

CURRICULUM VITAE of Fabio Marchesoni

Name: Fabio Marchesoni

Citizenship: Italian

Birth place: Massa (Italy)

Date of birth: December 14, 1955

Work address: Dipartimento di Fisica, Università di Camerino,

via Madonna delle Carceri,

I-62032 Camerino (Italy)

Phone: +39 0737 40 2536; **+39 320 7985898 (cell.)**

Fax: +39 0737 40 2853

Education:

Laurea in fisica, March 14, 1979, University of Pisa, Italy (110/110 summa cum laude);
advisor Prof A Di Giacomo

Specializzazione in fisica (PhD in Physics), March 14, 1983, University of Pisa, Italy;
supervisor Prof G. Parisi

Honors and Awards:

Alexander von Humboldt Fellow, 1984-1985 and 1987

RIKEN Eminent Scientist Award, 2002

Canon Foundation Award, 2003

Fellow of the American Physical Society (USA), 2003

Fellow of the Institute of Physics (UK), 2004

Alexander von Humboldt Prize (Germany), 2006 and 2013

Outstanding Reviewer Award, APS, 2007

Presidential Knighthood (Commander of the Order of Merit of the Republic), Italy, 2007

Visiting Professor & Scholar (honorary title), Loughborough University, UK, 2008-2015

Fellow of the American Association for Advancement of Science (AAAS), 2008

Fellow of the Japanese Society for Promotion of Science (JSPS), 2011

EPL Distinguished Referee, 2011 and 2014

Member elected, European Academy (AE), 2011

Foreign expert, Chinese Govt., 2016

Shared with the Ligo-Virgo Collaboration:

Special Breakthrough Prize in Fundamental Physics (2016)

Gruber Prize in Cosmology (2016)

Academic Career:

Professor of Physics, University of Camerino, 2003 – to date

Director of the International School on Statistical Physics, Ettore Majorana Foundation and
Center for Scientific Culture, Erice, 2011 – to date

Senior Fellow, iTHES-RIKEN, Japan, 2016-2019

Foreign Expert of the Chinese Government, 2016-2020

Distinguished Visiting Professor, Tongji University, Shanghai, 2015-2016 Associate Head for
Graduate Studies, University of Camerino, Nov. 2009 – 2014

Chairman of the Human Resources Committee, University of Camerino, Nov. 2004-2006
Associate Head for Undergraduate Studies, Dept. of Physics, Univ. of Camerino, 2002-2006
Italian representative in the board of ESF-STOCHDYN, 2003-2008
Visiting Professor, University of Michigan, Ann Arbor, Fall 1998, Fall 1999
Visiting Professor, University of Illinois, Urbana, 1996-1998
Member of the VIRGO Executive Committee, 1993-1996, 2009 – 2013
Associate Professor of Physics, University of Camerino, 1992-2003
Ricercatore Universitario, University of Perugia 1984-1992
Visiting Scientist, Condensed Matter Theory, MIT, Winter semester 1991
Visiting Scholar, Department of Physics, Harvard University, Fall 1989, 1990 and 1995
Guest Professor, Institute of Physics, Augsburg University, Summer 1988 and 1989
A. v. H. - Fellow, Technische Hochschule, Aachen, 1985, and Ulm University 1987
Scholar, Dublin Institute for Advanced Studies, Dublin, 1983-1984

Research Interests:

Stochastic processes, Non-equilibrium statistical mechanics, Soliton dynamics
Gravitational wave detection

Scientific Production:

Author of over **425** papers (including invited, regular, and proceeding articles) in international journals; cites on ISI-Web of Science: **>20,000** (h factor **64**); on Google Scholar: **>30,000** (h factor **76**).

See <http://www.researcherid.com/rid/A-1920-2008>

Editorial Activity:

2006-2012: Editor of the European Physics Journal B (EPS)

2013-to date: **Colloquia Chief Editor of the European Physics Journal B (EPS)**

2006-2015: Member of the Editorial Board of CHAOS (AIP)

Conferences and Outreach:

Director of the permanent **International School on Statistical Physics**, E. Majorana Center, Erice (Italy)



Director and/or organizer of several international conferences. Over the last 10 years:

- EPS-STOCHDYN Workshop, *100 Years of Brownian Motion*, (Erice, Italy), July 2005 – Director.
- Topical Workshop *Stochastic Dynamics, NEXT 2005*, (Crete, Greece) Aug. 2005 – Director.
- ESF Exploratory Workshop *Toward a 3rd generation European Gravitational Wave Observatory*, (Perugia, Italy) Sept. 2005 – Director.
- ESF-STOCHDYN Workshop *Fluctuations and Dissipation: The new synthesis far from Equilibrium* (Camerino, Italy) March 2006 – Director.
- MPI Workshop *Physics of Fluctuations far from Equilibrium* (Dresden, Germany) July 2007 – Director.
- ONR-ESF Workshop, *Noise, Information and Complexity @ Quantum Scale*, (Erice, Italy), Nov. 2007 – Director.

- Conference on *Stochastic Resonance* (Perugia, Italy) Aug. 2008 – Director
- Conference on Heat Control and Thermoelectric (HEAT2010) (Erice, Italy) October 2010 – Director
- Conference on *Noise Harvesting* (Erice, Italy), Jul. 2012 – Director
- Conference on *Challenges to Transport in Axons: Studies at the Interface of Physics and Biology* (Erice, Italy), Jul. 2014– Director


Author of several articles aimed at popularizing physics topics of general interest among teachers and students (e.g., on A. Einstein, Brownian motors, Stochastic Resonance, Bioinformatics, etc) appeared in *Le Scienze*, the Italian edition of *Scientific American*.



50 MOST CITED PUBLICATIONS (Fabio Marchesoni)

1. Title: [Stochastic resonance](#)
Author(s): GAMMAITONI, L; HANGGI, P; JUNG, P; et al.
Source: REVIEWS OF MODERN PHYSICS Volume: 70 Issue: 1 Pages: 223-287 Published: JAN 1998
Times Cited: 3598
2. Title: [Artificial Brownian motors: Controlling transport on the nanoscale](#)
Author(s): HANGGI, P; MARCHESONI, F
Source: REVIEWS OF MODERN PHYSICS Volume: 81 Issue: 1 Pages: 387-442 Published: JAN-MAR 2009
Times Cited: 663
DOI: 10.1103/RevModPhys.81.387 
3. Title: [Predictions for the rates of compact binary coalescences observable by ground-based gravitational-wave detectors](#)
Author(s): ABADIE, J; ABBOTT, BP; ABBOTT, R; et al.
Source: Classical and Quantum Gravity Volume: 27 Issue: 17 Published: SEP 7 2010
Times Cited: 428
DOI: 10.1088/0264-9381/27/17/173001 
4. Title: [STOCHASTIC RESONANCE IN BISTABLE SYSTEMS](#)
Author(s): GAMMAITONI, L; MARCHESONI, F; MENICHELLASAETTA, E; et al.
Source: PHYSICAL REVIEW LETTERS Volume: 62 Issue: 4 Pages: 349-352 Published: JAN 23 1989
Times Cited: 349
5. Title: [Brownian motors](#)
Author(s): HANGGI, P; MARCHESONI, F; NORI, F
Source: ANNALEN DER PHYSIK Volume: 14 Issue: 1-3 Pages: 51-70
Published: JAN-MAR 2005
Times Cited: 277
6. Title: [STOCHASTIC RESONANCE IN PHYSICS AND BIOLOGY](#)
Author(s): BULSARA, A; HANGGI, P; MARCHESONI, F; et al.
Source: JOURNAL OF STATISTICAL PHYSICS Volume: 70 Issue: 1-2 Pages: 1-2 Published: JAN 1993
Times Cited: 271
7. Title: [STOCHASTIC RESONANCE AS A BONA-FIDE RESONANCE](#)
Author(s): GAMMAITONI, L; MARCHESONI, F; SANTUCCI, S
Source: PHYSICAL REVIEW LETTERS Volume: 74 Issue: 7 Pages: 1052-1055 Published: FEB 13 1995
Times Cited: 220
8. Title: [An upper limit on the stochastic gravitational-wave background of cosmological origin](#)
Author(s): ABBOTT, BP; ABBOTT, R; ACERNESE, F; et al.
Source: NATURE Volume: 460 Issue: 7258 Pages: 990-994 Published:

AUG 20 2009


Times Cited: 192

DOI: 10.1038/nature08278 

9. Title: [BISTABLE FLOW DRIVEN BY COLORED GAUSSIAN-NOISE - A CRITICAL-STUDY](#)
Author(s): HANGGI, P; MARCHESONI, F; GRIGOLINI, P
Source: ZEITSCHRIFT FUR PHYSIK B-CONDENSED MATTER
Volume: 56 Issue: 4 Pages: 333-339 Published: 1984
Times Cited: 182
10. Title: [Superconducting fluxon pumps and lenses](#)
Author(s): WAMBAUGH, JF; REICHHARDT, C; OLSON, CJ; et al.
Source: PHYSICAL REVIEW LETTERS Volume: 83 Issue: 24 Pages: 5106-5109 Published: DEC 13 1999
Times Cited: 177
11. Title: [The Virgo interferometer](#)
Author(s): CARON, B; DOMINJON, A; DREZEN, C; et al.
Source: CLASSICAL AND QUANTUM GRAVITY Volume: 14 Issue: 6
Pages: 1461-1469 Published: JUN 1997
Times Cited: 172
12. Title: [Diffusion in Confined Geometries](#)
Author(s): BURADA, PS; HANGGI, P; MARCHESONI, F; et al.
Source: CHEMPHYSICHEM Volume: 10 Issue: 1 Pages: 45-54 Published: JAN 12 2009
Times Cited: 149
DOI: 10.1002/cphc.200800526 
13. Title: [Spatiotemporal stochastic resonance in a \$\phi\(4\)\$ model of kink antikink nucleation](#)
Author(s): MARCHESONI, F; GAMMAITONI, L; BULSARA, AR
Source: PHYSICAL REVIEW LETTERS Volume: 76 Issue: 15 Pages: 2609-2612 Published: APR 8 1996
Times Cited: 138
14. Title: [The Virgo status](#)
Author(s): ACERNESE, F; AMICO, P; ALSHOURBAGY, M; et al.
Source: CLASSICAL AND QUANTUM GRAVITY Volume: 23 Issue: 19
Pages: S635-S642 Published: OCT 7 2006
Times Cited: 136
DOI: 10.1088/0264-9381/23/19/S01 
15. Title: [Periodically time-modulated bistable systems: Stochastic resonance](#)
Author(s): GAMMAITONI, L; MENICHELLA-SAETTA, E; MARCHESONI, F; et al.
Source: PHYSICAL REVIEW A Volume: 40 Issue: 4 Pages: 2114-2119
Published: AUG 15 1989
Times Cited: 125
16. Title: [Status of the Virgo project](#)
Author(s): Accadia, T; Acernese, F; Antonucci, F; et al.
Source: Classical and Quantum Gravity Volume: 28 Issue: 11 Published:

2011

Times Cited: 121

DOI: 10.1088/0264-9381/28/11/114002 


17. Title: [Status of Virgo](#)

Author(s): ACERNESE, F; ALSHOURBAGY, M; AMICO, P; et al.

Source: CLASSICAL AND QUANTUM GRAVITY Volume: 25 Issue: 11

Published: JUN 7 2008

Times Cited: 118

DOI: 10.1088/0264-9381/25/11/114045 


18. Title: [Virgo status](#)

Author(s): ACERNESE, F; ALSHOURBAGY, M; AMICO, P; et al.

Source: CLASSICAL AND QUANTUM GRAVITY Volume: 25 Issue: 18

Published: SEP 21 2008

Times Cited: 113

DOI: 10.1088/0264-9381/25/18/184001 

19. Title: [PERIODICALLY TIME-MODULATED BISTABLE SYSTEMS - NONSTATIONARY STATISTICAL PROPERTIES](#)

Author(s): PRESILLA, C; MARCHESONI, F; GAMMAITONI, L

Source: PHYSICAL REVIEW A Volume: 40 Issue: 4 Pages: 2105-2113

Published: AUG 15 1989

Times Cited: 111

20. Title: [Controlling transport in mixtures of interacting particles using Brownian motors](#)

Author(s): SAVEL'EV, S; MARCHESONI, F; NORI, F

Source: PHYSICAL REVIEW LETTERS Volume: 91 Issue: 1 Published: JUL 4 2003

Times Cited: 107

DOI: 10.1103/PhysRevLett.91.010601 

21. Title: [Threshold diffusion in a tilted washboard potential](#)

Author(s): CONSTANTINI, G; MARCHESONI, F

Source: EUROPHYSICS LETTERS Volume: 48 Issue: 5 Pages: 491-497

Published: DEC 1999

Times Cited: 106

22. Title: [ACOUSTIC-EMISSION FROM VOLCANIC-ROCKS - AN EXAMPLE OF SELF-ORGANIZED CRITICALITY](#)

Author(s): DIODATI, P; MARCHESONI, F; PIAZZA, S

Source: PHYSICAL REVIEW LETTERS Volume: 67 Issue: 17 Pages: 2239-2243 Published: OCT 21 1991

Times Cited: 106

23. Title: [Thermal ratchets in 1+1 dimensions](#)

Author(s): MARCHESONI, F

Source: PHYSICAL REVIEW LETTERS Volume: 77 Issue: 12 Pages: 2364-2367 Published: SEP 16 1996


Times Cited: 104

24. Title: [Introduction: 100 years of Brownian motion](#)

Author(s): HANGGI, P; MARCHESONI, F

Source: CHAOS Volume: 15 Issue: 2 Published: JUN 2005

Times Cited: 103

DOI: 10.1063/1.1895505 

25. Title: [Resonant activation in a bistable system](#)

Author(s): MARCHI, M; MARCHESONI, F; GAMMAITONI, L; et al.

Source: PHYSICAL REVIEW E Volume: 54 Issue: 4 Pages: 3479-3487

Published: OCT 1996

Times Cited: 100

26. Title: [Search for gravitational waves from low mass compact binary coalescence in LIGO's sixth science run and Virgo's science runs 2 and 3](#)

Author(s): Abadie, J.; Abbott, B. P.; Abbott, R.; et al.

Source: Physical Review D Volume: 85 Issue: 8 Published: APR 19 2012

Times Cited: 96

DOI: 10.1103/PhysRevD.85.082002 

27. Title: [Search for gravitational waves from compact binary coalescence in LIGO and Virgo data from S5 and VSR1](#)

Author(s): Abadie, J; Abbott, BP; Abbott, R; et al.

Source: Physical Review D Volume: 82 Issue: 10 Published: 2010

Times Cited: 95


DOI: 10.1103/PhysRevD.82.102001 

28. Title: [SEARCHES FOR GRAVITATIONAL WAVES FROM KNOWN PULSARS WITH SCIENCE RUN 5 LIGO DATA](#)

Author(s): ABBOTT, BP; ABBOTT, R; ACERNESE, F; et al.

Source: ASTROPHYSICAL JOURNAL Volume: 713 Issue: 1 Pages: 671-685 Published: APR 10 2010

Times Cited: 92

DOI: 10.1088/0004-637X/713/1/671 

29. Title: [NUCLEATION OF THERMAL SINE-GORDON - EFFECT OF MANY-BODY INTERACTIONS](#)

Author(s): HANGGI, P; MARCHESONI, F; SODANO, P

Source: PHYSICAL REVIEW LETTERS Volume: 60 Issue: 25 Pages: 2563-2566 Published: JUN 20 1988

Times Cited: 88

30. Title: [ESCAPE DRIVEN BY STRONGLY CORRELATED NOISE](#)

Author(s): HANGGI, P; JUNG, P; MARCHESONI, F

Source: JOURNAL OF STATISTICAL PHYSICS Volume: 54 Issue: 5-6 Pages: 1367-1380 Published: MAR 1989


Times Cited: 86

31. Title: [Virgo: a laser interferometer to detect gravitational waves](#)

Author(s): Accadia, T.; Acernese, F.; Alshourbagy, M.; et al.

Source: Journal of Instrumentation Volume: 7 Published: MAR 2012








Times Cited: 86





DOI: 10.1088/1748-0221/7/03/P03012 

32. Title: [Brownian motors: Current fluctuations and rectification efficiency](#)

Author(s): MACHURA, L; KOSTUR, M; TALKNER, P; et al.

Source: PHYSICAL REVIEW E Volume: 70 Issue: 6 Published: DEC 2004

- Times Cited: 84
DOI: 10.1103/PhysRevE.70.061105 
33. Title: [Nonlinear signal mixing in a ratchet device](#)
Author(s): SAVEL'EV, S; MARCHESONI, F; HANGGI, P; et al.
Source: EUROPHYSICS LETTERS Volume: 67 Issue: 2 Pages: 179-185
Published: JUL 2004
Times Cited: 84
DOI: 10.1209/epl/i2004-10051-7 
34. Title: [Controlling the motion of magnetic flux quanta](#)
Author(s): ZHU, BY; MARCHESONI, F; NORI, F
Source: PHYSICAL REVIEW LETTERS Volume: 92 Issue: 18 Published:
MAY 7 2004
Times Cited: 84
DOI: 10.1103/PhysRevLett.92.180602 
35. Title: [The present status of the VIRGO Central Interferometer](#)
Author(s): ACERNESE, F; AMICO, P; ARNAUD, N; et al.
Source: CLASSICAL AND QUANTUM GRAVITY Volume: 19 Issue: 7
Pages: 1421-1428 Published: APR 7 2002
Times Cited: 78
DOI: PII S0264-9381(02)29466-6 
36. Title: [Controllable step motors and rectifiers of magnetic flux quanta using periodic arrays of asymmetric pinning defects](#)
Author(s): ZHU, BY; MARCHESONI, F; MOSHCHAL'KOV, VV; et al.
Source: PHYSICAL REVIEW B Volume: 68 Issue: 1 Published: JUL 1
2003
Times Cited: 74
DOI: 10.1103/PhysRevB.68.014514 
37. Title: [Manipulating small particles in mixtures far from equilibrium](#)
Author(s): SAVEL'EV, S; MARCHESONI, F; NORI, F
Source: PHYSICAL REVIEW LETTERS Volume: 92 Issue: 16 Published:
APR 23 2004
Times Cited: 73
DOI: 10.1103/PhysRevLett.92.160602 
38. Title: [Transport via nonlinear signal mixing in ratchet devices](#)
Author(s): SAVEL'EV, S; MARCHESONI, F; HANGGI, P; et al.
Source: PHYSICAL REVIEW E Volume: 70 Issue: 6 Published: DEC 2004
Times Cited: 72
DOI: 10.1103/PhysRevE.70.066109 
39. Title: [MULTIPLICATIVE STOCHASTIC RESONANCE](#)
Author(s): GAMMAITONI, L; MARCHESONI, F;
MENICHELLASAETTA, E; et al.
Source: PHYSICAL REVIEW E Volume: 49 Issue: 6 Pages: 4878-4881
Published: JUN 1994
Times Cited: 72
40. Title: [ON THE EXTENSION OF THE KRAMERS THEORY OF CHEMICAL RELAXATION TO THE CASE OF NON-WHITE NOISE](#)

- Author(s): MARCHESONI, F; GRIGOLINI, P
Source: JOURNAL OF CHEMICAL PHYSICS Volume: 78 Issue: 10 Pages: 6287-6298 Published: 1983
Times Cited: 71
41. Title: [Rectification currents in two-dimensional artificial channels](#)
Author(s): MARCHESONI, F; SAVEL'EV, S
Source: PHYSICAL REVIEW E Volume: 80 Issue: 1 Published: JUL 2009
Times Cited: 70
DOI: 10.1103/PhysRevE.80.011120 
42. Title: [The status of VIRGO](#)
Author(s): ACERNESE, F; AMICO, P; AL-SHOUBAGY, M; et al.
Source: CLASSICAL AND QUANTUM GRAVITY Volume: 23 Issue: 8
Pages: S63-S69 Published: APR 21 2006
Times Cited: 68
DOI: 10.1088/0264-9381/23/8/S09 
43. Title: [Resonant trapping: A failure mechanism in switch transitions](#)
Author(s): APOSTOLICO, F; GAMMAITONI, L; MARCHESONI, F; et al.
Source: PHYSICAL REVIEW E Volume: 55 Issue: 1 Pages: 36-39
Published: JAN 1997
Times Cited: 68
44. Title: [Stochastic Resonance: A remarkable idea that changed our perception of noise](#)
Author(s): GAMMAITONI, L; HANGGI, P; JUNG, P; et al.
Source: EUROPEAN PHYSICAL JOURNAL B Volume: 69 Issue: 1 Pages: 1-3
Published: MAY 2009
Times Cited: 68
DOI: 10.1140/epjb/e2009-00163-x 
45. Title: [SEARCH FOR GRAVITATIONAL-WAVE INSPIRAL SIGNALS ASSOCIATED WITH SHORT GAMMA-RAY BURSTS DURING LIGO'S FIFTH AND VIRGO'S FIRST SCIENCE RUN](#)
Author(s): ABADIE, J; ABBOTT, BP; ABBOTT, R; et al.
Source: Astrophysical Journal Volume: 715 Issue: 2 Pages: 1453-1461
Published: JUN 1 2010
Times Cited: 64
DOI: 10.1088/0004-637X/715/2/1453 
46. Title: [HARMONIC MIXING SIGNAL - DOUBLY DITHERED RING LASER GYROSCOPE](#)
Author(s): MARCHESONI, F
Source: PHYSICS LETTERS A Volume: 119 Issue: 5 Pages: 221-224
Published: DEC 22 1986
Times Cited: 63
47. Title: [Search for gravitational waves from binary black hole inspiral, merger, and ringdown](#)
Author(s): Abadie, J; Abbott, BP; Abbott, R; et al.
Source: Physical Review D Volume: 83 Issue: 12 Published: JUN 6 2011
Times Cited: 63

DOI: 10.1103/PhysRevD.83.122005 

48. Title: [TIME BEHAVIOR OF NON-LINEAR STOCHASTIC-PROCESSES IN THE PRESENCE OF MULTIPLICATIVE NOISE - FROM KRAMERS TO SUZUKI DECAY](#)

Author(s): FAETTI, S; GRIGOLINI, P; MARCHESONI, F

Source: ZEITSCHRIFT FUR PHYSIK B-CONDENSED MATTER

Volume: 47 Issue: 4 Pages: 353-363 Published: 1982

Times Cited: 61

49. Title: [Conceptual design of a molecular shuttle](#)

Author(s): MARCHESONI, F

Source: PHYSICS LETTERS A Volume: 237 Issue: 3 Pages: 126-130

Published: JAN 5 1998

Times Cited: 60

50. Title: [Geometric Stochastic Resonance](#)

Author(s): GHOSH, PK; MARCHESONI, F; SAVEL'EV, SE; et al.

Source: PHYSICAL REVIEW LETTERS Volume: 104 Issue: 2 Published: JAN 15 2010

Times Cited: 60

DOI: 10.1103/PhysRevLett.104.020601 