Curriculum Vitæ

1. Personal data

Name: Alberto Petri

Born: 5 January 1958

Nationality: Italian

Languages: Italian (mother tongue), English (fluent), Portuguese-Brazilian (fluent), French (school level)

2. Higher education

- 1984: *Laurea cum laude* in Physics at the University of Rome La Sapienza
- 1991: *Dottorato di Ricerca* (PhD) in Physics at the the University of Rome La Sapienza

3. Positions

- 1984-86: Teacher at High School
- 1986-87: fellowship at the Institute of Acoustics of CNR (the Italian National Council for the Scientific Research), Rome (Italy)
- 1987-88: staff researcher at the Lasers and Accelerators Laboratory of ENEA (the Italian Agency for the Atomic Energy), Frascati (Italy)
- 1988-2001: staff researcher at the Institute of Acoustics of CNR, Rome (Italy)
- 2001-2004: *Primo Ricercatore* (senior scientist) and research group leader at the Institute of Acoustics
- 2004-2104: *Responsabile di UOS* (Coordinator) of the Tor Vergata Research Unit of the CNR Institute of Complex Systems

4. Present scientific interests

I. Mechanics of disordered materials: fracture, granular systems and acoustic emission

II. Statistical physics and complex systems: phase transitions, non-equilibrium and glassy dynamics, slow relaxation and random deposition

III. Mathematical methods for statistical analysis and stochastic processes in physical, financial and electoral systems

5. Past topics of research

I. Lasers and optical resonators

II. Generation, propagation and interaction of electromagnetic and elastic guided waves

III. Elastic and vibrational properties of disordered and aperiodic structures

6. Sigificant realizations

- establishment in 1996 of a, previously missing, national meeting on statistical physics and complex systems, that since then has become a point of references for the related community. The meeting is since then held yearly at the University Campus of Parma (http://www.fis.unipr.it/stat/events.htm)

- realization, starting from 2001, of the first laboratory in Italy for the experimental study of the physics of granular media

- establishment, since 2008, of an interdisciplinary school devoted to young PhD researchers and promoting the development and implementation of new cell model systems to improve pharmaceutical, genomic and bioinformatic research. Five editions of the school have already been held at the the CNR Area of Tor Vergata (http://www.cms3.cnr.it/)

7. Scientific projects

As coordinator or responsible:

- 1998-2000: Coordinator and Principal Investigator of the project *Dynamics and transport in granular systems*, "Progetto Speciale" with the University of Parma, funded by CNR

- 2000-2001: Principal Investigator for the project *Acoustic emission based monitoring of mechanical machining*, funded on the behalf of the CNR Presidency

- 2003-2006: Coordinator and Principal Investigator of two biennial French-Italian cooperation projects *Towards a thermodynamics of granular matter*, funded by CNR and CNRS

- 2004-2006: Coordinator and Principal Investigator of the project *Dynamical and rheological properties of granular matter*, "FIRB" funded by the Italian Ministry of University and Research

- 2009: Responsible for the project *Role of metastable states in relaxation processes*, RSTL funded by CNR

- 2010: Principal Investigator of the project *Physics of shear faults: computer modelling and laboratory experiments*, funded by the Israeli Vigevani Fund, for the promotion of Israeli-Italian cooperation

As a participant:

- 1997-1999: Co-Investigator in the project *FI 11: Statistical Mechanics* funded by INFN (Italian National Institute for Nuclear Physics)

- 1998-2001: Co-Investigator in the European Network *Fractal structures and self-organization*, funded by CE (European Community) in the frame of the "Training and Mobility of Researchers" programme

- 1999: Co-Investigator in the project *Statistical approaches to granular matter* PAIS fundend by INFM (National Institute for the Physics of Condensed Matter)

- 2000-2002: Co-Investigator in the project *Enviromental Acoustic Reconaissance and Sounding*, funded by ASI (Agenzia Spaziale Italiana)

- 2007-2009: Co-Investigator in the European project *TRIGS: Triggering extreme events in materials and geosystems*, funded by the UE FP6 programme

- 2011-2014: Co-Investigator in *The unjamming transition*, FIRB project funded by the Italian Ministry of University and Research

- since 2013: participation to the European Cost Action MP1303: *Understanding and Controlling Nano and Mesoscale Friction*

8. Conference organization

- 1991 *Fourth International School on Physical Acoustics*, Ettore Majorana Centre for Scientific Culture, Erice (Italy), October 3-10

- 1996- present: co-founder and organizer of eighteen consecutive editions of *Convegno Nazionale di Fisica Statistica and Sistemi Complessi* national meeting on Statistical Physics and Complex Systems, held yearly in the Campus of the University of Parma (Italy)

- 1998: *International Workshop on Granular Systems*, Scuola Normale Superiore, Pisa (Italy), 22-24 October 1998

- 2007: *Scaling and Fluctuations in Materials* (international conference on statistical physics and stochastic processes in materials), Todi (Italy), 4-7 July 2007

- 2007: *Stochasticity and non-linearity in materials response*, ESF (European Science Foundation) workshop for the activity "Stochdyn", Todi (Italy), 5 July 2007 (separate special session of the previous workshop)

- 2009: *Grains, Friction and Faults: 11^{th} Course of the Erice International School on Complexity*, Ettore Majorana Centre for Scientific Culture, Erice (Sicily), 20-25 June 2009

- 2010 - 2011: two editions of *Fluctuations in Material Properties*, (international conference on statistical physics and stochastic processes in materials) Courmayeur (Italy), 27-29 January 2010 and 31 January - 1 February 2011

- 2010: *Stick slip dynamics from nano to geophysical scales*, CECAM (European Centre for Molecular and Atomic Computation), École Polytechnique Fédérale de Lausanne (Switzerland), 3-5 May 2010

- 2010: *Paths in Complexity*, CNR and University La Sapienza, Rome (Italy), 23-24 September 2010

- 2012 -2013: two editions of *Materials Deformation: Fluctuations, Scaling, Predictability*, École de Physiques des Houches (France), 22-27 January 2012 and 17-22 February 2013

- 2008-2014: co-founder and organizer of six consecutive editions of *Cell Model Systems Summer School* (interdisciplinary school in biotechnologies), Rome, CNR Campus of Tor Vergata (Italy)

9. Teaching and tutoring

- tutor or co-tutor of 10 students for *Laurea* in Physics or in Statistical Sciences, and 3 students for *Dottorato* (PhD) in Physics at the universities of Rome La Sapienza and Roma Tre

- 1989-94: lecturer in 'Physical Acoustics and its Application to Medical Diagnosis", for the "Scuola di Specializzazione in Fisica Sanitaria" (Master in Health Physics), La Sapienza University

- 1995-96: Adjunct Professor in physics, course "Vibrational Properties of Solids", for the Laurea in Materials Engineering at the University of Modena

- 1996-97: Adjunct Professor in physics, course "Methods in Statistical Mechanics", for the Laurea in Physics at the University of Camerino

- 2002-03: training course "Stochastic Processes and Random Noise", for the staff at the Rome-Tor Vergata site of CNR

- 2003-04: Adjunct Professor in physics, PhD course "Random variables and stochastic processes", Department of Physics, Roma Tre University

- 2008-present: Adjunct Professor in physics, PhD course "Introduction to Random Variables and Complex Systems", given yearly at the Department of Physics, Roma Tre University

10. Scientific production

- 2 co-edited books, about 70 articles in ISI scientific Journals, 30 articles in peer reviewed international proceedings, and 10 technical reports

- 1 national patent with PCT (Patent Cooperation Treaty) application and publication

- about 30 invited talks at international conferences, schools or workshops, and a copious number of invited seminars in universities and research centers over many countries

- about 10 contributions to magazines, newspapers, and other wide-audience media or events

Patents

1. F.A. Farrelly, A. Petri, L. Pitolli, G. Pontuale and G.B. Cannelli:
   Procedimento e relativo dispositivo basati sull'emissione acustica per la supervisione automatica delle lavorazioni meccaniche,
   Italian patent RM2000 A000560, 24 October 2000.

2. F.A. Farrelly, A. Petri, L. Pitolli, G. Pontuale and G.B. Cannelli:
Method and Relevant Device for the Automatic Supervision of the Degree of Wear of the Tools Employed in the Unmanned Mechanical Working,
European Patent (PCT) Pub. No.: WO/2002/036304; International Application No.:PCT/IT2001/000
Publication Date: 10.05.2002; International Filing Date: 22.10.2001 Estensione: PCT
(vedi http://www.wipo.int/pctdb/en/wo.jsp?wo=2002036304)

Books:

3. *Acoustic sensing and probing*,
A. Alippi and A. Petri Editors, World Scientific (Singapore 1992).

4. *Advanced Topics in Cell Model Systems*,
A. Macagnano, A. Raimundo-Orlando, F. A. Farrelly, A. Petri and Marco Girasole Eds.
Nova Science Publisher Inc., N.Y. 2009

Publications in JCR magazines:

5. M. Ibez Berganza, P. Coletti, and A. Petri,
Anomalous metastability in a temperature-driven transition,
Europhysics Letters **106**, 56 (2014).

6. M. Ibez Berganza, P. Coletti, and A. Petri,
Dynamic metastability in the two-dimensional Potts ferromagnet,
Physical Review **E 89**, 052115 (2014).

7. G. Pontuale, F. Dalton, S. Genovese, E. La Nave and A. Petri,
The electoral system for the Italian Senate: an analogy with deterministic chaos?,
Annals of Operational Research **215**, 245 (2014).

8. Andrea Gnoli, Alessandro Sarracino, Andrea Puglisi, and Alitberto Petri,
Nonequilibrium fluctuations in a frictional granular motor: Experiments and kinetic theory,
Physical Review **E 87**, 052209 (2013).

9. Andrea Gnoli, Alberto Petri, Fergal Dalton, Giorgio Pontuale, Giacomo Gradenigo, Alessandro Sarracino and Andrea Puglisi,
Brownian Ratchet in a Thermal Bath Driven by Coulomb Friction,
Physical Review Letters **110**, 120601 (2013).

10. Giorgio Pontuale, Francesca Colaiori and Alberto Petri,
Slow crack propagation through a disordered medium: Critical transition and dissipation,
Europhys Letters **101**, 16005 (2013).

11. Massimo Pica Ciamarra, Fergal Dalton, Lucilla de Arcangelis, Cataldo Godano, Eugenio Lippiello, Alberto Petri,
The role of interstitial impurities in the frictional instability of seismic fault models,
Tribology Letters **48**, 89 (2012).

12. Riccardo Balzan, Fergal Dalton, Vittorio Loreto, Alberto Petri
and Giorgio Pontuale,
Brownian motor in a granular medium,
Physical Review **E 83**, 031310 (2011).

13. Fabio Leoni, Andrea Baldassarri, Fergal Dalton, Alberto Petri, Giorgio Pontuale and Stefano Zapperi,
Friction memory in the stick-slip of a sheared granular bed,
Journal of Non-Crystalline Solids, Journal of Non-Crystalline Solids **357**, 749 (2011).

14. Fergal Dalton, Alberto Petri and Giorgio Pontuale,
A random neighbour model for yielding,
J. Stat. Mech. P03011 (2010).

15. Federico Polito, Alberto Petri, Giorgio Pontuale and Fergal Dalton,
Analysis of metal cutting acoustic emissions by time series models,
The International Journal of Advanced Manufacturing Technology **48**, 897 (2010).

16. A. Petri, A. Baldassarri, F. Dalton, G. Pontuale, L. Pietronero, S. Zapperi,
Stochastic dynamics of a sheared granular medium,
The European Physical Journal B **64**, 531-535 (2008).

17. A. Petri, M. Ibáñez de Berganza and V. Loreto,
Ordering dynamics in the presence of multiple phases,
Philosophical Magazine **88**, 3931 (2008).

18. Miguel Ibáñez de Berganza, Ezequiel E. Ferrero, Sergio A. Cannas, Vittorio Loreto and Alberto Petri,
Phase separation of the Potts model in the square lattice,
The European Physical Journal, Special Topics **143**, 273-275 (2007).

19. A. Petri, F. Coccetti, L. Pietronero, V. Alfi,
Roughness and finite size effect in the NYSE stock-price fluctuations,
The European Physical Journal B **55**, 135-142 (2007).

20. M. Ibáñez de Berganza, V. Loreto and A. Petri,
Phase ordering and symmetries of the Potts model,
Philosophical Magazine B **87**, 779-786 (2007).

21. A. Virgilii, A. Petri and S. R. Salinas,
A thermodynamic fibre bunldle model with disorder,
Journal of Statistical Mechanics: Theory and experiments P04009 (2007).

22. A. Petri and M. J. de Oliveira,
Temperature in out-of-equilibrium lattice gas,
International Journal of Modern Physics C **17**, 1703-1715 (2007).

23. V. Alfi, F. Coccetti, M. Marotta, A. Petri, L.Pietronero,
Exact Results for the Roughness of a Finite Size Random Walk,
Physica A **370**, 127-131 (2006).

24. A. Baldassarri, F. Dalton, A. Petri, S. Zapperi, G.Pontuale and L. Pietronero,
Brownian forces in shared granular matter,
Physical Review Letters **96**, 118002 (2006).

25. F. Dalton, F. Farrelly, A. Petri, L. Pietronero, L. Pitolli and G. Pontuale:
Shear Stress Fluctuations in the Liquid-Solid Granular Transition,
Physical Review Letters **95**, 138001 (2005).

26. Pierluigi Novi Inverardi, Alberto Petri, Giorgio Pontuale and Aldo Tagliani:
Stieltjes moment problem via fractional moments,
Applied Mathematics and Computation **166** (3), 664-677 (2005).

27. M. J. de Oliveira, A. Petri and T. Tomé:
Crystal vs Glass formation in lattice models with many coexisting states ordered states,
Physica A **342**, (1-2), 97-103 (2004).

28. F.A. Farrelly, A. Petri, L. Pitolli, G. Pontuale, A. Tagliani and P. L. Novi Inverardi:
Statistical properties of acoustic emission signals from metal cutting processes,
Journal of the Acoustic Society of America - JASA, **116** (2), 981-986 (2004)
.

29. F.A. Farrelly, A. Petri, L. Pitolli and G. Pontuale:
In-situ acoustic-based analysis system for physical and chemical properties of the lower Martian atmosphere,
Planetary and Space Science **52**, 125-131 (2004).

30. M. J. de Oliveira, A. Petri and T. Tomé:
Glassy states in lattice models with many coexisting crystalline phases,
Europhysics Letters **65**, 20-26 (2004).

31. Alberto Petri:
Lattice Models of Disorder with Order,
Brazilian Journal of Physics **33**, 521-525 (2003).

32. F. A. Farrelly a , A. Petri a , L. Pitolli a and G. Pontuale:
Acoustic Event Localization by Means of Passive Transducer Arrays in Environmental Monitoring,
Acta Acustica **Suppl. 1, 89**, 124-125 (2003).

33. G. Pontuale, F.A. Farrelly, A. Petri, L. Pitolli:
A statistical analysis of acoustic emission signals for tool condition monitoring,
Acoustic Research Letters Online - ARLO **4**, 13-18 (2003).

34. Pierluigi Novi Inverardi, Alberto Petri, Giorgio Pontuale and Aldo Tagliani:
Hausdorff moment problem via fractional moments,
Applied Mathematics and Computation **144**, 61-74 (2003).

35. C. Fusco, A. Fasolino, P. Gallo, A. Petri and M. Rovere:
A microscopic moIbáñezdel for granular compaction with friction,
Physical Review **E 66**, 31301-31309 (2002).

36. Mário J. de Oliveira and Alberto Petri:
Glassy behaviour in short range lattice models without quenched disorder,
Philosophical Magazine **B 82** 617-623 (2002).

37. Tâ Tomé and Alberto Petri:
Cumulants of the three state Potts model and of nonequilibrium models with C3v symmetry,
Journal of Physics **A 35**, 5379-5390 (2002).

38. C. Fusco, P. Gallo, A. Petri and M. Rovere:
Stretched exponential relaxation in a diffusive model for granular compaction,
Physical Review **E 65**, 26127-26130 (2002).

39. C. Fusco, P. Gallo, A. Petri and M. Rovere:
Slow dynamics of k-mers on a square lattice,
Philosophical Magazine **B 82**, 375-381 (2002).

40. C. Fusco, P. Gallo, A. Petri and M. Rovere:
Random sequential adsorption and diffusion of dimers and k-mers on a square lattice,
Journal of Chemical Physics **114**, 7563-7569 (2001).

41. F.A. Farrelly , E. Flamini , A. Petri , L. Pitolli and G. Pontuale:
Acoustic Emission Monitoring for Structural Time-Related Assessment,
Microgravity and Space Station Utilization **2**, 121-123 (2001).

42. U. M. Bettolo Marconi, A. Petri and A. Vulpiani:
Janssens law and stress fluctuations in confined dry granular material,
Physica **A 280**, 279-288 (2000).

43. G. Caldarelli, C. Castellano and A. Petri:
Critical behaviour in the fracture of disordered media,
Philosophical Magazine **B 79**, 1939-1944 (1999).

44. G. Caldarelli and A. Petri:
"Comment on First order transition in the breakdown of disordered media",
Physical Review Letters **83**, 1483-1486 (1999).

45. G. Caldarelli, C. Castellano and A. Petri:
Criticality in models for fracture in disordered media,
Physica **A 270**, 15-20 (1999).

46. Claudio Castellano, Federico Corberi, Umberto Marini Bettolo Marconi and Alberto Petri:
Coarsening in diluted systems
Journal de Physique **IV 8**, 93-98 (1998).

47. Francis A. Farrelly and Alberto Petri:
Numerically efficient computation of eigensolution spectrum in one-dimensional heterostructures ,
International Journal of Modern Physics **C 9**, 927-934 (1998).

48. U. M. Bettolo Marconi and A. Petri,
Domain growth on percolating clusters,
Philosophical Magazine **B 77** 265-276 (1998).

49. Mário J. de Oliveira and Alberto Petri:
Granular compaction, random sequential adsorption and diffusional relaxation,
Journal of Physics **A 31**, L425-L433 (1998).

50. A. Petri and M.J de Oliveira:
Asymptotic moment growth for products of correlated random matrices,
Physica **A 257**, 477-482 (1998).

51. A. Puglisi, V. Loreto, U. M. Bettolo Marconi, A. Petri and A. Vulpiani:
Clustering and non-gaussian behavior in granular matter,
Physical Review Letters **81**, 3848-3851 (1998).

52. A. Petri:
Acoustic emission and microcrack correlation,
Philosophical Magazine **B 77**, 491-498 (1998).

53. M.J. de Oliveira and A. Petri:
Resistance statistics in one-dimensional systems with correlated disorder,
Physical Review **B 56**, 251-259 (1997).

54. U. M. Bettolo Marconi and A. Petri:
Time dependent Ginzburg-Landau model in the absence of translational invariance. Non conserved Order Parameter domain growth,
Journal of Physics **A 30**, 1069-1088 (1997).

55. U. Marini Bettolo Marconi and A. Petri:
Domain Growth on Self Similar Structures,
Physical Review **E 55**, 1311-1314 (1997).

56. M.J. de Oliveira and A. Petri:
Density of states and localization lengths in one-dimensional linear chains,
International Journal of Modern Physics **B 11**, 2195 (1997).

57. A. Petri:
Anomalous localization and fluctuations of modes on fractals,
Physica **B 219&220**, 324-327 (1996).

58. G. Caldarelli, F. di Tolla and A. Petri:
Self Organization and Annealed Disorder in Fracturing Processes,
Physical Review Letters **77**, 2503-2506 (1996).

59. M.J. de Oliveira and A. Petri:
Generalized Lyapunov exponents for products of correlated random matrices,
Physical Review **E 53**, 2960-2963 (1996).

60. P. Muratore Ginanneschi, A. Petri, and A. Vulpiani:
Localization lengths in harmonic chains with correlated disorder,
Modern Physics Letters **B 9**, 921-928 (1995).

61. A. Vespignani, A. Alippi, M. Costantini, G. Paparo, A. Petri:
Long range correlation properties of aftershock relaxation signals,
Fractals **3**, 839-847 (1995).

62. A. Petri and G. Ruocco:
Perturbative approach to the dynamics of linear chains with hierarchical couplings,
Physical Review **B 51**, 11399-11405 (1995).

63. A. Petri:
Linear and nonlinear vibrational properties of a hierarchical continuous system
Philosophical Magazine **71**, 731-740 (1995).

64. A. Petri, G. Paparo, A. Vespignani, A. Alippi, and M. Costantini:
Experimental evidence of critical dynamics in microfracturing processes,
Physical Review Letters **73**, 3423-3426 (1994).

65. A. Alippi, A. Petri, G. Rafaelli, and E. Verona:
Refractive index profile determination in a planar optical waveguide,
Pure and Applied Optics **3**, 615-622 (1994).

66. A. Petri, A. Alippi, A. Bettucci, F. Craciun, F. Farrelly, and E. Molinari:
Vibrational properties of a continuous self-similar structure,
Physical Review **B 49**, 15067-15075 (1994).

67. A. Petri and G. Ruocco:
Statistical Behavior of Characteristic Lengths of Vibration on Two-Dimensional Random Fractals,
Fractals **1**, 1044-1050 (1993).

68. A. Alippi, G. Shkerdin, A. Bettucci, F. Craciun, E. Molinari and A. Petri:
Low-threshold Subharmonic Generation in Composite Structures with Cantor-like Code,
Physical Review Letters **69**, 3318-3321 (1992).

69. F. Craciun, A. Bettucci, E. Molinari, A. Petri and A. Alippi:
Direct Experimental Observation of Fracton Mode Patterns in One-Dimensional Cantor Composites,
Physical Review Letters **68**, 1555-1558 (1992).

70. A. Alippi, G. Shkerdin, A. Bettucci, F. Craciun, E. Molinari and A. Petri:
Threshold lowering for subharmonic generation in Cantor-like composite structures,
Physica **A 191** 540-544 (1992).

71. A. Petri and L. Pietronero:
Multifractal Nature of Fractons on a Percolating Lattice,
Physical Review **B 45**, 12864-12872 (1992).

72. A. Petri:
Properties of Localized Vibrational Modes on Fractal Structures,
Physica **A 185**, 166-173 (1992).

73. R. Barbini, F. Colao and A. Petri:
Numerical Analysis of a CO_2 SFUR Laser Cavity,
Nuovo Cimento **D 13**, 14a-150 (1991).

74. G. Carlotti, A. Petri , G. Socino and E. Verona:
Acoustic Investigation of the Elastic Properties of ZnO Films,
Applied Physics Letters 51, 1889-1991 (1987).

Peer reviewed proceedings of international conferences:

75. V. Alfi, A. Petri and L. Pietronero,
A method for detecting complex correlation in time series,
Proc. SPIE 6**601**, 66010H (2007).

76. Fergal Dalton, Alberto Petri, Giorgio Pontuale and Luciano Pietronero,
Component Analysis of Granular Friction,
Procs of Sixth workshop on Traffic and Granular Flow'05,
A. Schadschneider, T.Pöschel, R. Kühne, M. Schreckenberg and D. E. Wolf Eds., Springer-Verlag (Berlin Heidelberg 2007), p.101.

77. Andrea Baldassarri, Fergal Dalton, Alberto Petri, Luciano Pietronero, Giorgio Pontuale and Stefano Zapperi,
Granular shearing and Barkhausen noise,
Procs of Sixth workshop on Traffic and Granular Flow'05,
A. Schadschneider, T. Pöschel, R. Kühne, M. Schreckenberg and D. E. Wolf Eds., Springer-Verlag (Berlin Heidelberg 2007), p.91

78. F. Dalton, A. Petri and G. Pontuale, *Stress fluctuations and the solid/fluid transition in a sheared granular bed*
Powders & Grains 2005,
R.García-Rojo, H.J. Herrmann and S. McNamara, Eds., (A.A.Balkema, Rotterdam, 2005).

79. M. J. de Oliveira, A. Petri and T. Tomé:
Emergence of Glassy States in Lattice Models with no a Priori Disorder,
Modeling of complex systems: Seventh Granada Lectures, Granada (SP)
P. L. Garrido and J. Marro Eds., 139-142 (American Institute of Physics, 2003).

80. A. Petri:
Critical fluctuations in the breakdown of disordered lattices,
Scaling and Disordered Systems; International Workshop and Collection of Articles celebrating Antonio Coniglios 60th birthday, Paris (France),
April 13-14, 2000, edited by F. Family, M. Daoud, H. J. Herrmann and H. E. Stanley (World-Scientific, June 2002).

81. F.A. Farrelly , E. Flamini , A. Petri , L. Pitolli and G. Pontuale:
Environmental Acoustic Reconnaissance and Sounding (EARS) Instrument for Mars Exploration,
Procs. of 17th International Congress on Acoustics, Rome (Italy),
September 2-7, 2001, ISBN 88-88387-03-X .

82. G. Pontuale, F.A. Farrelly, A. Petri, L. Pitolli and F. Krogh:
Properties of Acoustic Emission Signals for Tool Condition Monitoring (TCM) Applications,
Procs. of 17th International Congress on Acoustics, Rome (Italy),
September 2-7, 2001, ISBN 88-88387-03-X.

83. F.A. Farrelly, F. Krogh, A. Petri, L. Pitolli and G. Pontuale:
Characteristics of power-law distributed AE signals,
Procs. of 17th International Congress on Acoustics, Rome (Italy),
September 2-7, 2001, ISBN 88-88387-03-X.

84. M.J. de Oliveira and A. Petri:
Slow relaxation in a diffusional model for granular compaction,
Compaction of Soils, Granulates and Powders, Proc. of International Workshop on Compaction of Soils, Granulates and Powders, Innsbruck (Austria),
February 28-29, 2000, D. Kolymbas and W. Fellin Eds., A.A.Balkema (Rotterdam 2000), p.275-281.

85. A. Alippi, A. Bettucci, F. Craciun, F. Farrelly, A. Petri and G. Shkerdin:
Subharmonic generation in acoustical resonators,
New perspectives and problems in classical and quantum physics: a Festschrift in honour of H. Überall,
P.P. del Santo and A.W. Saenz Eds., Gordon & Breach.

86. Umberto Marini Bettolo Marconi and Alberto Petri:
$O(n)$ vector model of growth on fractal lattices,
in Fractals in the Natural and Applied Sciences,
M.M. Novak Ed., World Scientific (Singapore 1997), p.163-168.

87. A. Vespignani, A. Alippi, M. Costantini, G. Paparo, A. Petri:
Long range correlation properties of aftershock relaxation signals,
Fractal Geometry and Analysis: The Mandelbrot Festschrift, Curaçao (NA) 1995,
C.J.G Evertsz, H.O Peitgen and R.F. Voss Eds. World Scientific (Singapore 1996), p. 435.

88. A. Alippi, A. Bettucci, F. Craciun, F. Farrelly, A. Petri, and O.B. Wright:
Lifetime of localized and extended modes in complex composite structures,
Proc. IEEE 1994 Ultrasonics Symposium, Cannes (France),
M. Levy and B. R. McAvoy Eds., New York (1995) p.765.

89. A. Alippi, A. Bettucci, F. Craciun, F. Farrelly, E. Molinari and A. Petri:
Acoustic modes in 2-dimensional self-similar composite plates,
Proc. IEEE 1993 Ultrasonics Symposium, Baltimore (AZ),
M. Levy and B. R. McAvoy Eds., New York (1994) p.533.

90. A. Alippi, A. Bettucci, F. Craciun, F. Farrelly, E. Molinari and A. Petri:
Vibrational modes in two-dimensional periodic and aperiodic composites piezoelectric plates,
Ultrasonics International 93, Wien (Austria),
July 1993, Butterworth-Heinemann (Cambridge 1993), p. 125.

91. A. Alippi, A. Bettucci, F. Craciun, F. Farrelly, E. Molinari and A. Petri:
Acoustic subharmonic generation in fractal one-dimensional composites,
13th Symposium on nonlinear acoustics, Bergen (Norway),
June 1993, H. Hobaek Ed., World Scientific (Singapore 1992), p. 537.

92. A. Alippi, A. Bettucci, F. Craciun, E. Molinari and A. Petri:
Low threshold subharmonic generation in fractal piezoelectric composites,
Proc. IEEE 1992 Ultrasonics Symposium, Tucson (AZ),
B. R. McAvoy Ed., New York (1992), p.707.

93. A. Alippi, A. Bettucci, F. Craciun, E. Molinari and A. Petri:
Aperiodic Piezoelectric Composites with Cantor-like Code,
Proc. IEEE 1991 Ultrasonics Symposium, Orlando (FL,
B. R. McAvoy Ed., IEEE Pub., New York (1992), p.399.

94. A. Petri:
Vibrational Properties of Fractal Structures,
Fourth International School on Physical Acoustics, Erice (Italy),
3-10 October 1991, A. Alippi Ed., A. Petri Coord., World Scientific (Singapore 1992), p. 319.

95. G. Carlotti, D. Fioretto, G. Socino, L. Palmieri and A. Petri, E. Verona:
Surface Acoustic Waves in c-Axis Inclined ZnO Films,
Proc.IEEE 1990 Ultrasonics Symposium, Honolulu (HI),
B. R. McAvoy Ed., IEEE Pub., New York (1991), p.449.

96. R. Barbini, F. Colao and A. Petri:
SFUR Laser Field Expansion in Gaussian Beams,
Proc. 1^{st} International GR-I Conference on New Laser Technologies and Applications, Olympia (Greece),
A. A. Carabelas and T. Letardi Eds., Editrice Compositori, Bologna (1988), p.13.

97. R. Barbini, F. Colao, A. Palucci and A. Petri:
The ENEA Ground Based LIDAR Station,
Proc. 14^{th} International Laser Radar Conference, Innichen-San Candido (Italy),
V. Cammelli and V. M. Sacco Eds., CNR Firenze (1988), p.288.

98. A. D'amico, A. Petri, P. Verardi and E. Verona:
NH_3 Surface Waves Gas Detector,
Proc. IEEE 1987 Ultrasonics Symposium, Denver (CO),
B. R. McAvoy Ed., IEEE Pub., New York (1987), p.633.

99. G. Carlotti, G. Socino, A. Petri and E. Verona:
Elastic Constants of Sputtered ZnO Films,
Proc. IEEE 1987 Ultrasonics Symposium, Denver (CO),
B. R. McAvoy Ed., IEEE Pub., New York (1987), p.295.

100. F. A. Farrelly and A. Petri:
Implicit Knowledge Discovery,
Advanced Topics in Cell Model Systems,
A. Macagnano, A. Raimundo-Orlando, F. A. Farrelly, A. Petri and Marco Girasole Eds.
(Nova Science Publishers Inc., N.Y. 2009), pp 87-92.

Peer reviewed prooceedings of national conferences:

101. A. Bettucci, F. Craciun, E. Molinari and A. Petri:
Propagazione elastica in strutture selfsimilari,
atti del XX Convegno Nazionale dellAssociazione Italiana di Acustica,
Roma (Italia), Esagrafica Editrice (1992), p.93.

Technical reports:

102. A. Puglisi, V. Loreto, U. Marini Bettolo Marconi, A. Petri and A. Vulpiani:
Granular gases: where standard kinetic theory fails,
Highlights INFM 1998/1999, p.98 (2001).

103. G. Caldarelli, F. di Tolla and A. Petri:
Self Organization and Annealed Disorder in Fracturing Processes,
report S.I.S.S.A **22/96/CM**(1996).

104. R. Barbini, F. Colao and A. Petri:
Numerical Analysis of a CO_2 SFUR Laser,
ENEA Technical Report **RT**/TIB/88/54 (1988).

105. R. Barbini, F. Colao, A. Petri and F. Orsitto:
Analytical Treatment of the SFUR Cavity Integral Equation,
ENEA Technical Report **RT**/TIB/88/45 (1988).

106. R. Barbini, F. Colao and A. Petri:
SFUR Laser Field Expansion in Gaussian Beams,
ENEA Technical Report **RT**/TIB/88/29 (1988).

107. R. Barbini, F. Colao, A. Palucci, A. Petri, S. Ribezzo:
Tunable SFUR TEA CO_2 Laser,
ENEA Technical Report **RT**/TIB/88/8 (1988);
(Presented at the 10^{th} International Conference on Lasers 87, Lake Tahoe (USA), 7-11 December 1987).

108. R. Barbini, F. Colao and A. Petri:
Analisi teorica di un laser a CO_2 con cavitá SFUR,
Rapporto Tecnico ENEA **RTI**/TIB(88)20 (1988).

Different contributions:

109. A. Petri,
Rappresentanza o governabilità?,
interview at RAI "Radio 3 Scienza" on February 3rd, 2014.

110. G. Pontuale, S. Genovese, E. La Nave e A. Petri,
Il premio che non premia,
Forum di Quaderni Costituzionali, 12 June 2008.

111. A. Petri e G. Pontuale,
Elezioni: dal Porcellum un premio ininfluente,
Almanacco della Scienza del CNR, n. 7, 16-29 April 2008.

112. A. Petri,
interview at RAI "Radio 3 Scienza" on January 23rd, 2008.

113. A. Petri,
Anche i granuli vivono,
interview at Corriere della Sera, Rome edition, 28 September 2007.

114. A. Petri,
La Fisica della Sabbia,
presentation at "Notte Europea della Ricerca 2007", Frascati (Rome) 29 September 2007.

115. A. Petri,
Sistema di voto del parlamento europeo,
interview at RAI "Radio 3 Scienza" on June 21st, 2007.

116. A. Petri and F. Sylos Labini,
Legge elettorale: il premio che castiga,
Megachip, 3 April 2007.

117. A. Petri,
Il nullificatore sonico,
interview at RAI - Radio 1 "Baobab" on March 22nd 2007.

118. A. Petri,
Un sistema elettorale tutto da rifare,
interview at Radio 24 "Il volo delle oche" on September 9th 2006.

119. A. Petri, F. Dalton e G. Pontuale,
Senato, tutto da rifare,
Le Scienze, November 2006, p. 63.