

ANGELO BASSI

CV

General data

Name: Angelo Bassi

Birth date: 27 May 1973.

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Education

2006-present: Researcher at the Department of Physics, University of Trieste.

2004-2006: Marie-Curie Fellow at the Mathematics Institute of the L.M.U., Munich (Germany)

2001-2004: Postdoctoral Fellow at the Abdus Salam ICTP, Trieste.

1999-2001: Ph.D. in Physics, University of Trieste.

1998: Master degree in Physics, University of Trieste (110/110 cum laude).

Research activity

Foundations of quantum mechanics; models of spontaneous wave function collapse; decoherence and open quantum systems.

Publications

Author of 60+ publications on international journals, proceedings excluded (see annex I). Among them: 1 Science, 1 Nat. Physics, 5 PRL, 3 Nat. Sci. Rept., 3 EPL, 1 Rev. Mod. Phys., 1 Phys. Rept.

Referee activity

Review Panel Member for COST (nominated by Italian Minister for University and Research). Referee for the APS and IOP journals. Referee for MIUR (Italian Minister for University and Research) for the American NSF.

Teaching activity

- Academic years 2003/2004, 2006/2007 and 2008/2009: "Stochastic Processes and Stochastic Differential Equations" for Ph.D. students at the Department of Theoretical Physics, University of Trieste.
- Academic years 2007/08 - 2010/11: "General Relativity" for graduate students at the Department of Physics, University of Trieste.
- Academic year 2011/12: "New Frontiers in Quantum Mechanics" for graduate students at the Department of Physics, University of Trieste.
- Academic year 2012/13 – 2016/17: "Advanced Quantum Mechanics" for graduate students at the Department of Physics, University of Trieste.
- Academic year 2013/14 – 2016/17: "Quantum Field Theory 1", for graduate students at the Department of Physics, University of Trieste.

Schools and Conferences

Invited speakers at 40+ Schools, Workshops, Conferences (see annex II)

Organization of conferences

Organizer/co-organizer of 17 international schools, workshops and conferences (see Annex III).

Supervisor activity

Supervisor of: 8 Ph.D. students (L. Ferialdi, S. Donadi, G. Gasbarri, M. Toros, M. Bilardello, M. Carlesso, L. Curcuraci, S. Bacchi), 9 graduate students, 14 undergraduate students. 6 PostDoctoral fellows: Luca Ferialdi (two years, 2011-12), Gabriel Garcia Leon (one year, 2012), Mohammad Bahrami (2013-15), Andrea Smirne (2013-15) A. Grossardt (2013-15), S. Donadi (2014).

Where they went

M. Bahrami: hired at California State University, Long Beach (USA).

L. Ferialdi: Marie-Curie Fellowship at LMU Munich (Germany).
A. Smirne: PostDoctoral Fellow, group of S. Huelga (Ulm, Germany).

Management activity (total funding managed > 1.400.000 Eur)

PI and Chair of the COST Action MP1006 "[Fundamental Problems in Quantum Physics](#)": about 60 units from 23 European countries, plus USA, South Africa, India, Mexico (2011-15).

PI and Chair of the COST Action CA15220: "[Quantum Technologies in Space](#)": 60 units from 24 European countries (2016-20).

PI of the MarieCurie Intra-European Fellowship MEIF-CT-2003-500543 (2004-05),

PI of the MarieCurie European Reintegration Grant MERG-CT-2006-044941 (2006).

Unit leader of FP7-ICT-2011-FET Open "NANOQUESTFIT – Nanoparticles in Quantum Experiments: Exploring the Scientific Basis of Future Information Technologies" (2013-15)

Unit leader of the "John F. Templeton Foundation" grant (ID 39530) 'Experimental and theoretical exploration of the fundamental limits of quantum mechanics' (2013–17).

Unit Leader of a "PRIN 2008" project, funded by MIUR – Italy (2010-2012).

Coordinator of the Trieste Unit of the INFN (National Institute for Nuclear Physics) "Iniziativa Specifica" BELL (2007 - today).

Coordinator of the Master Degree in Theoretical Physics at the University of Trieste.

Guest Editor of a Special Issue: The Quantum Universe, Journ. Phys. A: Math. Theor. 40, n. 12 (2007). Contributors include: S.L. Adler, B. d'Espagnat, F. De Martini, L. Diosi, D. Duerr, S. Goldstein, J. Froehlich, G.C. Ghirardi, M. Rasetti, J. Hartle, L. Hardy, A.J. Leggett, T. Regge, R.D. Sorkin, A.M. Steane.

Invited talks

Seminars at: Institute for Advanced Study (Princeton, USA, 24.05.07 and 22.05.2009), MIT (Cambridge, USA, 17.05.10), Harvard (Cambridge, USA, 02.12.10 and 03.12.15), S. Weinberg's Theory Group (Austin, USA, 13.12.2011), Imperial College (London, UK, 15.11.12), Weizmann Institute (07.01.2013), Rutgers University (New Brunswick, USA, 19.05.09 and 29.11.12), Perimeter Institute (Waterloo, Canada, 07.06.07), L.M.U. (Monaco, Germany, 06.05.09 and 17.03.10), U.C. Davis (California, 06.12.12), U. Calgary (28.11.13), Columbia University (02.12.13), University of Southern California (06.12.2014), NYU (12.05.2016), as well as most relevant research institutes in Italy (and elsewhere in the world).

Prizes & other

The essay: "Information and the foundations of quantum theory", by A. Bassi, T.P. Singh, H. Ulbricht [arXiv:1310.8600] won the 2nd Prize in the FOXi essay contest 2013.

The essay: "Is quantum linear superposition an exact principle of nature?", by A. Bassi, T.P. Singh, H. Ulbricht [arXiv:1212.0135] won the 4th Prize in the FOXi essay contest 2012.

Council member of the International Society for Relativistic Quantum Information (2014-16).

Interviews on Nature Journals:

<http://www.nature.com/news/quantum-physics-what-is-really-real-1.17585>

<http://www.nature.com/news/quantum-technology-probes-ultimate-limits-of-vision-1.17731>

<http://www.nature.com/news/how-gravity-kills-schr%C3%B6dinger-s-cat-1.17773>

Interviews on other Journals

<https://www.newscientist.com/article/mg23130820-200-collapse-has-quantum-theorys-greatest-mystery-been-solved/>

<http://nautil.us/issue/47/consciousness/a-theory-of-consciousness-can-help-build-a-theory-of-everything>

Radio Interviews
Radioattività – Italy
10th February 2011

ORF – Online Radio Fernsehen – Austria
9th May 2017 – 19:05
<http://oe1.orf.at/programm/20170509/474205>

Citations on books

The paper "Dynamical Reduction Models", has been cited in in 61 books (source: Google Books - 2016). In particular, it has been cited by:

1. S.L. Adler, "Quantum Theory as an Emergent Phenomenon", Cambridge University Press (2004).
2. Steven Weinberg, "Lectures on Quantum Mechanics" Cambridge University Press (2015).
3. G. 't Hooft "The Cellular Automaton Interpretation of Quantum Mechanics", Springer (2016).

ANNEX I
LIST OF PUBLICATIONS
(selected)

66 - McMillen S., Brunelli M., Carlesso M., Bassi A., Ulbricht H., Paris M. G. A., Paternostro M. (2017). Quantum-limited estimation of continuous spontaneous localization. *Physical Review A* 95, 012132 (2017).

65 – M. Bilardello, S. Donadi, A. Vinante, A. Bassi, "Bounds on collapse models from cold-atom experiments", *Physica A* 462, 764 (2016).

64 – M. Carlesso, A. Bassi, P. Falferi, A. Vinante, "Experimental bounds on collapse models from gravitational wave detectors" *Phys. Rev. D* 94, 124036 (2016).

63 – S. Belli, R. Bonsignori, G. D'Auria, L. Fant, M. Martini, S. Peirone, S. Donadi, A. Bassi, "Entangling macroscopic diamonds at room temperature: Bounds on the continuous-spontaneous-localization parameters", *Phys. Rev. A* 94, 012108 (2016).

62 – M. Toroš, S. Donadi, A. Bassi, "Bohmian Mechanics, Collapse Models and the emergence of Classicality", *J. Phys. A: Math. Theor.* 49, 355302 (2016).

61 – M. Carlesso and A. Bassi, "Decoherence due to gravitational time dilation: Analysis of competing decoherence effects", *Phys. Lett. A* 380, 2354 (2016).

60 – A. Großardt, J. Bateman, H. Ulbricht and A. Bassi, "Optomechanical test of the Schrödinger-Newton equation", *Phys. Rev. D* 93, 096003 (2016).

Discussion on Sabine Hossenfelder's blog [Back reaction](#), on [Forbes](#) and on [Slashdot](#).

<http://www.forbes.com/sites/briankoberlein/2015/10/16/a-new-experiment-may-determine-whether-gravity-is-quantized/>

<http://science.slashdot.org/story/15/10/17/1429238/an-experiment-could-determine-whether-gravity-is-quantized>

<http://backreaction.blogspot.de/2015/10/a-newly-proposed-table-top-experiment.html>

59 - A. Vinante, M. Bahrami, A. Bassi, O. Usenko, G. Wijts, T.H. Oosterkamp, "Upper bounds on spontaneous wave-function collapse models using millikelvin-cooled nanocantilevers", *Phys. Rev. Lett.* 116, 090402 (2016).

58 – S.L. Adler and A. Bassi, "Gravitational Decoherence for Mesoscopic Systems", *Phys. Lett. A* 380, 390 (2016).

57 – G. Gasbarri, S. Donadi and A. Bassi, "Coherent scattering in non-relativistic quantum mechanics", *Eur. Journ. Phys.* 36, 055038 (2015).

56 – A. Bassi and K. Hejazi, "No-faster-than-light-signaling implies linear evolutions. A re-derivation", *Eur. Journ. Phys.* 36, 055027 (2015).

- 55 – A. Bassi, “Gravity – Wanna be Quantum”, *News & Views on Nature Physics* 11, 626 (2015). Upon invitation.
- 54 – A. Smirne and A. Bassi, “Dissipative Continuous Spontaneous Localization (CSL) model”, *Nature: Scientific Reports* 5, 12518 (2015).
- 53 – S. Donadi and A. Bassi, “The emission of electromagnetic radiation from a quantum system interacting with an external noise: A general result”, *J. Phys. A: Math. Theor.* 48, 035305 (2015).
- 52 - C. Curceanu, S Bartalucci, A. Bassi, S. Bertolucci, C. Berucci, A .M. Bragadireanu, M. Cargnelli, A. Clozza, L. De Paolis, S. Di Matteo, S. Donadi, A. d’Uffizi, J.-P. Egger, C. Guaraldo, M. Iliescu, T. Ishiwatari, M. Laubenstein, J. Marton, E. Milotti, D. Pietreanu, K. Piscicchia, T. Ponta, E. Sbardella, A. Scordo, H. Shi, D. L. Sirghi, F. Sirghi, L. Sperandio, O. Vazquez Doce and J. Zmeska: “Quantum explorations: from the waltz of the Pauli exclusion principle to the rock of the spontaneous collapse”, *Phys. Scr.* 90, 028003 (2015). + paper of the week and front page.
- 51 – M. Bahrami, A. Smirne and A. Bassi, “Gravity and the Collapse of the Wave Function: a Probe into Diósi-Penrose model”, *Phys. Rev. A* 90, 062105 (2014).
- 50 – A. Smirne, B. Vachini and A. Bassi, “Dissipative extension of the Ghirardi-Rimini-Weber model”, *Phys. Rev. A* 90, 062135 (2014).
- 49 – M. Bahrami, A. Großardt, S. Donadi and A. Bassi, “The Schrödinger-Newton equation and its foundations”, *New J. Phys.* 16, 115007 (2014).
- 48 – M. Bahrami, M. Paternostro, A. Bassi and H. Ulbricht, “Proposal for a Non-interferometric test of Collapse Models in Optomechanical Systems”, *Phys. Rev. Lett.* 112, 210404 (2014) + highlighted in PRL
- 47 – M. Bahrami, A. Bassi and H. Ulbricht: “Testing the quantum superposition principle in the frequency domain”, *Phys. Rev. A* 89, 032127 (2014)
- 46 – S. Donadi, A. Bassi, D.-A. Deckert: “On the spontaneous emission of electromagnetic radiation in the CSL model”, *Annals of Physics* 340, Issue 1, 70 (2014).
- 45 – A. Bassi, S. Donadi: “Spontaneous photon-emission from a non-relativistic free charged particle in collapse models: A case-study”, *Phys. Lett. A* 378, 761 (2014).
- 44 – A. Bassi, D. Duerr, G. Hinrichs: “Uniqueness of the equation for state-vector collapse”, *Phys. Rev. Lett.* 111, 210401 (2013)
- 43 – S.L. Adler, A. Bassi, S. Donadi: “On spontaneous photon emission in collapse models”, *Journ. Phys. A: Math. Theor.* 46, 245304 (2013).
- 42 – S. Donadi, A. Bassi, C. Curceanu, A. Di Domenico, B. C. Hiesmayr: “Are Collapse Models Testable via Flavor Oscillations?”, *Foundations of Physics* 43, 813 (2013).
- 41 - M. Bahrami, S. Donadi, L. Ferialdi, A. Bassi, C. Curceanu, A. Di Domenico, B. C. Hiesmayr: “Are collapse models testable with quantum oscillating systems?”

- The case of neutrinos, kaons, chiral molecules", *Nature: Scientific Reports* 3, 1952 (2013)
- 40 – A. Bassi, K. Lochan, S. Satin, T.P. Singh and H. Ulbricht: "Models of Wavefunction Collapse, Underlying Theories, and Experimental Tests", *Rev. Mod. Phys.* 85, 471 (2013).
- 39 – K. Lochan, S. Das and A. Bassi: "Constraining CSL strength parameter λ from standard cosmology and spectral distortions of CMBR", *Phys. Rev. D* 86, 065016 (2012).
- 38 - L. Ferialdi and A. Bassi: "Exact solution for a non-Markovian dissipative quantum dynamics Luca Ferialdi, Angelo Bassi ", *Phys. Rev. Lett.* 108, 170404 (2012).
- 37 - M. Bahrami, A. Shafiee and A. Bassi: "Decoherence Effects on Superpositions of Chiral States in a Chiral Molecule", *Phys. Chem. Chem. Phys.* 14, 9214 (2012).
- 36 - L. Ferialdi and A. Bassi: "Functional Lagrange formalism for time-non-local Lagrangians ", *Europhys. Lett.* 98, 30009 (2012).
- 35 - M. Bahrami and A. Bassi: "On the Tunneling Properties of non-Planar Molecules in a Gas Medium", *Phys. Rev. A* 84, 062115 (2011).
- 34 - A. Bassi, D.-A. Deckert and L. Ferialdi: "Breaking quantum linearity: Constraints from human perception and cosmological implications", *Europhys. Lett.* 92, 50006 (2010).
- 33 - A. Bassi, D. Duerr and M. Kolb: "On the long time behavior of stochastic Schroedinger evolutions", *Rev. Math. Phys.* 22, 55 (2010).
- 32 - A. Bassi and D. Duerr, "On the Electromagnetic Properties of Matter in Collapse Models", *Journ. Phys. A* 42, 485302 (2009).
- 31 - A. Bassi and L. Ferialdi, "Non-Markovian quantum trajectories: An exact result", *Phys. Rev. Lett.* 103, 050403 (2009).
- 30 - A. Bassi and L. Ferialdi, "Non-Markovian dynamics for a free quantum particle subject to spontaneous collapse in space: general solution and main properties", *Phys. Rev. A* 80, 012116 (2009).
- 29 - S.L. Adler and A. Bassi: "Is Quantum Theory Exact?", *Science* 325, 275 (2009). [Download the article.](#)
- 28 - A. Bassi and D. Duerr: "On the long time behavior of Hilbert space diffusion", *Europhys. Lett.* 84, 10005 (2008).
- 27 - S.L. Adler and A. Bassi: "Collapse models with non-white noises II: particle-density coupled noises", *Journ. Phys. A: Math. Theor.* 41, 395308 (2008).
- 26 - A. Bassi and D.-A. Deckert: "Noise gates for decoherent quantum circuits", *Phys. Rev. A* 77, 032323 (2008).
- 25 - A. Bassi and G.C. Ghirardi: "On a recent proposal of faster than light quantum communication", *Int. Journ. Theor. Phys.* 47, 2500 (2008).
- 24 - A. Bassi and G.C. Ghirardi, "The Trieste lecture of John Bell", *Journ. Phys. A: Math. Theor.* 40, 2919 (2007).

- 23 - S.L. Adler and A. Bassi: "Collapse models with non-white noises", *Journ. Phys. A* 40, 15083 (2007).
- 22 - A. Bassi and D.G.M. Salvetti: "The quantum theory of measurement within dynamical reduction models", *Journ. Phys. A: Math. Theor.* 40, 9859 (2007).
- 21 - A. Bassi: "Dynamical Reduction Models: present status and future developments", *J. Phys.: Conf. Series* 67, 012013 (2007).
- 20 - A. Bassi and G.C. Ghirardi: "The Conway-Kochen argument and relativistic GRW models", *Found. Phys.* 37, 169 (2007).
- 19 - A. Bassi, G.C. Ghirardi and D.G.M. Salvetti, "The Hilbert-Space formalism within dynamical reduction models", *Journ. Phys. A* 40, 13755 (2007).
- 18 - A. Bassi and E. Ippoliti: "Geometric phase for open quantum systems and stochastic unravellings", *Phys. Rev. A* 73, 062104 (2006).
- 17 - A. Bassi: "Quantum Theory as an Emergent Phenomenon: The Statistical Mechanics of Matrix Models as Precursors of Quantum Field Theory", *SIAM Review* 47, 806 (2005).
- 16 - A. Bassi, E. Ippoliti and B. Vacchini: "On the energy increase in space-collapse models", *Journ. Phys. A* 38, 8017 (2005).
- 15 - A. Bassi: "Collapse Models: analysis of the free particle dynamics", *Journ. Phys. A* 38, 3173 (2005).
- 14 - S.L. Adler, A. Bassi and E. Ippoliti: "Towards Quantum Superpositions of a Mirror: An Exact Open System Analysis – Computational Details", *Journ. Phys. A* 38, 2715 (2005).
- 13 - A. Bassi, E. Ippoliti and S.L. Adler: "Towards Quantum Superpositions of a Mirror: An Exact Open System Analysis", *Phys. Rev. Lett.* 94, 030401 (2005).
- 12 - A. Bassi and E. Ippoliti: "Numerical analysis of a spontaneous collapse model for a two-level system", *Phys. Rev. A* 69, 012105 (2004).
- 11 - A. Bassi and G.C. Ghirardi: "Dynamical Reduction Models", *Physics Reports* 379, 257 (2003).
- 10 - A. Bassi: "Stochastic Schrödinger equations with general complex Gaussian noises", *Phys. Rev. A* 67, 62101 (2003).
- 9 - A. Bassi and G.C. Ghirardi: "A general scheme for ensemble purification", *Phys. Lett. A* 309, 24 (2003).
- 8 - A. Bassi and G.C. Ghirardi: "Dynamical reduction models with general Gaussian noises", *Phys. Rev. A* 65, 42114 (2002).
- 7 - A. Bassi and G.C. Ghirardi: "Counting Marbles: Reply to Clifton and Monton", *Brit. Journ. Phil. Sci.* 52, 125 (2001).
- 6 - A. Bassi and G.C. Ghirardi: "A General Argument Against the Universal Validity of the of the Superposition Principle", *Phys. Lett. A* 275, 373 (2000).
- 5 - A. Bassi and G.C. Ghirardi: "Decoherent Histories and Realism", *Journ. Stat. Phys.* 98, 457 (2000).
- 4 - A. Bassi and G.C. Ghirardi: "About the notion of truth in the decoherent histories approach: a reply to Griffiths", *Phys. Lett. A* 265, 153 (2000).

- 3 - A. Bassi and G.C. Ghirardi: "More about Dynamical Reduction and the Enumeration Principle", *Brit. Journ. Phil. Sci.* 50, 719 (1999).
- 2 - A. Bassi and G.C. Ghirardi: "Can the decoherent histories description of reality be considered satisfactory?", *Phys. Lett. A* 257, 247 (1999).
- 1 - G.C. Ghirardi and A. Bassi: "Do Dynamical Reduction Models Imply that Arithmetic Does Not Apply to Ordinary Macroscopic Objects?", *Brit. Journ. Phil. Sci.* 50, 49 (1999).

ANNEX II
SCHOOLS AND CONFERENCES
(as invited speaker/lecturer)

1. Workshop: Foundations of Quantum and Statistical Mechanics, Bertinoro, 13 and 14 September 2001. Talk: Generalizing the von Neumann ideal measurement scheme.
2. School: School on the Foundation of Physical Sciences, Trieste 7-11 October 2002.
First lesson: A generalization of the von Neumann Scheme for the quantum measurement problem. Second lesson: Stochastic equations in Hilbert spaces and applications to dynamical reduction models.
3. Workshop: Quantum Information and Quantum Computation, Trieste 14-25 October 2002. Talk: The EPR Incompleteness Argument.
4. School: Problemi attuali in Fisica Teorica, Vietri sul Mare, 11-16 April 2003. Lesson: Stochastic differential equations in Hilbert space.
5. Conference: Quantum Theory without Observers II, Bielefeld (Germany) 2-6 February 2004. Talk: A model of wave function Collapse.
6. Conference: Actual Problems in Theoretical Physics, Vietri sul Mare (Italy), 2-7 April 2004. Talk: Stochastic differential equations and dynamical reduction models.
7. School: 2nd School on the Foundation of Physical Sciences, Urbino 5-8 July 2004. First lesson: The measurement problem in Quantum Mechanics. Second lesson: Dynamical Reduction Models.
8. Workshop: What is Quantum in Quantum Computing?, Konstanz (Germany) 19-20 May 2005. Talk: Linearity and non linearity in Quantum Mechanics.
9. Conference: Third International Workshop DICE2006, Castello di Piombino (Tuscany), 11-15 September 2006 . Talk: Dynamical Reduction Models: present status and future perspectives.
10. Conference: Mathematical Physics, Statistical Mechanics and Foundations of Quantum Mechanics, Rutgers University (USA), 7-9 October 2007. Talk: Existence, uniqueness, and long time asymptotics of a CSL equation.
11. Conference: QTRF5 - Quantum Theory: Reconsideration of Foundations 5, Vaxjo University (Sweden), 14-18 June 2009. Talk: Spontaneous collapse models and the limits of Quantum Mechanics.
12. Workshop: Matter, reality, quantum physics and transcendental philosophy, Rome 21 January 2010. Talk: Quantum mechanics and the representation of matter.
13. ECT* Workshop: Decoherence in quantum dynamical systems, Trento (Italy), 26-30 April 2010. Talk: Non-Markovian quantum dynamics: a stochastic Schrödinger equation approach.

14. Workshop: The Forgotten Present, Pullach (Germany), 29 April - 2 May 2010. Talk: The problem of instantaneous quantum collapses in a relativistic framework.
15. Conference and Exhibition: The European Future Emergent Technologies, Budapest (Hungary), 4-6 May 2011. Talk: Spontaneous collapse models in the light of modern experiments.
16. Workshop: 8th Central European Quantum Information Processing Workshop, Znojmo (Czech Republic) 2-5 June 2011. Talk: Is quantum theory exact? Collapse models and the possibility of spontaneous quantum jumps.
17. Conference: Physics, Mathematics and Philosophy of Nature, Munich (Germany), 28-30 June, 2011. Talk: Towards an Exact Quantum Mechanics: Detlef Dürr and quantum jumps.
18. ECT* Workshop: Speakable in quantum mechanics: atomic, nuclear and subnuclear physics tests, Trento (Italy), 29 August - 2 September 2011. Talk: Is quantum theory exact? Collapse Models and the possibility of a break down of quantum mechanics towards the macroscopic scale.
19. Conference: The biggest accelerators in Space and on Earth, CERN – Geneva, 18-21 March 2013. Talk: Fundamental Problems in Quantum Physics.
20. School: Open Systems and the Quantum-Classical Boundary, Rome (Italy), 8-12 April 2013. Lecture: Ways to modify the Schrödinger equation.
21. Conference: Quantum Theory without Observers III, Bielefeld (Germany), 22-26 April 2013. Talk: Probing Macroscopic Quantum Superpositions.
22. School: Exploring the limits of the quantum superposition principle: From matter waves to nanomechanical oscillators, Bad Honnef (Germany) 12-17 Mai 2013. First lecture: How to modify Quantum Mechanics. Second Lecture: Phenomenology of spontaneous wave-function collapse models.
23. Workshop: The Quantum Landscape: Generalization of Quantum Theory and Experimental Tests, Perimeter Institute – Waterloo (Canada), 27-31 May 2013. Talk: Phenomenology of spontaneous wave-function collapse models.
24. Conference: "Emergent Quantum Mechanics 2013", Austrian Academy of Sciences, Vienna (Austria), 3-6 October 2013. Title of talk: Collapse models: From theoretical foundations to experimental verifications.
25. Workshop: "Quantum Mechanics Tests in Particle, Atomic, Nuclear and Complex Systems: 50 years after Bell's renowned theorem", Trento (Italy), 24-28 February 2014. Title of talk: Why and how collapse models affect the radiative properties of matter.
26. Workshop: "Is Quantum Theory Exact? The endeavor for the theory beyond standard quantum mechanics", LNF-INFN Frascati (Italy), 28-30 April 2014. Title of talk: Collapse Models: Introduction and overview.

27. Workshop: "Questioning Fundamental Physics Principles", CERN – Geneva (Switzerland), 8-9 May 2014. Title of talk: Recent developments in Collapse Models.
28. Conference: "RQIN – 2014: Relativistic Quantum Information", Seoul (South Korea), 30 June – 3 July 2014. Title of talk: Collapse models as an alternative to standard quantum theory.
29. Conference: "DICE 2014: Spacetime – matter – quantum mechanics", Castiglioncello (Italy), 15-19 September 2014. Title of talk: Models of spontaneous wave function collapse: what they are and how they can be tested.
30. Workshop: "Advances and future of fundamental problems of quantum physics studied at different energies", Vienna (Austria), 26-27 February 2015. Title of talk: Why and how collapse models make sure that quantum measurements have definite outcomes (and with the correct probabilities).
31. Conference: "RQIN-2015", Dartmouth College (USA), 5-8 July 2015. Title of talk: Gravity and the collapse of the wave function.
32. Workshop: "Probing the mystery: theory & experiment in quantum gravity", Vancouver (Canada), 17-20 August 2015. Title of talk: Wave function collapse and gravity.
33. Workshop: "Is quantum theory exact? The endeavor for the theory beyond standard quantum mechanics. Second Edition FQT2015", LNF Frascati (Italy), 23-25 September 2015. Title of talk: Wave function Collapse and gravity.
34. Symposium: "Emergent Quantum Mechanics", 3rd edition, Vienna (Austria), 23-25 October 2015. Title of talk: Models of spontaneous wave function collapse: what they are, and how they can be tested.
35. Workshop: "Celebrating GianCarlo Ghirardi's 80th Birthday", Trieste (Italy), 27th October 2015. Title of talk: GRW: From the Bohr-Einstein debate to Optomechanics"
36. Conference: "115th Statistical Mechanics Conference", Rutgers University (USA), 8-10 May 2016. Title of talk: Models of Spontaneous Wave Function Collapse: an Update.
37. Workshop: "Quantum control of levitated optomechanics", Pontremoli (Italy), 18-20 May 2016. Title of talk: Models of spontaneous wave function collapse: an update.
38. Workshop: "Quantum Interfaces with Nano-opto-electro-mechanical devices: Applications and Fundamental Physics", Erice (Italy), 1-5 August 2016. Title of talk: Models of spontaneous wave function collapse and optomechanics.
39. School: "Mathematical Foundations of Physics", Munich (Germany), 1-4 November 2016. Lesson: Models of spontaneous wave function collapse.

40. Workshop: "Metaphysics of Physics", Lausanne (Switzerland), 17-19 November 2016. Title of talk: Models of spontaneous wave function collapse: current status and future perspectives.
41. School: INSPYRE 2017: "INternational School on modern PhYsics and REsearch "The Space Frontier"", Frascati (Italy), 15-19 February 2017. Title of Lecture: Quantum matter and space.
42. Workshop: "Trieste Quantum Days", Trieste (Italy), 20-24 February 2017. Title: TBA.
43. VIII international workshop: "Advances in Foundations of Quantum Mechanics and Quantum Information with atoms and photons", Torino (Italy) 7-13 May 2017. Title: TBA.
44. Workshop: "Quantum Physics & Geometry", Trento (Italy), 4-6 June 2017. Title: TBA.

ANNEX III

SCHOOLS AND CONFERENCES (as organizer/co-organizer)

1. Conference with proceedings: Are there Quantum Jumps? On the Present Status of Quantum Mechanics, ICTP–Trieste (Italy), 5 September 2005 and Mali Losinj (Croatia): 7-9 September 2005.
2. School and conference: New Trends in Quantum Dynamics and Quantum Entanglement, ICTP–Trieste (Italy), 18-25 February 2011.
3. Conference with mini-proceedings: Quantum Malta 2012. Fundamental Problems in Quantum Physics, Malta, 24-27 April 2012.
4. Conference with mini-proceedings: Open Problems in Quantum Mechanics, Frascati, 20-22 June 2012
5. Conference: "Quantum Theory without Observers III", Bielefeld (Germany), 22-26 April 2013.
6. Conference: "Fundamental Problems in Quantum Physics", Weizmann Institute (Israel), 24-28 April 2014 (Chair of the International Advisory Committee).
7. Workshop: "Is quantum theory exact? The endeavor for the theory beyond standard quantum mechanics", Frascati (Italy), 28-30 April 2014.
8. Quantum Africa 3, Rabat (Morocco), 22-26 September 2014.
9. Conference: "Fundamental Problems in Quantum Physics", Erice (Italy), 23-27 March 2015.
10. Workshop: "Is quantum theory exact? The endeavor for the theory beyond standard quantum mechanics. Second Edition", Frascati (Italy), 23-25 September 2015.
11. Workshop: "Non-interferometric tests of the quantum superposition principle", Trieste (Italy), 17-18 September 2015.
12. Workshop: "Testing the limits of the quantum superposition principle in nuclear, atomic and optomechanical systems", Trento (Italy), 11-16 September 2016.
13. School + Discussion meeting: "Fundamental Problems of Quantum Physics", Bangalore (India), 21 November – 10 December 2016.
14. School: "Are spin-statistics connections and quantum theory exact? The endeavor for the theory beyond standard quantum mechanics", Frascati (Italy) 19-21 December 2016.
15. Conference and Working Group Meetings: "Quantum Technologies in Space", Valletta (Malta) 26-31 March 2017.
16. Workshop: "The Physics of What Happens and the "measurement problem", Frascati (Italy) 24-26 May 2017.

17. Workshop: "Testing Fundamental Physics Principles", Corfu (Greece), 23-28 September 2017.