

ELENCO DELLE PUBBLICAZIONI

A) Pubblicazioni su riviste di matematica

- 1) M. Demianski, A. Bersani, M. Litterio – “Bianchi Type-I Perfect Fluid Multidimensional Cosmological Model” – *Il Nuovo Cimento*, vol. 103b, n. 3, pp.221-226 (1989).
- 2) A.M. Bersani, C. Sciarretta – “Asymptotic Analysis for a Closed Processor-Sharing System with Switching Times: Normal Usage” – *SIAM J. Appl. Math.*, vol. 51, n.2, pp. 525-541 (1991).
- 3) A.M. Bersani - “The Hausdorff-Young Theorem for Besicovitch Spaces of Vector-Valued Almost Periodic Functions” - *Rend. Mat.*, serie VII, vol.15, pp.5-24 (1995).
- 4) A.M. Bersani - “On the Hausdorff-Young Theorem for Hilbert Vector Valued Besicovitch a.p. Functions Spaces” - *Rend. Mat.*, serie VII, vol.16, pp. 146-152 (1996).
- 5) R. Iannacci, A.M. Bersani, G. Dell’Acqua, P. Santucci - “Embedding Theorems for Sobolev - Besicovitch Spaces of Almost Periodic Functions” - *Zeitschrift fur Analysis und ihre Anwendungen* vol. 17, n. 2, pp. 443-457 (1998).
- 6) J. Andres, A.M. Bersani, K. Lesniak – “On some almost-periodicity problems in various metrics” – *Acta Appl. Math.* – vol. 65, pp. 35-57 (2001).
- 7) J. Andres, A.M. Bersani – “Almost-periodicity problem as a fixed-point problem for evolution inclusions” – *Topol. Meth. Nonlin. Anal.* – vol. 18, pp. 337-349 (2001).
- 8) A. M. Bersani, G. Dell’Acqua – “The Sobolev-Besicovitch space for traces of almost periodic functions” – *Atti Sem. Mat. Fis. Univ. Modena* – vol. 51, pp. 15-33 (2003).
- 9) J. Andres, A.M. Bersani, F.R. Grande - “Hierarchy of almost-periodic function spaces” – *Rend. Mat.*, vol. 26, pp. 121 – 188 (2006).
- 10) J. Andres, A.M. Bersani, L. Radova – “Almost-periodic solutions in various metrics of higher-order differential equations with a nonlinear restoring term” - *Acta Universitatis Palackianae Olomucensis, Facultas Rerum Naturalium - Mathematica*, vol. 45, pp. 7-29 (2006).
- 11) M.G. Pedersen, A.M. Bersani, E. Bersani – “The total quasi-steady-state approximation for fully competitive enzyme reactions” - *Bulletin of Mathematical Biology*, vol. 69, n. 1, pp. 433 – 457 (2007).
- 12) M.G. Pedersen, A.M. Bersani, E. Bersani, G. Cortese - “The Total Quasi-Steady State Approximation for Complex Enzyme Reactions” – *Mathematics and Computers in Simulation (MATCOM)*, vol. 79, pp. 1010 – 1019 (2008).
- 13) M.G. Pedersen, A.M. Bersani, E. Bersani – “Quasi Steady-State Approximations in Intracellular Signal Transduction – A Word of Caution”, *Journal of Mathematical Chemistry*, vol. 43, pp. 1318-1344 (2008).
- 14) A.M. Bersani, E. Bersani, L. Mastroeni – “Deterministic and Stochastic Models of Enzymatic Networks - applications to pharmaceutical research”, *Computers and Mathematics with*

Applications, special issue: R. Tadei and N. Bellomo (Editors), “Modeling and Computational Methods in Genomic Sciences”, vol. 55, n. 5, pp. 879-888 (2008).

- 15) S. MacNamara, A.M. Bersani, K. Burrage, R.B. Sidje – “Stochastic chemical kinetics and the *total* quasi-steady-state assumption: application to the stochastic simulation algorithm and chemical master equation”, *Journal of Chemical Physics*, Vol. 129, pp. 095105-1 / 095105-13 (2008).
- 16) M. Pedersen, A.M. Bersani – “The Total Quasi-Steady State Approximation Simplifies Theoretical Analysis at Non-Negligible Enzyme Concentrations: Pseudo First-Order Kinetics and the Loss of Zero-Order Ultrasensitivity”, *Journal of Mathematical Biology*, Vol. 60, pp. 267-283 (2010).
- 17) A.M. Bersani – “Reformed permutations in *Mousetrap* and its generalizations”, *INTEGERS*, Vol. 10, pp. 575-622 (2010).
- 18) A.M. Bersani, E. Carlini, P. Lanucara, M. Rorro, V. Ruggiero - ”Application of Optimal Control techniques and Advances Computing to the study of enzyme kinetics”, *Mathematics and Computers in Simulation (MATCOM)*, Vol. 81, pp. 705-716 (2010).
- 19) A.M. Bersani, E. Bersani, L. Mastroeni – “Modeling the action of drugs on cellular enzymes by means of optimal control techniques”, *Journal of Mathematical Chemistry*, Vol. 49, pp. 776-795 (2011) DOI 10.1007/s10910-010-9775-2
- 20) A.M. Bersani, G. Dell’Acqua – “Asymptotic expansions in enzyme reactions with high enzyme concentrations”, *Mathematical Methods in the Applied Sciences* – 34, 1954-1960 (2011); DOI: 10.1002/mma.1495
- 21) A.M. Bersani, G. Dell’Acqua – “Is there anything left to say on enzyme kinetic constants and quasi-steady state approximation?”, *Journal of Mathematical Chemistry* 50, 335-344 (2012); DOI 10.1007/s10910-010-9770-7
- 22) G. Dell’Acqua, A.M. Bersani – “A perturbation solution of Michaelis-Menten kinetics in a “total” framework”, *Journal of Mathematical Chemistry*, Vol. 50, pp. 1136-1148 (2012). DOI: 10.1007/s10910-011-9957-6
- 23) G. Dell'Acqua, A. M. Bersani - “Quasi-steady state approximations and multistability in the double phosphorylation-dephosphorylation cycle”, *Communications in Computer and Information Science* 273, 155-173 (2012).
- 24) A.M. Bersani, I. Giorgio, G. Tomassetti - “Buckling of an elastic hemispherical shell with an obstacle”, *Continuum Mechanics and Thermodynamics (CMAT)*, in corso di stampa, DOI: 10.1007/s00161-012-0273-6

B) Note interne e altre pubblicazioni di matematica

- 1) A.M. Bersani – “Sperimentazione Numerica su Problemi di Minimo Relativi a Fenomeni di Eversione e di *Buckling* di Calotte Sferiche” – Quaderno IAC n.5 (1990).
- 2) A.M. Bersani – “Metodi di Discesa per il Calcolo Numerico del *Buckling* di Gusci Elastici Semisferici” – Quaderno IAC n.9 (1991).

- 3) A.M. Bersani - “Studio Numerico di un *Buckling* con Ostacolo di un Guscio Sferico Elastico” - Quaderno IAC n.26 (1993).
- 4) A.M. Bersani – “An *eulerian* approach to a class of matching problems” – Preprint Me.Mo.Mat. n. 14/2005 – pubblicato online sulla pagina <http://www.dmmm.uniroma1.it/~bersani/EULERIAN.pdf> . Una versione notevolmente ridotta del preprint è stata accorpata con il preprint D1).
- 5) Solutions to Problems 35 and 38 – Newsletter of the European Mathematical Society, Vol. 71, pp.47/48 (2009).

C) Pubblicazioni su Atti di Convegni e Congressi

- 1) “Non standard results in a spherical shell buckling with obstacle”, in collaborazione con M. Rosati e G. Vergara Caffarelli (extended abstract); - **II Congresso Nazionale SIMAI**, Anacapri, 31/5 - 3/6/1994.
- 2) “Trace theorems for Sobolev-Besicovitch spaces of almost-periodic functions and their applications”, in collaborazione con G. Dell’Acqua (extended abstract); - **V Congresso Nazionale SIMAI**, Ischia, 5 – 9/6/2000.
- 3) “Multivalued fractals as fixed points for multivalued mappings: generalizations and applications”, in collaborazione con M.R. Lancia (extended abstract); - **VI Congresso Nazionale SIMAI**, Chia Laguna (CA), 27 – 31/5/2002.
- 4) “Stability and equilibrium points in MINMOD for glucose”, in collaborazione con G. Baratta, F. Barcellona, M. Coli, G. Lucidi; - **VI Congresso Nazionale SIMAI**, Chia Laguna (CA), 27 – 31/5/2002.
- 5) “Modeling glucose-insulin behavior in ill patients (DM type 2)”, in collaborazione con G. Baratta, F. Barcellona, G. Lucidi; - **3rd International Symposium on Medical Data Analysis (ISMDA 2002)**, Roma, 10 – 11/10/2002, A. Colosimo, A. Giuliani, P. Sirabella eds., Springer, Lecture Notes in Computer Science, vol. 2526 (2002), pp. 71-78.
- 6) “Neural network in modeling glucose-insulin behavior”, in collaborazione con F. Barcellona, M. Panella – in “Biological and Artificial Intelligence Environments”, Proceedings 15th Italian **Workshop on Neural Nets (WIRN)**, Vietri, 15 - 17/9/2004, B. Apolloni, M. Marinaro, R. Tagliaferri eds., Springer (2005), pp. 367-374.
- 7) “A mathematical approach to the study of signal transduction pathways in MAPK cascade”, in collaborazione con M.G. Pedersen, E. Bersani, F. Barcellona; - “**Applied and Industrial Mathematics in Italy 2004**”, **Atti VII Congresso SIMAI**, World Publ. Co., M. Primicerio, R. Spigler, V. Valente eds., Series on Advances in Mathematics for Applied Sciences, vol. 69 (2005), pp. 124-135.
- 8) “Neural processing of Biomedical Data for Improving Driving Safety”, in collaborazione con F. Barcellona, F. Filippi, M. Panella, A. Alessandrini - **Biomedicine VI: Sixth International Conference on Modelling in Medicine and Biology**, Bologna, 7 - 9/9/2005, WIT Transactions on Biomedicine and Health, vol. 8, M. Ursino, C.A. Brebbia, G. Pontrelli, E. Magosso eds., WIT Press (2005), pp. 213-219.

- 9) “Mathematical Models of Open and Closed Biochemical Reactions in Living Cells”, in collaborazione con M. G. Pedersen, E. Bersani (extended abstract); **VIII Congresso Nazionale SIMAI**, Baia Samuele (RG), 22 - 26/5/2006.
- 10) “Michaelis-Menten kinetics and quasi steady state approximations in large enzyme reaction networks”, in collaborazione con E. Bersani, G. Dell’Acqua, M.G. Pedersen (extended abstract), Proceedings **SYSBIOHEALTH Symposium 2007**, L. Alberghina, L. Milanesi eds., Locomia Innovazione Publ. (2007), pp. 42-44.
- 11) A.M. Bersani, P. Lanucara, M. Rorro, V. Ruggiero, Systems Biology and Advanced Computing , IMACS Series in Computational and Applied Mathematics 13: 11-20, 2008, **IMACS**, Roma, Italy, (F. Pistella, R.M. Spitaleri Eds, ISSN 1098-870X).
- 12) A. Bersani, G. Dell'Acqua *Multistability in double phosphorylation-dephosphorylation cycles*, extended abstract al “**SIMAI 2010 - 10th** congress”, Cagliari, 21-25 Giugno 2010;
- 13) A. Bersani, G. Dell'Acqua *Asymptotic expansions in enzyme reactions with high enzyme concentrations*, extended abstract al “**SIMAI 2010 - 10th** congress”, Cagliari, 21-25 Giugno 2010;
- 14) A.M. Bersani, G. Dell’Acqua, G. Tomassetti, On Stationary States in the Double Phosphorylation-dephosphorylation Cycle, **AIP Conf. Proc.** 1389, NUMERICAL ANALYSIS AND APPLIED MATHEMATICS ICNAAM, Halkidiki (Greece), 19–25 September 2011, pp. 1208-1211; doi:10.1063/1.3637833.
- 15) G. Dell’Acqua, A.M. Bersani, Bistability and the complex depletion paradox in the double phosphorylation-dephosphorylation cycle, **BIOINFORMATICS 2011** – International Conference on Bioinformatics Models, Methods and Algorithms, Roma, 26-29 gennaio 2011, pp. 55-65.
- 16) A.M. Bersani, G. Dell’Acqua, Is there anything left to say on enzyme kinetic constants and quasi-steady state approximation?, Proceedings of the 10th International Conference on Computational and Mathematical Methods in Science and Engineering, **CMMSE 2010**, (J. Vigo-Aguiar Ed) pp. 204-215, ISBN 13: 978-84-613-5510-5.
- 17) D. Andreucci, A.M. Bersani, E. Bersani, G. Dell’Acqua, C. De Lazzari, M. Ledda, A. Lisi, G. Pontrelli, “A reaction-diffusion model to predict the regeneration of cardiac tissues via stem cell therapy”, Proceedings **MASCOT 2011**, 11th Conference on Applied Scientific Computing and Tools, Roma, 19-21 ottobre 2011, in corso di stampa

D) Preprint

E) Articoli di ricerca pubblicati su altre riviste scientifiche

- 1) A.M. Bersani, F. Centurelli, L. Fontana, A. Trifiletti – “Analytic transient solution of SCFL logic gates” – Int. J. Circ. Theory. Appl. – vol. 33, pp. 365-378 (2005).
- 2) E. Finotti, A.M. Bersani, E. Bersani – “Total quality indexes for extra-virgin olive oils”, Journal of Food Quality, vol. 30, pp. 911-931 (2007).

3) E. Finotti, A.M. Bersani, E. Bersani, M. Friedman – “La formazione dell’acrilamide nelle patate fritte e scelta delle cultivar più idonee mediante indice matematico funzionale”, La Rivista di Scienza dell’Alimentazione, supplemento al n. 1/2011 – Atti del Convegno “Il processo di frittura: ricerca e innovazione”, pp. 90-98 (2011).

4) E. Finotti, E. Bersani, A.M. Bersani, V. Vivanti, E. Toti – “Variation of nutritional parameters in the olive oil during the ripening phase”, La Rivista di Scienza dell’Alimentazione, vol. 11, pp. 33-41 (2011).

F) Pubblicazioni didattiche e divulgative

1) A.M. Bersani, F. Manzini – “Esercizi di Matematica Generale per Studenti di Economia e Commercio” – Aracne (1991).

2) L. Accardi, A.M. Bersani – “Note di Matematica Generale per Studenti di Economia e Commercio” – Aracne (1992).

3) A.M. Bersani, F. Manzini, L. Mastroeni, R. Suppa – “Esercizi di Algebra Lineare, Topologia e Geometria Analitica” – Esculapio (1997).

4) D. Andreucci, A.M. Bersani – “Risoluzioni di Problemi d’Esame di Analisi Matematica II” – Esculapio (1998).

5) A.M. Bersani - “The Italian Stamp on World Mathematical Year 2000” – Philamath, vol. 22, pp. 5-10 (2001).

6) A.M. Bersani - “Addendum to the paper ‘The Italian Stamp on World Mathematical Year 2000’” – Philamath, vol. 23, pp. 12-14 (2001).

7) M. Amar, A.M. Bersani – “Esercizi di Analisi Matematica per i nuovi corsi di laurea” - Esculapio (2002); seconda edizione: 2004.

8) A.M. Bersani - “Sulla divulgazione filatelica della Matematica: l’occasione mancata del WMY2000” – Archimede, vol. 2, pp. 67-74 (2002).

9) A.M. Bersani, F. Manzini, L. Mastroeni – “Matematica Generale: esercizi per i corsi di nuovo ordinamento della Facoltà di Economia” – Esculapio (2003).

10) A.M. Bersani – “Antonio Meucci – At last, the Glory” – Philatelia Chimica et Physica, vol. 25, pp. 82-88 (2003).

11) A.M. Bersani – “Alinghi and Mathematics: a ... *liaison dangereuse!*” – Philamath, vol. 25, pp. 10-16 (2005).

12) A.M. Bersani – “Dal *Treize* al *Sudoku*: tre secoli di permutazioni” - Archimede, vol. 1, pp. 18-25 (2007).

13) A.M. Bersani, A. Lumachi – “Ettore Majorana: A Meteor in the Golden Age of Physics”- Philatelia Chimica et Physica, part 1: vol. 30, n. 2, pp. 84-87 (2008); part 2: vol. 30, n. 3, pp. 114-124 (2008); part 3: vol. 31, n. 1, pp. 24-35 (2009). Apparso anche su Bulletin of Philately Atom Japan (PAJ), Dec.2007, **44** pp. 49-71.

- 14) A.M. Bersani – “Il Sudoku finalmente svelato dalla matematica?” - MaddMaths (rivista online), dicembre 2009.
- 15) A.M. Bersani, F. Manzini, L. Mastroeni – “Esercizi di Matematica Generale per i corsi di nuovo ordinamento delle Facoltà di Economia” – Esculapio (2009).
- 16) M. Amar, A.M. Bersani – “Esercizi di Analisi Matematica 1 con elementi di teoria” – Esculapio (2011).
- 17) M. Amar, A.M. Bersani – “Analisi Matematica I – Esercizi e richiami di teoria” – LaDotta (2012).