
Cecilia Cormick's Curriculum Vitae

Personal information

Postal address: Departamento de Física, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Pabellón I, Ciudad Universitaria, (1428) Ciudad de Buenos Aires, Argentina.

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Date of birth: June 1980.

Citizenship: Argentinian.

Passport Number (DNI): 28.062.457

Current positions

- Doctoral Fellowship from CONICET, since April 2009.
Advisor: Prof. Juan Pablo Paz.
Institution: Physics Department, FCEyN, University of Buenos Aires.
 - Teaching Assistant at the Physics Department, FCEyN, UBA, since April 2003.
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Education

- Doctora en Ciencias Físicas (Ph.D. in Physics).
FCEyN, University of Buenos Aires.
December 2005 - December 2009.
Thesis Title: "Decoherence and quantum simulations of dynamic environments".
Advisor: Prof. Juan Pablo Paz.
 - Licenciada en Ciencias Físicas (eq. to Master in Physics).
FCEyN, University of Buenos Aires.
March 2000 - September 2005.
G.P.A.: 9.59/10
Master's Thesis: "Discrete Wigner functions and stabilizer states in quantum computation".
Advisor: Prof. Juan Pablo Paz.
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Previous research positions

- Doctoral Fellowship from Conicet, April 2006 - March 2009.
Advisor: Prof. Juan Pablo Paz.
- Doctoral Fellowship from ANPCyT, November 2005 - March 2006.
Advisor: Prof. Juan Pablo Paz.

Research papers

- C. Cormick and J. P. Paz. "Observing different phases for the dynamics of entanglement in an ion trap". Submitted to Phys. Rev. A. e-print arXiv.org:0912.1602 (2009).
- C. Cormick and J. P. Paz. "Decoherence of Bell states by local interactions with a dynamic spin environment". Phys. Rev. A **78**, 012357 (2008).
- C. Cormick and J. P. Paz. "Decoherence induced by a dynamic spin environment: the universal regime". Phys. Rev. A **77**, 022317 (2008).
- C. Cormick and J. P. Paz. "Interference in discrete Wigner functions". Phys. Rev. A **74**, 062315 (2006).
- C. Cormick, E. Galvão, D. Gottesman, J. P. Paz and A. Pittenger. "Classicality in discrete Wigner functions". Phys. Rev. A **73**, 012301 (2006).

International scientific meetings

- Quantum Chaos: Theory and Applications, dedicated to the 65th birthday of Marcos Saraceno. December 01-04, 2009, Buenos Aires, Argentina.
- Second International Workshop on Quantum Information, September 07-11, 2009, Paraty, Brazil. Poster presented:
 - C. Cormick and J. P. Paz. "Studying entanglement dynamics in ion traps".
- Quantum Information. June 7-27, 2009. Benasque Center for Science, Spain.
- The Ninth International Conference on Quantum Communication, Measurement and Computing. August 19-24, 2008. University of Calgary, Alberta, Canadá. Poster presented:

- C. Cormick and J. P. Paz. “Decoherence of Bell states by local interactions with a dynamic spin environment”.
 - International Workshop on Quantum Information, August 12-16, 2007, Paraty, Brazil. Posters presented:
 - C. Cormick and J. P. Paz, “Decoherence by a spin-chain environment: the universal regime”.
 - C. Cormick and J. P. Paz, “Decoherence by local interactions with a spin-chain environment”.
 - Workshop on Quantum - Classical Transition and Quantum Information, June 19-23, 2006, Benasque Center for Science, Benasque, Spain.
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Talks

- “Observing different phases for the dynamics of entanglement in an ion trap”. August 5, 2009. Contributed talk to the satellite workshop in the Eleventh J.J. Giambiagi Winter School. Buenos Aires, Argentina.
 - “Studying entanglement dynamics in an ion trap”.
 - June 3, 2009: Seminar for the Quantum Information Theory Group at the Institute for Mathematical Sciences, Imperial College of London, UK.
 - June 2, 2009: Seminar for the Quantum Information Theory Group at the University College of London, UK.
 - May 25, 2009: Internal seminar in the Quantum Optics Group at Institute d’Optique, Palaiseau, France.
 - May 19, 2009: Seminar at the Institute for Quantum Information Processing, University of Ulm, Germany.
 - “Decoherence by spin environments”, May 28, 2009. Seminar of the Condensed Matter Group, LPTHE, Université Paris 6, France.
 - “Decoherence by spin-chain environments”, August 14, 2008. Physics lunch talk at the Institute for Quantum Computing, University of Waterloo, Ontario, Canada.
 - “How to draw the state of a quantum computer”, June 26, 2006. Seminar of the Optics Group, Universidad Autónoma de Barcelona, Spain.
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Schools

- Second School on Quantum Information, September 01-06, 2009, Paraty, Brazil.
- Eleventh J.J. Giambiagi Winter School, *The Quantum Mechanics of the XXI Century: Manipulation of Coherent Atomic Matter*. July 27 - August 7, 2009. FCEyN, UBA, Buenos Aires, Argentina.
- School on Quantum Information, August 6-11, 2007, Paraty, Brazil.
- Ninth J. J. Giambiagi Winter School, part A: *Physics and the Computers of the Future*, July 30 - August 3, 2007, FCEyN, UBA, Buenos Aires, Argentina.
- Summer School on Scalable Quantum Information Processing and Computing, June 12-23, 2006, Benasque Center for Science, Benasque, Spain.
- Sixth J. J. Giambiagi Winter School on Physics, *Particle Physics*, July 26-30, 2004, FCEyN, UBA, Buenos Aires, Argentina.
- Fourth Canadian Summer School on Quantum Information, June 21-25, 2004, University of Waterloo, Ontario, Canada.
- Fifth J. J. Giambiagi Winter School on Physics, *Precision Cosmology*, July 18 - August 1, 2003, FCEyN, UBA, Buenos Aires, Argentina.

PhD and Master courses

- Cosmology.
- Foundations of Quantum Mechanics.
- Introduction to General Relativity.
- Nonlinear Dynamics.
- Quantum Liquids.
- Semiclassical Methods in Quantum Dynamics.

All courses passed with marks 10/10.

Scientific interests

- Decoherence and the quantum-to-classical transition.
- Quantum information and computation.
- Quantum simulation of physical systems.
- Foundations of Quantum Mechanics.

Teaching qualifications

- **Teacher Training Courses (at FCEyN, UBA)**
Educational Issues; General Didactics; Psychology and Learning; History of Science.
All courses passed with marks 10/10.
- **Teaching experience**
Teaching assistant in introductory courses on Calculus, Electromagnetism, Mechanics, Optics, Quantum Mechanics, Quantum Computation, and Thermodynamics.
- **Previous teaching positions**
Teaching Assistant, Mathematics Department, CBC, UBA, April 2004 to July 2005.

Language skills

- Spanish (first language).
 - English (spoken, read and written, fluent).
 - French (spoken, read and written, good).
 - German (beginner level).
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