

BOOKS

A book on quantum physics for non-experts:

- French: Initiation à la physique quantique (Vuibert, Paris, 2003; 3rd edition 2006)
- English: Quantum Physics: A First Encounter (Oxford University Press, Oxford, 2006)
- German: Physik in Quanten (Spektrum Akademischer Verlag, Berlin, 2007)

PATENTS

"Quantum Cryptography Protocol", PCT Patent Application, WO2004047359; US Patent US 7,359,513 B2

SCIENTIFIC ARTICLES

#	YEAR	AUTHORS	TITLE	PUBLISHED REFERENCE	PREPRINT
75	2009	M.L. Almeida, D. Cavalcanti, V. Scarani, A. Acín	Activation of multipartite quantum non-locality		arXiv :0911.3559
74	2009	V. Scarani	Quantum information: primitive notions and quantum correlations		arXiv:0910.4222
73	2009	C.-E. Bardyn, T.C.H. Liew, M. McKague, S. Massar, V. Scarani	Device-independent tomography of a quantum state based on Bell's inequalities	Accepted in PRA	arXiv:0907.2170
72	2009	V. Scarani, C. Kurtsiefer	The black paper of quantum cryptography: real implementation problems		arXiv:0906.4547
71	2009	J. Allcock, N. Brunner, M. Pawłowski, V. Scarani	Recovering part of the boundary between quantum and nonquantum correlations from information causality	Phys. Rev. A 80 , 040103(R)	arXiv:0906.3464
70	2009	S.A. Aljunid, M.K. Tey, B. Chng, T. Liew, G. Maslennikov, V. Scarani, C. Kurtsiefer	Phase shift of a weak coherent beam induced by a single atom	Phys. Rev. Lett. 103 , 153601	arXiv:0905.3734
69	2009	M. Pawłowski, T. Paterek, D. Kaszlikowski, V. Scarani, A. Winter, M. Żukowski	Information causality as a physical principle	Nature 461 , 1101	arXiv:0905.2292
68	2009	R.Y.Q. Cai, V. Scarani	Finite-key analysis for practical implementations of quantum key distribution	New J. Phys. 11 , 045024	arXiv:0811.2628
67	2009	S.Pironio, A. Acín, N. Brunner, N. Gisin, S. Massar, V. Scarani	Device-independent quantum key distribution secure against collective attacks	New J.Phys. 11 , 045021	arXiv:0903:4460
66	2009	M.K. Tey, G. Maslennikov, T.C.H. Liew, S.A. Aljunid, F. Huber, B. Chng, Z. Chen, V. Scarani, C. Kurtsiefer	Interfacing light and single atoms with a lens	New J. Phys. 11 , 043011	arXiv:0804.4861
65	2009	V. Scarani, H. Bechmann-Pasquinucci, N.J. Cerf, M. Dušek, N. Lütkenahus, M. Peev	The security of practical quantum key distribution	Rev.Mod. Phys. 81 , 1301	arXiv:0802.4155
64	2008	M. Fitz, E. Hänggi, V. Scarani, S.	How non-local are n noisy Popescu-	[not submitted; short version	arXiv:0811.1649

		Wolf	Rohrlich Machines?	in proceedings QCMC2008]	
63	2008	N. Brunner, N. Gisin, S. Popescu, V. Scarani	Simulation of partial entanglement with nonsignaling resources	Phys. Rev. A 78 , 052111	arXiv:0803.2359
62	2008	V. Scarani, R. Renner	Security Bounds for Quantum Cryptography with Finite Resources	Proceedings of TQC2008, Lecture Notes in Computer Science 5106 (Springer Verlag, Berlin), pp. 83-95 (2008)	arXiv:0806.0120
61	2008	A. Ling, M.P. Peloso, I. Marcikic, V. Scarani, A. Lamas-Linares, C. Kurtsiefer	Experimental quantum key distribution based on a Bell test	Phys. Rev. A 78 , 020301(R)	arXiv:0805.3629
60	2008	C. Branciard, N. Brunner, N. Gisin, C. Kurtsiefer, A. Lamas-Linares, A. Ling, V. Scarani	A simple approach to test Leggett's model of nonlocal quantum correlations	Nature Physics 4 , 681	arXiv:0801.2241
59	2008	N. Brunner, S. Pironio, A. Acín, N. Gisin, A.A. Méthot, V. Scarani	Testing the dimension of Hilbert spaces	Phys. Rev. Lett. 100 , 210503	arXiv:0802.0760
58	2008	V. Scarani, R. Renner	Quantum cryptography with finite resources: Unconditional security bound for discrete-variable protocols with one-way post-processing	Phys. Rev. Lett. 100 , 200501	arXiv:0708.0709
57	2008	V. Scarani	Local and non-local content of bipartite qubit and qutrit correlations	Phys. Rev. A 77 , 042112	arXiv:0712.2307
56	2008	C. Branciard, N. Gisin, V. Scarani	Upper Bounds for the Security of two Distributed-Phase Reference Protocols of Quantum Cryptography (Coherent-One-Way and Differential-Phase-Shift)	New J. Phys 10 , 013031	arXiv:0710.4884
55	2007	C. Branciard, A. Ling, N. Gisin, C. Kurtsiefer, A. Lamas-Linares, V. Scarani	Experimental falsification of Leggett's non-local variable model	Phys. Rev. Lett. 99 , 210407	arXiv:0708.0584
54	2007	V. Scarani	Entanglement and Irreversibility in the Approach to Thermal Equilibrium	Eur. Phys. J. Special Topics 151 , 41 (2007)	arXiv:0707.0898
53	2007	M. Halder, A. Beveratos, N. Gisin, V. Scarani, C. Simon, H. Zbinden	Entangling independent photons by time measurement	Nature Physics 3 , 692	arXiv:0704.0758
52	2007	A. Acín, N. Brunner, N. Gisin, S. Massar, S. Pironio, V. Scarani	Device-independent security of quantum cryptography against collective attacks	Phys. Rev. Lett. 98 , 230501	quant-ph/0702152
51	2007	N. Brunner, N. Gisin, V. Scarani, C. Simon	Detection loophole in asymmetric Bell experiments	Phys. Rev. Lett. 98 , 220403	quant-ph/0702130
50	2007	N. Gisin, A.A. Méthot, V. Scarani	Pseudo-telepathy: input cardinality and Bell-type inequalities	Int. J. Quant. Inf. 5 , 525	quant-ph/0610175
49	2007	C. Branciard, N. Gisin, N. Lütkenhaus, V. Scarani	Zero-Error Attacks and Detection Statistics in the Coherent One-Way Protocol for Quantum Cryptography	Quant. Inf. Comput. 7 , 639	quant-ph/0609090
48	2007	M.U. Staudt, S.R. Hastings-Simon, M. Nilsson, M. Afzelius, V. Scarani, R. Ricken, H. Suche, W. Sohler, W. Tittel, N. Gisin	Fidelity of an optical memory based on stimulated photon echoes	Phys. Rev. Lett. 98 , 113601	quant-ph/0609201

47	2007	A. A. Méthot, V. Scarani	An anomaly of non-locality	Quant. Inf. Comput. 7 , 157	quant-ph/0601210
46	2006	V. Scarani	Feats, Features and Failures of the PR-box	AIP Conference Proceedings, Vol. 844, pp. 309-320 (Melville, New York, 2006)	quant-ph/0603017
45	2006	N. Brunner, V. Scarani, N. Gisin	Bell-type inequalities for non-local resources	J. Math. Phys. 47 , 112101	quant-ph/0603094
44	2006	V. Scarani, N. Gisin, N. Brunner, L. Masanes, S. Pino, A. Acín	Secrecy extraction from no-signalling correlations	Phys. Rev. A 74 , 042339	quant-ph/0606197
43	2006	N. Gisin, S. Popescu, V. Scarani, S. Wolf, J. Wullschlegler	Oblivious transfer and quantum channels	Proceedings of the 2006 IEEE Information Theory Workshop (ITW 2006)	quant-ph/0601157
42	2005	D. Stucki, N. Brunner, N. Gisin, V. Scarani, H. Zbinden	Fast and simple one-way Quantum Key Distribution	Appl. Phys. Lett. 87 , 194108	quant-ph/0506097
41	2005	V. Scarani, S. Iblisdir, N. Gisin, A. Acín	Quantum cloning	Rev. Mod. Phys. 77 , 1225	quant-ph/0511088
40	2005	C. Branciard, N. Gisin, B. Kraus, V. Scarani	Security of two quantum cryptography protocols using the same four qubit states	Phys. Rev. A 72 , 032301	quant-ph/0505035
39	2005	V. Scarani, N. Gisin	Superluminal hidden communication as the underlying mechanism for quantum correlations: constraining models	Braz. J. Phys. 35 , 328 (Proceedings of DICE 2004)	quant-ph/0410025
38	2005	V. Scarani, A. Acín, E. Schenck, M. Aspelmeyer	The non-locality of cluster states	Phys. Rev. A 71 , 042325	quant-ph/0405119
37	2005	A. Niederberger, V. Scarani, N. Gisin	Photon-Number-Splitting versus Cloning Attacks in Practical Quantum Cryptography	Phys. Rev. A 71 , 042316	quant-ph/0408122
36	2005	N. Brunner, N. Gisin, V. Scarani	Entanglement and non-locality are different resources	New. J. Phys. 7 , 88	quant-ph/0412109
35	2005	V. Scarani, H. de Riedmatten, I. Marcikic, H. Zbinden, N. Gisin	Four-photon correction in two-photon Bell experiments	Eur. Phys. J. D 32 , 129	quant-ph/0407189
34	2004	N. Gisin, G. Ribordy, H. Zbinden, D. Stucki, N. Brunner, V. Scarani	Towards practical and fast Quantum Cryptography	[not submitted; see item 42]	quant-ph/0411022
33	2004	N. Brunner, V. Scarani, M. Legré, M. Wegmüller, N. Gisin	Direct measurement of superluminal group velocity and of signal velocity in an optical fiber	Phys. Rev. Lett. 93 , 203902	quant-ph/0407155
32	2004	H. de Riedmatten, V. Scarani, I. Marcikic, A. Acín, W. Tittel, H. Zbinden, N. Gisin	Two independent photon pairs versus four-photon entangled states in parametric down conversion	J. Mod. Opt. 51 , 1637	quant-ph/0310167
31	2004	V. Scarani	Classical and quantum: some mutual clarifications	P. Blanchard, G. Dell'Antonio (eds), Multiscale Methods in Quantum Mechanics (Birkhäuser, Boston, 2004)	quant-ph/0309113
30	2004	H. de Riedmatten, I. Marcikic, V. Scarani, W. Tittel, H. Zbinden, N. Gisin	Tailoring photonic entanglement in high-dimensional Hilbert spaces	Phys. Rev. A 69 , 050304R	quant-ph/0309058

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27	2004	V. Scarani, A. Acín, N. Gisin, G. Ribordy	Quantum cryptography protocols robust against photon number splitting attacks for weak laser pulses implementations	Phys. Rev. Lett. 92 , 057901	quant-ph/0211131
26	2004	A. Acín, N. Gisin, V. Scarani	Coherent pulse implementations of quantum cryptography protocols resistant to photon number splitting attacks	Phys. Rev. A 69 , 012309	quant-ph/0302037
25	2003	N. Brunner, A. Acín, D. Collins, N. Gisin, V. Scarani	Optical telecom networks as weak quantum measurements with post-selection	Phys. Rev. Lett. 91 , 180402	quant-ph/0306108
24	2003	A. Acín, N. Gisin, V. Scarani	Security bounds in Quantum Cryptography using d-level systems	Quant. Inf. Comput. 6 , 563	quant-ph/0303009
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20	2002	I. Marcikic, H. de Riedmatten, W. Tittel, V. Scarani, H. Zbinden, N. Gisin	Time-bin entangled qubits for quantum communication created by femtosecond pulses	Phys. Rev. A 66 , 062308	quant-ph/0205144
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18	2002	S. Fasel, N. Gisin, G. Ribordy, V. Scarani, H. Zbinden	Quantum cloning with an optical fiber amplifier	Phys. Rev. Lett. 89 , 107901	quant-ph/0203056
17	2002	V. Scarani, N. Gisin	Superluminal influences, hidden variables, and signaling	Phys. Lett. A 295 , 167	quant-ph/0110074
16	2002	D. Collins, N. Gisin, S. Popescu, D. Roberts, V. Scarani	Bell-type inequalities to detect true n-body non-separability	Phys. Rev. Lett. 88 , 170405	quant-ph/0201058
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14	2002	V. Scarani, M. Ziman, P. Stelmachovic, N. Gisin, V. Bužek	Thermalizing Quantum Machines: Dissipation and Entanglement	Phys. Rev. Lett. 88 , 097905	quant-ph/0110088
13	2002	V. Scarani, N. Gisin	Quantum key-distribution between N partners: optimal eavesdropping and Bell's inequalities	Phys. Rev. A 65 , 012311	quant-ph/0104016
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11	2001	V. Scarani, N. Gisin	Spectral decomposition of Bell's operators for qubits	J. Phys. A: Math. Gen. 34 , 6043	quant-ph/0103068
10	2000	H. de Riedmatten, V. Scarani, J.-Ph. Ansermet	The effect of oxidation of Cobalt-based nanowires on the NMR spin-lattice relaxation	Appl. Magn. Res. 19 (2000) 439	
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5	1998	V. Scarani	Quantum Computing	Am. J. Phys. 66 , 956	quant-ph/9804044
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2	1997	A. Suarez, V. Scarani	Reply to « Lorentz and CPT invariances and the EPR correlations » by O. Costa de Beauregard	Phys. Lett. A 236 , 605	
1	1997	A. Suarez, V. Scarani	Does entanglement depend on the timing of the impacts at the beam-splitters?	Phys. Lett. A 232 , 9	quant-ph/9704038