Personal Particulars	
Name	Tomasz Paterek
Telephone	0060 145 004 587
Email	tomasz@paterek.info
Education & Work	
Since 2022	Professor at Xiamen University Malaysia and University of Gdańsk
2019-2022	Associate Professor and Vice-Director at IFTiA (University of Gdańsk)
2012-2019	Assistant Professor at SPMS (Nanyang Technological University)
2012-2015	Research Assistant Professor at CQT (National University of Singapore)
2008-2012	Research Fellow at CQT (National University of Singapore)
2007-2008	Junior Scientist at IQOQI Vienna (Austrian Academy of Sciences)
2016	Habilitation with distinction at the University of Gdańsk, Poland Theme: *Nonclassical correlations in quantum systems* Degree received on 17th March 2016
2002-2007	Doctoral studies finished with distinction at the University of Gdańsk, Poland Thesis: *Quantum communication* Supervisor: Prof. Marek Żukowski Doctoral degree received on 24th May 2007
1997-2002	Physics studies at the Marie Curie-Skłodowska University in Lublin, Poland Thesis: *Methods and role of projections in quantum mechanics* Supervisor: Prof. Andrzej Góźdź Master of Science degree received on 17th September 2002
Professional Service	
Editor	Int. J. Quant. Inf. (Since 2014)
Reviewer	For more than 30 international science journals
Grant Reviewer	For 4 funding agencies
Awards	
2022	Rector's Award (University of Gdańsk)
2019	Ig Nobel Prize in Biology
2015	Excellence in Teaching Award (SPMS, NTU Singapore)
Statement on publications list	
No. papers	97 (1 in Rev. Mod. Phys., 2 in Nature, 1 in Nature Phys., 16 in Phys. Rev. Lett.)
No. citations	8000 (Google Scholar)

H-index	34 (Google Scholar)
Grants (PI)	
2022-2025	Xiamen University Malaysia Research Fund *Quantitative bounds on non-classicality of mediator only from...* (MYR 60k)
2021-2022	Foundational Questions Institute Mini Grant (USA) *Wanders of light* (art&science, USD 6.6k)
2020-2022	Polish National Agency for Academic Exchange *Polish Returns 2018* (PLN 2.1M)
2017-2018	Ministry of Education Tier 1 Grant (Singapore) *Towards experimental tests of gravitationally-induced...* (SGD 80k)
2016-2019	Ministry of Education Tier 2 Grant (Singapore) *New correlation quantifiers and their experimental implications* (SGD 600k)
2014-2016	Ministry of Education Tier 1 Grant (Singapore) *Towards quantum biology with insects...* (SGD 85k)
2014-2016	Ministry of Education Tier 1 Grant (Singapore) *Quantum entanglement in space and in time* (SGD 100k)
2012-2016	Start-up grant of Nanyang Technological University (Singapore) *Quantum correlations* (SGD 200k)
Publications	
[98]	T. Krisnanda, P. Song, A. Copetudo, C. Y. Fontaine, T. Paterek, T. C. H. Liew et al. *Experimental demonstration of enhanced quantum tomography via quantum...* arXiv:2412.11015
[97]	J. A. Gruca, A. Kumar, R. Ganardi, P. Arumugam, K. Kropielnicka, T. Paterek *Correlations and signaling in the Schrodinger-Newton model* Class. Quant. Grav. **41**, 245014 (2024)
[96]	P. Cieśliński, L. Knips, M. Kowalczyk, W. Laskowski, T. Paterek, T. Vertesi et al. *Unmasking the polygamous nature of quantum nonlocality* Proc. Nat. Acad. Sci. **121**, e2404455121 (2024)
[95]	P. Cieśliński, S. Imai, J. Dziewior, O. Gühne, L. Knips, W. Laskowski et al. *Analysing quantum systems with randomised measurements* Phys. Rep. **1095**, 1 (2024)
[94]	A. Kumar, Y.-K. Lim, P. Arumugam, T. Złośnik, T. Paterek *Probing modified gravity with entanglement of microspheres* Phys. Rev. D **109**, L101501 (2024)
[93]	R. Ganardi, E. Panwar, M. Pandit, B. Wołoncewicz, T. Paterek *Quantitative nonclassicality of mediated interactions* PRX Quantum **5**, 010318 (2024)
[92]	P. Cieśliński, J. Dziewior, L. Knips, W. Kłobus, J. Meinecke, T. Paterek et al. *Valid and efficient entanglement verification with finite copies of a quantum state* npj Quant. Inf. **10**, 14 (2024)

[91]	J. Wasilewski, T. Paterek, K. Horodecki *Uncertainty of feed forward neural networks recognising quantum contextuality* J. Phys. A **56**, 455305 (2023)
[90]	P. Cieśliński, W. Kłobus, P. Kurzyński, T. Paterek, W. Laskowski *The fastest generation of multipartite entanglement with natural interactions* New J. Phys. **25**, 093040 (2023)
[89]	S. Kanjilal, C. Jebarathinam, T. Paterek, D. Home *Sufficient conditions for quantum advantage in random access code protocols...* Phys. Rev. A **108**, 012617 (2023)
[88]	A. Kumar, T. Krisnanda, P. Arumugam, T. Paterek *Continuous-variable entanglement through central forces: Application to gravity...* Quantum **7**, 1008 (2023)
[87]	T. Krisnanda, T. Paterek, M. Paternostro, T. C. H. Liew *Quantum neuromorphic approach to efficient sensing of gravitationally-induced...* Phys. Rev. D **107**, 086014 (2023)
[86]	M. J. Lake, M. Miller, R. Ganardi, T. Paterek *Generalised uncertainty relations from finite-accuracy measurements* Front. Astron. Space Sci. **10**, 1087724 (2023)
[85]	T. Krisnanda, S.-Y. Lee, C. Noh, J. Kim, A. Streltsov, T. C. H. Liew, T. Paterek *Correlations and energy in mediated dynamics* New J. Phys. **24**, 123025 (2022)
[84]	K. S. Lee, Y. P. Tan, L. H. Nguyen, R. P. Budoyo, K. H. Park, C. Hufnagel et al. *Entanglement in a qubit-qubit-tardigrade system* New J. Phys. **24**, 123024 (2022)
[83]	T. Krisnanda, S. Ghosh, T. Paterek, W. Laskowski, T. C. H. Liew *Phase measurement beyond the standard quantum limit using a quantum...* Phys. Rev. Appl. **18**, 034011 (2022)
[82]	R. Ganardi, M. Miller, T. Paterek, M. Żukowski *Hierarchy of correlation quantifiers comparable to negativity* Quantum **6**, 654 (2022)
[81]	A. Kumar, T. Krisnanda, P. Arumugam, T. Paterek *Closest approach of a quantum projectile* J. Phys. Conf. Ser. **1850**, 012074 (2021)
[80]	A. Kumar, T. Krisnanda, P. Arumugam, T. Paterek *Nonclassical trajectories in head-on collisions* Quantum **5**, 506 (2021)
[79]	W. Kłobus, M. Miller, M. Pandit, L. Knips, J. Dziewior, J. Meinecke, *et al.* *Cooperation and dependencies in multipartite systems* New J. Phys. **23**, 063057 (2021)
[78]	S. Pal, P. Batra, T. Krisnanda, T. Paterek, T. S. Mahesh *Experimental localisation of quantum entanglement through monitored classical...* Quantum **5**, 478 (2021)
[77]	K. S. Lee, R. Dumke, T. Paterek *Numerical tests of magnetoreception models assisted with behavioural...* Sci. Rep. **11**, 12221 (2021)

[76]	S. Ghosh, T. Krisnanda, T. Paterek, T. C. H. Liew *Realising and compressing quantum circuits with quantum reservoir computing* Comms. Phys. **4**, 105 (2021)
[75]	L. Rozema, Z. Zhao, T. Paterek, B. Dakić *Higher-order interference between multiple quantum particles interacting...* Phys. Rev. A **103**, 052204 (2021)
[74]	T. Krisnanda, S. Ghosh, T. Paterek, T. C. H. Liew *Creating and concentrating quantum resource states in noisy environments...* Neu. Net. **136**, 141 (2021)
[73]	M. Miller, Woo C. Y., R. Dumke, T. Paterek *Experiment-friendly formulation of quantum backflow* Quantum **5**, 379 (2021)
[72]	S. Ghosh, A. Opala, M. Matuszewski, T. Paterek, T. C. H. Liew *Reconstructing quantum states with quantum reservoir networks* IEEE Trans. Neur. Net. Learn. Sys. **32**, 3148 (2021)
[71]	L. Knips, J. Dziewior, W. Kłobus, W. Laskowski, T. Paterek, P. J. Shadbolt, *et al.* *Multipartite entanglement analysis from random correlations* npj Quantum Inf. **6**, 51 (2020)
[70]	K. S. Lee, Z. Zhao, C. Couteau, D. Wilkowski, T. Paterek *An atomic test of higher-order interference* Phys. Rev. A **101**, 052111 (2020) Editors' suggestion
[69]	Kelvin, K. Onggadinata, M. J. Lake, T. Paterek *Dark energy effects in the Schrödinger-Newton approach* Phys. Rev. D **101**, 063028 (2020)
[68]	T. Krisnanda, G. Y. Tham, M. Paternostro, T. Paterek *Observable quantum entanglement due to gravity* npj Quantum Inf. **6**, 12 (2020)
[67]	S. Ghosh, T. Paterek, T. C. H. Liew *Quantum neuromorphic platform for quantum state preparation* Phys. Rev. Lett. **123**, 260404 (2019)
[66]	W. Y. Kon, T. Krisnanda, P. Sengupta, T. Paterek *Non-classicality of spin structures in condensed matter: An analysis of* $Sr_{14}Cu_{24}O_{41}$ Phys. Rev. B **100**, 235103 (2019)
[65]	M. J. Lake, M. Miller, R. Ganardi, Z. Liu, S.-D. Liang, T. Paterek *Generalised uncertainty relations from superpositions of geometries* Class. Quant. Grav. **36**, 155012 (2019)
[64]	S. Ghosh, A. Opala, M. Matuszewski, T. Paterek, T. Liew *Quantum reservoir processing* npj Quantum Inf. **5**, 35 (2019)
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[62]	W. Kłobus, W. Laskowski, T. Paterek, M. Wieśniak, H. Weinfurter *Higher dimensional entanglement without correlations* Eur. Phys. J. D **73**, 29 (2019)

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[56]	T. Krisnanda, M. Zuppardo, M. Paternostro, T. Paterek *Revealing non-classicality of inaccessible objects* Phys. Rev. Lett. **119**, 120402 (2017)
[55]	A. Chia, T. Paterek, L. C. Kwek *Hitting statistics from quantum jumps* Quantum **1**, 19 (2017)
[54]	M. C. Tran, M. Zuppardo, A. de Rosier, L. Knips, W. Laskowski *et al.* *Genuine N-partite entanglement without N-partite correlation functions* Phys. Rev. A **95**, 062331 (2017) Editors' suggestion
[53]	M. Grassl, D. McNulty, L. Mista Jr., T. Paterek *Small sets of complementary observables* Phys. Rev. A **95**, 012118 (2017) Editors' suggestion
[52]	T. Le, F. A. Pollock, T. Paterek, M. Paternostro, K. Modi *Divisible quantum dynamics satisfies temporal Tsirelson's bound* J. Phys. A **50**, 055302 (2017)
[51]	M. C. Tran, B. Dakić, W. Laskowski, T. Paterek *Correlations between outcomes of random measurements* Phys. Rev. A **94**, 042302 (2016)
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[48]	M. Zuppardo, T. Krisnanda, T. Paterek, S. Bandyopadhyay, A. Banerjee *et al.* *Excessive distribution of quantum entanglement* Phys. Rev. A **93**, 012305 (2016)
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[45]	C. Schwemmer, L. Knips, M. C. Tran, A. de Rosier, W. Laskowski, *et al.* *Genuine multipartite entanglement without multipartite correlations* Phys. Rev. Lett. **114**, 180501 (2015)
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[39]	A. Fedrizzi, M. Zuppardo, G. G. Gillett, M. A. Broome, M. de Almeida, *et al.* *Experimental distribution of entanglement with separable carriers* Phys. Rev. Lett. **111**, 230504 (2013) Editors' suggestion & Viewpoint by C. Silberhorn Covered on 2physics.com
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[36]	J. N. Bandyopadhyay, T. Paterek, D. Kaszlikowski *Reply to comment on quantum coherence and sensitivity of avian...* Phys. Rev. Lett. **110**, 178901 (2013)
[35]	M. Markiewicz, W. Laskowski, T. Paterek, M. Żukowski *Detecting genuine multipartite entanglement of pure states with bipartite...* Phys. Rev. A **87**, 034301 (2013)
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[29]	W. Laskowski, D. Richart, C. Schwemmer, T. Paterek, H. Weinfurter *Experimental Schmidt decomposition and state independent entanglement...* Phys. Rev. Lett. **108**, 240501 (2012)
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[27]	S.-Y. Lee, T. Paterek, H. S. Park, H. Nha *Linear optical scheme for producing polarization-entangled NOON states* Opt. Comm. **285**, 307 (2011)
[26]	R. Ramanathan, T. Paterek, A. Kay, P. Kurzyński, D. Kaszlikowski *Local realism of macroscopic correlations* Phys. Rev. Lett. **107**, 060405 (2011)
[25]	M. Wieśniak, T. Paterek, A. Zeilinger *Entanglement in mutually unbiased bases* New J. Phys. **13**, 053047 (2011)
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[23]	P. Kurzyński, T. Paterek, R. Ramanathan, W. Laskowski, D. Kaszlikowski *Correlation complementarity yields Bell monogamy relations* Phys. Rev. Lett. **106**, 180402 (2011)
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[21]	T. Paterek, B. Dakić, Č. Brukner *Reply to comment on mutually unbiased bases, orthogonal Latin squares...* Phys. Rev. A **83**, 036102 (2011)
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[12]	T. Paterek, B. Dakić, Č. Brukner *Mutually unbiased bases, orthogonal Latin squares, and hidden-variable models* Phys. Rev. A **79**, 012109 (2009)
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