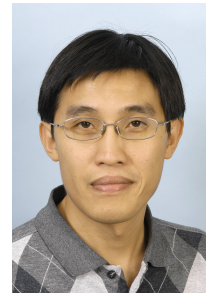


**Dr. LIANG, Yeong-Cherng**

Department of Physics,  
National Cheng Kung University,  
No.1, University Road,  
Tainan City 701,  
Taiwan.  
yliang@phys.ncku.edu.tw



# Curriculum Vitae

## PERSONAL PARTICULARS

<b>Surname, Given Names</b>	• Liang, Yeong Cherng
<b>Country of Birth</b>	• Malaysia
<b>Civil Status</b>	• Married with two children

## CAREER HISTORY (Full-time)

<b>2017/08 –</b>	• Associate Professor (tenured), Department of Physics, National Cheng Kung University, Taiwan.
<b>2015/02 – 2017/07</b>	• Assistant Professor, Department of Physics, National Cheng Kung University, Taiwan.
<b>2013/07 – 2015/01</b>	• Postdoc, Institute for Theoretical Physics, ETH Zürich, Switzerland.
<b>2012/10 – 2013/06</b>	• Maître Assistant, GAP-Optique, Department of Physics, University of Geneva, Geneva, Switzerland.
<b>2011/08 – 2012/09</b>	• Attaché de Recherche, GAP-Optique, Department of Physics, University of Geneva, Geneva, Switzerland.
<b>2010/08 – 2011/07</b>	• Postdoc, GAP-Optique, Department of Physics, University of Geneva, Geneva, Switzerland.
<b>2008/04 – 2010/07</b>	• Postdoctoral Research Fellow, School of Physics, University of Sydney, Sydney, Australia.
<b>2008/01 – 2008/04</b>	• Research Officer, Department of Physics, University of Queensland, St. Lucia, Brisbane, Australia.
<b>2001/02 – 2004/06</b>	• Full-time Teaching Assistant, National University of Singapore, Singapore.

## EDUCATION

<b>2004/06 – 2007/12</b>	• Doctor of Philosophy in Physics, <i>University of Queensland, Australia.</i>
<b>2000/01 – 2002/10</b>	• M. Sc. in Physics, <i>National University of Singapore, Singapore.</i>
<b>1999/07 – 1999/12</b>	• B. Sc. (Hons, 1st) in Physics, <i>National University of Singapore, Singapore.</i>
<b>1996/07 – 1999/06</b>	• B. Sc. in Physics, <i>National University of Singapore, Singapore.</i>

## SELECTED AWARDS/ HONORS

<b>2019</b>	• Ta-You Wu Memorial Award (Ministry of Science & Technology, Taiwan)
<b>2018</b>	• Young Theoretical Scholar Award (National Center for Theoretical Sciences, Taiwan)

## SELECTED AWARDS/ HONORS (continued)

- Teaching Award  
(National Cheng Kung University, Taiwan)
- The Young Scholars' Creativity Award  
(Foundation for the Advancement of Outstanding Scholarship, Taiwan)
- 2014**
  - Most Valued Reviewer of 2014  
(Annals of Physics).
- 2009**
  - 2008 Dean's Awards for Outstanding Research Higher Degree Theses  
(University of Queensland, Australia)
- 2004/07 – 2007/12**
  - International Postgraduate Research Scholarships  
(funded by the Australian government)
  - University of Queensland Graduate School Scholarships  
(University of Queensland, Australia)

## SUCCESSFUL GRANT APPLICATIONS

- 2019/12 – 2020/11**
  - Co-PI for "Quantum computation, devices, and technologies": funded NTD 16,500,000 by the Ministry of Science and Technology, Taiwan.
- 2019/01 – 2020/12**
  - Coordinator of the Quantum Information Science & Its Applications Thematic Group, National Center for Theoretical Sciences of Taiwan: funded NTD 1,300,000 by the Ministry of Science and Technology, Taiwan.
- 2018/12 – 2019/11**
  - Co-PI for "Quantum computation, devices, and technologies": funded NTD 16,500,000 by the Ministry of Science and Technology, Taiwan.
- 2018/06 – 2020/07**
  - PI for "Quantum nonlocality: generalizations and applications in quantum information": funded NTD 3,223,000 by the Ministry of Science and Technology, Taiwan.
- 2018/01 – 2022/12**
  - Member of the Center for Quantum Technology based at Hsinchu: jointly funded NTD 50,000,000 *per annum* by the Ministry of Education as well as the Ministry of Science and Technology, Taiwan.
- 2015/12**
  - Workshop on Quantum Nonlocality, Causal Structures and Device-independent Quantum Information: funded NTD 400,000 by the Ministry of Science and Technology, Taiwan.
- 2015/07 – 2018/08**
  - PI for "Quantum entanglement, quantum nonlocality and device-independent characterizations": funded NTD 3,562,000 by the Ministry of Science and Technology, Taiwan.
- 2015/01 – 2018/12**
  - Core member of the Quantum Information Science & Quantum Control Thematic Group, National Center for Theoretical Sciences of Taiwan: funded NTD 3,800,000 by the Ministry of Science and Technology, Taiwan.
- 2012/10 – 2015/09**
  - Co-applicant (with Nicolas Gisin) of "Understanding the origin of quantum nonlocality via non-signaling correlations": funded CHF 180,000 by the Swiss State Secretariat for Education and Research SER.
- 2011/09 – 2014/08**
  - Work package leader for the European CHIST-ERA project "Device-Independent Quantum Information Processing".

## CITATION METRICS AND LIST OF PUBLICATIONS

- 48 Publications in International Peer-Reviewed Journals + 1 erratum + 1 corrigendum:  
1 Nature Physics, 1 Physics Reports (+ 1 erratum), 1 Reports on Progress in Physics, 3 Physical Review X, 10 Physical Review Letters, 2 Scientific Reports, 2 New Journal of Physics (+ 1 corrigendum), 1 Physical Review D, 21 Physical Review A, 1 Physical Review Research, 1 Entropy, 1 Quantum Science & Technology, 3 Journal of Physics A: Mathematical & Theoretical
- 3 Peer-Reviewed Conference Publications
- 2 Preprint(s) (to be) submitted for publication

## CITATION METRICS AND LIST OF PUBLICATIONS (continued)

- 48 Poster presentations in Australia (5), Austria (5), Canada (1), Czech Republic (1), France (1), Germany (3), Japan (2), Malta (2), Singapore (1), Slovakia (5), Spain (5), Switzerland (1), Taiwan (14), United Kingdom (1), United States of America (1)
- 1423 citations; h-index: 23 (source: Web of Science)  
2397 citations; h-index: 28 (source: Google Scholar)

§ Paper selector as Editors' suggestion; † Authors ordered alphabetically;

‡ No corresponding author(s) specified; \* All authors are corresponding authors;

\*\* Invited contributions

### ***Preprints (to be) submitted for publication — 2***

- 2019 • "Testing the reality of Wigner's friend's experience", K.-W. Bong, A. Utreras-Alarcón, F. Ghafari, Y.-C. Liang, N. Tischler, E. G. Cavalcanti, G. J. Pryde, H. M. Wiseman, arXiv:1907.05607
- 2015 • "Quantum clocks and their synchronisation - the Alternate Ticks Game", S. Ranković, Y.-C. Liang, and R. Renner arXiv:1506.01373 (2015).

### ***Publications in Peer-Reviewed Journals (corresponding author(s))— 48***

- 2019 • "Maximal Violation of a Broad Class of Bell Inequalities and Its Implications on Self-Testing", C. Jebarathinam, J.-C. Hung, S.-L. Chen, Y.-C. Liang, *Phys. Rev. Research* **1**, 033073 (Nov , 2019).
- "Exploring Bell inequalities for the device-independent certification of multipartite entanglement depth", P.-S. Lin, J.-C. Hung, C.-H. Chen, Y.-C. Liang, *Phys. Rev. A* **99**, 062338 (Jun , 2019).
- "Quantum fidelity measures for mixed states", Y.-C. Liang, Y.-H. Yeh, P. E. M. F. Mendonça, R. Y. Teh, M. Reid, and P. D. Drummond, *Rep. Prog. Phys.* **82**, 076001 (Jun , 2019).
- "Bounding the plausibility of physical theories in a device-independent setting", \*Y.-C. Liang and Y. Zhang, *Entropy* **21**, 185 (Feb , 2019)
- "Regularizing data for practical randomness generation", B. Bourdoncle, P.-S. Lin, D. Rosset, A. Acín, and Y.-C. Liang, *Quantum Sci. Technol.* **4**, 025007 (Feb , 2019)
- 2018 • "Exploring the framework of assemblage moment matrices and its applications in device-independent characterizations", \*S.-L. Chen, C. Budroni, Y.-C. Liang, and Y.-N. Chen, *Phys. Rev. A* **98**, 042127 (Oct , 2018).
- "Entanglement structure: Entanglement partitioning in multipartite systems and its experimental detection using optimizable witnesses", H. Lu, Q. Zhao, Z.-D Li, X.-F. Yin, X. Yuan, J.-C. Hung, L.-K. Chen, L. Li, N.-L. Liu, C.-Z. Peng, Y.-C. Liang, X. Ma, Y.-A. Chen, and J.-W. Pan, *Phys. Rev. X* **8**, 021072 (Jun , 2018).
- "Resource theory of quantum memories and their faithful verification with minimal assumptions", \*D. Rosset, F. Buscemi, and Y.-C. Liang, *Phys. Rev. X* **8**, 021033 (May , 2018).
- "Device-independent point estimation from finite data and its application to device-independent property estimation", P.-S. Lin, D. Rosset, Y. Zhang, J.-D. Bancal, and Y.-C. Liang, *Phys. Rev. A* **97**, 032309 (Mar , 2018).
- §"Geometry of the set of quantum correlations", K. T. Goh, J. Kaniewski, E. Wolfe, T. Vértesi, X. Wu, Y. Cai, Y.-C. Liang, and V. Scarani, *Phys. Rev. A* **97**, 022104 (Feb , 2018).
- 2017 • "Almost quantum correlations and their refinements in a tripartite Bell scenario", J. Vallins, A. B. Sainz, and Y.-C. Liang, *Phys. Rev. A* **95**, 022111 (Feb , 2017).
- 2016 • "Quantum steerability: characterization, quantification, superactivation and unbounded amplification", C.-Y. Hsieh, Y.-C. Liang, and R.-K. Lee, *Phys. Rev. A* **94**, 062120 (Dec , 2016).
- "Natural Framework for Device-Independent Quantification of Quantum Steerability, Measurement Incompatibility, and Self-Testing", \*S.-L. Chen, C. Budroni, Y.-C. Liang, and Y.-N. Chen, *Phys. Rev. Lett.* **116**, 240401 (2016).
- "Bipartite Bell inequalities with three ternary-outcome measurements – from theory to experiments", S. Schwarz, B. Bessire, A. Stefanov, and Y.-C. Liang, *New J. Phys.* **18**, 035001 (2016).
- 2015 • "Exploring the limits of quantum nonlocality with entangled photons", B. G. Christensen, Y.-C. Liang, N. Brunner, N. Gisin, and P. G. Kwiat, *Phys. Rev. X* **5**, 041052 (2015).

## CITATION METRICS AND LIST OF PUBLICATIONS (continued)

- “Demonstrating quantum contextuality of indistinguishable particles by a single family of non-contextuality inequalities”, \*H.-Y. Su, J.-L. Chen, and Y.-C. Liang, *Sci. Rep.* **5**, 11637 (2015).
- “Family of Bell-like inequalities as device-independent witnesses for entanglement depth”, Y.-C. Liang, D. Rosset, J.-D. Bancal, G. Pütz, T. J. Barnea, and N. Gisin, *Phys. Rev. Lett.* **114**, 190401 (2015).
- “Nonlocality of  $W$  and Dicke states subject to losses”, T. J. Barnea, G. Pütz, J. B. Brask, N. Brunner, N. Gisin, and Y.-C. Liang, *Phys. Rev. A* **91**, 032108 (2015).
- “Quantifying multipartite nonlocality via the size of the resource”, F. J. Curchod, N. Gisin, and Y.-C. Liang, *Phys. Rev. A* **91**, 012121 (2015).
- 2014 • “Arbitrarily Small Amount of Measurement Independence Is Sufficient to Manifest Quantum Nonlocality”, G. Pütz, D. Rosset, T. J. Barnea, Y.-C. Liang, and N. Gisin, *Phys. Rev. Lett.* **113**, 190402 (2014).
- \*\* “Bell’s theorem, Accountability and Nonlocality”, \*N. Vona and Y.-C. Liang, Special Issue: 50 Years of Bell’s Theorem, *J. Phys. A: Math. Theor.* **47**, 424026 (2014).
- \*\* “Multipartite Nonlocality as a Resource and Quantum Correlations Having Indefinite Causal Order”, †F. Curchod, Y.-C. Liang and N. Gisin, Special Issue: 50 Years of Bell’s Theorem, *J. Phys. A: Math. Theor.* **47**, 424014 (2014).
- “Anonymous Quantum Nonlocality”, Y.-C. Liang, F. J. Curchod, J. Bowles, and N. Gisin, *Phys. Rev. Lett.* **113**, 130401 (2014).
- 2013 • “Tripartite quantum state violating the hidden influence constraints”, T. J. Barnea, J.-D. Bancal, Y.-C. Liang, N. Gisin, *Phys. Rev. A* **88**, 022123 (2013).
- “Device-independent entanglement quantification and related applications”, †T. Moroder, J.-D. Bancal, Y.-C. Liang, M. Hofmann, O. Gühne, *Phys. Rev. Lett.* **111**, 030501 (2013).
- “Entangled states cannot be classically simulated in generalized Bell experiments with quantum inputs”, D. Rosset, C. Branciard, N. Gisin, Y.-C. Liang, *New J. Phys.* **15**, 053025 (2013).
- § “Measurement-Device-Independent Entanglement Witnesses for All Entangled Quantum States”, †C. Branciard, D. Rosset, Y.-C. Liang, N. Gisin, *Phys. Rev. Lett.* **110**, 060405 (2013).
- 2012 • “Imperfect measurements settings: implications on quantum state tomography and entanglement witnesses”, †D. Rosset, R. Ferretti-Schöbitz, J.-D. Bancal, N. Gisin, and Y.-C. Liang, *Phys. Rev. A* **86**, 062325 (2012).
- “Quantum nonlocality based on finite-speed causal influences leads to superluminal signaling”, J.-D. Bancal, S. Pironio, A. Acín, Y.-C. Liang, V. Scarani, N. Gisin, *Nature Phys.* **8**, 867 (2012).
- “All entangled states display some hidden nonlocality”, †Y.-C. Liang, Ll. Masanes, D. Rosset, *Phys. Rev. A* **86**, 052115 (2012).
- “Guaranteed violation of a Bell inequality without aligned reference frames or calibrated devices”, P. Shadbolt, T. Vértesi, Y.-C. Liang, C. Branciard, N. Brunner, J. L. O’Brien, *Sci. Rep.* **2**, 470 (2012).
- “Bell inequalities for three systems and arbitrarily many measurement outcomes”, †B. Grandjean, Y.-C. Liang, J.-D. Bancal, N. Brunner, N. Gisin, *Phys. Rev. A* **85**, 052113 (2012);
- “A framework for the study of symmetric full-correlation Bell-like inequalities”, ††J.-D. Bancal, C. Branciard, N. Brunner, N. Gisin, and Y.-C. Liang, *J. Phys. A: Math. Theor.* **45**, 125301 (2012);
- 2011 • “Specker’s parable of the overprotective seer: A road to contextuality, nonlocality and complementarity”, †Y.-C. Liang, R. W. Spekkens, and H. M. Wiseman, *Phys. Rep.* **506**, 1 (2011).
- “Device-Independent Witnesses of Genuine Multipartite Entanglement”, ††J.-D. Bancal, N. Gisin, Y.-C. Liang, and S. Pironio, *Phys. Rev. Lett.* **106**, 250404 (2011).
- “Generating nonclassical correlations without fully aligning measurements”, †J. J. Wallman, Y.-C. Liang, S. D. Bartlett, *Phys. Rev. A* **83**, 022110 (2011).
- “Semi-device-independent bounds on entanglement”, Y.-C. Liang, T. Vértesi, and N. Brunner, *Phys. Rev. A* **83**, 022108, (2011).

## CITATION METRICS AND LIST OF PUBLICATIONS (continued)

- “Detecting Genuine Multipartite Quantum Nonlocality: A Simple Approach and Generalization to Arbitrary Dimensions ,”  
†‡J.-D. Bancal, N. Brunner, N. Gisin and Y.-C. Liang, *Phys. Rev. Lett.* **106**, 020405 (2011).
- 2010 • “Nonclassical correlations from randomly chosen local measurements,”  
Y.-C. Liang, N. Harrigan, S. D. Bartlett, and T. Rudolph, *Phys. Rev. Lett.* **104**, 050401 (2010).
- 2009 • “Reexamination of a multisetting Bell inequality for qudits,”  
Y.-C. Liang, C.-W. Lim, D.-L. Deng, *Phys. Rev. A* **80**, 052116 (2009).
- 2008 • “Alternative fidelity measure between quantum states,”  
\*P. E. M. F. Mendonça, R. d. J. Napolitano, M. A. Marchioli, C. J. Foster, and Y.-C. Liang, *Phys. Rev. A* **78**, 052330 (2008).
- “All Bipartite Entangled States Display Some Hidden Nonlocality,”  
‡Ll. Masanes, Y.-C. Liang, and A. C. Doherty, *Phys. Rev. Lett.* **100**, 090403 (2008).
- “Convertibility between two-qubit states using stochastic local operations assisted by classical communication,”  
\*Y.-C. Liang, Ll. Masanes, and A. C. Doherty, *Phys. Rev. A* **77**, 012332 (2008).
- 2007 • “Bounds on quantum correlations in Bell-inequality experiments,”  
\*Y.-C. Liang and A. C. Doherty, *Phys. Rev. A* **75**, 042103 (2007).
- 2006 • “Better Bell-inequality violation by collective measurements,”  
\*Y.-C. Liang and A. C. Doherty, *Phys. Rev. A* **73**, 052116 (2006).
- 2004 • “Quantum Cryptography: Security Criteria Reexamined,”  
‡D. Kaszlikowski, A. Gopinathan, Y. C. Liang, L. C. Kwек, and B.-G. Englert, *Phys. Rev. A* **70**, 032306 (2004).
- 2003 • “Tomographic Quantum Cryptography,”  
‡Y. C. Liang, D. Kaszlikowski, B.-G. Englert, L. C. Kwек, and C. H. Oh, *Phys. Rev. A* **68**, 022324 (2003).
- 2001 • “Black diholes with unbalanced magnetic charges,”  
†‡Y. C. Liang and E. Teo, *Phys. Rev. D* **64**, 024019 (2001).

### ***Peer-Reviewed Conference Publications (Presenting Author)***

- 2017 • “Nonlocal Correlations in Frequency Entangled Two-Qudit Systems,”  
S. Schwarz, B. Bessire, A. Montana, Y.-C. Liang, and A. Stefanov in *Proceedings 2017 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference (CLEO/Europe-EQEC)* (2017).
- 2015 • “Experimental Tests of Nonlocality with Entangled Photons,”  
B. Christensen, N. Gisin, N. Brunner, Y.-C. Liang, and P. Kwiat in *Proceedings CLEO: 2015, OSA Technical Digest (online) (Optical Society of America, 2015), paper FTu2A.8*.
- 2008 • “The Quantum Moment Problems and Bounds on Entangled Multi-prover Games,”  
†‡A. C. Doherty, Y.-C. Liang, B. Toner, and S. Wehner, in *Proceedings of the 23rd Annual IEEE Conference on Computational Complexity*, pp. 199-210 (2008).

## SUMMARY OF ORAL PRESENTATIONS

- 22 invited conference talks in Canada (1), China (2), Czech Republic (2), Hong Kong (2), India (3), Malaysia (2), Singapore (2), Sweden (1), Switzerland (2) and Taiwan (5)
- 39 invited seminars/ colloquiums in Australia (5), China (3), Canada (2), Japan (2), Korea (1), Singapore (3), Spain (2), Switzerland (2), Taiwan (17), United Kingdom (2)
- 12 contributed conference talks in Australia (1), China (2), France (1), Italy (2), Japan (2), Korea (1), Singapore (1), Spain (2)

## SUMMARY OF ORAL PRESENTATIONS (continued)

### *Invited Conference Talks — 22*

- 2019**
- “On the hidden teleportation power of entangled states”, presented at the 14th Asia Pacific Physics Conference, 17 - 21 Nov 2019, Kuching, Malaysia.
  - “A (strengthened) no-go theorem on Wigner’s friend’s paradox”, presented at the International Conference on Emerging Quantum Technology, 15 - 20 Sep 2019, Hefei, China.
- 2018**
- “A device-independent approach to testing physical theories from finite data?”, presented at the Foundations of Quantum Mechanics conference, 30 Jul - 3 Aug 2018, Waterloo, Canada.
  - “What can we learn by analyzing the data collected in a Bell test?”, presented at the Hong Kong Workshop on Quantum Information and Foundations: Focus on the Physics of the Observer, 8 Jan - 12 Jan 2018, Hong Kong.
- 2017**
- “What can we learn from the apparent violation of the nonsignaling conditions?”, presented at the 3rd International Conference on Quantum Foundations, 4 Dec - 9 Dec 2017, Patna, India.
  - “A device-independent approach for testing physical theories from finite data,” presented at the Workshop on Quantum Science & Technology, 4 - 6 Sep 2017, Nantou, Taiwan.
  - “Taming finite statistics for a device-independent approach to physics,” presented at the 18th Växjö Conference on Quantum Foundations (Foundations of Quantum Mechanics and Technology), 12 - 15 Jun 2017, Växjö, Sweden.
- 2016**
- “A brief tour of recent progress in device-independent quantum information”, presented at the Annual Meeting of the Physical Society of the Republic of China, 16 - 18 Jan 2017, Taipei, Taiwan.
  - “A brief guide to device-independent quantum information”, presented at the 8th International Workshop on Solid-state Quantum Computing & Mini-School on Quantum Information Science, 10 Dec - 15 Dec 2016, Taipei, Taiwan.
  - “Quantification of quantum steerability & measurement incompatibility using uncharacterized devices”, presented at the 2nd International Conference on Quantum Foundations, 17 Oct - 21 Oct 2015, Patna, India.
  - “Quantification of quantum steerability & the self-testing of measurement incompatibility using black boxes”, presented at the 2nd Trustworthy Quantum Information Workshop, 27 Jun - 1 July 2016, Shanghai, China.
  - “Quantum nonlocality from arbitrarily small amount of measurement independence,” presented at the Hong Kong Workshop on Quantum Information and Foundations, Focus on: Quantum Causal Structures, 4 - 7 May 2016, Hong Kong.
  - “Exploring the limits of quantum nonlocality with entangled photons,” presented at the Quantum Limits on Information Processing, 4 - 7 Mar 2016, Singapore.
- 2015**
- “Exploring the limits of quantum nonlocality with entangled photons,” presented at the International Conference on Quantum Foundations, 30 Nov - 4 Dec 2015, Patna, India.
  - “Exploring the limits of quantum nonlocality with entangled photons,” presented at the Japan-Taiwan mini-Workshop on Quantum Science & Technology, 20 Oct, Hsinchu, Taiwan.
  - “Exploring the limits of quantum nonlocality with entangled photons,” presented at the Frontiers of Quantum and Mesoscopic Thermodynamics Conference, 27 Jul - 1 Aug 2015, Prague, Czech Republic.
  - “Device-independent entanglement characterizations and beyond,” meant to be presented at the Workshop on Trustworthy Quantum Information, 28 Jun - 2 Jul 2015, Ann Arbor, United States (talk eventually presented by collaborator Jean-Daniel Bancal due to last-minute cancelation of trip).
- 2014**
- “ $k$ -producibility: from entanglement to correlations and back,” presented at the Asia Pacific Conference & Workshop in Quantum Information Science, 12 - 15 Dec 2014, Tainan, Taiwan.
  - “ $k$ -producibility: from entanglement to correlations and back,” presented at the Greatest Inspiration Surely Is Nonlocality 2014 Workshop, 8 Sep - 12 Sep 2014, Riederalp, Switzerland.
- 2013**
- “All entangled states display some hidden nonlocality,” presented at the Frontiers of Quantum and Mesoscopic Thermodynamics Conference, 29 Jul - 3 Aug 2013, Prague, Czech Republic.
- 2012**
- “Device-independent quantum information: a paradigm that offers more robustness and security,” presented at the Asia Pacific Conference & Workshop in Quantum Information Science, 3 - 7 Dec 2012, Putrajaya, Malaysia.

## SUMMARY OF ORAL PRESENTATIONS (continued)

- “Can we think about contextuality like how we think about nonlocality,” presented at the Greatest Inspiration Surely Is Nonlocality 60th Workshop, 29 May - 1 Jun 2012, Val d’Illiez, Switzerland.
- 2009
- “Nonclassical correlations from random measurements,” presented at the Workshop on Quantum Correlations 2009, 30 Nov - 4 Dec 2009, Singapore.

## PROFESSIONAL SERVICES TO THE DISCIPLINE

### *Peer reviews*

- Referee for Annals of Physics, Annalen Der Physik, AQIS 2014, AQIS 2018, Chinese Journal of Physics, Entropy, European Physical Journal D, Foundations of Physics, Journal of Physics A: Mathematical and Theoretical, New Journal of Physics, Nature Communications/ Physics, npj Quantum Information, Optics Express, QIP 2013, QIP 2014, Quantum, Quantum Information & Computation, Physical Review A/ Lett./ X
- 2019-  
2018-  
2015-
- Academic Committee Member, Department of Physics, National Cheng Kung University
  - Research grant reviewer for the Ministry of Science & Technology, Taiwan
  - Editorial Board Member of Scientific Reports

### *Conference organization and/or committee members*

- 2019
- Program committee member of the Asian Quantum Information Science 2019 Conference, Seoul, Korea, held from 19 Aug - 23 Aug 2019.
  - Principal organizer of the Young Researchers Forum on Quantum Information Science held at Hsinchu, Taiwan, held from 14 - 16 Aug 2019.
  - Local organizing committee member of the Relativistic Quantum Information-North (RQI-N 2019) Conference and School, Tainan, Taiwan, held from 27 May - 1 Jun 2019.
- 2018
- Scientific committee member of QTech2018 (Quantum Technology International Conference 2018), held from 5 - 7 Sep 2018.
  - Program committee member of Workshop on Quantum Science and Technology 2018, Taiwan, held from 3 - 5 Sep 2018.
- 2017
- Program committee member of the Trustworthy Quantum Information Workshop (TYQI) 2017, Paris, France, held from 19 - 21 Jun 2017.
  - Program committee member of the Theory of Quantum Computation, Communication and Cryptography workshop (TQC) 2017, held from 14 - 16 Jun 2017.
- 2016
- Local organizing committee member of the Asian Quantum Information Science 2016 Conference, Taipei, Taiwan, held from 27 Aug - 2 Sep 2016.
- 2015
- Principal organizer of the Workshop on Quantum Nonlocality, Causal Structures & Device-independent Quantum Information held at Tainan, Taiwan, held from 9 - 14 Dec 2015.
- 2011
- Principal organizer of the Device-independent Quantum Information Processing Kick-off Meeting, Geneva, Switzerland, held from 23 - 25 Nov 2011.
- 2003
- Local organizing committee member of the 2nd Asia Pacific Workshop on Quantum Information Science, Singapore, held from 15 - 19 Dec 2003.

### *Thesis examination*

- 2018
- Mr. Bi-Sheng Hu (Master, internal, National Cheng Kung University)
  - Mr. You-Chang Wu (Master, internal, National Cheng Kung University)
- 2017
- Mr. Shin-Liang Chen (PhD, internal, National Cheng Kung University)
- 2016
- Mr. Tomer Jack Barnea (PhD, external, University of Geneva)
  - Mr. Marco Túlio Quintino (PhD, external, University of Geneva)
  - Mr. Chung-Yun Hsieh (Master, external, National Tsinghua University)
- 2015
- Mr. Denis Rosset (PhD, external, University of Geneva)
- 2014
- Mr. Charles Ci Wen Lim (PhD, external, University of Geneva)
- 2013
- Mr. Flavien Hirsch (Master, external, University of Geneva)
- 2012
- Mr. Jean-Daniel Bancal (PhD, internal, University of Geneva)
- 2010
- Mr. Denis Rosset (Master, internal, University of Geneva)

## RESEARCH SUPERVISION & MENTORING EXPERIENCE

### *PhD Research Supervision & Mentoring Experience*

- 2015- • \*Mr. Pei-Sheng Lin (National Cheng Kung University)
- 2013-2015 • Miss. Sandra Rankovic (ETH Zürich, with Renato Renner)
- 2012-2015 • Mr. Gilles Pütz (University of Geneva, with Nicolas Gisin, Nicolas Brunner)
  - Mr. Tomer J. Barnea (University of Geneva, with Nicolas Gisin, Nicolas Brunner)
- 2010-2015 • Mr. Denis Rosset (University of Geneva, with Nicolas Gisin)
- 2010-2012 • Mr. Jean-Daniel Bancal (University of Geneva, with Nicolas Gisin)

### *Master Research Supervision & Mentoring Experience*

- 2020- • \*Mr. Alex Shih (National Cheng Kung University)
- 2019- • \*Mr. Kai-Giun Chen (National Cheng Kung University)
  - \*Mr. Bo-An Tsai (National Cheng Kung University)
- 2018- • \*Mr. Yu-Chun Yin (National Cheng Kung University)
- 2017-2019 • Mr. Shih-Xian Yang (National Cheng Kung University)
  - Mr. Jyun-Yi Li (National Cheng Kung University, with Gelo Noel Tabia)
- 2016-2017 • Mr. Rui-Yang You (National Cheng Kung University, with Denis Rosset)
- 2015-2017 • Mr. Jui-Chen Hung (National Cheng Kung University)
- 2014 • Mr. Paul Eker (ETH Zürich, with Sandra Rankovic)
- 2012-2013 • Mr. Florian J. Curchod (University of Geneva, with Nicolas Gisin)
- 2011-2012 • Mr. Basile Grandjean, (University of Geneva, with Nicolas Gisin)
  - Mr. Tomer J. Barnea (University of Geneva/ ETH Zürich, with Jean-Daniel Bancal, Nicolas Gisin)

### *Undergraduate Research Supervision & Mentoring Experience*

- 2017-2018 • Mr. Yu-Hao Yeh (National Cheng Kung University)
- 2014 • †Miss. Manran Zhu (Semester Project, ETH Zürich, with Sandra Rankovic)
- 2009 • Mr. Graham White, (Senior Special Projects, University of Sydney)
  - Mr. Matthew Wardrop, (Senior Special Projects, University of Sydney)
- 2003 • Miss. Fang Miaoqing, Mr. Ng Jia Tong and Mr. Zheng Minrui (Special Program in Science SP2172 Project, National University of Singapore, with Berthold-Georg Englert)

† Incomplete \* Research candidature in progress

## RESEARCH VISITS

- 2019 • ETH Zürich, Zürich, Switzerland, 5 -6 Aug 2019 (hosted by *Renato Renner*).
  - Institute for Nuclear Research, Debrecen, Hungary, 29 Jul - 4 Aug 2019 (hosted by *Tamás Vértesi*)
  - University of Geneva, Geneva, Switzerland, 22 - 28 Jul 2017, 5 - 7 Aug (hosted by *Nicolas Gisin* and *Nicolas Brunner*)
- 2018 • NTT Basic Research Laboratories, Atsugi, Japan, 13 - 14 Sep 2018 (hosted by *Bill Munro*)
  - Perimeter Institute for Theoretical Physics, Waterloo, Canada, 22- 29 Jul 2018 (hosted by *Denis Rosset*)
  - Centre for Quantum Technologies, Singapore, 26 - 28 Feb 2018 (hosted by *Valerio Scarani*)
- 2017 • University of Geneva, Geneva, Switzerland, 26 - 30 Jun 2017 (hosted by *Nicolas Gisin* and *Nicolas Brunner*)
  - ETH Zürich, Zürich, Switzerland, 22 - 23 Jun 2017 (hosted by *Renato Renner*).
  - University of Tokyo, Tokyo, Japan, 13 - 17 Feb 2017 (hosted by *Mio Muraio*).
  - University of Nagoya, Nagoya, Japan, 9 - 10 Feb 2017 (hosted by *Francesco Buscemi*).
- 2016 • ETH Zürich, Zürich, Switzerland, 15 - 16 Sep 2015 (hosted by *Renato Renner*).



## RESEARCH VISITS (continued)

- University of Geneva, Geneva, Switzerland, 5 - 14 Sep 2016 (hosted by *Nicolas Gisin* and *Nicolas Brunner*)
- Luoyang Normal College, Luoyang, China, 5 - 7 Jul 2016 (hosted by *Yonggang Tan*).
- Institute of Interdisciplinary Information Sciences, Tsinghua University, Beijing, China, 4, 5 & 8 Jul 2016 (hosted by *Xiongfeng Ma*).
- 2015**
  - Institute of Interdisciplinary Information Sciences, Tsinghua University, Beijing, China, 4 - 10 Sep 2015 (hosted by *Xiongfeng Ma*).
  - University of Geneva, Geneva, Switzerland, 10 - 22 Aug 2015 (hosted by *Nicolas Gisin* and *Nicolas Brunner*)
  - ETH Zürich, Zürich, Switzerland, 3 - 7 Aug 2015 (hosted by *Renato Renner*).
  - Institute of Information Sciences, Academia Sinica, Taipei, 13 - 15 Apr 2015 (hosted by *Kai-Min Chung*)
- 2014**
  - University of Lugano, Lugano, Switzerland, 2 - 3 Dec 2014 (hosted by *Stefan Wolf*)
  - University of Geneva, Geneva, Switzerland, 17 - 20 Nov 2014 (hosted by *Nicolas Gisin*)
  - University of Geneva, Geneva, Switzerland, 19 - 21 Aug 2014 (hosted by *Nicolas Gisin*)
  - Free University of Brussels, Brussels, Belgium, 5 Aug 2014 (hosted by *Stefano Pironio*)
  - University of Geneva, Geneva, Switzerland, 28 - 30 Jul 2014 (hosted by *Nicolas Gisin*)
  - University of Geneva, Geneva, Switzerland, 12 - 13 Jun 2014 (hosted by *Nicolas Gisin*)
  - University of Geneva, Geneva, Switzerland, 14 - 17 Apr 2014 (hosted by *Nicolas Gisin*)
  - University of Geneva, Geneva, Switzerland, 24 - 27 Mar 2014 (hosted by *Nicolas Gisin*)
  - National Cheng Kung University, Tainan, Taiwan, 26 - 27 Feb 2014 (hosted by *Yueh-Nan Chen*)
  - Universidad Complutense, Madrid, Spain, 10 - 13 Feb 2014 (hosted by *David Pérez-García*)
  - University of Geneva, Geneva, Switzerland, 13 - 14 Jan 2014 (hosted by *Nicolas Gisin*)
- 2013**
  - National Cheng Kung University, Tainan, Taiwan, 17 Dec 2013 (hosted by *Yueh-Nan Chen*)
  - Centre for Quantum Technologies, Singapore, 9 - 13 Dec 2013 (hosted by *Alex Ling*)
  - University of Geneva, Geneva, Switzerland, 25 - 27 November 2013 (hosted by *Nicolas Gisin*)
  - University of Geneva, Geneva, Switzerland, 4 - 7 November 2013 (hosted by *Nicolas Gisin*)
  - University of Geneva, Geneva, Switzerland, 7 - 10 Oct 2013 (hosted by *Nicolas Gisin*)
  - University of Geneva, Geneva, Switzerland, 23 - 27 Sep 2013 (hosted by *Nicolas Gisin*)
  - University of Geneva, Geneva, Switzerland, 15 - 19 Jul 2013 (hosted by *Nicolas Gisin*)
  - CWI, Amsterdam, 27 Mar 2013 (hosted by *Harry Bruerman*).
  - ETH Zürich, Zürich, Switzerland, 11 - 14 Feb 2013 (hosted by *Renato Renner*).
  - University of Bristol, Bristol, United Kingdom, 4 - 8 Feb 2013 (hosted by *Sandu Popescu*)
- 2012**
  - Institute for Nuclear Research, Debrecen, Hungary, 27 - 31 Aug 2012 (hosted by *Tamás Vértesi*)
- 2010**
  - National Cheng Kung University, Tainan, Taiwan, 31 Dec 2010 (hosted by *Yueh-Nan Chen*)
  - Korean Institute for Advanced Study, Seoul, Korea, 17 - 21 May (hosted by *Joonwoo Bae*)
  - University of Geneva, Geneva, Switzerland, 7 Mar - 2 Apr 2010 (hosted by *Nicolas Gisin*)
  - Perimeter Institute for Theoretical Physics, Waterloo, Canada, 1- 26 Feb 2010 (hosted by *Rob Spekkens*)
- 2009**
  - Imperial College London, London, United Kingdom, 29 Jun - 11 Jul 2009 (hosted by *Terry Rudolph*)
  - ICFO, Castelldefels, Spain, 1-5 Jun 2009 (hosted by *Antonio Acín*)
  - Macquarie University, Sydney, Australia, 7 May 2009 (hosted by *Daniel Terno*)
  - Centre for Quantum Technologies, Singapore, 19 - 21 Jan 2009 (hosted by *Leong Chuan Kwek*)
- 2008**
  - Center for Quantum Information Science, Tainan, Taiwan, 1 Sep 2008 (hosted by *Yueh-Nan Chen*)
- 2007**
  - Center for Quantum Information Science, Tainan, Taiwan, 19 - 20 Sep 2007 (hosted by *Wei-Min Zhang*)
  - University of Sydney, Sydney, Australia, 7 - 9 Aug 2007 (hosted by *Stephen Bartlett*)
- 2006**
  - Center for Quantum Information Science, Tainan, Taiwan, 6 - 8 Sep 2006 (hosted by *Wei-Min Zhang*)
- 2005**
  - National University of Singapore, Singapore, 17 - 28 Jan 2005 (hosted by *Leong Chuan Kwek*)