

## 7 Bibliography

- [1] HERBERT N. Quantum Reality. **Anchor Books**. New York, 1985.
- [2] STREETMAN B. G. Solid State Electronic Devices, Third Edition. **Prentice-Hall International**, Eaglewood Cliffs, N. J., 1990.
- [3] SALEH A. B.; TEICH C. M. Fundamentals of Photonics, **Wiley**, New York, 1991.
- [4] BENNETT C. H.; SHOR P.W. Quantum Information Theory, **IEEE Transactions on Information Theory**, Vol. 44, No. 6, 1995.
- [5] BOUWMEESTER D.; EKERT A. and ZEILINGER A. The physics of quantum information. **Springer**, New York, 2001.
- [6] LO H-K.; POPESCU S. and SPILLER T. Introduction to Quantum Computation and Information, **World Scientific**, Danvers, Maryland, 1998.
- [7] Gisin N. et al, Quantum Cryptography, **Reviews of Modern Physics**, Vol. 74, p. 145-195, 2002.
- [8] BOUWMEESTER D. et al, Experimental Quantum Teleportation, **Nature (London)** Vol. 390, pp.575-579, 1997.
- [9] NIELSEN M. and CHUANG I. Quantum Computation and Information, **Cambridge University Press**, Cambridge, 2002.
- [10] SHANNON C. E. A Mathematical Theory of Communication, **Bell System Technical Journal**, Vol. 27, pp. 379-423, 623-656, 1948.

[11] IMAMOGLU A. et al, Quantum information processing using quantum dot spins and cavity QED, **Physical Review Letters**, Vol. 83, pp. 4204, 1999.

[12] HAYKIN S., Communication Systems 4th Edition, **Wiley**, 2001.

[13] KYEES P. J.; MCCONNELL R. C. and SISTANIZADEH K., ADSL: a new twister-pair access to the information highway, **IEEE Communications Magazine**, Vol. 33, 52, 1995.

[14] COHEN-TANNOUJDI C.; DIU B. and LALOË F., Quantum Mechanics Vol. 1, **Wiley-VCH**, Paris, France 1977.

[15] LEWIS G. N., The conservation of photons, **Nature (London)**, Vol. 118, 874, 1926.

[16] FOX M., Quantum optics: an introduction, **Oxford University Press**, Great Britain, 2006.

[17] VEDRAL V., Modern foundations of quantum optics, **Imperial college press**, London, Great Britain, 2005.

[18] MANDEL L. and WOLF E., Optical coherence and quantum optics, **Cambridge University Press**, New York, USA, 1995.

[19] ASPECT A.; GRANGIER P and ROGER G., Experimental tests of realistic local theories via Bell's theorem, **Physical Review Letters**, Vol. 47, 460, 1981.

[20] BEUGNON J. et al, Quantum interference between two single photons emitted by independently trapped atoms, **Nature (London)** Vol. 440, 779, 2006.

[21] DELÈGLISE S. et al, Reconstruction of non-classical cavity field states with snapshots of their decoherence, **Nature (London)** Vol. 455, 510, 2008.

[22] LIDAR D. A. and WHALEY K. B., Decoherence-free subspaces and subsystems, **arXiv:quant-ph/0301032v1**, 2003.

[23] ZUREK W. H., Decorerence, einselection and the quantum origins of the classical, **Reviews of Modern Physics** Vol. 75, 715, 2003.

[24] [www.idquantique.com](http://www.idquantique.com)

[25] [www.magiqtech.com](http://www.magiqtech.com)

[26] YOUNG R. J.; ELLIS D. J. P.; STEVENSON M. R.; BENNETT A. J.; ATKINSON P.; COOPER K.; RITCHIE D. A. and SHIELDS A. J., Quantum-dot sources for single photons and entangled photon pairs, **Proceedings of the IEEE**, Vol. 95, 1805, 2007.

[27] STRAUF S. et al, High-frequency single-photon source with polarization control, **Nature Photonics**, Vol. 1, 704, 2007.

[28] BOYD R. W., Non-linear optics, **Academic Press**, San Diego, USA, 2003.

[29] LJUNGGREN D., Entanglement in quantum communication: Preparation and characterization of photonic qubits, **PhD thesis**, KTH Stockholm, 2006.

[30] TANZILLI S.; TITTEL W.; DE RIEDMATTEN H.; ZBINDEN H.; BALDI P.; DE MICHELI M.; OSTROWSKY D. B. and GISIN N., PPLN waveguide for quantum communication, **European Physical Journal D**, Vol. 18, 155-160, 2002.

[31] TENGNER M., Photonic qubits for quantum communications: Exploiting photon-pair correlations; from theory to applications, **PhD thesis**, KTH Stockholm, 2008.

[32] HONG C. K. and MANDEL L., Experimental realization of a localized one-photon state, **Physical Review Letters**, Vol. 56, 58, 1986.

[33] FASEL S.; ALIBART O.; TANZILLI S.; BALDI P.; BEVERATOS A.; GISIN N. and ZBINDEN H., High-quality asynchronous heralded single-photon source at telecom wavelength, **New Journal of Physics**, Vol. 6, 163, 2004.

[34] WANG Q.; CHEN W.; XAVIER G.; SWILLO M.; ZHANG T.; SAUGE S.; TENGNER M.; HAN Z.-F.; GUO G.-C. and KARLSSON A., Experimental decoy-state quantum key distribution with a sub-poissonian heralded single-photon source, **Physical Review Letters**, Vol 100, 090501, 2008.

[35] KWIAT P. G.; MATTLE K.; WEINFURTER H.; ZEILINGER A.; SERGIENKO A. V. and SHIH Y., New High-Intensity Source of Polarization-Entangled Photon Pairs, **Physical Review Letters**, Vol 75, 4337, 1995.

[36] EINSTEIN A.; PODOLSKY B. and ROSEN N., Can quantum-mechanical description of physical reality be considered complete?, **Physical Review**, Vol. 47, 777, 1935.

[37] CLAUSER J. F.; HORNE M. A.; SHIMONY A. and HOLT A. R., Proposed Experiment to Test Local Hidden-Variable Theories, **Physical Review Letters**, Vol. 23, 880, 1969.

[38] WEIHS G.; JENNEWEIN T.; SIMON C.; WEINFURTER H. and ZEILINGER A., Violation of Bell's inequality under strict Einstein locality conditions, **Physical Review Letters**, Vol. 81, 5039, 1998.

[39] TITTEL W.; BRENDDEL J.; ZBINDEN H. and GISIN N., Violation of Bell's inequalities by photons more than 10 km apart, **Physical Review Letters**, Vol. 81, 3563, 1998.

[40] PAN J.-W.; CHEN Z.-B.; ZUKOWSKI M.; WEINFURTER H. and ZEILINGER A., Multi-photon entanglement and interferometry, arXiv:0805.2853v1 [quant-ph], 2008.

[41] KWIAT P. G.; WAKS E.; WHITE A. G.; APPELBAUM I. and EBERHARD P. H., Ultrabright source of polarization-entangled photons, **Physical Review A**, Vol. 60, R773, 1999.

[42] KWIAT P. G.; STEINBERG A. M. and CHIAO R. Y., High-visibility interference in a Bell-inequality experiment for energy and time, **Physical Review A**, Vol. 47, R2472, 1993.

[43] FRANSON J. D., Bell inequality for position and time, **Physical Review Letters**, Vol. 62, 2205, 1989.

[44] LJUNGGREN D. and TENGNER M., Optimal focusing for maximal collection of entangled narrow-band photon pairs into single-mode optical fibers, **Physical Review A**, Vol. 72, 062301, 2005.

[45] WANG L. J.; HONG C. K. and FRIBERG S R, Generation of correlated photons via four-wave mixing in optical fibres, **Journal of optics B: Quantum and semiclassical optics**, Vol. 3, 346, 2001.

[46] LI X.; VOSS P. L.; SHARPING J. E. and KUMAR P., Optical-fiber source of polarization entangled photons in the 1550 nm telecom band, **Physical Review Letters**, Vol. 94, 053601, 2005.

[47] LI X.; LIANG C.; LEE K. F.; CHEN J.; VOSS P. L. and KUMAR P., Integrable optical-fiber source of polarization-entangled photon pairs in the telecom band, **Physical Review A**, Vol. 73, 052301, 2005.

[48] TAKESUE H. and INOUE K., Generation of-1.5  $\mu\text{m}$  band time-bin entanglement using spontaneous fiber four-wave mixing and planar light-wave circuit interferometers, **Physical Review A**, Vol. 72, 041804(R), 2005.

[49] RARITY J. G.; FULCONIS J.; DULIGALL J.; WADSWORTH W. J. and RUSSELL P. ST. J., Photonic crystal fiber source of correlated photon pairs, **Optics Express**, Vol. 13, 534, 2005.

[50] FULCONIS J.; ALIBART O.; O'BRIEN J. L.; WADSWORTH W. J. and RARITY J. G., Nonclassical interference and entanglement generation using a photonic crystal fiber pair photon source, **Physical Review Letters**, Vol. 99, 120501, 2007.

[51] KARLSSON A.; BOURENNANE M.; RIBORDY G.; ZBINDEN H.; BRENDEN J.; RARITY J. and TAPSTER P., A single-photon counter for long-haul telecom, **IEEE Circuits & Devices Magazine**, Vol. 15, pp. 34-40, 1999.

[52] THEW R. T.; TANZILLI S.; KRAINER L.; ZELLER S. C.; ROCHAS A.; RECH I.; COVA S.; ZBINDEN H. and GISIN N., Low jitter up-conversion detectors for telecom wavelength GHz QKD, **New Journal of Physics**, Vol. 8, 32, 2006.

[53] GOL'TSMAN G. N.; OKUNEV O.; CHULKOVA G.; SEMENOV A.; SMIRNOV K.; VORONOV B.; DZARDANOV A.; WILLIAMS C. and SOBOLEWSKI R., Picosecond superconducting single-photon optical detector, **Applied Physics Letters**, Vol. 79, 705, 2001.

[54] TAKESURE H.; NAM W. S.; ZHANG Q.; HADFIELD R. H.; HONJO T.; TAMAKI K. and YAMAMOTO Y., Quantum key distribution over a 40-dB channel loss using superconducting single-photon detectors, **Nature Photonics**, Vol. 1, 343, 2007.

[55] TEMPORÃO G.; TANZILLI S.; ZBINDEN H.; GISIN N.; AELLEN T.; GIOVANNINI M. and FAIST J., Mid-infrared single-photon counting, **Optics Letters**, Vol. 31, 1094, 2006.

[56] RIBORDY G.; GAUTIER J. D.; ZBINDEN H. and GISIN N., Performance of InGaAs/InP avalanche photodiodes as gated-mode counters, **Applied Optics**, Vol. 37, 2272, 1998.

[57] NAMEKATA N.; SASAMORI S. and INOUE S., 800 MHz single-photon detection at 1550-nm using an InGaAs/InP avalanche photodiode operated with a sine wave gating, **Optics Express**, Vol. 14, 10043, 2006.

[58] YUAN Z. L.; KARDYNAL B. E.; SHARPE A. W. and SHIELDS A. J., High speed single photon detection in the near infrared, **Applied Physics Letters**, Vol. 91, 041114, 2007.

[59] MANDERBACH-SCHMITT T., et al, Experimental demonstration of free-space decoy-state quantum key distribution over 144 km, **Physical Review Letters**, Vol. 98, 010504, 2007.

[60] HUGHES R. J.; NORDHOLT J. E.; DERKACS D. and PETERSON C. G., Practical free-space quantum key distribution over 10 km in daylight and at night, **New Journal of Physics**, Vol. 4, 43, 2002.

[61] COLVERO C. P., Análise experimental de sistemas de comunicação ópticas no espaço livre em diferentes comprimentos de onda, **PhD thesis**, PUC-Rio, Rio de Janeiro - Brazil, 2006 (available in portuguese only).

[62] TEMPORÃO G. P.; ZBINDEN H.; TANZILLI S.; GISIN N.; AELLEN T.; GIOVANNINI M.; FAIST J. and VON DER WEID J. P., Feasibility study of free-space quantum key distribution in the mid-infrared, **Quantum Information and Computation**, Vol. 8, 1, 2008.

[63] KAISER G., Optical fiber communications third edition, **McGraw Hill**, USA, 2000.

[64] AGRAWAL G. P., Fiber-optic communication systems second edition, **Wiley interscience**, USA, 1997.

[65] BREGUET J.; MULLER A. and GISIN N., Quantum cryptography with polarized photons in optical fibers: Experiment and practical limits, **Journal of Modern Optics**, Vol. 41, 2405, 1994.

[66] BENNETT C. H., Quantum cryptography using any two nonorthogonal states, **Physical Review Letters**, Vol. 68, 3121, 1992.

[67] TOWNSEND P. D.; RARITY J. G. and TAPSTER P. R., Single photon interference in 10 km long optical fibre interferometer, **Electronics Letters**, Vol 29, 634, 1993.

[68] STUCKI D.; GISIN N.; GUINNARD O.; RIBORDY G. and ZBINDEN H., Quantum key distribution over 67 km with a plug & play system, **New Journal of Physics**, Vol. 4, 41, 2002.

[69] GOBBY C.; YUAN Z. L. and SHIELDS A. J., Quantum key distribution over 122 km of standard telecom fiber, **Applied Physics Letters**, Vol. 84, 3762, 2004.

[70] WIESNER S., Conjugate coding, **ACM SIGACT News**, Vol. 15, 78, 1983.

[71] BENNETT C. H. and BRASSARD G., Quantum cryptography: Public key distribution and coin tossing, **Proceedings of the IEEE international conference on computers, systems and signal processing**, Bangalore, India, December 1984.



[72] XAVIER G. B., Esquemas de modulação para distribuição quântica de chaves com codificação por frequência, **Master thesis**, PUC-Rio, Rio de Janeiro - Brazil, 2005 (available in portuguese only).

[73] WOOTERS W. K. and ZUREK W. H., A single quantum cannot be cloned, **Nature (London)**, Vol. 299, 802, 1982

[74] SCHALLER R. R., Moore's law: past, present and future, **IEEE Spectrum**, Vol. 34, 52, 1997.

[75] STEFANOV A.; GISIN N.; GUINNARD O.; GUINNARD L. and ZBINDEN H., Optical quantum random number generator, **Journal of Modern Optics**, Vol. 47, 595, 2000.

[76] BENNETT C. H.; BESSETTE F.; BRASSARD G.; SALVAIL L. and SMOLIN J., Experimental quantum cryptography, **Journal of Cryptology**, Vol. 5, 3, 1992.

[77] AGRAWAL G. P., Nonlinear fiber optics third edition, **Academic Press**, San Diego, USA, 2001.

[78] XAVIER G. B.; VILELA DE FARIA G.; TEMPORÃO G. P. and VON DER WEID J. P., Full polarization control for fiber optical quantum communication systems using polarization encoding, **Optics Express**, Vol. 16, 1867, 2008.

[79] PELTON M.; MARSDEN P.; LJUNGGREN D.; TENGNER M.; KARLSSON A.; FRAGEMANN A.; CANALIAS C. and LAURELL F., Bright, single-spatial-mode source of frequency non-degenerate, polarization-entangled photon pairs using periodically poled KTP, **Optics Express**, Vol. 12, 3573, 2004.

[80] LJUNGGREN D.; TENGNER M.; MARSDEN P. and PELTON M., Theory and experiment of entanglement in a quasi-phase-matched two-crystal source, **Physical Review A**, Vol. 73, 032236, 2006.

[81] SAUGE S.; SWILLO M.; ALBERT-SEIFRIED S.; XAVIER G. B.; WALDEBACK J.; TENGNER M.; LJUNGGREN D. and KARLSSON A., Narrowband polarization-entangled photon pairs distributed over a WDM link for qubit networks, **Optics Express**, Vol. 15, 6926, 2007.

[82] LJUNGGREN D. and TENGNER M., Optimal focusing for maximal collection of entangled narrow-band photon pairs into single-mode fibers, **Physical Review A**, Vol. 72, 062301, 2005.

[83] FEDRIZZI A.; HERBST T.; POPPE A.; JENNEWEIN T and ZEILINGER A., A wavelength-tunable fiber-coupled source of narrowband entangled photons, **Optics Express**, Vol. 15, 15377, 2007.

[84] SAUGE S.; SWILLO M.; TENGNER M. and KARLSSON A., A single-crystal source of path-polarization entangled photons at non-degenerate wavelengths, **Optics Express**, Vol. 16, 9701, 2008.

[85] LIANG C.; LEE K. F.; CHEN J. and KUMAR P., Distribution of fiber-generated polarization entangled photon-pairs over 100 km of standard fiber in OC-192 WDM environment, postdeadline paper, **Optical Fiber Communications Conference - OFC 2006**, paper PDP35, 2006.

[86] LO H.-K. and CHAU H. F., Unconditional security of quantum key distribution over arbitrarily long distances, **Science**, Vol. 283, 2050, 1999.

[87] LÜTKENHAUS N., Security against individual attacks for realistic quantum key distribution, **Physical Review A**, Vol. 61, 052304, 2000.

[88] KOASHI M. and PRESKILL J., Secure quantum key distribution with an uncharacterized source, **Physical Review Letters**, Vol. 90, 057902, 2003.

[89] BRASSARD G., LÜTKENHAUS N., MOR T. and SANDERS B. C., Limitations on practical quantum cryptography, **Physical Review Letters**, Vol. 85, 1330, 2000.

[90] LUTKENHAUS N. and JAHMA M., Quantum key distribution with realistic states: photon-number statistics in the photon-number splitting attack, **New Journal of Physics**, Vol. 4, 44, 2002.

[91] HWANG W.-Y., Quantum Key Distribution with high loss: toward global secure communication, **Physical Review Letters**, Vol. 91, 057901, 2003.

[92] GRANGIER P.; LEVENSON J. A. and POIZAT J.-P., Quantum non-demolition measurements in optics, **Nature (London)**, Vol. 396, 537, 1998.

[93] CHEN S.; CHEN Y.-A.; ZHAO B.; YUAN Z.-S.; SCHMIEDMAYER J. and PAN J.-W., Demonstration of a stable atom-photon entanglement source for quantum repeaters, **Physical Review Letters**, Vol. 99, 180505, 2007.

[94] DE RIEDMATTEN H.; AFZELIUS M.; STAUDT M. U.; SIMON C. and GISIN N., A solid-state light-matter interface at the single-photon level, **Nature (London)**, Vol. 456, 773, 2008.

[95] MARAND C. and TOWNSEND P. D., Quantum key distribution over distances as long as 30 km, **Optics Letters**, Vol. 20, 1695, 1995.

[96] WANG X.-B. Beating the photon-number-splitting attack in practical quantum cryptography, **Physical Review Letters** Vol. 94, 230503, 2005.

[97] LO H.-K., MA X. and CHEN K., Decoy state quantum key distribution, **Physical Review Letters**, Vol.94, 230504, 2005.

[98] PENG C.Z. et al, Experimental long-distance decoy-state quantum key distribution based on polarization encoding, **Physical Review Letters**, Vol. 98, 010505, 2007.

[99] WANG Q.; WANG X.-B. and GUO G.-C., Practical decoy-state method in quantum key distribution with a heralded single-photon source, **Physical Review A**, Vol. 75, 012312, 2007.

[100] WANG Q., and KARLSSON A., Performance enhancement of a decoy-state quantum key distribution using a conditionally prepared down-conversion source in the Poisson distribution, **Physical Review A**, Vol. 76, 014309, 2007.

[101] WANG Q.; WANG X.-B.; BJORK G. and KARLSSON A., Improved practical decoy state method in quantum key distribution with parametric down-conversion source, **Europhysics Letters**, Vol. 79, 40001, 2007.

[102] TENGNER M. and LJUNGGREN D., Characterization of an asynchronous source of heralded single photons generated at a wavelength of 1550 nm, **arXiv:0706.2985 [quant-ph]**, 2007.

[103] WANG Q.; CHEN W.; XAVIER G.; SWILLO M.; ZHANG T.; SAUGE S.; TENGNER M.; HAN Z.-F.; GUO G.-C. and KARLSSON A., Robust quantum cryptography with a heralded single-photon source based on the decoy state method, **arXiv:0803.3643v1 [quant-ph]**, 2008.

[104] ZAVRIYEV A. and TRIFONOV A., in **Proceedings of single photon workshop 2007**, Turin, Italy.

[105] MO X.-F.; ZHU B.; HAN Z.-F.; GUI Y.-Z. and GUO G.-C., Faraday-Michelson system for quantum cryptography, **Optics Letters**, Vol. 30, 2632, 2005.

[106] ZHAO Y.; FRED FUNG C.-H.; QI B.; CHEN C. and LO H.-K., Quantum hacking: Experimental demonstration of time-shift attack against practical quantum-key-distribution systems, **Physical Review A**, Vol. 78, 042333, 2008.

[107] MAKAROV V. and SKAAR J., Faked states attack using detector efficiency mismatch on SARG04, phase-time, DPSK, and Ekert protocols, **Quantum information and computation**, Vol. 8, 0622, 2008.

[108] SUBACIOUS D.; ZAVRIYEV A. and TRIFONOV A., Backscattering limitation for fiber-optic quantum key distribution systems, **Applied Physics Letters**, Vol. 86, 011103, 2005.

[109] NWEKE N. I. et al, Experimental characterization of the separation between wavelength-multiplexed quantum and classical communications channels, **Applied Physics Letters**, Vol. 87, 174103, 2005.

[110] HALDER M.; BEVERATOS A.; THEW R. T.; SCARANI V.; SIMON C. and ZBINDEN H., Entangling independent photons by time measurement, **Nature Physics**, Vol. 3, 692, 2007.

[111] PARK S. K. and MILLER K. W., Random number generators: good ones are hard to find, **Communications of the ACM**, Vol. 31, 1192, 1988.

[112] JENNEWEIN T.; ACHLEITNER U.; WEIHS G.; WEINFURTER H. and ZEILINGER A., A fast and compact quantum random number generator, **Review of Scientific Instruments**, Vol. 71, 1675, 2000.

[113] STEFANOV A.; GISIN N.; GUINNARD O.; GUINNARD L. and ZBINDEN H., Optical Quantum Random Number Generator, **Journal of Modern Optics**, Vol. 47, 595, 2000.

[114] STIPCEVIC M. and MEDVED ROGINA B., Quantum random number generator based on photonic emission in semiconductors, **Review of Scientific Instruments**, Vol. 78, 045104, 2007.

[115] DYNES J. F.; YUAN Z. L.; SHARPE A. W. and SHIELDS A. J., A high speed, postprocessing free, quantum random number generator, **Applied Physics Letters**, Vol. 93, 031109, 2008.

[116] DIXON A. R.; YUAN Z. L.; DYNES J. F.; SHARPE A. W. and SHIELDS A. J., Gigahertz decoy quantum key distribution with 1 Mbit/s secure key rate, **Optics Express**, Vol. 16, 18790, 2008.

[117] EKERT A. K., Quantum cryptography based on Bell's theorem, **Physical Review Letters**, Vol. 67, 661, 1991.

[118] LING A.; PELOSO M. P.; MARCIKIC I.; SCARANI V.; LAMAS-LINARES A. and KURTSIEFER C., Experimental quantum key distribution based on a Bell test, **Physical Review A**, Vol. 78, 020301(R), 2008.

[119] ACÍN A.; MASSAR S. and PIRONIO S., Efficient quantum key distribution secure against no-signalling eavesdroppers, **New Journal of Physics**, Vol. 8, 126, 2006.

[120] XAVIER G. B.; FERREIRA DA SILVA T.; VILELA DE FARIA G.; TEMPORÃO G. P. and VON DER WEID J. P., A simple scheme for random number generation in quantum key distribution systems, Proceedings of AQIS 2008, Seoul, South Korea, 2008.

[121] FERREIRA DA SILVA T.; XAVIER G. B. and VON DER WEID J. P., **in preparation.**

[122] RUSHKIN A. et al, **Nist Special Publication 800-22**, available at <http://csrc.nist.gov/groups/ST/toolkit/rng/index.html>, 2001.

[123] XAVIER G. B.; FERREIRA DA SILVA T.; VILELA DE FARIA G.; TEMPORÃO G. P. and VON DER WEID J. P., Practical Random Number Generation Protocol for Entanglement-Based Choice Quantum Key Distribution, **Quantum Information & Computation**, Vol. 7, 0683, 2009.

[124] LIM H. C.; YOSHIKAWA A.; TSUCHIDA H. and KIKUCHI K., Stable source of high quality telecom-band polarization-entangled photon-pairs based on a single, pulse-pumped, short PPLN waveguide, **Optics Express**, Vol. 16, 12460, 2008.

[125] LIM H. C.; YOSHIKAWA A.; TSUCHIDA H. and KIKUCHI K., Distribution of polarization-entangled photonpairs produced via spontaneous parametric down-conversion within a local-area fiber network: Theoretical model and experiment, **Optics Express**, Vol. 16, 14512, 2008.

[126] POPPE A. et al, Practical quantum key distribution with polarization entangled photons, **Optics Express**, Vol. 12, 3865, 2004.

[127] TANG X. et al, Experimental study of high speed polarization-coding quantum key distribution with sifted-key rates over Mbits/s, **Optics Express**, Vol. 14, 2062, 2006.

[128] CHEN J.; WU G.; LI Y.; WU E. and ZENG H., Active polarization stabilization in optical fibers suitable for quantum key distribution, **Optics Express**, Vol. 15, 17928, 2007.

[129] CHEN T.-Y.; ZHANG J.; BOILEAU J.-C.; JIN X.-M.; YANG B.; ZHANG Q.; YANG T.; LAFLAMME R. and PAN J.-W., Experimental quantum communication without a shared reference frame, **Physical Review Letters**, Vol. 96, 150504, 2006.

[130] HUBEL H.; VANNER M. R.; LEDERER T.; BLAUENSTEINER B.; LORUNSER T.; POPPE A. and ZEILINGER A., High-fidelity transmission

of polarization encoded qubits from an entangled source over 100 km of fiber, **Optics Express**, Vol. 15, 7853, 2007.

[131] TREIBER A.; POPPE A.; HENTSCHEL M.; FERRINI D.; LORUNSER T.; QUERASSER E.; MATYUS T.; HUBEL H. and ZEILINGER A., Fully automated entanglement-based quantum cryptography system for telecom fiber networks, **arXiv:0901.2725 [quant-ph]**.

[132] BOILEAU J.-C; LAFLAMME R.; LAFOREST M. and MYERS C. R., Robust quantum communication using a polarization-entangled photon pair, **Physical Review Letters**, Vol. 93, 220501, 2004.

[133] XAVIER G. B.; WALENTA N.; VILELA DE FARIA G.; TEMPORÃO G. P.; GISIN N.; ZBINDEN H. and VON DER WEID J. P., Experimental polarization encoded quantum key distribution over optical fibres with real-time continuous birefringence compensation, **New Journal of Physics**, Vol. 11, 045015, 2009.

[134] MACEDO J. F. and VON DER WEID J. P., Time domain PMD simulations in optical fibers and emulators, **Proceedings WFOPC - IEEE / LEOS Workshop of fibres and optical passive components 2005**, pp. 176, Palermo, Italy, 2005.

[135] XAVIER G. B.; MACEDO J. F. and VON DER WEID J. P., Polarization control scheme using a DWDM guard channel for quantum cryptography, *unpublished*.

[136] VILELA DE FARIA G.; FERREIRA J.; XAVIER G. B.; TEMPORÃO G. P. and VON DER WEID J. P., Polarisation control schemes for fibre-optics quantum communications using polarisation encoding, **Electronics Letters**, Vol. 44, 228, 2008.