

CURRICULUM VITAE

Name	Gabriella
Surname	BOSCO
Date of birth	1 November 1973
Place of birth	Ivrea, Italy
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EDUCATION

May 1998

Master of Science degree in “Telecommunication Engineering” from Politecnico di Torino (summa cum laude).

MSc thesis title: “Nonlinear propagation effects in WDM fiber optical transmission systems”.

February 2002

PhD in “Electronic and Communication Engineering” from Politecnico di Torino.

PhD thesis title: “Performance analysis of optical communication systems”

PROFESSIONAL AND RESEARCH EXPERIENCE

1st October 2014 – Present

Associate Professor

Department of Electronics and Telecommunications, Politecnico di Torino.

1st August 2011 – 30th September 2014

Assistant Professor

Department of Electronics and Telecommunications, Politecnico di Torino.

1st November 2001 – 31st July 2011

Post-doc researcher

Optical Communications Group, Politecnico di Torino.

March – December 2000

Visiting researcher

Optical Communications and Photonic Networks Group, University of California, Santa Barbara

AWARDS AND HONORS

2013

Elevation to the **IEEE Senior Member** grade

2014

Elevation to the **OSA Senior Member** grade

First author of the paper winner of the “**2011 JLT Best Paper Award**”:

G. Bosco, V. Curri, A. Carena, P. Poggiolini, F. Forghieri “On the Performance of Nyquist-WDM Terabit Superchannels Based on PM-BPSK, PM-QPSK, PM-8QAM or PM-16QAM Subcarriers”, Journal of Lightwave Technology, vol. 29, no. 1, pp. 53-61, Jan. 1, 2011.

2015

Co-author of the paper winner of the “**2012 JLT Best Paper Award**”:

A. Carena, V. Curri, G. Bosco, P. Poggiolini, F. Forghieri, “Modeling of the Impact of Non-Linear Propagation Effects in Uncompensated Optical Coherent Transmission Links,” Journal of Lightwave Technology, vol. 30, no. 10, pp. 1524-1539, May. 15, 2012.

PARTICIPATION IN THE EDITORIAL BOARD OF MAJOR INTERNATIONAL JOURNALS

January 2014-Present

Associate Editor for IEEE/OSA Journal of Lightwave Technology

PARTICIPATION IN TECHNICAL COMMITTEES OF NATIONAL AND INTERNATIONAL CONFERENCES

CLEO 2012, CLEO 2103, CLEO 2014 (CLEO - Science & Innovations)

Technical committee member

Subcommittee S&I 12 “Lightwave Communications and Optical Networks”

OFC 2013, OFC 2014

Technical committee member

Subcommittee 10 “Transmission Subsystems and Network Elements”

OFC 2015

Subcommittee Chair

S4: “Digital electronic subsystems and transceivers”

ACP 2015 (Asia Communications and Photonics Conference)

Subcommittee Co-chair

Track 3 “Optical Transmission Systems, Subsystems and Technologies”

FOTONICA 2015

Technical Program Chair

Italian National Conference on Photonic Technologies (www.fotonica2015.it/ENG/)

Tyrrhenian Workshop on Digital Communications 2015

Technical committee member

OFC 2016

Technical committee member

S4: “Digital electronic subsystems and transceivers”

OFC 2017

Program Chair

Track S: Photonic Systems and Subsystems

ORGANIZATION OF INTERNATIONAL WORKSHOPS

2016

Organization, together with Han Henry Sun from Infinera, of a workshop entitled “To serialize or not to serialize? Practical approaches for coherent transmission at and beyond 400G”, to be held in March 2016 in Anaheim (USA), during the international conference OFC 2016.

2013

Organization, together with Chris Fludger from Cisco and Ezra Ip from NEC Labs, of a workshop entitled “Paths to additional capacity/performance gain: How far can we go and is it worth the price?”, that was held in March 2013 in Anaheim (USA), during the international conference OFC 2013.

2005

Organization, in the framework of the Network of Excellence “e-photon/One” (<http://www.e-photon-one.org/>), of a workshop entitled “Applying communications theory advanced techniques to the future generation of optical transmission systems”, held in February 2005 in Aveiro (Portugal), during the Plenary Meeting.

PEER AND EXTERNAL REVIEW ACTIVITIES

2000-Present

Reviewer for major international journals, among which:

- IEEE Photonics Technology Letters (~40 reviewed papers since 2000)
- IEEE Journal of Lightwave Technology (~30 reviewed papers since 2000)
- OSA Optics Express (~20 reviewed papers since 2009)
- IEEE Communication Letters, IEEE Transactions on Communications, OSA Optics Letters, IEE Electronics Letters, IET Optoelectronics

2010

- **Jury member for the PhD thesis defense** of Oriol Bertran-Pardo at Telecom ParisTech in Paris. Title of the thesis: "On coherent detection for optical transmissions at 40 Gb/s and 100 Gb/s". The thesis was developed in the research laboratories of Alcatel-Lucent in Paris.

2013

- **External reviewer** for the evaluation of research projects funded by the "Fund for Scientific Research-FNRS" (Belgium), in the framework of the "Credits & Projects 2013" call.

2014

- **External reviewer** for the evaluation of research projects funded by the Hong-Kong "Research Grants Council" (RGC).
- **External reviewer** for the evaluation of research projects funded by the "Fund for Scientific Research-FNRS" (Belgium), in the framework of the "Credits & Projects 2014" call.
- Member of the "**IEEE Photonics Society Distinguished Lecturer Committee**"

2015

- **External reviewer** for the evaluation of research projects funded by the Hong-Kong "Research Grants Council" (RGC).
- Member of the "**IEEE Photonics Society Distinguished Lecturer Committee**"
- **Jury member for the PhD thesis defense** of Elie Awwad at Telecom ParisTech in Paris. Title of the thesis: "Emerging Space-Time Coding Techniques for Optical Fiber Transmission Systems".
- **Jury member for the PhD thesis defense** of Milen Paskov at University College London. Title of the thesis: "Algorithms and subsystems for next generation optical networks."

PUBLICATIONS IN INTERNATIONAL JOURNALS AND CONFERENCES

Since 1999, I've co-authored more than 150 papers in major international journals and conferences (the complete list of publications is reported in Annex A):

- **65 papers on international journals:**
 - 23 IEEE Photonics Technology Letters
 - 19 IEEE/OSA Journal of Lightwave Technology
 - 13 OSA Optics Express
 - 3 IEEE Transactions on Communications
 - 1 OSA Journal of Optical Communications and Networking
 - 1 IEEE Journal of Selected Topics in Quantum Electronics
 - 1 IEEE Communications Letters
 - 1 IET Optoelectronics
 - 1 IEE Electronics Letters
 - 1 Optical and Quantum Electronic (Springer)
 - 1 Annals of Telecommunications

- **90 papers in proceedings of International conferences:**
 - 38 European Conference on Optical Communication (ECOC)
 - 22 Optical Fiber Communication Conference (OFC)
 - 6 IEEE Lasers and Electro-Optics Society Conference (LEOS)
 - 6 International Conference on Transparent Optical Networks (ICTON)
 - 4 Signal Processing in Photonics Communications (SPPCom)
 - 4 Tyrrhenian International Workshop on Digital Communications
 - 1 International Conference on Communications (ICC)
 - 1 National Fiber Optics Engineers Conference (NFOEC)
 - 1 International Conference on Plastic Optical Fiber (ICPOF)
 - 1 Suboptics Conference
 - 1 Tracking, Telemetry and Command Systems for Space Applications conference (TTC)
 - 1 Symposium on Computers and Communications.
 - 1 Softcom Conference
 - 1 Broadband Europe Conference
 - 1 STREON (Simulation Tools for Research and Education Optical Networks) Conference
 - 1 International Conference on Microelectronics, Optoelectronics, and Nanoelectronics (ICMON)

- **3 book chapters**

- **1 PhD thesis**

The following data have been extracted from "Scopus" database on September 15th, 2015:

- Documents: 171
- Citations: 1798 total citations
- h-Index: 21

INVITED TALKS/PAPERS IN INTERNATIONAL CONFERENCES/JOURNALS

2010

G. Bosco, "Is Nyquist WDM the Optimum Format for Spectrally Efficient Terabit Superchannel Transmission?", European Conference on Optical Communications (ECOC) 2010, Torino, September 2010, invited talk in the Workshop on "Single and Multi-Carrier Techniques to Build Terabit/s per Channel Optical Transmission Systems"

A. Carena, G. Bosco, V. Curri, "Coherent polarization-multiplexed formats: receiver requirements and mitigation of fiber non-linear effects", in Proc. of ECOC 2010, Torino (Italy), Invited Paper, paper Mo.2.C.1, Sep. 2010.

2011

G. Bosco, A. Carena, "Performance Evaluation of Coherent PS-QPSK (HEXA) Modulation", Signal Processing in Photonic Communications (SPPCom) 2011, Toronto (Canada), June 2011, Invited Paper SPTuB2

2012

G. Bosco, "Spectral Shaping: Optical vs. Electrical Approaches", Optical Fiber Conference (OFC) 2012, Los Angeles (USA), March 2012, Invited Paper OM3H.1.

G. Bosco, "Spectrally Efficient Transmission: a Comparison between Nyquist-WDM and CO-OFDM Approaches", SPPCom 2012, Colorado Springs (USA), June 2012, SPW3B.1.

2013

A. Nespola, S. Straullu, G. Bosco, A. Carena, Y. Jiang, P. Poggiolini, F. Forghieri, Y. Yamamoto, M. Hirano, T. Sasaki, J. Bauwelinck, K. Verheyen, "1306-km 20x124.8-Gb/s PM-64QAM transmission over PSCF with net SEDP 11,300 (bkm)/s/Hz using 1.15 samp/symb DAC," proc. of ECOC 2013, paper Th.2.D.1, London, Sep. 2013.

2014

P. Poggiolini, G. Bosco, A. Carena, V. Curri, Y. Jiang, F. Forghieri, "The GN-Model of Fiber Non-Linear Propagation and its Applications," IEEE Journal of Lightwave Technology, vol. 32, no. 4, Feb. 2014, pp. 694 – 721.

2015

R. Pastorelli, G. Bosco, S. Piciaccia, F. Forghieri, "Network Planning Strategies for Next-Generation Flexible Optical Networks", Journal of Optical Communications and Networking, vol. 7, no. 3, pp. A511-A525, (2015)

F.P. Guiomar, S.B. Amado, A. Carena, G. Bosco, A. Nespola, A.L. Teixeira, A.N. Pinto, "Fully Blind Linear and Nonlinear Equalization for 100G PM-64QAM Optical Systems", Journal of Lightwave Technology, vol. 33, no. 7, pp. 1265- 1274, Apr. 1, 2015.

P. Poggiolini, G. Bosco, A. Carena, V. Curri, Y. Jiang, S. M. Bilal, A. Nespola, L. Bertignono, S. Abrate, F. Forghieri "Theoretical and Experimental Assessment of Nonlinearity Mitigation through Symbol Rate Optimization", Tyrrhenian International Workshop on Digital Communications, Florence (Italy), 22 Sep. 2015, paper P3.1.

SCIENTIFIC PARTICIPATION IN NATIONAL AND INTERNATIONAL RESEARCH PROJECTS, BASED ON CALLS THAT INVOLVED COMPETITIVE PEER REVIEW

May 2008-April 2012

Network of Excellence of 7th ICT-Framework Programme: **Euro-FOS**
(<http://www.euro-fos.eu/>)

October 2010-March 2011

Network of Excellence of 7th ICT-Framework Programme: **ALPHA**
(<http://www.ict-alpha.eu/>)

February 2008-February 2011

Network of Excellence of 7th ICT-Framework Programme: **BONE**
Euro-FOS (<http://www.euro-fos.eu/>)

March 2006-February 2008

Integrated Project of 6th ICT-Framework Programme: **Nobel2**
(<http://www.ist-nobel.org/Nobel2/>)

March 2006-February 2008

Network of Excellence of 6th ICT-Framework Programme: **E-Photon/One+**
(<http://www.e-photon-one.org/ephotonplus/>)

January 2004-December 2005

Network of Excellence of 6th ICT-Framework Programme: **E-Photon/One**
(<http://www.e-photon-one.org/>)

December 2005 – November 2006

PRIN 2004: “Transmission of Optical Signals exploiting Competitive Amplification techniques (**TOSCA**)”, funded by the Italian Ministry of University and Research.

PARTICIPATION IN RESEARCH PROJECTS FUNDED BY NATIONAL AND INTERNATIONAL INDUSTRIES

CISCO Systems (January 2009 – Present)

Research activity on long-haul coherent optical transmission systems.

Telecom Italia (2010 – 2013)

Research activity on technological solutions for NG-PON access networks.

HUAWEI (2008 –2009)

Research activity on analysis and development of MLSE algorithms for the compensation of chromatic dispersion and polarization mode dispersion in high bit-rate optical systems.

ESA – European Space Agency (2003 – 2005).

Research activity on multi-level modulation schemes using LDPC forward error correction codes.

ACADEMIC ACTIVITY

Since 2004, I've been teaching several classes in "Signal Theory", "Digital Communications" and "Optical Communications" in the framework of the Bachelor and Master (1st and 2nd level) degrees in Electronic Engineering, Telecommunication Engineering and Optical Communications at Politecnico di Torino (see list below for details).

I am member of the Academic Senate of Politecnico di Torino and of the "Giunta del Collegio" of Electronic, Telecommunication and Physic Engineering.

Since 2007, I've been supervising the activity of several Master and PhD students.

TEACHING HISTORY AS LECTURER

A.Y. 2012-2013, 2013-2014, 2014-2015, 2015-2016

- **Signal theory and signal processing**, Politecnico di Torino, Bachelor program in Computer Engineering.

A.Y. 2011-2012

- **Introduction to Digital Transmission**, Politecnico di Torino, Second Level Specializing Master in "Optical Communication and Photonic Technologies".

- **Digital Transmission**, Politecnico di Torino, Second Level Specializing Master in "Network innovations and services for ICTs".

A.Y. 2009-2010

- **Foundations of Digital Transmission**, Politecnico di Torino, Second Level Specializing Master in "Optical Communication and Photonic Technologies".

A.Y. 2006-2007 , 2007-2008

- **Telecommunications: introduction**, Politecnico di Torino, Master of Science program in Nanotechnologies for ICTs (Torino/Grenoble/Losanna).

- **Foundations of communication theory**, Politecnico di Torino, Bachelor program in Information Engineering.

TEACHING HISTORY AS ASSISTANT

A.Y. 2011-2012, 2012-2013, 2013-2014

- **Computer Aided Design of Communication Systems**, Politecnico di Torino, Master of Science program in Electronic and Telecommunication Engineering.

A.Y. 2006-2007, 2007-2008, 2008-2009, 2009-2010

- **Elements of Communication Theory**, Politecnico di Torino, Bachelor program in Electronic Engineering.

A.Y. 2008-2009

- **Signal theory**, Politecnico di Torino, Bachelor program in Electronic and Computer Engineering.

A.Y. 2007-2008

- **Optical Transmission I and Optical Transmission II**, Politecnico di Torino , Second Level Specializing Master in "Optical Communication and Photonic Technologies".

A.Y. 2004-2005, 2006-2007

- **Optical fiber transmission II**, Politecnico di Torino, Master of Science program in Telecommunication Engineering.

ANNEX A

COMPLETE LIST OF PUBLICATIONS

INTERNATIONAL JOURNALS

1999

G. Bosco, A. Carena, V. Curri, R. Gaudino, P. Poggiolini e S. Benedetto, "Parametric gain in multiwavelength systems: a new approach to noise enhancement analysis", *IEEE Photonic Technology Letters*, vol.11, no.9, pp.1135-1137, Sep.1999.

2000

G. Bosco, A. Carena, V. Curri, R. Gaudino, P. Poggiolini e S. Benedetto, "A Novel Analytical Method for the BER Evaluation in Optical Systems Affected by Parametric Gain", *IEEE Photonic Technology Letters*, vol.12, no.2, pp. 152-154, Feb. 2000.

G. Bosco, A. Carena, V. Curri, R. Gaudino, P. Poggiolini e S. Benedetto, "Suppression of spurious tones induced by the split-step method in fiber systems simulation", *IEEE Photonic Technology Letters*, vol. 12 no. 5, pp. 489-491, May 2000.

2001

G. Bosco, A. Carena, V. Curri, R. Gaudino, P. Poggiolini e S. Benedetto, "A Novel Analytical Approach to the Evaluation of the Impact of Fiber Parametric Gain on the Bit Error Rate", *IEEE Transactions on Communications*, vol. 49, no. 12, pp. 2154-2163, Dec. 2001.

2002

G. Bosco, B.E. Olsson e D.J. Blumenthal, "Pulsewidth distortion monitoring in a 40 Gb/s optical system affected by PMD", *IEEE Photonic Technology Letters*, vol. 14, no. 3, pp. 307-309, Mar. 2002.

G. Bosco, A. Carena, V. Curri, R. Gaudino and P. Poggiolini, "On the use of NRZ, RZ and CSRZ modulation at 40 Gbit/s with narrow DWDM channel spacing", *Journal of Lightwave Technology*, vol. 20, no. 9 pp. 1694-1704, Sep. 2002.

2003

G. Bosco, A. Carena, V. Curri, R. Gaudino and P. Poggiolini, "Quantum limit of direct detection optically preamplified receivers using duobinary transmission", *IEEE Photonic Technology Letters*, vol. 15, no. 1, pp. 102-104, Jan. 2003.

G. Bosco, G. Montorsi, S. Benedetto, "Soft decoding in optical Systems", *IEEE Transactions on Communications*, vol. 51, no. 8, pp. 1258-1265, Aug. 2003.

G. Bosco, G. Montorsi, S. Benedetto, "A new algorithm for "hard" iterative decoding of concatenated codes", *IEEE Transactions on Communications*, vol. 51, no. 8, pp. 1229-1232, Aug.2003.

G. Bosco, P. Poggiolini, "On the Q-factor inaccuracy in the performance analysis of optical direct-detection DPSK systems", *IEEE Photonic Technology Letters*, vol. 16, no. 2, pp. 665-667, Feb. 2004.

2004

G. Bosco, A. Carena, V. Curri, R. Gaudino and P. Poggiolini, "Modulation formats suitable for ultrahigh spectral efficient WDM systems", *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 10, no. 2, pp. 321-328, March/April 2004.

G. Bosco, P. Poggiolini, "Analysis of impact of receiver imperfections on performance of optical DQPSK systems", *IEEE Electronics Letters*, vol. 40, no. 18, pp. 1147-1149, Sep. 2004.

2005

G. Bosco, P. Poggiolini, "The impact of receiver imperfections on the performance of optical direct-detection DPSK", *Journal of Lightwave Technology*, vol. 23, no.2, pp.842-848, Feb. 2005.

G. Bosco, G. Montorsi and S. Benedetto, "Decreasing the complexity of LDPC iterative decoders", *IEEE Commun. Lett.*, vol. 9, no. 2, Jul. 2005, pp. 634-636.

2006

G. Bosco, P. Poggiolini, "On the joint effect of receiver impairments on direct-detection DQPSK systems", *IEEE Journal of Lightwave Technology*, vol. 24, no. 3, March 2006, pp. 1323-1333.

G. Bosco, P. Poggiolini, "Long-Distance Effectiveness of MLSE IMDD Receivers", *IEEE Photonics Technology Letters*, vol. 18, no. 9, May 2006, pp. 1037-1039.

2007

M. Visintin, P. Poggiolini, G. Bosco, "Long-haul optically uncompensated IMDD transmission with MLSE using the M-Method," *IEEE Photon. Technol. Lett.*, vol. 19, no. 16, pp. 1230-1232, Aug. 15, 2007.

P. Poggiolini, G. Bosco, "Impact of Chromatic Dispersion on DPSK and DQPSK Direct-Detection Optical Systems", *Annals of Telecommunications*, Vol. 62, n°5-6, May-Jun. 2007.

G. Bosco, V. Curri, E. Roffé, P. Poggiolini, "Joint effect of MLSE and receiver filters optimization on dispersion robustness of IMDD, DPSK, DQPSK and Duobinary modulation", *IEEE Photonics Technology Letters*, vol. 19, no. 24, Dec. 15, 2007, pp. 2003-2005.

2008

G. Bosco, I. Cano, V. Curri, P. Poggiolini, "Optimization of Branch Metric Exponent and Quantization Range in MLSE Receivers for Duobinary Systems", *IEEE Photonics Technology Letters*, vol.20, no.11, Jun. 2008, pp. 924-926.

G. Bosco, P. Poggiolini, M. Visintin, "Performance Analysis of MLSE Receivers Based on the Square-Root Metric", *IEEE Journal of Lightwave Technology*, vol. 26, no.14, Jul. 15, 2008, pp. 2098-2109.

P. Poggiolini, G. Bosco, "Long-Haul WDM IMDD Transmission at 10.7 Gbit/s in a Dispersion-Managed Multispan System Using MLSE Receivers", *IEEE Journal of Lightwave Technology*, vol. 26, no. 17, pp. 3041-3047, Sep. 2008.

P. Poggiolini, G. Bosco, Y. Benlachtar, S.J. Savory, P. Bayvel, R.I. Killey, J. Prat, "Long-haul 10 Gbit/s linear and non-linear IMDD transmission over uncompensated standard fiber using a SQRT-metric MLSE receiver," *Optics Express*, vol. 16, no. 17, pp.12919-12936, 2008.

P. Baroni, G. Bosco, A. Carena, P. Poggiolini, "Performance evaluation and assessment of receiver impairments of a novel PolSK transceiver based on differential demodulation," *Optics Express*, vol. 16, no. 20, pp. 16079-16092, 2008.

M. Joindot, G. Bosco, A. Carena, V. Curri, P. Poggiolini, "Fundamental performance limits of optical duobinary", *Optics Express*, vol. 16, no. 24, pp. 19600-19614, 2008.

2009

I. Papagiannakis, D. Klonidis, V. Curri, P. Poggiolini, G. Bosco, R.I. Killey, M. Omella, J. Prat, D. Fonseca, A. Teixeira, A. Cartaxo, R. Freund, E. Grivas, A. Bogris, A.N. Birbas, I. Tomkos, "Electronic distortion compensation in the mitigation of optical transmission impairments: the view of joint project on mitigation of optical transmission impairments by electronic means ePhoton/One+ project", *IET Optoelectronics*, vol. 3, no. 2, April 2009, pp. 73-85.

S.C.J. Lee, F. Breyer, S. Randel, R. Gaudino, G. Bosco, A. Bluschke, M. Matthews, P. Rietzsch, R. Steglich, H.P.A. van den Boom, A.M.J. Koonen, "Discrete Multitone Modulation for Maximizing Transmission Rate in Step-Index Plastic Optical Fibres", *Journal of Lightwave Technology*, vol. 27, no. 11, Jun. 1 2009, pp. 1503-1513.

G. Bosco, P. Poggiolini, M. Visintin, Li-Liangchuan, Chen-Ming, “New Branch Metrics for MLSE Receivers Based on Polarization Diversity for PMD Mitigation”, *Journal of Lightwave Technology*, vol. 27, no. 21, Nov. 1 2009, pp. 4793-4803.

A. Carena, V. Curri, P. Poggiolini, G. Bosco, F. Forghieri, “Impact of ADC Sampling Speed and Resolution on Uncompensated Long-Haul 111 Gbit/s WDM PM-QPSK Systems”, *IEEE Photonics Technology Letters*, vol. 21, no. 20, Oct. 15 2009, pp. 1514-1516.

2010

A. Carena, V. Curri, P. Poggiolini, G. Bosco, F. Forghieri, “Maximum Reach Versus Transmission Capacity for Terabit Superchannels Based on 27.75-GBaud PM-QPSK, PM-8QAM, or PM-16QAM”, *IEEE Photonics Technology Letters*, vol. 22, no. 11, Jun. 1 2010, pp. 829-831

G. Bosco, A. Carena, V. Curri, P. Poggiolini, F. Forghieri, “Performance Limits of Nyquist-WDM and CO-OFDM in High-Speed PM-QPSK Systems”, *IEEE Photonics Technology Letters*, vol. 22, no. 15, Aug. 1 2010, pp. 1129-1131.

G. Gavioli, E. Torrenco, G. Bosco, A. Carena, V. Curri, V. Miot, P. Poggiolini, F. Forghieri, S.J. Savory, L. Molle, R. Freund, “NRZ-PM-QPSK 16 \times 100 Gb/s Transmission Over Installed Fiber With Different Dispersion Maps”, *IEEE Photonics Technology Letters*, vol. 22, no. 6, Mar. 1 2010, pp. 371-373.

P. Poggiolini, G. Bosco, A. Carena, V. Curri, F. Forghieri, “Performance evaluation of coherent WDM PS-QPSK (HEXA) accounting for non-linear fiber propagation effects”, *Optics Express*, vol. 18, no. 11, pp.11360-11371 (2010).

G. Bosco, I.N. Cano, P. Poggiolini, Liangchuan Li, Ming Chen, “MLSE-Based DQPSK Transmission in 43 Gb/s DWDM Long-Haul Dispersion-Managed Optical Systems”, *Journal of Lightwave Technology*, vol. 28, no. 10, May. 15 2010, pp. 1573-1581.

V. Curri, P. Poggiolini, G. Bosco, A. Carena, F. Forghieri, “Performance Evaluation of Long-haul 111 Gb/s PM-QPSK Transmission over Different Fiber Types”, *IEEE Photonics Technology Letters*, vol. 22, no. 19, Oct. 1 2010, pp. 1446-1448.

G. Gavioli, E. Torrenco, G. Bosco, A. Carena, S.J. Savory, F. Forghieri, P. Poggiolini, “Ultra-Narrow-Spacing 10-Channel 1.12 Tb/sD-WDM Long-Haul Transmission Over Uncompensated SMF and NZDSF”, *IEEE Photonics Technology Letters*, vol. 22, no. 19, Oct. 1 2010, pp. 1419-1421.

2011

P. Poggiolini, G. Bosco, A. Carena, V. Curri, F. Forghieri, “Performance Dependence on Channel Baud-Rate of PM-QPSK Systems over Uncompensated Links”, *IEEE Photonics Technology Letters*, vol. 23, no.1, Jan.1 2011, pp. 15-18.

G. Bosco, V. Curri, A. Carena, P. Poggiolini, F. Forghieri “On the Performance of Nyquist-WDM Terabit Superchannels Based on PM-BPSK, PM-QPSK, PM-8QAM or PM-16QAM Subcarriers”, *Journal of Lightwave Technology*, vol. 29, no. 1, Jan. 1, 2011, pp. 53-61.

D. Zeolla, A. Antonino, G. Bosco, R. Gaudino, “DFE vs. MLSE Electronic Equalization for Gigabit/s SI-POF Transmission Systems”, *IEEE Photonics Technology Letter*, vol. 23, no. 8, pp. 510-512, Apr.15 2011.

M. Omella, A. Jimenez, G. Bosco, P.Poggiolini, J. Prat, “Non-linear Function for a Gaussian Photoreception in Standard IM/DD Systems”, *Optical and Quantum Electronic*, vol.. 42, no. 3, pp. 165-178, Feb. 2011.

P. Poggiolini, A. Carena, V. Curri, G. Bosco, and F. Forghieri “Analytical Modeling of Nonlinear Propagation in Uncompensated Optical Transmission Links”, *IEEE Photonics Technology Letter*, vol. 23, no. 11, pp. 742-744, June 1, 2011.

R. Cigliutti, E. Torrenco, G. Bosco, N. P. Caponio, A. Carena, V. Curri, P. Poggiolini, Y. Yamamoto, T. Sasaki, F. Forghieri, "Transmission of 9x138Gb/s Pre-Filtered PM-8QAM Signals over 4,000 km of Pure Silica-Core Fiber", *Journal of Lightwave Technology*, vol. 29, no.15, pp. 2310-2318, Aug. 1, 2011.

G. Bosco, P. Poggiolini, A. Carena, V. Curri and F. Forghieri, "Analytical results on channel capacity in uncompensated optical links with coherent detection," *Optics Express*, vol. 19, no. 26, pp.B438-B449 (2011).

E. Torrenco, R. Cigliutti, G. Bosco, A. Carena, V. Curri, P. Poggiolini, A. Nespola, D. Zeolla, F. Forghieri, "Experimental validation of an analytical model for nonlinear propagation in uncompensated optical links," *Optics Express*, vol. 19, no. 26, pp.B790-B798 (2011).

2012

A. Carena, V. Curri, G. Bosco, R. Cigliutti, E. Torrenco, P. Poggiolini, A. Nespola, D. Zeolla, F. Forghieri, "Novel figure of merit to compare fibers in coherent detection systems with uncompensated links", *Optics Express*, vol. 20, no. 1, pp. 339-346 (2012).

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