

## Curriculum Vitae

Prof. Dr. Antonio Acín Dal Maschio  
ICFO – The Institute of Photonic Sciences  
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Date: 28 January 2025

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- Present position:** ICREA Professor at ICFO-The Institute of Photonic Sciences  
Head of the Quantum Information Theory group at ICFO
- Appointments:**  
10/2001-03/2003 Post-doc: GAP-Optique, University of Geneva  
04/2003-12/2004 Post-doc: ICFO-The Institute of Photonic Sciences  
01/2005-12/2007 Assistant Professor: ICFO-The Institute of Photonic Sciences  
01/2008-09/2008 Professor: ICFO-The Institute of Photonic Sciences  
09/2008-Present ICREA Professor at ICFO-The Institute of Photonic Sciences
- Education:**  
09/1998-06/2001 PhD in Physics: “Quantum entanglement and quantum state estimation”,  
University of Barcelona  
09/1990-07/1997 Telecommunication Engineer, Polytechnic University of Catalonia  
09/1993-06/1997 Physics, University of Barcelona
- Honors:**  
Rei Jaume I Award in Basic Research (2024)  
ERC Advanced Grant CERQUTE (2020-2024)  
ERC Consolidator Grant QITBOX (2014-2019)  
ERC Proof-of-Concept MAMBO (2012-2013)  
ERC Starting Grant PERCENT (2008-2013)  
Recipient in 2017, 2019 and 2022 of The Paul Ehrenfest Best Paper Award for  
Quantum Foundations  
AXA Chair in Quantum Information Science (2016-2025)  
Recipient in 2010 of the “La Recherche” prize for the article “Random  
numbers certified by Bell’s theorem”  
Ramon y Cajal Fellow, Spanish Ministry of Economy. Ranked 1<sup>st</sup> nationwide in  
the area of Electronic and Communication Technologies
- Leadership:** Leader of the Quantum Information Theory group at ICFO since 2003. At the  
moment of writing, the group consists of 16 post-docs and 16 PhD students.  
Graduated 34 Ph.D. students and supervised 47 post-docs.  
Thirty-two former group members now have tenure-track or tenure positions in  
Argentina (2), Austria (2), Belgium, Brazil (2), Denmark, France (4), Germany,  
India, Italy, Japan, Poland (6), Spain (4), South Korea, United Arab Emirates and  
UK (4).
- Advisory Boards:** Scientific Advisory Board of the Centre for Quantum Technologies in Singapore  
(CQT-Singapore)  
International Advisory Council of the International Institute of Physics in Natal  
(IIP-Natal)
- Evaluations:** Reviewer for several funding agencies including EU, ERC, ESF, EPSRC, Royal  
Society, Alexander von Humboldt Foundation, the John Templeton Foundation,  
and national agencies in Argentina, Austria, Belgium, Denmark, France, Israel,  
Italy, Latvia, Netherlands, Poland, Slovakia, Spain, Sweden, Switzerland and UK.

- Conference Chair:** Conference on Quantum Thermodynamics (2020)  
5<sup>th</sup> Spanish Quantum Information Conference (2019)  
Program Chair of “Modern Topics in Quantum Information” (2018), Natal, Brazil,  
Conference on “Quantum Thermodynamics” (2018), Santa Barbara, USA  
3 Workshops on Bayesian Networks (2016-2017)  
Conference on Randomness in Quantum Physics and Beyond (2015)  
XVII Conference on Quantum Information Processing (2014)  
Conference on Quantum Information Processing and Communication (2007)
- Service:** External examiner for 53 PhD theses (Austria, Belgium, Canada, Denmark, Finland, France, Italy, Poland, South Korea, Spain, Sweden, Switzerland, Taiwan and UK).
- Publications:** More than 230 publications in peer-reviewed journals, including 4 Nature (3 research articles and 1 invited review), 2 Science, 5 Nature Physics, 5 Nature Communications, 1 Review of Modern Physics, 8 Physical Review X and 66 Physical Review Letters.
- Citations:** According to Web of Science / Google Scholar, and on 28 January 2025, the publications by Acín have received 19,893 / 31,702 citations and the Hirsch index is 70 / 87.
- Funding:** Since its creation in 2003, Acín’s group has participated in 42 projects, 17 national and 25 international. Acín acted as coordinator in 19 of these projects, including four projects by the European Research Council (ERC): 1 Starting Grant (2008-2013), 1 Proof of Concept (2012-2013), 1 Consolidator Grant (2014-2019) and 1 Advanced Grant (2020-2024).
- Patents:** N. Gisin, A. Acín, V. Scarani and G. Ribordy: *Quantum Cryptography Protocol*; PCT Patent WO2004047359-A1 (2004); US Patent US2006120529-A1. The protocol is known under the acronym of SARG.  
J. Bowles, P. Hümbeli, A. Acín, A. Dauphin, J. R. Martínez Saavedra: *Computer-Implemented Method for Finding an Approximate Solution for a Quadratic Unconstrained Binary Optimization Problem*, EP4123480-A1, licensed (2023).  
D. Jansen, L. Mortimer, T. Heightman, I. Perito, A. Acín, EP24382529, submitted and licensed (2024).  
E. Oudot, A. Steffinlongo, M. Navarro, A. Acín, EP24383018.9, submitted (2024).
- Reviewer:** Referee of the best journals in physics, such as Nature, Science, Nature Physics, Nature Photonics, Nature Communications, Physical Review X and Physical Review Letters.
- Scientific talks:** Almost 190 Invited Talks/Courses in International Events. This includes the March Meeting of the American Physical Society, the Gordon Conference, CLEO and the European Science Open Forum (ESOF). Apart from conferences, talks in many universities and research centres, including colloquia at ETH-Zurich, Switzerland, the Max-Planck Institute for Quantum Optics, Germany or the Perimeter Institute for Theoretical Physics, Canada, and general public seminars.
- Research interests:** Acín’s main research interest is in quantum information theory, quantum communication and cryptography. The research activity goes from abstract theoretical problems to the experimental demonstration of quantum information protocols. His research also covers questions in foundations of quantum physics, quantum optics, many-body physics and quantum thermodynamics.

**Awarded grants in the last 10 years (when project coordinator, marked in bold):**

2024-2027	Quantera COMPUTE, Ministerio de Ciencia e Innovación
2024-2028	TENORS, MSCA Training Network, EU
2023-2027	<b>FUNQIP, Spanish Ministry of Science</b>
2024-2025	Quantum in Spain, Secretaría de Estado e Inteligencia Artificial
2023-2026	PASQUANS, EU Flagship on Quantum Technologies
2023-2026	QSNP, EU Flagship on Quantum Technologies
2022-2025	NEQST, Horizon Europe
2022-2025	QUCATS, Coordinated Action, EU Flagship on Quantum Technologies
2022-2025	Quantera Veriqtas, Ministerio de Ciencia e Innovación
2021-2024	Misiones CUCO, Ministerio de Ciencia e Innovación (CDTI)
2021-2024	Ministerio de Ciencia e Innovación (NextGen Funds)
2021-2022	R&D Challenges (Retos) QuSpin Spanish Ministry of Economy
2020-2024	<b>ERC Advanced Grant (CERQUTE)</b>
2020-2022	<b>R&amp;D Project Promotion of Excellence, Ministerio de Ciencia e Innovación</b>
2018-2021	FEDER Co-fund Assignment QuantumCAT, Catalan Government
2018-2021	CiviQ, EU Flagship on Quantum Technologies
2018-2021	QRANGE, EU Flagship on Quantum Technologies
2017-2021	<b>AGAUR, Grants to support Research Groups, Catalan Government</b>
2017-2019	<b>R&amp;D Project Promotion of Excellence Ministerio de Ciencia e Innovación</b>
2016-2025	<b>AXA Chair in Quantum Information Science</b>
2015-2017	<b>FQXI project (<i>Quantum Bayesian networks: the physics of nonlocal events</i>)</b>
2015-2017	FQXI project ( <i>Towards an almost quantum physical theory</i> )

## **10 Representative Publications in the last 10 years**

1. *Extractable work from correlations*  
M. Perarnau-Llobet, K. V. Hovhannisyan, M. Huber, P. Skrzypczyk, N. Brunner, A. Acín  
Phys. Rev. X 5, 041011 (2015)
2. *Certified randomness in quantum physics*  
A. Acín, L. Masanes  
Nature 540, 213 (2016)
3. *No-go theorem for the characterization of work fluctuations in coherent quantum systems*  
M. Perarnau-Llobet, E. Bäumer, K. V. Hovhannisyan, M. Huber, A. Acín  
Phys. Rev. Lett. 118, 070601 (2017)
4. *Bounding the sets of classical and quantum correlations in networks*  
A. Pozas-Kerstjens, R. Rabelo, L. Rudnicki, R. Chaves, D. Cavalcanti, M. Navascués, A. Acín  
Phys. Rev. Lett. 123, 140503 (2019)
5. *Connector tensor networks: a renormalization-type approach to quantum certification*  
M. Navascués, S. Singh, A. Acín  
Phys. Rev. X 10, 021064 (2020)
6. *Unsupervised phase discovery with deep anomaly detection*  
K. Kottmann, P. Huembeli, M. Lewenstein, A. Acín  
Phys. Rev. Lett. 125, 170603 (2020)
7. *Quantum theory based on real numbers can be experimentally falsified*  
M. Renou, D. Trillo, M. Weilenmann, T. P. Le, A. Tavakoli, N. Gisin, A. Acín, M. Navascués  
Nature 600, 625 (2021)
8. *Bell nonlocality is not sufficient for the security of standard device-independent quantum key distribution protocols*  
M. Farkas, M. Balanzó-Juandó, K. Łukanowski, J. Kołodyński, A. Acín  
Phys. Rev. Lett. 127, 050503 (2021)
9. *Quantum networks self-test all entangled states*  
I. Šupić, J. Bowles, M.-O. Renou, A. Acín, M. J. Hoban  
Nature Physics 19, 670 (2023)
10. *Certifying ground-state properties of many-body systems*  
J. Wang, J. Surace, I. Frérot, B. Legat, M.O. Renou, V. Magron, A. Acín  
Phys. Rev. X 14, 031006 (2024)

## **Books**

1. *Einstein y la intuición*  
A. Acín  
Shackleton Books

## **Book Chapters**

1. *Continuous-Variable Quantum Key Distribution*  
F. Grosshans, A. Acín, N. J. Cerf  
Quantum Information with Continuous Variables of Atoms and Light, World Scientific (2007)
2. *Two chapters, one on “Werner states” and another on “Hardy’s paradox”*  
A. Acín  
Compendium of Quantum Physics, Springer (2009)
3. *SDP Relaxations for Non-Commutative Polynomial Optimization*  
M. Navascués, S. Pironio, A. Acín  
Handbook on Semidefinite, Conic and Polynomial Optimization, Springer (2012)
4. *True Quantum Randomness*  
A. Acín  
Is Science Compatible with Free Will?, Springer (2013)
5. *Guess Your Neighbour’s Input: No Quantum Advantage but an Advantage for Quantum Theory*  
A. Acín, M. Almeida, R. Augusiak, N. Brunner  
Quantum Theory: Informational Foundations and Foils, Springer (2016)
6. *Black Box Quantum Mechanics*  
A. Acín, M. Navascués  
Quantum [Un]Speakables II: Half a Century of Bell’s Theorem, Springer Verlag (2017)

## **Popular Science Articles**

1. *Procesamiento cuántico de la información*  
A. Acín  
Investigación y Ciencia 360 (2006)
2. *Criptografía cuántica*  
A. Acín, M. Navascués  
Revista Española de Física 21, (2007)
3. *La certitude de l’aléa quantique*  
A. Acín, S. Massar, S. Pironio, D. Delbecq  
La Recherche, 447, 60 (2010)
4. *Información cuántica*  
A. Acín  
Lychnos 5 (2011)
5. *La certeza del azar cuántico*  
A. Acín, S. Massar, S. Pironio  
Investigación y Ciencia 424 (2012)

6. *¿Qué bit tiene mi vecino?*  
A. Acín, M. Almeida  
Investigación y Ciencia 437 (2013)
7. *Termodinámica cuántica*  
A. Acín, M. Perarnau-Llobet, A. Riera  
Revista Española de Física, 33 (2019)
8. *Imaginary Universe*  
M. O. Renou, A. Acín, M. Navascués  
Scientific American 328 (4), 62 (2023)
9. *Física quàntica i informació: noves tecnologies per al segle XXI*  
A. Acín, J. I. Cirac  
Revista Idees 61, 1 (2024)

## Supervised Phd Theses

1. *Entanglement and Quantum Cryptography*  
Joonwoo Bae  
12 April 2007
2. *Quantum information in infinite dimensional Hilbert spaces*  
Miguel Navascués  
14 December 2007
3. *Entanglement: from its mathematical description to its experimental observation*  
Daniel Cavalcanti  
17 October 2008
4. *Entanglement and classical correlations in many-body systems*  
Artur Garcia-Saéz  
14 May 2010
5. *Resources for Quantum Information Tasks: from the Bipartite to the Multipartite Scenario*  
Mafalda Almeida  
15 July 2010
6. *Entanglement and non-local correlations: quantum resources for information processing*  
Giuseppe Pretico  
18 January 2013
7. *Device-independent information protocols: Measuring dimensionality, randomness and nonlocality*  
Rodrigo Gallego  
22 February 2013
8. *Intrinsic randomness in non-local theories: quantification and amplification*  
Chirag Dhara  
12 June 2013
9. *Nonlocality in multipartite correlation networks*  
Lars Würflinger  
18 September 2013
10. *Characterizing and witnessing multipartite correlations: from nonlocality to contextuality*  
Ana Belén Sáinz  
10 February 2014
11. *From quantum foundations to quantum information protocols and back*  
Gonzalo de la Torre  
23 September 2015
12. *Impact of Imperfections on Correlation-Based Quantum Information Protocols*  
Elsa Passaro  
30 May 2016
13. *Thermodynamics and quantum correlations*  
Martí Perarnau-Llobet  
6 June 2016

14. *Quantum Information with Black Boxes – Lifting Protocols from Theory to Implementation*  
Alejandro Máttar  
17 October 2017
15. *Simulating quantum measurements and quantum correlations*  
Leonardo Guerini  
29 January 2018
16. *Device-independent certification of quantum resources*  
Ivan Supic  
19 September 2018
17. *Nonlocal resources for quantum information tasks*  
Florian Curchod  
11 October 2018
18. *Quantifying Randomness from Bell Nonlocality*  
Boris Bourdoncle  
13 February 2019
19. *Bell Inequalities for Device-Independent Protocols*  
Alexia Salavrakos  
26 March 2019
20. *Local Temperature and correlations in Quantum Many-Body Systems*  
Senaída Hernández-Santana  
12 April 2019
21. *Certification of Many-Body Systems*  
Flavio Baccari  
17 May 2019
22. *Quantum information outside quantum information*  
Alejandro Pozas-Kerstjens  
15 October 2019
23. *Quantum Multipartite Entangled States, Classical and Quantum Error Correction*  
Zahra Raissi  
8 October 2020
24. *Machine Learning for Quantum Physics and Quantum Physics for Machine Learning*  
Patrick Hübner  
25 March 2021
25. *Witnessing Non-Markovian Evolutions*  
Dario De Santis  
22 June 2021
26. *Quantum Information in Lattices*  
Bruna Gabrielly de Moraes Araujo  
22 July 2022
27. *Resource Theories of Quantum Dynamics*  
Chung-Yun Hsieh  
13 October 2022



28. *Investigating Quantum Many-Body Systems with Tensor Networks, Machine Learning and Quantum Computers*  
Korbinian Kottmann  
14 October 2022
29. *Optimization and Geometry for Quantum Information tasks*  
Paolo Abiuso  
12 December 2022
30. *Information and Thermodynamics*  
Matteo Scandi  
13 July 2023
31. *Non-classical states of light: generation via strong-field processes and applications in quantum key distribution*  
Javier Rivera Dean  
24 May 2024
32. *Bell nonlocality and causal networks*  
Cristian Boghiu  
9 July 2024
33. *Certification in quantum information theory: key distribution, self-testing and entanglement*  
María Balanzó Juandó  
12 September 2024
34. *Correlations and Measurements as Resources for Quantum Information Tasks*  
Marina Cenni  
25 November 2024

## **Supervised Post-doctoral Fellows**

1. Mafalda Almeida
2. Mario Leandro Aolita
3. Remigiusz Augusiak
4. Ariel Bendersky
5. Joseph Bowles
6. Jonatan Brask
7. Eric Brown
8. Bogna Bylicka
9. Daniel Cavalcanti
10. Rafael Chaves
11. Michele Dall'Arno
12. Maciej Demianowicz
13. Donato Farina
14. Máté Farkas
15. Alessandro Ferraro
16. Tobias Fritz
17. Irénée Frerot
18. Manuel Gessner
19. Christian Gogolin
20. Christopher Hadley
21. Matthew Hoban
22. Karen Hovhannisyan
23. Felix Huber
24. David Jansen
25. Osvaldo Jimenez
26. Markus Johansson
27. Jan Kolodynski
28. Jaroslaw Korbicz
29. Anthony Leverrier
30. Matteo Lostaglio
31. Lluís Masanes
32. Gaël Massé
33. Mohammad Mehboudi
34. Artur Niezgoda
35. Michał Oszmaniec
36. Enky Oudot
37. Stefano Pironio
38. Marc-Olivier Renou
39. Arnau Riera
40. Augusto Roncaglia
41. Gabriel Senno
42. Kyrylo Simonov
43. Paul Skrzypczyk
44. Jacopo Surace
45. Peter Wittek
46. Erik Woodhead
47. Victoria Wright

## **List of main collaborators (senior co-authors) in the last 5 years**

1. Remigiusz Augusiak, Polish Academy of Sciences
2. Konrad Banaszek, University of Warsaw
3. Nadja K. Bernardes, Federal University of Pernambuco
4. Ulysse Chabaud, INRIA Paris
5. Rafael Chaves, IIP-Natal
6. Ignacio Cirac, Max-Planck Institute for Quantum Optics
7. Philippe Corboz, University of Amsterdam
8. Omar Fawzi, ENS Lyon
9. Irénée Frérot, CNRS Paris
10. Vittorio Giovannetti, Scuola Normale di Pisa
11. Nicolas Gisin, University of Geneva
12. Matthew Hoban, University of Oxford
13. Jędrzej Kaniewski, University of Warsaw
14. Ludovico Lami, University of Amsterdam
15. Jan Kolodynski, University of Warsaw
16. Jakob Kottmann, University of Augsburg
17. Maciej Lewenstein, ICFO
18. Yeong-Cherng Liang, University of Tainan
19. Victor Magron, CNRS Toulouse
20. Miguel Navascués, IQOQI-Vienna
21. Valentina Parigi, Sorbonne University
22. Juan Parrondo, Universidad Complutense de Madrid
23. Stefano Pironio, Université Libre de Bruxelles
24. Valerio Pruneri, ICFO
25. Saleh Rahimi-Keshari, University of Tehran
26. Marc-Olivier Renou, INRIA Paris
27. Nicolas Sangouard, University of Basel
28. Valerio Scarani, Centre for Quantum Technologies
29. Paul Skrzypczyk, University of Bristol
30. Anders Sorensen, Niels Bohr Institute
31. Armin Tavakoli, University of Lund
32. Jordi Tura, University of Leiden
33. Jie Wang, Chinese Academy of Sciences
34. Elie Wolfe, Perimeter Institute

## **10 Representative Invited Scientific Talks in the last 5 years**

1. *Quantum key distribution: from security proofs to implementations*  
QTech 2024, Berlin, Germany, September 2024
2. *Bell's theorem, randomness and secrecy*  
Foundations of Quantum Physics beyond Bell: Celebrating 60 years of Bell's theorem, Les Diablerets, Switzerland, April 2024
3. *Certification of many-body systems*  
Quantum Optics 2024, Obergurgl, Austria, February 2024
4. *Quantum key distribution: from security proofs to implementations*  
European Quantum Technologies Conference 2023, Hannover, Germany, October 2023
5. *The device-independent scenario: quantum information processing based on Bell Theorem*  
DPG Meeting, Hannover, Germany, March 2023
6. *Network quantum information processing*  
Frontiers of Quantum Information Science, Vienna, Austria, September 2022
7. *Certification of quantum technologies*  
Quantum Matter, Barcelona, June 2022
8. *Non-commutative polynomial in quantum physics*  
8<sup>th</sup> European Congress of Mathematics (online), Portorož, Slovenia, June 2021
9. *Quantum Networks beyond Point-to-point Configurations*  
Optical Fiber Communication Conference (OFC) (online), San Diego, USA, June 2021
10. *Correlations in quantum networks*  
24<sup>th</sup> Conference on Optical Network Design and Modelling (ONDM) (online), Barcelona, Spain, May 2020

## **List of General Public Talks**

1. *Ordinadors i Comunicació Quàntica: Què passa quan els bits esdevenen quàntics?*  
Casa de Cultura de Girona  
Girona, Spain, 14 November 2024
2. *El teorema de Bell i els protocols de informació quàntica independents dels dispositius*  
Institut d'Estudis Catalans  
Barcelona, Spain, 23 May 2023
3. *El Premio Nobel de Física 2022: El teorema de Bell y los protocolos de información cuántica independiente de los dispositivos*  
Fronteras de la ciencia, Universidad de Valladolid  
Valladolid, Spain, 14 April 2023
4. *Fotons: de l'efecte fotoelèctric a la informació quàntica*  
Jornada commemorativa del centenari de la visita d'Albert Einstein, Reial Acadèmia de Ciències i Arts de Barcelona  
Barcelona, Spain, 23 February 2023
5. *El teorema de Bell y los fotones entrelazados*  
Pessics de Ciència  
Hospitalet, Spain, 1 February 2023
6. *Tecnologies quàntiques: què passa quan els bits esdevenen quàntics*  
Institut d'Estudis Catalans  
Barcelona, Spain, 19 November 2020
7. *Ordinadors i criptografia quàntica: què passa quan els bits esdevenen quàntics*  
Institut d'Estudis Illerdencs  
Lleida, Spain, 23 October 2019
8. *Convergence of Disciplines: Artificial Intelligence (Discussion Panel)*  
Madrid South Summit  
Madrid, Spain, 3 October 2019
9. *A quantum future: the next technological revolution?*  
ICREA-CCCB Debates 2019  
Barcelona, Spain, 13 April 2019
10. *Tecnologies quàntiques*  
Universitat Catalana d'Estiu  
Manresa, Spain, July 2018
11. *Quantum information and communication: The legacy of John Bell*  
John Bell Day  
Belfast, UK, November 2017
12. *Tecnologías cuánticas*  
EURECAT Future Technology Congress  
Barcelona, Spain, June 2017

13. *Violació de les desigualtats de Bell*  
Societat Catalana de Física  
Barcelona, Spain, November 2016
14. *La segunda revolución cuántica*  
TEDx Barcelona  
Barcelona, Spain, October 2016, more than 500k views
15. *Algoritmos de encriptación y criptografía cuántica*  
"La vida, instrucciones de uso", Cosmocaixa  
Barcelona, Spain, June 2014
16. *Procesamiento de información cuántica independiente de los dispositivos*  
Jornada "Información Cuántica" de la Fundación Ramón Areces  
Madrid, Spain, November 2011
17. *Random numbers certified by Bell's theorem*  
IV Congreso de Estudiantes la Facultad de Física 2011 de la Universidad La Laguna  
La Laguna, Spain, April 2011
18. *Teoria de la Informació Quàntica*  
Aula Sabadell  
Sabadell, Spain, January and April 2011
19. *True Quantum Randomness*  
Social Trends Institute Meeting: Is Science Compatible with our Desire for Freedom?  
IESE, Barcelona, Spain, October 2010
20. *Información cuántica o cómo utilizar las paradojas cuánticas*  
Aula de verano "Ortega y Gasset", Universidad Internacional Menéndez Pelayo  
Santander, Spain, August 2010
21. *Teoria de la informació quàntica*  
Certesa Simulada, Centre d'Arts Santa Mònica  
Barcelona, Spain, October 2009
22. *Información cuántica o cómo utilizar las paradojas cuánticas*  
Aula de verano "Ortega y Gasset", Universidad Internacional Menéndez Pelayo  
Santander, Spain, August 2009
23. *El azar en la Física Cuántica*  
Museo de Arte Contemporáneo de Barcelona (MACBA)  
Barcelona, Spain, June 2009
24. *La teleportación*  
Ya es futuro en CosmoCaixa, Cosmocaixa  
Barcelona, Spain, January 2009
25. *La criptografía e información cuántica: un reto para los matemáticos*  
Progresos y retos de la matemática interdisciplinar, Cursos de verano de El Escorial  
El Escorial, Spain, July 2007

## COMPLETE LIST OF FUNDED PROJECTS

1. Non-Commutative polynomial optimisation for quantum networks (COMPUTE)  
Ministerio de Ciencia e Innovación (Quantera), 01-10-2024 to 30-09-2027  
Coordinator: Dr. Marc-Olivier Renou
2. Tensor modeling, geometry and optimisations (TENORS)  
MSCA Training Network, 01-01-2024 to 31-12-2027  
Coordinator: Prof. Bernard Mourrain
3. Fundamentos del procesamiento de información cuántica (FUNQIP)  
Ministerio de Economía y Competitividad, 01-09-2023 to 31-08-2027  
Coordinator: Prof. Antonio Acín
4. Quantum in Spain  
Secretaría de Estado e Inteligencia Artificial (NextGen Funds), 01-08-2023 to 31-12-2024  
Coordinator: Dr. Alba Cervera-Lierta
5. Programmable Atomic Large-scale Quantum Simulation (PASQUANS)  
EU Flagship on Quantum Technologies, 01-04-2023 to 31-03-2026  
Coordinator: Prof. Immanuel Bloch
6. Quantum Secure Networks Partnership (QSNP)  
EU Flagship on Quantum Technologies, 01-03-2023 to 30-04-2026  
Coordinator: Prof. Valerio Pruneri
7. Next level quantum information processing for science and technology (NEQST)  
EU Union (Horizon Europe), 01-11-2022 to 31-10-2025  
Coordinator: Prof. Philipp Hauke
8. Quantum Flagship Coordination Action and Support (QUCATS)  
EU Flagship on Quantum Technologies, 01-05-2022 to 30-04-2025  
Coordinator: Prof. Philippe Grangier
9. Verification of quantum Technologies, Applications and Systems (VERIQTAS)  
Ministerio de Ciencia e Innovación (Quantera), 01-04-2022 to 31-03-2025  
Coordinator: Prof. Remigiusz Augusiak
10. Computación Cuántica en Industrias Estratégicas (CUCO)  
Ministerio de Ciencia e Innovación (CDTI), 01-10-2021 to 31-12-2024  
Coordinator: GMV Innovating Solutions
11. Comunicación Cuántica  
Ministerio de Ciencia e Innovación (NextGen Funds), 01-12-2021 to 31-12-2024  
Coordinator: Prof. Valerio Pruneri
12. Quspin: aceleradores hardware inspirados en física cuántica para optimización y Machine Learning  
Ministerio de Ciencia e Innovación (Retos), 01-01-2021 to 31-12-2022  
Coordinator: Dr. Carlos Abellán
13. Certification of Quantum Technologies (CERQUTE)  
European Research Council (Advanced Grant), 01-01-2020 to 31-12-2024  
Coordinator: Prof. Antonio Acín

14. Transversal Quantum Information (TRANQI)  
Ministerio de Economía y Competitividad, 01-01-2020 to 31-12-2022  
Coordinator: Prof. Antonio Acín
15. Agrupació Emergent en Tecnologies Quàntiques de Catalunya (QuantumCAT)  
Generalitat de Catalunya, 01-01-2018 to 31-12-2021  
Coordinator: Prof. Morgan Mitchell
16. Quantum Random Number Generators: cheaper, faster and more secure (QRANGE)  
EU Flagship on Quantum Technologies, 01-10-2018 to 30-09-2021  
Coordinator: Prof. Hugo Zbinden
17. Continuous Variable Quantum Communications (CIVIQ)  
EU Flagship on Quantum Technologies, 01-10-2018 to 30-09-2021  
Coordinator: Prof. Valerio Pruneri
18. Grup de Recerca Consolidat 2017 SGR 1381  
Generalitat de Catalunya, 01-10-2017 to 31-12-2021  
Coordinator: Prof. Antonio Acín
19. Quantum Information beyond Quantum Information (QIBEQI)  
Ministerio de Economía y Competitividad, 01-01-2017 to 31-12-2019  
Coordinator: Prof. Antonio Acín
20. AXA Chair in Quantum Information Science  
AXA Research Fund, 01-01-2016 to 30-06-2021  
Coordinator: Prof. Antonio Acín
21. Quantum Bayesian networks: the physics of nonlocal events  
Foundational Questions Institute (FQXI), 01-09-2015 to 31-08-2017  
Coordinator: Prof. Antonio Acín
22. Towards an almost quantum physical theory  
Foundational Questions Institute (FQXI), 01-09-2015 to 31-08-2017  
Coordinator: Dr. Miguel Navascués
23. Grup de Recerca Consolidat 2014 SGR 875  
Generalitat de Catalunya, 01-10-2014 to 31-12-2016  
Coordinator: Prof. Antonio Acín
24. Frontiers of Quantum Sciences: Atoms, Molecules, Photons and Quantum Information (FOQUS)  
Ministerio de Economía y Competitividad, 01-01-2014 to 31-12-2016  
Coordinator: Prof. Antonio Acín
25. Quantum Information Theory with Black Boxes (QITBOX)  
European Research Council (Consolidator Grant), 01-01-2014 to 31-12-2019  
Coordinator: Prof. Antonio Acín
26. Intrinsic Randomness in the Quantum World  
The John Templeton Foundation, 01-10-2013 to 30-06-2016  
Coordinator: Prof. Antonio Acín
27. Simulators and Interfaces with Quantum Systems (SIQS)  
European Union (Integrated Project), 01-05-2013 to 30-04-2016  
Coordinator: Prof. Tommaso Calarco



28. Quantum Technologies Europe (QUTE)  
European Union (Coordinated Action), 01-02-2013 to 31-01-2016  
Coordinator: Dr. Mario Ziman
29. High rate and compact quantum random number generator (MAMBO)  
European Research Council (Proof of Concept), 01-05-2012 to 30-04-2013  
Coordinator: Prof. Antonio Acín
30. Intrinsic Quantum Randomness (INTRINQRA)  
Ministerio de Ciencia e Innovación (Explora), 01-01-2012 to 31-12-2013  
Coordinator: Prof. Antonio Acín
31. Device Independent Quantum Information Processing (DIQIP)  
Era-Net Chist-Era (National Agencies), 01-09-2011 to 31-08-2014  
Coordinator: Prof. Antonio Acín
32. Correlaciones cuánticas y protocolos de información cuántica (COQPIC)  
Ministerio de Ciencia e Innovación, 01-01-2011 to 31-12-2013  
Coordinator: Prof. Antonio Acín
33. Quantum Computer Science (QCS)  
European Union (STREP), 01-09-2010 to 31-08-2013  
Coordinator: Prof. Andris Ambainis
34. Quantum Interfaces, Sensors and Communication based on Entanglement (Q-ESSENCE)  
European Union (Integrated Project), 01-02-2010 to 31-01-2013  
Coordinator: Prof. Konrad Banaszek
35. Grup Consolidat de Recerca: Grup d'Informació Quàntica  
Generalitat de Catalunya, 01-01-2010 to 31-12-2012  
Coordinator: Prof. Antonio Acín
36. Percolating Entanglement and Quantum Information Resources through Quantum Networks (PERCENT)  
European Research Council (Starting Grant), 01-11-2008 to 31-10-2013  
Coordinator: Prof. Antonio Acín
37. Computing with Mesoscopic Photonic and Atomic States (COMPAS)  
European Union (STREP), 01-04-2008 to 31-03-2011  
Coordinator: Prof. Nicolas Cerf
38. Quantum Tools for Information Tasks (QTIT)  
Ministerio de Educación y Ciencia, 01-01-2008 to 31-12-2010  
Coordinator: Prof. Antonio Acín
39. Consolider: Quantum Optical Information Technology (QOIT)  
Ministerio de Educación y Ciencia, 01-01-2007 to 31-12-2011  
Coordinator: Prof. Jürgen Eschner
40. Grup Consolidat de Recerca: Grup d'Informació Quàntica  
Generalitat de Catalunya, 01-01-2005 to 31-12-2008  
Coordinator: Prof. José Ignacio Latorre

41. Qubit Applications (QAP)  
European Union (Integrated Project), 01-11-2005 to 01-11-2008  
Coordinator: Prof. Martin Plenio and Ian Wamsley
  
42. Criptografía cuántica y entrelazamiento  
Ministerio de Educación y Ciencia, 13-12-2004 to 13-12-2007  
Coordinator: Dr. Antonio Acín

## COMPLETE LIST OF SCIENTIFIC PUBLICATIONS

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2. A. Acín, R. Tarrach and G. Vidal  
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8. A. Acín  
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13. A. Acín, G. Vidal and J. I. Cirac  
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## COMPLETE LIST OF SCIENTIFIC INVITED TALKS

1. *From Bell's theorem to the device-independent quantum information scenario*  
IFT Xmas Workshop, Madrid, Spain, December 2024
2. *Quantum Computers and Cryptography: What Happens When Bits Become Quantum?*  
ICFO-TIFRH Frontiers Research School: Hot topics in Quantum and Nanophotonics, Hyderabad, India, October 2024
3. *News from the device-independent scenario*  
Vienna Quantum Foundations Conference, Vienna, Austria, September 2024
4. *The device-independent scenario: quantum information processing based on Bell theorem*  
Quantum 2024 - Summer School on Quantum Science and Technologies, Bari, Italy, September 2024
5. *Quantum key distribution: from security proofs to implementations*  
QTech 2024, Berlin, Germany, September 2024
6. *Quantum computers and cryptography: what happens when bits become quantum?*  
QCrypt 2024, Vigo, Spain, September 2024
7. *Are complex numbers needed in quantum theory?*  
kTLog2: Information and thermodynamics from quantum to biological systems, Cuenca, Spain, July 2024
8. *Quantum key distribution: from security proofs to implementations*  
Quantum Information 2024, Seefeld, Austria, June 2024
9. *Security proof of discrete-modulated continuous-variable quantum key distribution*  
Quantum Matter 2024, San Sebastián, Spain, May 2024
10. *Bell's theorem, randomness and secrecy*  
Foundations of Quantum Physics beyond Bell: Celebrating 60 years of Bell's theorem, Les Diablerets, Switzerland, April 2024
11. *Randomness of quantum states and measurements*  
Physics and Security – from Random Numbers to Secure Communication, Bad Honnef, Germany, March 2024
12. *Certification of many-body systems*  
Quantum Optics 2024, Obergurgl, Austria, February 2024
13. *Network quantum information processing*  
International Conference on Photonics, Quantum Information, and Quantum Communication, Kolkata, India, January 2024
14. *From Bell's theorem to the device-independent quantum information paradigm*  
Colloquium UPV/EHU, Bilbao, Spain, January 2024
15. *Device-independent quantum information processing*  
GnGQC 2023, Copenhagen, Denmark, December 2023

16. Certification of many-body quantum systems  
Quantum Computing Day, Grenoble, France, November 2023
17. Certification of many-body systems  
Quantum Certification Conference, Warsaw, Poland, November 2023
18. Quantum key distribution: from security proofs to implementations  
EQTC 2023, Hannover, Germany, October 2023
19. Network quantum information processing  
CEQIP 2023, Smolenice Castle, Slovakia, September 2023
20. What are qudits good for?  
Workshop on Quantum Ecology, Leysin, Switzerland, July 2023
21. Certifying ground-state properties of many-body systems  
Quantum Information in Malta, Malta, May 2023
22. The device-independent scenario: quantum information processing based on Bell's Theorem  
Quantum Information in Malta, Malta, May 2023
23. Certifying ground-state properties of many-body systems  
ICFO-IMPRPS Workshop, ICFO, Castelldefels, Spain, April 2023
24. Quantum randomness  
Workshop on Varieties of Indeterminism, Les Diablerets, Switzerland, April 2023
25. Certification of quantum optimisers and simulators  
Spring School on Open-Source Tools for Quantum Computing & Simulation, ICFO, Castelldefels, Spain, March 2023
26. The device-independent scenario: quantum information processing based on Bell theorem  
Physics Colloquium, Università di Pavia, Pavia, Italy, March 2023
27. The device-independent scenario: quantum information processing based on Bell Theorem  
DPG Meeting, Hannover, Germany, March 2023
28. The device-independent scenario: a quantum information theory with black boxes  
Quantum IT 2022, Daejeon, South Korea, November 2022
29. Device-independent quantum information processing  
Focus Semester on Quantum Information, Saarbrücken, Germany, October 2022
30. Network Quantum Information Processing  
Frontiers of Quantum Information Science, Vienna, Austria, September 2022
31. Introduction to Quantum Information Theory  
Summer School on Quantum Computing: Theory and Implementations, Universidad Internacional Menéndez Pelayo, Santander, Spain, September 2022
32. Are complex numbers needed in quantum theory?  
CQT Conference Day, Singapore, August 2022
33. Correlations in physical theories and the device-independent scenario for quantum information processing  
Esquisses Summer School, Porquerolles, France, July 2022

34. Channel marginal problems  
5th Seefeld Workshop on Quantum Information, Seefeld in Tyrol, Austria, June 2022
35. Certification of quantum technologies  
Quantum Matter, Barcelona, Spain, June 2022
36. Network quantum information processing  
Workshop on Network Nonlocality, Les Diablerets, Switzerland, May 2022
37. Quantum cryptography  
LEAPS meets quantum technology, Isola d'Elba, Italy, May 2022
38. Bell inequalities for quantum certification  
Tsirelson Memorial Workshop, Vienna, Austria, April 2022
39. Certification of quantum technologies  
ICFO-UNAM-UniAnd School on the Frontiers of Quantum Light (online), November 2021
40. Quantum theory needs complex numbers  
Vienna Quantum Foundations Conference, Vienna, Austria, September 2021
41. Quantum theory needs complex numbers  
40th anniversary of the Center for Theoretical Physics, Warsaw, Poland, September 2021
42. Some new results and challenges in device-independent quantum key distribution  
Workshop on Device-Independent Quantum Key Distribution, Zurich, Switzerland, September 2021
43. The device-independent scenario: a quantum information theory with black boxes  
PhD Summer School in Quantum Technologies (online), Italy, September 2021
44. Bell inequalities for quantum certification  
Second Kyoto Workshop on Quantum Information, Computation, and Foundation (QICF21) (online), Kyoto, Japan, September 2021
45. Non-commutative polynomial in quantum physics  
8th European Congress of Mathematics (online), Portorož, Slovenia, June 2021
46. Quantum Networks beyond Point-to-point Configurations  
Optical Fiber Communication Conference (OFC) (online), San Diego, USA, June 2021
47. Bell nonlocality is not sufficient for the security of standard device-independent quantum key distribution protocols  
BQIT 21: 8th Annual Bristol Quantum Information Technologies Workshop (online), Bristol, United Kingdom, April 2021
48. Certification of quantum technologies  
ICFO-IMPRS workshop (online), March 2021
49. Quantum Information Technologies  
F4E Seminar, Fusion for Energy (online), Barcelona, Spain, March 2021
50. Certification of quantum technologies  
ICCUB Colloquium, Barcelona, Spain, February 2021

51. Quantum Information Theory with Black Boxes  
KAIST EE Colloquium (online), Daejeon, South Korea, October 2020
52. Certification of many-body quantum states  
QICF 2020: Workshop on Quantum Information, Computation, and Foundation (online), Kyoto, Japan, September 2020
53. Quantum cryptography: a new paradigm for secure information transmission  
24<sup>th</sup> Conference on Optical Network Design and Modelling (ONDM) (online), Barcelona, Spain, May 2020
54. Correlations in quantum networks  
QFF 2020: Quantum Frontiers and Fundamentals, Bangalore, India, January 2020
55. Information backflow and non-Markovian dynamics  
Quantum Information Processing in Non-Markovian Quantum Complex Systems (QIPQC 2019), Nagoya, Japan, December 2019
56. Device-independent quantum information processing  
10<sup>th</sup> GDR IQFA Colloquium, Paris, France, November 2019
57. Certification of many-body quantum systems  
Workshop on Quantum Foundations and Quantum Information, Puerto Madryn, Argentina, October 2019
58. Implementations of device-independent quantum information protocols  
ICMAT Focus week on Quantum Cryptography, Madrid, Spain, October 2019
59. Bounding correlations in networks  
5<sup>th</sup> International Conference for Young Quantum Information Scientists (YQIS), Gdansk, Poland, September 2019
60. Device-independent quantum information processing  
Summer School of Ph.D. Program on "Quantum Technologies", Ischia, Italy, September 2019
61. Bounding correlations in networks  
Causality in the quantum world: harnessing quantum effects in causal inference problems, Anacapri, Italy, September 2019
62. Certification of many-body quantum systems  
12<sup>th</sup> Italian Quantum Information Science Conference, Milano, Italy, September 2019
63. Bell inequalities for quantum certification  
BIRS workshop "Algebraic and Statistical ways into Quantum Resource Theories", Banff, Canada, July 2019
64. What can and cannot be said about randomness in quantum physics  
Distinguished Lecture of the Department of Information Engineering, Padova, Italy, May 2019
65. General versus projective measurements  
Conference on Quantum Measurements: Fundamentals, Twists, and Applications, ICTP, Trieste, Italy, April 2019
66. The power of quantum networks  
NORDITA Workshop "New directions in Quantum Information", Stockholm, Sweden, April 2019



67. Information back-flows in non -Markovian dynamics  
II Workshop on Quantum Information and Thermodynamics, Natal, Brazil, March 2019
68. Information back-flows in non -Markovian dynamics  
Workshop on "Ubiquitous Quantum Physics: the New Quantum Revolution", ICTP, Trieste, Italy, February 2019
69. Certification of many-body quantum systems  
SFB-FoQuS International Conference, Innsbruck, Austria, February 2019
70. The power of quantum networks  
Symposium on Quantum Technologies, Fundacion Areces, Madrid, Spain, November 2018
71. Quantum Information Theory with Black Boxes  
Colloquium at the Department of Physics, UNAM, Mexico City, Mexico, November 2018
72. Certification of many-body quantum systems  
Quantum Optics IX, Cartagena de Indias, Colombia, October 2018
73. Almost quantum correlations  
Modern Topics in Quantum Information, Natal, Brazil, July 2018
74. Certification of many-body quantum states  
26<sup>th</sup> International Conference on Atomic Physics (ICAP), Barcelona, Spain, July 2018
75. Quantum random-number generators  
Secure Quantum Communications School, Baiona, Spain, May 2018
76. Device-independent quantum key distribution  
Secure Quantum Communications School, Baiona, Spain, May 2018
77. Quantum Information Theory with Black Boxes  
Meeting of the Finnish Physics Association, Turku, Finland, March 2018
78. Detecting entanglement and non-local correlations of many-body quantum states  
Symposium on "Beyond digital computing: the power of neural and quantum networks", Heidelberg, Germany, March 2018
79. Towards an equivalence between pure state maximal entanglement and maximal quantum nonlocality  
Workshop on Quantum Correlations, Singapore, February 2018
80. Detecting entanglement and non-locality in many-body quantum systems  
Workshop on Quantum Correlations in Space and Time, Bad Honnef, Germany, December 2017
81. Quantum Information Theory with Black Boxes  
Colloquium at the Department of Physics of The Federal University of Pernambuco, Recife, Brazil, November 2017
82. Quantum Information Theory with Black Boxes  
Colloquium at the International Institute for Physics of Natal, Natal, Brazil, November 2017

83. Non-commutative polynomial optimization problems in quantum information theory  
Workshop on Probabilistic Techniques and Quantum Information Theory, Paris, France,  
October 2017
84. Quantum Information Theory with Black Boxes  
102 Reunión de la Asociación de Físicos Argentinos (RAFA), La Plata, Argentina, September  
2017
85. Quantum Information Theory with Black Boxes  
Italian Quantum Information Conference, Florence, Italy, September 2017
86. Quantum Information Theory with Black Boxes  
School on Recent Trends in Light-Matter Interaction, Lausanne, Switzerland, September 2017
87. Detecting entanglement and non-locality in many-body quantum systems  
Quantum Systems In and Out of Equilibrium: Fundamentals, dynamics and applications,  
Granada, Spain, June 2017
88. Entanglement and non-locality detection in many-body systems  
Trustworthy Quantum Information (TyQI) 2017, Paris, France, June 2017
89. General and projective measurements  
Central European Workshop in Quantum Information Theory, Smolenice, Slovakia, June 2017
90. Quantum Information Theory with Black Boxes  
Colloquium at the Centre of Theoretical Physics, Polish Academy of Science, Warsaw, Poland,  
May 2017
91. What can and cannot be said about randomness in quantum physics  
Institut de Ciències de l'Espai, Barcelona, Spain, December 2016
92. Quantum random-number generators  
COST-IACR School on Randomness in Cryptography, Barcelona, Spain, November 2016
93. Detecting non-local correlations of many-body quantum states  
Quantum Optics VIII, Maresias, Brazil, October 2016
94. What can and cannot be said about randomness using quantum physics  
ICREA Colloquium, Barcelona, Spain, October 2016
95. What can and cannot be said about randomness using quantum physics  
Conference on Agency and (quantum) physics (AQP2016), Konstanz, Germany, September  
2016
96. Quantum information theory with black boxes  
VI Leopoldo García--Colín Mexican Meeting on Mathematical and Experimental Physics,  
Mexico City, Mexico, September 2016
97. Detecting non-local correlations of many-body quantum states  
VI Leopoldo García--Colín Mexican Meeting on Mathematical and Experimental Physics,  
Mexico City, Mexico, September 2016
98. Quantum information theory with black boxes  
Colloquium at the Center of Quantum Dynamics, Heidelberg, Germany, July 2016

99. News on quantum randomness  
3rd Seefeld workshop on Quantum Information, Seefeld in Tyrol, Austria, July 2016
100. Deterministic explanations of non-local correlations have to be uncomputable  
Workshop on "Contextuality as a resource in quantum computation", London, UK, June 2016
101. The power of general measurements  
Workshop on "Multipartite Entanglement", Benasque, Spain, May 2016
102. Quantum information theory with black boxes  
Colloquium at the Max Planck Institute for Quantum Optics, Garching, Germany, April 2016
103. Quantum Hacking & Device-independent Quantum Key Distribution  
2016 Winter School on Quantum Security, Darmstadt, Germany, January 2016
104. Non-commutative polynomial optimization problems in quantum information theory  
Linear Matrix Inequalities, Semidefinite Programming and Quantum Information Theory 2016, Toulouse, France, January 2016
105. Recent results and open questions on quantum randomness  
Workshop on Quantum Correlations, Contextuality and All That... Again, Natal, Brazil, November 2015
106. How much randomness can be certified in quantum and general non-signalling theories?  
Workshop on the Foundations of Randomness, Stellenbosch, South Africa, October 2015
107. Quantum Information with Black Boxes  
ETH-Physics Colloquium, Zurich, Switzerland, October 2015
108. Device-independent quantum quantum protocols  
PICQUE Roma Scientific School, Rome, Italy, July 2015
109. Optical setups for device-independent quantum key distribution  
22nd Central European Workshop on Quantum Optics, Warsaw, Poland, July 2015
110. Bell nonlocality: a resource for device-independent quantum information protocols  
DAMOP Meeting 2015, Columbus, Ohio, USA, June 2015
111. News on randomness and non-locality  
Información Cuántica en España (ICE-2), Bilbao, Spain, June 2015
112. Device-independent quantum key distribution  
CLEO 2015, San José, USA, May 2015
113. Device-independent quantum information processing: protocols and quantum foundations  
Colloquium at Department of Physics and Astronomy, University of Turku, Turku, Finland, April 2015
114. Device-independent quantum information processing: protocols and quantum foundations  
Colloquium at Laboratoire Charles Coulomb, Université de Montpellier Montpellier, France, March 2015
115. Work and correlations  
Workshop on Quantum Information and Thermodynamics, Sao Carlos, Brazil, February 2015

116. Setups for device-independent quantum key distribution  
Quantum Optics VII, Mar del Plata, Argentina, October 2014
117. Detecting the non-locality of many-body quantum states  
GISIN'14 - The Greatest Inspiration Surely Is Nonlocality, Riederalp, Switzerland, September 2014
118. Quantum non-locality: a resource for information processing  
Paris Centre for Quantum Computation (PCQC) Inauguration Workshop, Paris, France, August 2014
119. Work and correlations  
III Working Group Meeting of the COST Action "Quantum Thermodynamics", Belfast, UK , August 2014
120. Implications of computer science principles for quantum physics  
II Seefeld Workshop on Quantum Information, Seefeld in Tyrol, Austria, July 2014
121. Quantum non-locality: a resource for information processing  
Quantum [Un]Speakables II, 50 years of Bell's Theorem, Vienna, Austria, June 2014
122. Implications of computer science principles for quantum physics  
Quantum Theory: from Problems to Advances (QTPA), Växjö, Sweden, June 2014
123. Almost quantum correlations  
V KCIK Symposium, Gdansk, Poland, May 2014
124. Almost quantum correlations  
Complex Quantum Systems (COQUS) Colloquium, Vienna, Austria, April 2014
125. Almost quantum correlations  
Perimeter Institute Colloquium, Waterloo, Canada, April 2014
126. Device-Independent Quantum Key Distribution  
Quantum Information and Measurement, Berlin, Germany, March 2014
127. Non-locality detection in many-body systems  
Entanglement detection and quantification, Bilbao, Spain, March 2014
128. Local orthogonality: a multipartite principle for correlations  
American Physical Society (APS) March Meeting, Denver, USA, March 2014
129. Device-Independent Quantum Key Distribution  
DSTL Bristol Quantum Information Technologies Workshop 2014, Bristol, UK, February 2014
130. Almost quantum correlations  
Quantum Contextuality, Non-Locality, and the Foundations of Quantum Mechanics, Bad Honnef, Germany, February 2014
131. Local orthogonality: a multipartite principle for correlations  
Workshop on Quantum Correlations, Contextuality and All That, Natal, Brazil, December 2013
132. Quantum correlations and N-representability  
Mathematical Methods for Ab Initio Quantum Chemistry 8, Nice, France, November 2013

133. Local thermal states and correlations  
Mathematical Horizons for Quantum Physics 2, Singapore, September 2013
134. Device-independent quantum information processing  
Frontiers of Quantum Physics and Quantum Information, Barcelona, Spain, July 2013
135. Randomness and Quantum Non-locality  
Quantum Physics and Logic (QPL), Barcelona, Spain, July 2013
136. Randomness and Quantum Non-locality  
Quantum Information Processing and Communication (QIPC), Florence, Italy, July 2013
137. Randomness and Quantum Non-locality  
Intensive Month on Operator Algebra and Quantum Information, Madrid, Spain, July 2013
138. Local orthogonality: a multipartite principle for correlations  
Causal Structure in Quantum Theory, Benasque, Spain, June 2013
139. Networks and Quantum Correlations  
Twin Workshop on Complex Quantum Systems, Wick, UK, May 2013
140. Local orthogonality: an intrinsically multipartite principle for correlations  
New Trends in Complex Quantum System Dynamics, Cartagena, Spain, April 2013
141. Local orthogonality: a multipartite principle for correlations  
Second Workshop on Quantum Foundations, Barbados, March 2013
142. Device-independent estimation  
Spanish Quantum Information Workshop, Madrid, Spain, September 2012
143. Randomness and quantum non-locality  
QCRYPT 2012, Singapore, September 2012
144. Quantum Information Theory  
European Science Open Forum (ESOF) 2012, Dublin, Ireland, July 2012
145. Randomness and quantum non-locality  
Quantum Information Workshop, Seefeld in Tirol, Austria, July 2012
146. Device-independent estimation  
Central European Workshop on Quantum Optics 2012, Sinaia, Romania, July 2012
147. Robust quantum correlations without complex encodings  
44 Symposium on Mathematical Physics: "New Developments in the Theory of Open Quantum Systems", Torun, Poland, June 2012
148. Local temperature and correlations  
kT log 2 2012 Quantum fluctuations and Information, Cuenca, Spain, May 2012
149. Correlations and networks  
Tsinghua-Aarhus CTIC Workshop on Quantum Information Science, Beijing, China, May 2012
150. Local orthogonality: a multipartite principle for correlations  
Quantum Information Sciences Workshop, Oxford, UK, March 2012

151. Device-Independent Quantum Information Processing  
Spanish Cryptography Days, Murcia, Spain, November 2011
152. Device-independent estimation  
Workshop on Engineering and Control of Quantum Systems, Max-Planck Institute for Complex Systems, Dresden, Germany, October 2011
153. Device-independent quantum key distribution  
4th International Symposium on Applied Sciences in Biomedical and Communication Technologies (ISABEL), Barcelona, Spain, October 2011
154. The structure of multipartite correlations  
ESF-PESC Strategic Workshop on Signatures of Quantumness in Complex Systems, Nottingham, UK, June 2011
155. Quantum Correlations and Device-Independent Quantum Information Processing  
XII Seminario de Matemática Discreta, Valladolid, Spain, June 2011
156. Device-Independent Quantum Information Processing  
Complex Quantum Systems (CoQuS) Colloquium, Vienna, Austria, June 2011
157. Guess Your Neighbor Input  
Conceptual Foundations and Foils for Quantum Information Processing, Perimeter Institute, Waterloo, Canada, May 2011
158. Entanglement  
1er Colloque du GDR Information Quantique, Fondements & Applications, Nice, France, March 2011
159. Random Numbers Certified by Bell's Theorem  
CQT Colloquium, Singapore, February 2011
160. Device-Independent Quantum Information Processing  
US-Spain Bilateral Scientific Workshop on Information Science and Related Technologies, Santa Fe, USA, December 2010
161. Entanglement Distribution in Quantum Networks  
Workshop on Complex Quantum Systems, Mallorca, Spain, October 2010
162. Device-Independent Quantum Key Distribution  
Workshop on Post-Quantum Security Models, Paris, France, October 2010
163. Quantum correlations and device-independent quantum information protocols  
Workshop on Quantum Communication and Quantum Key Distribution, Stockholm, October 2010
164. Local Thermal States and Correlations  
Quantum Coherence and Decoherence, Benasque, Spain, September 2010
165. Quantum correlations and device-independent quantum information protocols  
New Perspectives in Quantum Statistics and Correlations, Heidelberg, Germany, March 2010
166. Entanglement Distribution in Quantum Networks  
QuPa 2010, Quantum Information in Paris, Paris, France, February 2010

167. Entanglement Distribution in Quantum Networks  
QuantumComm 2009, International Conference on Quantum Communication and Quantum Networking, Vico Equense, Italy, October 2009
168. Quantum non-locality: a resource for information processing  
3rd AFI Symposium, Fundamental Physics Questions, Innsbruck, Austria, October 2009
169. Quantum Correlations and Device-Independent Quantum Information Processing  
ICSSUR and Feynman Festival, Olomouc, Check Republic, June 2009
170. Random Numbers from Bell's Theorem  
Scala Conference, Cortina d'Ampezzo, Italy, February 2009
171. Quantum correlations and device-independent quantum information protocols  
QICS Workshop on "Foundational Structures for Quantum Information and Computation",  
Oberurgl, Austria, September 2008
172. Device-Independent Quantum Key Distribution  
Laser Physics 2008, Trondheim, Norway, July 2008
173. Characterizing the Set of Quantum Correlations  
40 Symposium on Mathematical Physics, Torun, Poland, June 2008
174. Entanglement as an information resource  
APS (American Physical Society) March Meeting, New Orleans, USA, March 2008
175. Characterization of quantum correlations  
QCCC Workshop 2007: Foundations and Future Prospects of QIP, Aschau, Germany, October  
2007
176. Entanglement Percolation in Quantum Networks  
International Conference on Quantum Information Processing and Communication, QIPC 2007,  
Barcelona, Spain, October 2007
177. Quantum Cryptography  
Quantum Information School, Paraty, Brazil, August 2007
178. Entanglement Percolation in Quantum Networks  
Recent Progress in Many-Body Theories 14, Barcelona, Spain, July 2007
179. Entanglement and Non-local Correlations: Quantum Resources for Secure QKD  
Workshop " Theory and Realisation of Practical Quantum Key Distribution", Waterloo, Canada,  
June 2007
180. Cryptographic Properties of Quantum Correlations  
NATO Workshop "Quantum Communication and Security", Gdansk, Poland, September 2006
181. Detecting the quantum origin of correlations  
Laser Physics 06, Lausanne, Switzerland, July 2006
182. Cryptographic Properties of Quantum Correlations  
Gordon Conference on Quantum Information Science, Il Ciocco, Italy, May 2006
183. Key distillation from Gaussian states using Gaussian operations  
Colloque thématique du GdR "Information et communication quantique", Palaiseau, France,  
October 2005

184. Entanglement and Secret Bits  
Laser Physics 05, Kyoto, Japan, July 2005
185. Entanglement and Secret Bits  
Benasque Center for Science, Benasque, Spain, June 2005
186. Gaussian operations and Privacy  
ESF Exploratory Workshop - Long-distance Quantum Communication Networks with Atoms and Light, Prague, Czech Republic, April 2005
187. Quantum and secret correlations  
Quantum Information Theory: Present Status and Future Directions, Cambridge, UK, July 2004
188. Quantum Cryptography  
EURESCO IQING03, Munich, Germany, December 2003