



Journal papers, published/accepted

1. K. Tamaki, H.-K. Lo, A. Mizutani, G. Kato, C. C. W. Lim, K. Azuma, M. Curty, Security of quantum key distribution with iterative sifting, *Quantum Science and Technology* 3, 014002 (2017).
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9. A. Ortu, J. Etesse, M. Afzelius, A solid state quantum memory for quantum repeaters, QCALL ESR conference 2019, Mondello, Italy
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 16. M Pittaluga "Long distance Quantum Key Distribution over GÉANT fibre network", 17/03/21 - GÉANT infoshare meeting, Virtual
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 36. R. Trényi, M. Curty, "The asymptotic performance of coherent-one-way quantum key distribution", to the conference QCrypt 2021
 37. R. Trényi, M. Curty, "Performance of the coherent-one-way quantum key distribution protocol", at QCALL Final Symposium on Advances in Quantum Communications , 3-5 May 2021.
 38. S Ghorai, "Asymptotic Security of Continuous-Variable QKD with a Discrete Modulation", QCALL Early-Stage Researchers Conference, Palermo (Italy), 2019
 39. D Rusca, "Fast and practical quantum key distribution". QCALL Final Symposium , 2021
 40. S Ghorai, "Continuous-Variable Quantum Money with Classical Verification", QCALL Final Symposium , 2021
 41. Grasselli, G. Murta, H. Kampermann, and D. Bruß, "Entropic bounds for multiparty device-independent cryptography", ML4Q virtual conference, 24-26 February 2021
 42. Grasselli, G. Murta, H. Kampermann, and D. Bruß, "Entropy bounds for multipartite device-independent cryptography", QCALL Final Symposium on Advances in Quantum Communications , 3-5 May 2021
 43. H Tebyanian, M Zahidy, M Avesani, A Stanco, P Villoresi, G Vallone, Practical semi-self testing randomness generation based on quantum state's indistinguishability, QCALL Final Symposium on Advances in Quantum Communications, May 3-5, 2021 — Online.
 44. H Tebyanian, M Avesani, G Vallone, P Villoresi, Semi-device independent randomness from d-outcome continuous-variable detection, 20th Asian Quantum Information Science Conference, December 7-9, 2020 — Sydney, Australia.
 45. M Avesani, H Tebyanian, G Vallone, P Villoresi, Semi-device independent randomness from d-outcome continuous-variable detection, 20th Asian Quantum Information Science Conference, December 7-9, 2020 — Sydney, Australia.
 46. H Tebyanian, M Avesani, G Vallone, P Villoresi, Semi-DI QRNG, QCALL ESR Conference 2019, Mondello, Sicily, September 16-19, 2019.
 47. M Avesani, H Tebyanian, G Vallone, P Villoresi, Semi-Device-Independent QRNG based on the overlap assumption and hetero- dyne detection, International Workshop for Young Researchers on the Future of Quantum Science and Technology, February 3-6,



2020 — Tokyo, Japan.

48. H Tebyanian, M Avesani, G Vallone, P Villoresi, Semi-Device-Independent QRNG based on the overlap assumption and heterodyne detection, Quantum Technology International Conference-QTech, November 2020.
49. D Rusca, H Tebyanian, G Vallone, P Villoresi, Fast self-testing Quantum Random Number Generator based on homodyne detection.
50. M Avesani, H Tebyanian, G Vallone, P Villoresi, Semi-Device-Independent QRNG based on the overlap assumption and heterodyne detection, Frontiers in Optics(FiO), Technical Conference & Virtual Exhibits, 14 - 17 September 2020.

Posters

1. A Ortu, A Tiranov, E Zambrini Cruzeiro, N Gisin and M Afzelius, Broadband Raman heterodyne spectroscopy of Rare Earth-doped crystals, NCCR QSIT Junior Meeting, Passugg (2017)
2. G Currás Lorenzo and M Razavi, Finite-key analysis for memory-assisted quantum key distribution, International Conference on Challenges in Quantum Information Science, Tokyo, Japan (2018)
3. G Currás Lorenzo and M Razavi, Finite-key analysis for memory-assisted decoy-state quantum key distribution, 8th International Conference on Quantum Cryptography, Shanghai, China (2018)
4. [34] D. Rusca, A Boaron, F Grünenfelder, A Martin and H Zbinden. The 1-decoy state protocol: the best choice for practical QKD, 8th International Conference on Quantum Cryptography, Shanghai, China (2018)
5. Y Jing, Resource analysis of future quantum repeater networks, 24th Young Atom Opticians Conference, Glasgow, UK (2018)
6. Y Jing and M Razavi, Resource analysis of future quantum repeater networks, 8th International Conference on Quantum Cryptography, Shanghai, China (2018)
7. F Grasselli, Hermann Kampermann and D Bruss, Finite-key effects in multi-partite quantum key distribution protocols, DPG Spring Meeting, Erlangen, Germany (2018) and 8th International Conference on Quantum Cryptography, Shanghai, China (2018)
8. G Roberts, M Pittaluga, M Minder, J F. Dynes, Z Yuan, M Lucamarini and A J. Shields, Patterning-effect-free intensity modulator for decoy-state quantum key distribution, 8th International Conference on Quantum Cryptography, Shanghai, China (2018)

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9. M Pereira, M Curty and K Tamaki, Loss-tolerant quantum cryptography with leaky sources, 8th International Conference on Quantum Cryptography, Shanghai, China (2018)
10. C Liorni, Hermann Kampermann and D Bruß, Satellite-based quantum links for QKD: beam effects and weather dependence, DPG Spring Meeting, Erlangen, Germany (2018) and 8th International Conference on Quantum Cryptography, Shanghai, China (2018)
11. N Vyas and R Alléaume, Quantum Computational Hybrid Cryptography, 8th International Conference on Quantum Cryptography, Shanghai, China (2018)
12. A Ortu, A Tiranov, S Welinski, F Fröwis, A Ferrier, P Goldner, N Gisin, and M Afzelius, Simultaneous coherence enhancement of optical and microwave transitions in solid-state electronic spins, 7th NCCR QSIT Winter School & 8th NCCR QSIT General Meeting, Arosa (2018)
13. M. Pereira, M. Curty and K. Tamaki, “Finite-key security analysis of quantum key distribution with flawed and leaky sources” at the 9th International Conference on Quantum Cryptography (QCrypt), Montreal, Canada (2019)
14. Currás Lorenzo, A. Navarrete, K. Azuma, M. Curty and M. Razavi, Tight finite-key security for twin-field quantum key distribution, Int. Conf. on Quantum Cryptography (QCrypt), Montreal, Canada (2019)
15. Trényi, K. Azuma, M. Curty, Beating the repeaterless bound with adaptive measurement-device-independent quantum key distribution, 9th International Conference on Quantum Cryptography, Montreal, Canada, 2019 (QCrypt 2019)
16. C. Liorni, H. Kampermann, D. Bruß, “Satellite- vs Ground-based quantum networks and the role of quantum repeaters”, QCrypt 2019 International Conference on Quantum Cryptography, Montreal, Canada
17. Mujtaba Zahidy, Matteo Schiavon, Marco Avesani, Alberto Santamato, Andrea Stanco, Luca Calderaro, Costantino Agnesi, Francesco Vedovato, Giuseppe Vallone, Paolo Villoresi – Terrestrial free space daylight QKD at 100MHz – European Quantum Technologies Conference, Grenoble, France (2019)
18. Y Jing, Daniel Alsina Leal and M. Razavi Quantum key distribution over quantum repeaters with repetition code, 9th International Conference on Quantum Cryptography, Montreal, Canada (2019)
19. G. Gras, D. Rusca, H. Zbinden and F. Bussières, Bounding the information leakage in



- quantum hacking using photon statistics, QCrypt, Montréal, Canada (2019)
20. A. Ortu, A. Tiranov, S. Welinski, F. Fröwis, A. Ferrier, P. Goldner, N. Gisin, and M. Afzelius, Simultaneous coherence enhancement of optical and microwave transitions in solid-state electronic spins, School of Quantum Secure Communications, Baiona, Spain
 21. A. Ortu, A. Tiranov, S. Welinski, F. Fröwis, A. Ferrier, P. Goldner, N. Gisin, and M. Afzelius, Simultaneous coherence enhancement of optical and microwave transitions in solid-state electronic spins, School of Quantum Communication Networks, Padua, Italy
 22. A. Ortu, J. Etesse, N. Gisin, and M. Afzelius, Technical improvements towards a Rare Earth ion-based quantum repeater, Rare Earth Ion Workshop 2018, Geneva, Switzerland
 23. M Schiavon, M Zahidy, M Avesani, A Santamato, A Stanco, L Calderaro, C Agnesi, F Vedovato, G Vallone, P Villoresi; Establishing and characterizing a free space optical link over 10 km, School of Quantum Communications Networks (SQCN), Padova, Italy (2018)
 24. C. Liorni, H. Kampermann and D. Bruss, Satellite- vs ground-based quantum networks and the role of quantum repeaters, QCrypt2019, Montreal 26-30.08.19
 25. C. Liorni, H. Kampermann and D. Bruss, Quantum repeaters in space, QCrypt2020, Online conference 10-14.08.20
 26. Ortu, J. Etesse, N. Gisin, and M. Afzelius, Technical improvements towards a Rare Earth ion-based quantum repeater, Rare Earth Ion Workshop 2018, Geneva, Switzerland
 27. G. Currás-Lorenzo, L. Wooltorton, M. Razavi, "Twin-field quantum key distribution with discrete phase randomization", 10th Int. Conf. on Quantum Cryptography (QCrypt), Online (2020)
 28. H Tebyanian, M Avesani, G Vallone, P Villoresi, Semi-device independent randomness from d-outcome continuous-variable detection, YQIS 2021
 29. H Tebyanian, M Avesani, G Vallone, P Villoresi, Semi-Device-Independent quantum random number generation, QID 2021
 30. H Tebyanian, M Avesani, G Vallone, P Villoresi, Semi-Device-Independent QRNG based on the energy bound, QIP 2021
 31. H Tebyanian, M Avesani, G Vallone, P Villoresi, Semi-Device-Independent QRNG based on the overlap assumption and heterodyne detection, QCrypt 2020, online conference.
 32. H Tebyanian, M Avesani, G Vallone, P Villoresi, QRNG based on energy bound, QCRYPT2019 Montreal, Canada, 26–30 August 2019.

Invited talks by QCALL supervisors (partial list)



1. E. Diamanti, Quantum cryptography using practical photonic systems, Invited talk at the COST Nanoscale Quantum Optics Early Stage Researcher Workshop, Budapest, Hungary, Oct 2017.
2. M. Razavi, From theory to practice: What it takes for quantum repeaters to prove useful? invited paper, 2nd Workshop for Quantum Repeater and Networks, Seefeld, Austria, Sept 2017.
3. E. Diamanti, Continuous-variable quantum cryptography on silicon, Invited talk at the International Conference on Integrated Quantum Photonics, Rome, Italy, Sept 2017.
4. E. Diamanti, Practical secure quantum communications, Invited talk at the Central European Workshop on Quantum Optics (CEWQO), Copenhagen, Denmark, June 2017.
5. E. Diamanti, Practical secure quantum communications, Invited talk at the OSA Quantum Information and Measurement IV: Quantum Technologies Conference, Paris, France, April 2017.
6. D. Bruss, Quantum cryptography, Invited Talk at International Workshop on Secure Communication via Quantum Channels, ZiF Bielefeld, Germany, April 2017.
7. D. Bruss, Large-scale quantum networks based on graphs, Invited Talk at 31. Umbrella Symposium on Quantum Information and Technology, RWTH Aachen, Germany, July 2017.
8. D. Bruss, Multi-partite entanglement can speed up quantum key distribution in networks, Invited talk at International Symposium on New Frontiers in Quantum Correlations, Kolkata, India, January 2018.
9. R. Alléaume, Can We Accelerate Quantum Cryptography Take-Off ? Invited talk at the Central European Workshop on Quantum Optics (CEWQO) Industry Session, Copenhagen, Denmark, June 2017.
10. R. Alléaume, Quantum Technologies: Impact on Cybersecurity, Invited Talk at the Cisco - Polytechnique Annual Symposium, Paris, France - April 9-10 2018
11. R. Alléaume, Quantum Cryptography at the Computational Frontier, Invited talk at the Workshop « The Quantum Internet, Charting the Critical Path », Toronto, Canada, June 21-23 2018.