cancer I: Tumor-immune system interaction n and immunotherapy: basic research and clinical inferences' 13 APR 2007 Department of Mathematics, Messina University, Messina (IT)
5. Alberto d'Onofrio 'Mathematical physics as a new weapon in the war against cancer II: Tumor angiogenesis and anti-angiogenesis therapies' 14 APR 2007 Department of Mathematics, Messina University, Messina (IT)
6. A d'Onofrio 'Mathematics as a new weapon in the war against cancer: mathematical modelling and analysis of tumor angiogenesis and anti-angiogenesis therapies' 29 JUN 2007, Department of Mathematics, University of Pisa, Pisa (IT)
7. A d'Onofrio 'The Crazy Rhytms of the Life' Nov 14 2007, Pisa University, Pisa (IT)
8. A d'Onofrio 'A mathematical Alice in the Wonder Land of biological Rhythms' 25 JAN 2008, Department of Mathematics, Padua University, Padua (IT)
9. A d'Onofrio 'Tumour angiogenesis and anti-angiogenesis therapies: a modeling contribution' (and other Talks) 14 JUN 2009, Mathematical Institute of Warszaw University , 14-20 June 2009 https://www.mimuw.edu.pl/~biolmat/visits.php
10. A d'Onofrio 'The mathematical Wonder Land of Biology and Medicine' September 2009, Department of Mathematics, Messina University, Messina (IT)
11. A d'Onofrio 'The strange case of Dr. Newton And Mr. Disease' 15 SEP 2009, IPCF CNR, Messina (IT)
12. A d'Onofrio 'Vaccination, Information and Bifurcation' 13 MAY 2010, Department of Mathematics, Rome 3 University, Rome (IT) https://www.mat.uniroma1.it/sites/default/import-files/ricerca/ARCHIVIO-NOTIZIARI/show_notiziario.cgi?notiziario=100510.html
13. A d'Onofrio 'Simple modelling of therapies in solid vascularised tumors' 9 OCT 2010 IMNC CNRS, Orsay (FR) https://www.imnc.in2p3.fr/sites/default/files/pdf/rapport_imnc_bd.pdfpage71
14. A d'Onofrio 'The Noisy Life of Cancer' November 22 2010, Division of Mathematics, Dundee University, Dundee, Scotland (UK)
15. A d'Onofrio 'Kinetic aspects in tumor-immune system interplay - a biomathematical talk without theorems' Invited Talk at the Department of Information Engineering, Padova University (IT), July 11 2011,https://www.dei.unipd.it/system/files/13_12_2011.pdf
16. A d'Onofrio 'The Strange case of Dr Cell and Mr Stem', Nov 28 2011; National Neurology Institute 'Carlo Besta', Milan (IT)
17. A d'Onofrio 'The Theorist's guide to the escape of tumors from immune control' November 30th, 2011, Department of Inforrmation Systems and Control (DISCO), Milan Bicocca University, Milan (Italy) http://149.132.178.235/index.php?title=Events&diff=next&oldid=2432

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18. A d'Onofrio 'The Geometric approach to Global Stability in Behavioral Epidemic Models with information-dependent memory' 31 JAN 2012, Dipartmento di Matematica, Universitá di Napoli, Napoli (IT)
19. Alberto d'Onofrio 'The Strange case of Dr. Gaussian and Mr. Bounded', 16 Feb 2012 Dipartimento di Scienze statistiche, Bologna University, Bologna (IT) https://web.archive.org/web/20210806060721/6
20. A d'Onofrio 'The mathematics of hepatitis C (and B)' 23 FEB 2012, Pisa University, Pisa (IT)
21. A d'Onofrio 'Research Activities of My Group', Istituto Veneto di Medicina Molecolare, 11 May 2012, Padua (IT) in occasion of the Italian site visit of the 'Aphelion Assessment Panel' http://scienceus.org/wtec/docs/AphelionFinalReport-web.pdf (page 162)
22. A d'Onofrio 'A Random Walk in The Math Wonder Land of Biology and Medicine', 6 MARCH 2013, Department of Mathematics, Pisa University, Pisa (IT)
23. A d'Onofrio 'Mathematical Oncology: Tumor-Immune system 'fight' as a case study A personal perspective' 8 MARCH 2013 , Department of Mathematics, Pisa University, Pisa (IT)
24. A d'Onofrio 'The pharmacodynamics of the p53-Mdm2 targeting drug Nutlin: the role of gene-switching noise' 15 May 2014 , for 'DRACULA Seminary Series', organized by INRIA DRACULA and Lyon 1 University http://dracula.univ-lyon1.fr/news_old.php
25. Alberto d'Onofrio 'La nuova teoria matematica delle Epidemie: sussurri, grida, e imitazioni.' JUN 13 2014 presso il Dipartimento di matematica dell'universitá di Napoli
26. A d'Onofrio 'Old and New Bounded Stochastic Processes in Modelling Cancer Growth and anti-cancer Therapies ' 3 MARCH 2016, Aix-Marseille University, CNRS, Centrale Marseille, I2M, UMR 7373, 13453 Marseille, France
27. A d'Onofrio 'Behavioural Epidemiology' MAY 2017, Heae of Science Faculty Office, Strathlyde University, Glasgow (Scotland) UK
28. A d'Onofrio 'Behavioural Epidemiology and its limitations' I SamMBA Seminars, Institut Pasteur, Paris, SEP 11 2018 https://tinyurl.com/p7cgen7f
29. A d'Onofrio 'Behavioural Epidemiology of Infectious Diseases' 8 JUNE 2020 for the 'Covid 19 Seminars of the Jacques-Louis Lions Institute', Sorbonne Université, Paris (FR) https://web.archive.org/web/20210303022505/https://www.ljll.math.upmc.fr/fr/seminaires/article/gdt-maths4covid19?lang=fr https://www.youtube.com/watch?v=BF4NCSXe-A8
30. A d'Onofrio 'Behavioural Epidemiology of populations and policymakers' September 28 2020, INRIA Central Direction, Paris (FR) for the 'Rencontres 'Inria-Laboratorie Jacques Louis Lions' en calcul scientifique' https://web.archive.org/web/20210806060203/https://project.inria.fr/rencontresljll/monday-28st-september-2020-visio-alberto-donofrio-strath
31. A d'Onofrio 'Behavioural Epidemiology of Infectious Diseases' November 26 2022 Department of MAthematics, St Andrews University, St Andrews (Scotland) (UK)
32. A d'Onofrio 'Behavioural Epidemiology of Infectious Diseases' November 29 2022 International School of Advanced Studies , Trieste (Italy)

Main Scientific Visits

1. 29/Jul/01 - 19/Aug/01: Visiting Scientist at Molecular and Genetics Laboratory of Cancer Research UK, Lincoln's Inn Fields, London (UK);
2. 17/Feb/02 - 24/Feb/02: Visiting Scientist at Molecular and Genetics Laboratory of Cancer Research UK, Lincoln's Inn Fields, London (UK);

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3. 18/Aug/02 – 25/Aug/02: Visiting Scientist at Molecular and Genetics Laboratory of Cancer Research UK, Lincoln's Inn Fields, London (UK);
4. 26/Aug/02 – 07/Sept/02: Visiting Scientist at the International Agency for Research on Cancer - World Health Organization, Lyon (France);
5. 17/Oct/02-18/Oct/02: Visiting Scientist at the International Agency for Research on Cancer - World Health Organization, Lyon (France);
6. 9/F
7. eb/03-12/Feb/03: Visiting Scientist at the Norwegian Cancer Registry (Kreftregisteret), Oslo.
8. 28/Jul/03 – 4/Aug/03: Visiting Scientist at the 'Department of Statistics and Modelling Science' of Strathclyde University , Glasgow UK
9. 21/Sept/2003-13/Oct/2003: Visiting Scientist at Molecular and Genetics Laboratory of Cancer Research UK, Lincoln's Inn Fields, London (UK)
10. 22/May/04-29/May/04, : Visiting Scientist at the International Agency for Research on Cancer - World Health Organization, Lyon (France);
11. 23/apr/06 – 28/Apr/06: Visiting Scientist at the 'Department of Statistics and Modelling Science' of Strathclyde University , Glasgow UK.
12. 10/May/06 – 12/May/06, : Visiting Scientist at the International Agency for Research on Cancer - World Health Organization, Lyon (France);
13. 25/April/2007 – 27/April/2007: Visiting Scientist at the International Agency for Research on Cancer - World Health Organization, Lyon (France);
14. 13/Apr/2007 – 17/apr/2007: visiting Scientist at the Group of mathematical physics of the Mathematics Dept. of Messina University October 2008 (one week): Visiting Scientist at the Group of mathematical physics of the Mathematical Physics Mathematics Dept. of Messina University
15. 15-20 June 2009: Visiting Scientist at the Department of Mathematics, Mechanics and Informatics, Warsaw University
16. September 2009 (one week) Visiting Scientist at the Mathematics Dept. of Messina University
17. 22-27 November 2010: Visiting Scientist at the Department of Mathematics, Dundee University, UK
18. **Since January 2006 to 2014**: yearly and more frequently: visiting Scientist at the Mathematics and/or at Economics Departments of Pisa University
19. Jan 2012 (one week) Visiting Scientist at the Department of Mathematics, Napoli University
20. September 2014 visiting Scientist at the Mathematics and/or at Economics Departments of Pisa University
21. June 2014 (one week) Visiting Scientist at the Department of Mathematics, Napoli University
22. Sept 14 2020- October 2 2020 (three weeks) Visiting Scientist at the 'INRIA MAMBA research unit' at the 'Laboratoire Jacques-Louis Lions' of Sorbonne University, Paris

Main Journal and Books Refereeing Activities

1. *Book Projects Reviewer for*: Springer, Elsevier
2. *Reviewer for* Mathematical Reviews (including books)

3. *Leading Computational Biology, Applied Mathematics and Control Theory Journals*, including: Appl Math Letters, Applied Mathematics and Computation, IEEE Tr Biomed Eng, IEEE Tr Cont Sys Tech, IEEE Conference Series, Journal of Optimization: Theory and Applications, PLOS Comp Bio, , PLOS One, SIAM J of Appl Math, Proc London Math Soc, App Math Model, J Math Analysis and Applications, J Math Bio, Bull Math Biology , J Th Biol, Discr Cont Dyn Sys Series A, Discr Cont Dyn Sys Series B, Math Biosc, Math Biosc and Eng, Mathematical Medicine and Biology, Nonlinear Analysis: Real World Applications, Th Pop Bio, Applied Mat Mod, etc...
4. *Leading Theoretical Physics Journals*: Phys Rev Lett, Phys Rev E, Phys Biol, Physica A, Phys Lett A, Eur J Phys B, Eur J Physics Plus, PLoS ONE (physics section), New J Phys, J Mech Stat: Theory and Applications, J Mol Liq, Chaos Sol Fract, Adv Comp Sys , Int J Bif Chaos, Complexity, Indian J of Physics, Fluids etc...
5. *Leading Biomedical Journals* (referee for mathematical biology manuscripts): PNAS, Nature Medicine, Cancer Research (Mathematical Oncology section), Cancer Letters, BMC Medicine, Vaccine , Proc Roy Soc B, Proc Roy Soc: Open Sc, Sc Rep, Science Advance (AAAS), Biology Direct etc...

Other International and National Research Projects Projects of International Institutions:

1. 2002 - 2003, *European Code Against the Cancer 2003* Role: **Member of the Statistical SubCommittee**
2. 2003 - 2009 *WHO Atlas of the Cancer Mortality in Europe*(Chair: P. Boyle). **Member of the Scientific Comittee**
3. JAN/2020- DEC/2020 EU H2020 Project INSTAND-NGS4P.

Outreach towards Civil Society
As task-leader in EU FP7 project ASSET, I worked in involving Civil Society in Pandemic Preparedness. This implied actions of dissemination to Civil Society, including https://tinyurl.com/3qfab6c8: events during the large public event *ImmuniserLyon*, a mutual learning event on Vaccines Awareness with Resident MDs, and a Portal on Best Practices https://tinyurl.com/3k2nqrnl. In 2019 I collaborated to writing the EU grant proposal (led by Graz University) *INSTAND NGS4P* on Next generation Sequencing, which was funded https://www.instandngs4p.eu/) . I designed the Work-Package on Communication and Dissemination, including tasks on Science in Society and MD involvements. Before italian lockdown P. Manfredi and myself wrote a strong position paper https://tinyurl.com/5dmmygfv on *Scienzainrete*, influential science divulgation journal online.

Research Experiences in Private Institutions
All my career after the PhD has been in private research institutes without direct connection to Universities. The first part (2000-2013) was at the European Institute of Oncology, where the research was mainly academic. However, it was not possible for me to enroll PhD students in Applied Mathematics since the only doctoral school linked to the institute was in Molecular Medicine. Thus wen I was funded by EU project P-Medicine I preferred to have a Post-PhD fellow.
The second part (2014 to 2020) was at the 'International Prevention Research Institute', a small but prestigious research center. In this case my activity of research in biomathematics was paired by an intense activity in applications of MAthematics to Public Health.
Due to a loyalty agreement, I cannot disclose all the details of my work at IPRI, but in general I can safely say that my activity involved to participate to private consulting reports for International clients, including writing reviews for white books, and contributing to the design of private and EU grant proposals. I was also the IPRI main scientist in a research project, ASSET, more aimed to design an action plan for pandemic preparedness (see section on technical reports) than to perform quantitative publishable research. Before my dismissal from IPRI I had started to work to a EU project INSTAND NGS4P to whose proposal I had

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contributed with important pieces of work, and where I had to be particularly involved in the topic of 'Science in Society' in collaboration with the European and the Italian Cancer Patients associations.
A part of past IPRI activity that is withouth doubt worth of mention, and in which I have been partially involved, is its past commitment in favor of low-income countries, especially sub–equatorial Africa and Far-East countries, resulting in a number of Public Health actions, Science Communication Actions, and public-health related non–scientific publications.
Finally, at IPRI it was not possible to directly have PhD students: we only had two students under the supervision by the IPRI-president President.

Mobility
My personal and work life were characterized by mobility: geographic, thematic and sectoral. This allowed me to fine-tune my adaptation and communication skills. Mobility experiences were also very helpful to build a large network. On the whole adaptation, communication and networking are the ideal conditions to develop programs of interdisciplinary research with multi-disciplinary teams. Details :

- **International Geographic Mobility**: I moved from my Country, Italy, to France in JAN 2014;
- **National Geographic Mobility**: After my High School in Calabria (South Italy), I got my MSc in Pisa (Central Italy), then I moved to Rome for my PhD and finally I moved to Milan (North Italy);
- **Thematic Mobility** My MSc was on control engineering; then I moved to computational biology. During my PhD. I was focused on Medical Computer Sciences and their interplay with Mathematical Epidemiology. In year 2000 I started to work in Computational and Statistical Oncology. During my pre-PhD and PhD I made my first research steps in the field of deterministic dynamical systems described by ordinary differential equations, but soon I started also working with more complex computational and theoretical frameworks. Then I switched part of my activity on bounded stochastic processes (temporal and spatiotemporal), hybrid stochastic systems and their simulation. Often I work on Optimal Control in conjunction with heurstic global optimization;
- **Work Type Mobility** I was PhD student in a public research institutefocused in computer science and systems theory, and part time I was software consultant in a wide international institution (FAO UN) (more than 3000 workers in Rome). Then I moved to a large (1200 workers about) Research Oncology Hospital, and finally I moved to a small but influent SME working on Research on Global Public Health. Moreover I had also two long periods in which I was workless, which were (and the current is) very educational.

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