

Luis Pedro García-Pintos

Education

- 10/2011–10/2015 **Ph.D. Mathematics**, *School of Mathematics, University of Bristol, United Kingdom.*
Supervisors: Prof. Andreas Winter and Prof. Noah Linden.
- 10/2008–08/2011 **M.Sc. Physics**, *School of Physics, University of the Republic, Uruguay.*
Supervisor: Prof. Rodolfo Gambini.
- 01/2006–11/2006 Umeå Universitet, Sweden.
- 03/2003–08/2008 **B.Sc. Physics (Hons)**, *School of Physics, University of the Republic, Uruguay.*
1st class degree (> 80%).

Research experience

- Research Project: ***Equilibration time scales in closed quantum systems***
10/2011–today **Quantum Information Group, University of Bristol**
Group leaders: Prof. Andreas Winter and Prof. Noah Linden
School of Mathematics, University of Bristol, United Kingdom.
- Research Project: ***Studies of decoherence and loss of coherence in quantum systems***
09/2008–08/2011 **Quantum Field Theory Group, Universidad de la Republica**
Group leader: Prof. Rodolfo Gambini
School of Physics, University of the Republic, Uruguay.
- Research Project: ***Instrumental techniques in quantum optics and non-linear optics***
07/2007–06/2008 **Quantum Optics and Laser Interferometry Lab, Universidad de la Republica**
Group leader: Prof. Arturo Lezama
School of Engineering, University of the Republic, Uruguay

Research interests:

Quantum information, quantum statistical mechanics, quantum thermodynamics, decoherence, quantum to classical transition, fundamental tests of quantum mechanics.

Teaching and monitoring experience

- 08/2010–08/2011 **Teaching Assistant**, School of Physics, University of the Republic, Uruguay, Physics Laboratory 2 for Biochemistry, 2010.
- 12/2008–07/2010 **Teaching Assistant**, School of Physics, University of the Republic, Uruguay, Laboratory 1 for Physics, 2009 and 2010, Physics Laboratory 1 for Biochemistry, 2009.
- 06/2006–09/2006 **Student Monitor**, Faculty of Science, University of the Republic, Uruguay. Provided assistance and support to B.Sc. students from the Faculty of Science.

Publications and preprints

7. *Equilibration time scales of physically relevant observables*, Luis Pedro García-Pintos, Noah Linden, Artur S.L. Malabarba, Anthony J. Short, and Andreas Winter, In preparation (final stages - available on request).
6. *Non-thermal quantum channels as a thermodynamical resource*, Miguel Navascués and Luis Pedro García-Pintos, Phys. Rev. Lett. 115, 010405 (2015) [[arXiv:1501.02597](#)].
5. *Quantum systems equilibrate rapidly for most observables*, Artur S.L. Malabarba, Luis Pedro García-Pintos, Noah Linden, Terence C. Farrelly and Anthony J. Short, Phys. Rev. E 90, 012121 (2014) [[arXiv:1402.1093](#)].
4. *A realist interpretation of quantum mechanics based on undecidability due to gravity*, Rodolfo Gambini, Luis Pedro García-Pintos and Jorge Pullin, J. Phys. Conf. Ser. 306:012005 (2011) [[arXiv:1010.4188](#)].
3. *Undecidability as a solution to the problem of measurement: fundamental criterion for the production of events*, Rodolfo Gambini, Luis Pedro García-Pintos and Jorge Pullin, Int. J. Mod. Phys. D 20:909-918 (2011) [[arXiv:1009.3817](#)].
2. *An axiomatic formulation of the Montevideo interpretation of quantum mechanics*, Rodolfo Gambini, Luis Pedro García-Pintos and Jorge Pullin, Studies In History and Philosophy of Modern Physics 42, 256-263 (2011) [[arXiv:1002.4209](#)].
1. *Undecidability and the problem of outcomes in quantum measurements*, Rodolfo Gambini, Luis Pedro García-Pintos and Jorge Pullin,

Found. Phys. 40, 93-115 (2010), [[arXiv:0905.4222](https://arxiv.org/abs/0905.4222)].

Presentations in conferences and workshops

8. *COST Quantum Thermodynamics Conference, Mallorca, Spain (2015)*,
Talk: Time scales of equilibration in physically relevant measurements.
7. *COST Quantum Thermodynamics Conference, Belfast, UK (2014)*,
Poster: Equilibration time scales for physically relevant measurements in closed systems.
6. *Seminar in Prof. Björn Trauzettel's Mesoscopic Physics Group, Würzburg University, Germany (2014)*,
Talk: Equilibration time scales in closed quantum systems.
5. *QUICC School, Exeter, UK (2014)*,
Poster: Equilibration time scales for physically relevant measurements in closed systems.
4. *DICE2010: Space-time-matter, Castiglioncello, Italy (2010)*,
Poster: On the possibility of experimentally verifying collapse hypothesis and the concept of Undecidability.
3. *II Quantum Information School and Workshop, Paraty, Brasil (2009)*,
Poster: On the possibility of experimentally verifying collapse hypothesis through global observables and the concept of Undecidability.
2. *11° JJ Giambiagi School in Physics, Buenos Aires, Argentina (2009)*,
Poster: On the possibility of experimentally verifying collapse hypothesis through global observables and the concept of Undecidability.
1. *1st AFA-SUF meeting, Buenos Aires, Argentina (2008)*,
Poster: Decoherence with a controlled environment: taking d'Espagnat's experiment to practice,
Poster: Study of coherent optical transitories in the presence of a magnetic field.

Professional memberships

06/2015–today *ANII Junior Research Associate (adjunct)*.
ANII (National Agency of Innovation and Research), Uruguay.

Awards, grants and scholarships

- 10/2011–04/20015 *University of Bristol Postgraduate Research Scholarship, United Kingdom.*
- 10/2011–10/2014 *University of Bristol Excellence award, United Kingdom.*
- 08/2009–07/2011 *ANII Master Degree Scholarship, Uruguay.*
- 09/2008–08/2009 *PEDECIBA/ANII Research Initiation Scholarships, Uruguay.*
- 07/2007–06/2008 *PEDECIBA Research Initiation Scholarship, Uruguay.*
- 01/2006–07/2006 *Linnaeus-Palme study abroad Grant, Sweden.*

References

- Noah Linden* Professor and Head of School of Mathematics, University of Bristol, United Kingdom.
n.linden@bristol.ac.uk
- Andreas Winter* ICREA Research Professor, Grup d'Informació Quàntica, Universitat Autònoma de Barcelona, Spain.
andreas.winter@uab.cat
- Rodolfo Gambini* Profesor Grado 5 at School of Physics, University of the Republic, Uruguay.
rgambini@fisica.edu.uy