

# Curriculum vitae et studiorum

## Eleonora Alfinito

Ricercatrice di ruolo in Fisica della Materia (SSD FIS03)  
Università del Salento

### Formazione

Laurea in Fisica (con lode), 1992, Università di Salerno

Titolo della tesi di laurea: *Massa del neutrino e struttura del vuoto in teoria quantistica dei campi*

Dottorato di ricerca in Fisica (prima classificata al concorso di ammissione), 1995, Università di Bari

Titolo della tesi di dottorato: *Proprietà algebriche di equazioni di campo non-lineari e loro applicazioni in fisica*

### Attività di ricerca scientifica

1992 Borsa di studio INFN- sezione di Salerno (responsabile prof. S. Pace)

1996 Borsa di studio "Villani" INFN- sezione di Salerno (responsabile prof. S. Pace)

1998 Borsa di studio CNR

1998-1999 Borsa di studio post-doc Università di Salerno (responsabile prof. S. Pace)

1999-2001 Assegno di ricerca Università di Salerno (responsabile prof. G. Vitiello)

2001-2003 Assegno di ricerca INFN –sezione di Lecce (responsabile dott.ssa C. Pennetta)

2004 Ricercatrice in Fisica della Materia, Università del Salento

Abilitazione all'insegnamento della fisica in istituti di istruzione secondaria

Abilitazione al ruolo di professore associato FIS/07

### Progetti nazionali ed internazionali

1997-2000 Membro del Network Europeo ESF Topological Defects..., coordinato da T.W. B. Kibble.(1997-2000)

2001-2005 Membro del Network Europeo ESF COSLAB

2003-2005 Membro del progetto Europeo SPOT-NOSED

2003-2005 Membro del Prin "Models and Noise Measurements in Nanostructures"

2005-2007 Membro del Prin "Theoretical and Computational Study of the Electrical Properties of Large Biomolecules"

2009-2012 Membro del progetto Europeo BOND (Bioelectronic Olfactory Neuron Devices) e coordinatore locale dal 2011.

### Collaborazioni nazionali ed internazionali

Politecnico di Milano (prof. Marco Sampietro)

Università Claude Bernard I, Lione (prof. Nicole Jaffrezic-Renault, prof. Abdhellamid Errachid)

CNRS-Paris (dr. Edith Pajot-Augy, dr. Jasmina Vidic)

Università di Barcellona (prof. Gabriel Gomila)

Università di Münster (prof. Tilman Kuhn)

Università di Seoul (prof. Kiejin Lee)

### **Attività organizzativa**

1995 Membro del Comitato Organizzatore del Workshop: Nonlinear Physics.  
Theory and Experiments (Gallipoli, 1995)

2000 Membro del Comitato Organizzatore del Workshop ESF :  
Topological Defects (Capri, September 7-12, 2000)

2005 Membro del Comitato Organizzatore del Workshop: UPoN 2005 (Gallipoli)

2011 Chair del Workshop: All the colors of noise (Lecce, 14-15 November)

2012 Co-Chair del Workshop: "Bio-inspired Smell Nanobiosensors", Lecce 18-19 luglio 2012

2016 Membro del Program Committee del workshop Complexis 2016 (Roma, 24-26 aprile)

2017 Membro del Program Committee del workshop Complexis 2017 (Porto, 24-26 aprile)

**Referee** per: Europhysics Letters, Fluctuations and Noise Letters, The Computer Journal,  
Sensors and Actuators B, IEEE Sensors Journal, Acta biotheoretica, Scientific Reports

**Referee** Anvur per la VQR 2004

Membro del CNISM

Membro (complimentary) dell'American Nano Society (2012)

Membro (Complimentary) di RCS –Royal Society of Chemistry (2012)

### **Riconoscimenti**

In occasione del premio Nobel per la chimica 2012, la casa editrice AIP (American Institute of Physics) ha segnalato 6 lavori sull'argomento e di questi 3 sono a firma EA.

Best paper award 2017 INSTICC (Institute for Systems and Technology of Information, Control and Communication)

Ammessa al finanziamento individuale annual MIUR 2018

### **Attività didattica e professionale**

**1992** Insegnante di matematica e fisica, istituto magistrale "Regina Margherita", Salerno

**Anno Scolastico 1996/1997** :Insegnamento di matematica e fisica presso l'istituto tecnico  
"S.Caterina da Siena", Salerno

**2001** Abilitazione all'insegnamento della Fisica nella scuole medie superiori

**AA 1996-1998** Professore a contratto di Fisica Generale II, Università di Salerno,  
Diploma Universitario in Metodologie Fisiche

**AA 2004-2005** Esercitazioni di Fisica Generale I, Corso di laurea in Ingegneria  
gestionale/materiali/meccanica (docente dott. G. Gigli), Università del Salento

**AA 2004-2012** Esercitazioni di Fisica Generale II, Corso di laurea in Ingegneria gestionale/materiali/meccanica (docente prof. N. Lovergine), Università del Salento

**AA 2014-2015** Esercitazioni di Fisica Generale II, Corso di laurea in Ingegneria dell'Informazione (docente prof. L. Renna), Università del Salento

**AA 2016-2017** Esercitazioni di Fisica Generale II, Corso di laurea in Ottica ed Optometria (docente prof. G. Marsella), Università del Salento

**AA 2005-2008** Professore aggregato del corso di Complementi di Fisica, Università del Salento, (Accordo Italia-Francia)

**AA 2008-2010** Professore aggregato del corso di Fisica della Materia, Università del Salento

**AA 2012-2017** Professore aggregato del corso Physics of Matter I, Università del Salento

### ***Terza Missione***

Alfinito, E., Matteo Beccaria, Guido Macorini, "Fisica ed epidemiologia: nuovi metodi per nuove emergenze." *Il Bollettino* 2016.6-7 (2016): 48-50.

Alfinito, E "Il naso... nel taschino!" *Il Bollettino*, settembre 2012

Alfinito, E, Leuzzi, M., Pennetta, C. Reggiani, L. Convegno Internazionale: Bio-inspired Smell Nanobiosensors, *Il Bollettino*, settembre 2012

Alfinito, E, Cataldo, R., Guascito, M.R., Conferenza al Castello Carlo V, *Quando la tecnologia imita la natura: anche fra macchina e corpo l'integrazione nasce dal dialogo*. Settimana della Cultura Scientifica 2017

### **Attività scientifica < 2001**

Approccio termodinamico alla teoria dei campi con applicazioni ai sistemi dissipativi, oscillazioni di sapore e meccanismi di produzione di massa

Sistemi non-lineari di particolare rilievo per la struttura della materia. Quantum brain models

### **Attività scientifica < 2004**

Approccio stocastico allo studio dell'elettromigrazione e della conduzione in materiali compositi

### **Attività scientifica dal 2004**

Proprietà di trasporto elettrico in biomateriali, eventi estremi, nanosensori, proteotronica.

### **Commissioni di esame**

Esami di Fisica I, Corso di laurea in Ingegneria gestionale/materiali/meccanica (docente dott. G. Gigli), Università del Salento  
Esami di Fisica II, Corso di laurea in Ingegneria gestionale/materiali/meccanica (docente prof. N. Lovergine), Università del Salento  
Esami di Fisica della Materia, Corso di laurea in Ingegneria dei materiali (docente prof. L. Reggiani), Università del Salento  
Esami di Fisica dello Stato Solido, Corso di laurea in Ingegneria dei materiali (docente prof. L. Reggiani), Università del Salento  
Esami di Fisica Generale II, Corso di laurea in Ingegneria dell'informazione (docente, prof L. Renna)  
Esami di Fisica Generale II, Corso di laurea in Ingegneria dell'informazione (docente, prof. D. Martello)

### **Attività istituzionali**

Membro del gruppo di riesame del Corso di laurea magistrale Materials Engineering and Nanotechnology  
Membro del Consiglio di Dottorato in Ingegneria dei materiali delle strutture e nanotecnologie ,  
Università del Salento

### **Tesi di Laurea triennale in ingegneria industriale**

Laureandi Alessia Peluso, Chiara Forte, Daniele Calabriso

### **Tesi di Laurea magistrale in Ingegneria dei Materiali**

Laureando: Salvatore Rizzo

### **Pubblicazioni**

Monografia: 1  
Curatele: 3  
Capitoli in volumi:3  
Lavori in riviste internazionali:57  
Atti di conferenze in volume:36

### **Monografie**

Alfinito E, Pousset J, Reggiani L. Proteotronics: Development of Protein-Based Electronics. CRC Press; 2015 Oct 22.

### **Capitoli di Libri**

- 3) Alfinito E, Pousset J, Reggiani L. The electrical properties of olfactory receptors in the development of biological smell sensors. *Olfactory Receptors: Methods and Protocols*. 2013:67-83.
- 2) C. Pennetta, V. Akimov, E. Alfinito, L. Reggiani, T. Gorojankina, J. Minic, E. Pajot-Augy, M. A. Persuy, R. Salesse, I. Casuso, A. Errachid, G. Gomila, O. Ruiz, J. Samitier, Y. Hou, N. Jaffrezic, G. Ferrari, L. Fumagalli, M. Sampietro, *Towards the Realization of Nanobiosensors based on G Protein-Coupled Receptors*, in Wiley-VCH Book series on Nanotechnologies for the Life Sciences, vol. 4, Nanodevices for the Life Sciences, ed. by Challa S.S.R. Kumar, Wiley-VCH, Berlin, pp 217-240 (2006)
- 1) E. Alfinito, G. Vitiello, The Bessel equation and dissipation, Ed. K. Watanabe, in : ``Garden of Quanta: Essays in honor of Hiroshi Ezawa'', World Scientific Publ. Co., Singapore, pp. 245-256 (2003).

### **Curatele**

- 3)E. Alfinito, M. Leuzzi, J.-F. Millithaler (Editors), *All the Colors of Noise, Essays in honor of Lino Reggiani*, Munari Editore, Padova, Italia ISBN 978889770100-2
- 2)Reggiani L, Pennetta C, Akimov V, Alfinito E, Rosini M (Editors). *Unsolved Problems of Noise and Fluctuations*, AIP conference proceedings 2005 Nov 14 (Vol. 800, No. 1). AIP.
- 1)Alfinito, E., M. Boiti, L. Martini, and F. Pempinelli. "Nonlinear Physics, Theory and Experiment." (1996).

### Lavori su rivista

- 57) Alfinito E, Beccaria M, Large N expansion of Wilson loops in the Gross-Witten-Wadia matrix model, *J. Phys. A: Mathematical and Theoretical*, 51(5) 055401
- 56) Cataldo R, Alfinito E, Reggiani L. Hierarchy and assortativity as new tools for binding-affinity investigation: the case of the TBA aptamer-ligand complex, *IEEE Transactions on Nanobioscience* (2017, in press)
- 55) Reggiani L, Alfinito E. The Puzzling of Zero-Point Energy Contribution to Black-Body Radiation Spectrum: The Role of Casimir Force, *Fluctuations and Noise Letters*, 16(4),1771002.
- 54)Alfinito E, Beccaria M, Fachechi A, Macorini G. Reactive immunization on complex networks. *EPL (Europhysics Letters)*. 2017 Feb 23;117(1):18002.
- 53)Alfinito E, Beccaria M, Macorini G. Critical behavior in a stochastic model of vector mediated epidemics. *Scientific reports*. 2016;6.
- 52)Alfinito E, Reggiani L, Cataldo R, De Nunzio G, Giotta L, Guascito MR. Modeling the microscopic electrical properties of thrombin binding aptamer (TBA) for label-free biosensors. *Nanotechnology*. 2017 Jan 4;28(6):065502.
- 51)Alfinito E, Reggiani L. Current-voltage characteristics of seven-helix proteins from a cubic array of amino acids. *Physical Review E*. 2016 Jun 1;93(6):062401.
- 50)Alfinito E, Reggiani L. Modeling Current-Voltage Characteristics of Proteorhodopsin and Bacteriorhodopsin: Towards an Optoelectronics Based on Proteins. *IEEE Transactions on NanoBioscience*. 2016 Oct;15(7):775-80.
- 49)Reggiani L, Alfinito E, Kuhn T. Duality and reciprocity of fluctuation-dissipation relations in conductors. *Physical Review E*. 2016 Sep 9;94(3):032112.
- 48)Reggiani L, Alfinito E, Kuhn T. The dual property of number and velocity fluctuations of charge carriers in a macroscopic conductor under thermodynamic equilibrium conditions. *Lithuanian Journal of Physics*. 2016 Jan 11;55(4).
- 47)Alfinito E, Reggiani L. Mechanisms responsible for the photocurrent in bacteriorhodopsin. *Physical Review E*. 2015 Mar 4;91(3):032702.
- 46)Alfinito E, Reggiani L. Opsin vs opsin: New materials for biotechnological applications. *Journal of Applied Physics*. 2014 Aug 14;116(6):064901.
- 45)Alfinito E, Reggiani L. Evidence of Gumbel distributions of conductance fluctuations in bacteriorhodopsin thin films. *Journal of Physics: Condensed Matter*. 2013 Aug 21;25(37):375103.
- 44)Alfinito E, Pousset J, Reggiani L, Lee K. Photoreceptors for a light biotransducer: a comparative study of the electrical responses of two (type-1) opsins. *Nanotechnology*. 2013 Sep 6;24(39):395501.
- 43)Alfinito E, Reggiani L. Evidence of Gumbel distributions of conductance fluctuations in bacteriorhodopsin thin films. *Journal of Physics: Condensed Matter*. 2013 Aug 21;25(37):375103.
- 42)Alfinito E, Millithaler JF, Reggiani L. Gumbel distribution and current fluctuations in critical systems. *Fluctuation and Noise Letters*. 2012 Sep;11(03):1242005.
- 41)Alfinito E, Millithaler JF, Reggiani L, Zine N, Jaffrezic-Renault N. Human olfactory receptor 17-40 as an active part of a nanobiosensor: a microscopic investigation of its electrical properties. *Rsc Advances*. 2011;1(1):123-7.
- 40)Alfinito E, Millithaler JF, Reggiani L. Olfactory receptors for a smell sensor: a comparative study of the electrical responses of rat I7 and human 17-40. *Measurement Science and Technology*. 2011 Nov 15;22(12):124004.
- 39)Alfinito E, Millithaler JF, Reggiani L. Charge transport in purple membrane monolayers: A sequential tunneling approach. *Physical Review E*. 2011 Apr 21;83(4):042902.

- 38)Alfinito E, Pennetta C, Reggiani L. Olfactory receptor-based smell nanobiosensors: an overview of theoretical and experimental results. *Sensors and Actuators B: Chemical*. 2010 Apr 29;146(2):554-8.
- 37)Alfinito E, Reggiani L. Role of topology in electrical properties of bacterio-rhodopsin and rat olfactory receptor I7. *Physical Review E*. 2010 Mar 31;81(3):032902.
- 36)Alfinito E, Reggiani L. Charge transport in bacteriorhodopsin monolayers: The contribution of conformational change to current-voltage characteristics. *EPL (Europhysics Letters)*. 2009 Apr 1;85(6):68002.
- 35)E.Alfinito, C. Pennetta, and L. Reggiani, Topological change and impedance spectrum of rat olfactory I7: A comparative analysis with bovine rhodopsin and bacteriorhodopsin, *JAP* , 105(8),084703-1-6 (2009)
- 33)C. Pennetta, E. Alfinito, and L. Reggiani, Tuning the Correlation Decay in the Resistance Fluctuations of Multi-Species Networks, *J. Stat. Mech: Theory and Experiment*, 2 , P02053 (2009)
- 32)Alfinito E, Pennetta C, Reggiani L. A network model to correlate conformational change and the impedance spectrum of single proteins. *Nanotechnology*. 2008 Jan 23;19(6):065202.
- 31)Akimov V, Alfinito E, Bausells J, Benilova I, Paramo IC, Errachid A, Ferrari G, Fumagalli L, Gomila G, Grosclaude J, Hou Y. Nanobiosensors based on individual olfactory receptors. *Analog Integrated Circuits and Signal Processing*. 2008 Dec 1;57(3):197-203.
- 30)Hou Y, Jaffrezic-Renault N, Martelet C, Zhang A, Minic-Vidic J, Gorojankina T, Persuy MA, Pajot-Augy E, Salesse R, Akimov V, Reggiani L Alfinito E., Pennetta C. et al. A novel detection strategy for odorant molecules based on controlled bioengineering of rat olfactory receptor I7. *Biosensors and Bioelectronics*. 2007 Feb 15;22(7):1550-5.
- 29) G, Casuso I, Errachid A, Ruiz O, Pajot E, Minic J, Gorojankina T, Persuy MA, Aioun J, Salesse R, Bausells J. et al. Advances in the production, immobilization, and electrical characterization of olfactory receptors for olfactory nanobiosensor development. *Sensors and Actuators B: Chemical*. 2006 Jul 28;116(1):66-71.
- 28)V.Akimov, E. Alfinito, J. Bausells, I. Benilova, I. Casuso Paramo, A. Errachid, et al., ,Nanobiosensors based on individual olfactory receptors , *Analog Integr. Circ. Sig. Process* , on-line on 6 December 2007, DOI 10.1007/s10470-007-9114-0 IF 0.591
- 27)Hou Y, Helali S, Zhang A, Jaffrezic-Renault N, Martelet C, Minic J, Gorojankina T, Persuy MA, Pajot-Augy E, Salesse R, Bessueille F et al.. Immobilization of rhodopsin on a self-assembled multilayer and its specific detection by electrochemical impedance spectroscopy. *Biosensors and Bioelectronics*. 2006 Jan 15;21(7):1393-402.
- 26)C. Pennetta, E. Alfinito, L. Reggiani , F. Fantini, I. de Munari, and A. Scorzoni, Biased Resistor Network Model for Electromigration Failure and Related Phenomena in Metallic Lines, *Physical Review B* 70, 174305 (2004).
- 25)C. Pennetta, E. Alfinito, L. Reggiani , Linear and nonlinear regime of a random resistor network under biased percolation, *Computational Materials Science*, 30, 120-125 (2004) IF 1.549
- 24) C. Pennetta, E. Alfinito, L. Reggiani and S. Ruffo, Non-Gaussian resistance noise near electrical breakdown, in granular material , *Physica A*, 340(1-3), 380-387 (2004) IF 1.434
- 23) C. Pennetta, E. Alfinito, L. Reggiani and S. Ruffo, Non-Gaussianity of resistance fluctuations near electrical breakdown, *Semic. Sci. Tech*, 19,S164-S166 (2004)
- 22)E.Alfinito and G. Vitiello, *Time reversal, Loop-antiloop symmetry and Bessel equation*, *Mod. Phys Lett. B* 17 (23), 1207-1218 (2003).
- 21)C.Pennetta, E. Alfinito and L.Reggiani, *Monte Carlo simulation of electromigration phenomena in metallic lines*,*Math. Comp. Simul.*, 62 (3-6) 495-499 (2003).
- 20)E. Alfinito, G. Vitiello, *Domain formation in non-istantaneous breaking phase transitions*, *Phys. Rev. B* 65, 054105-1-5 (2002). IF 3.322
- 19) E. Alfinito, O. Romei, G. Vitiello, *On topological defect formation in the process of symmetry breaking phase transitions*, *Mod. Phys. Lett. B* 16 (4), 1-14 (2002).
- 18) C. Pennetta, L.Reggiani, E.Alfinito, Gy. Trefan, *Stationary regime of random resistor networks under biased percolation*, *J. Phys: Cond. Mat.* 14, 2371-2381 (2002).
- 17) P. Tempesta, E. Alfinito, R.A. Leo, G. Soliani, *Quantum models related to fouled Hamiltonians of the harmonic oscillator*, *J. Math. Phys.* 43, 3538-3553 (2002).
- 16) C. Pennetta, L.Reggiani, Gy. Trefan, E.Alfinito, *Resistance and Resistance fluctuations in random resistor networks under biased percolation*, *Phys. Rev. E* 65, 066199 (2002)
- 15)E. Alfinito, R.G. Vigiione, G. Vitiello, The decoherence criterion, *Mod. Phys. Lett. B*15 (4 & 5) 127-135 (2001).

- 14) E. Alfinito, R. Manka, G. Vitiello, Vacuum structure for expanding geometry, *Class. Quant. Grav.* 17, 93-111 (2000).
- 13) E. Alfinito, G. Vitiello, Formation and life-time of memory domains in the dissipative quantum model of brain, *Int. J. Mod. Phys. B* 14, 853-868 (2000).
- 12) Alfinito, G. Vitiello, The dissipative quantum model of brain: how does memory localize in correlated neuronal domains, *Information Sciences*, 128, 147-294 (2000).
- 11) E. Alfinito, G. Vitiello, Dissipation and memory domains in the quantum model of brain, in "Quantum Brain Dynamics", special issue of "Suri-kagaku journal", 10, 49-54, (2000)
- 10) E. Alfinito, G. Vitiello, Canonical Quantization and Expanding Metrics, *Phys. Lett. A* 252, 5-10 (1999).
- 9) E. Alfinito, M. S. Causo, G. Profilo, G. Soliani, A class of nonlinear wave equations containing the continuous Toda case, *J. Phys. A* 31, 2173-2189 (1998).
- 8) E. Alfinito, V. Grassi, R.A. Leo, G. Profilo, G. Soliani, Equations of the reaction-diffusion type with a loop-algebra structure, *Inv. Probl.* 14, 1387-1401 (1998).
- 7) E. Alfinito, G. Profilo, G. Soliani, Properties of Equations of the Continuous Toda Type, *J. Phys. A.* 30, 1527-1547 (1997).
- 6) E. Alfinito, G. Soliani, L. Solombrino, The Symmetry structure of the heavenly equation, *Lett. Math. Phys.* 41, 379-389 (1997).
- 5) E. Alfinito, M. Blasone, A. Iorio, G. Vitiello, Squeezed Neutrino Oscillations, *Phys. Lett. B* 362, 91-96 (1995).
- 4) E. Alfinito, M. Leo, R.A. Leo, M. Palese, G. Soliani, Integrable non-linear field equations and loop algebra structure, *Phys. Lett. B* 352, 314-320 (1995).
- 3) E. Alfinito, M. Leo, R.A. Leo, G. Soliani, L. Solombrino, Symmetry properties and exact patterns in birefringent optical fibers, *Phys. Rev. E* 52, 3159-3164 (1995).
- 2) E. Alfinito, G. Profilo, G. Soliani, Two extended versions of the 2D-Heisenberg model, *Phys. Rev. B* 51, 2972-2978 (1995).
- 1) E. Alfinito, M. Leo, R.A. Leo, M. Palese, G. Soliani, Algebraic properties of the 1+1 dimensional Heisenberg spin field model, *Lett. Math. Phys.* 32, 241-248 (1994)

### Atti di conferenze

- 36) Alfinito E, Cataldo R, Reggiani L. A network of networks to reproduce the electrical features of an aptamer-ligand complex: What an electrical network tells about affinity, COMPLEXIS 2017 - Proceedings of the 2nd International Conference on Complexity, Future Information Systems and Risk 2017, Pages 62-69 2nd International Conference on Complexity, Future Information Systems and Risk, COMPLEXIS 2017; Porto; Portugal; 24 April 2017 through 26 April 2017; Code 128062
- 35) Alfinito E, Beccaria M, Fachechi A, Macorini G. Probing complexity with epidemics: A new reactive immunization strategy, COMPLEXIS 2017 - Proceedings of the 2nd International Conference on Complexity, Future Information Systems and Risk 2017, Pages 116-123 2nd International Conference on Complexity, Future Information Systems and Risk, COMPLEXIS 2017; Porto; Portugal; 24 April 2017 through 26 April 2017; Code 128062
- 34) Alfinito E, Reggiani L, Cataldo R, De Nunzio G, Giotta L, Guascito, M.R. Thrombin Aptamer-Based Biosensors: A Model of the Electrical Response, *Lecture Notes in Electrical Engineering* Volume 457, 2018, Pages 115-122 19th AISEM National Conference on Sensors and Microsystems, 2017; Lecce; Italy; 21 February 2017 through 23 February 2017; Code 202339
- 33) Alfinito Eleonora, Reggiani Lino, Cataldo Rosella, Denunzio Giorgio, Giotta Livia, Guascito Maria Rachele (2016). Proteotronics: Application to Human 17-40 and Bacteriorhodopsin Receptors. In: *Complexis 2016*. vol. 1, p. 32-38, Oporto:scitepress, ISBN: 978-989-758-181-6, Roma, Italia, 22-24 Aprile 2016
- 32) Alfinito Eleonora, Reggiani Lino (2015). Nanodevices Based on Proteins: the Emerging Science of Proteotronics. In: *1st Workshop on Nanotechnology in Instrumentation and Measurement NANOFIM 2015*. p. 54-57, nonso:IEEE Instrumentation and Measurement Society, Lecce, Italia, 24-25 Luglio 2015

- 31) Eleonora Alfinito, Jeremy Pousset, Lino Reggiani (2015). Proteotronics: Electronic Devices Based on Proteins. In: Sensors, lecture notes in electrical engineering. vol. 319, p. 3-7, svizzera:Springer, Roma, italia, 19-22 febbraio 2014, doi: 10.1007/978-3-319-09617-9\_1
- 30) E. Alfinito, J. Pousset, L. Reggiani (2014). Investigations on the electrical current-voltage response in protein light receptors. In: Journal of Physics Conference Series. vol. 490, p. 012134-1-012134-5, BRISTOL:IOP PUBLISHING LTD, Praga, Repubblica Ceca, SEP 01-05, 2013, doi: 10.1088/1742-6596/490/1/012134
- 29) Alfinito E, Vitiello G. Time-reversal and the Bessel equation. In Journal of Physics: Conference Series 2015 (Vol. 631, No. 1, p. 012023). IOP Publishing. In Journal of Physics: Conference Series 2015 (Vol. 647, No. 1, p. 012002). IOP Publishing.
- 28) Alfinito E, Pousset J, Reggiani L. Investigations on the electrical current-voltage response in protein light receptors. In Journal of Physics: Conference Series 2014 (Vol. 490, No. 1, p. 012134). IOP Publishing.
- 27) Alfinito E, Pousset J, Reggiani L. Non-Gaussian fluctuations in opsins. In Noise and Fluctuations (ICNF), 2013 22nd International Conference on 2013 Jun 24 (pp. 1-4). IEEE.
- 26) Alfinito E, Pousset J, Reggiani L. PROTEOTRONICS: The emerging science of protein-based electronic devices. In Journal of Physics: Conference Series 2015 (Vol. 647, No. 1, p. 012002). IOP Publishing.
- 25) Alfinito E, Pousset J, Reggiani L. Non-Gaussian fluctuations in opsins. In Noise and Fluctuations (ICNF), 2013 22nd International Conference on 2013 Jun 24 (pp. 1-4). IEEE.
- 24) E. Alfinito, J.-F. Millithaler, and L. Reggiani, A comparative study of the electrical properties of rat I7 and human 17-40 olfactory receptors for the realization of a nanobiosensor, Proceedings of the IV International Conference on Sensing Technology, June 3-5, 2010, Lecce, Italy; S.C. Mukhopadhyay, A. Fuchs, G. Sen Gupta and A. Lay-Ekuakille (eds) ISBN 978-0-473-16942-8. Copyrights Massey University, Massey New Zealand (2010)
- 23) J.-F. Millithaler, E. Alfinito, Microscopic investigation of electrical transport in biological materials, in *All the Colors of Noise, Essays in honor of Lino Reggiani*, pg 103-114, in: E. Alfinito, M. Leuzzi, J. -F. Millithaler (Editors), Munari Editore, Padova, Italia ISBN 978889770100-2
- 22) E. Alfinito, J. F. Millithaler, C. Pennetta, and L. Reggiani, A nanobiosensor based on olfactory receptors, Proceedings of the 3<sup>rd</sup> IEEE International Workshop on Advances in Sensors and Interfaces, IWASI 2009, Trani 25-26 June 2009, p25-28, ISBN: 978-1-4244-4709-1.
- 21) E. Alfinito, C. Pennetta, and L. Reggiani, Smell nanobiosensors: Hybrid systems based on the electrical response to odorant capture. Theory and experiment AIP Conf. Proceed. 1137, eds M. Pardo, G. Sberveglieri, conf. ISOEN 2009, Brescia, Italy, 15-17 April 2009, ISBN 978-0-7354-0674-2, p 115.
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