

CURRICULUM VITAE ET STUDIORUM LUCA SCHENATO

Personal Details

Gender: Male
Date of Birth: November 6, 1979
Place of birth: Soave, Italy
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Education

- 07/1998 High school diploma (Scientific Lycee) cum laude.
- 10/2003 Laurea Degree (5 years program, MSc equivalent) cum laude in Telecommunication Engineering (Specialization: "Optical Communication") at the University of Padova, Italy.
Thesis: *Analysis of the transient behaviour of the Polarization Mode Dispersion in periodic spun fibers*. Tutor: prof. A. Galtarossa.
- 11/2003 Engineer habilitation granted by Engineers Association of Padova.

03/2007 Ph.D. degree in Electronic and Telecommunication Engineering at the University of Padova, Italy, Department of Information Engineering.
Project area: *Photonics and Electromagnetism in Telecommunication Engineering*.
Thesis: *Polarization mode dispersion in spun single-mode fibers*. Tutor: prof. A. Galtarossa.

Fellowships

01/2007–03/2008 Research fellowship at the Dept. of Information Engineer of the University of Padova. Project title: Optical fiber for slow- and fast-light applications. Tutor: prof. A. Galtarossa.

04/2008–03/2010 Research fellowship at the Dept. of Information Engineer of the University of Padova. Project title: Reflectometric measurements for the characterization of optical fibers and fiber-based devices. Tutor: prof. M. Santagiustina.

04/2010–NOW Post-Doctoral grant at the Dept. of Information Engineer of the University of Padova in the framework of the Cariparo Founded project “Innovative integrated Systems for Monitoring and assessment of hIgh risk LANDslides” (SMILAND). Project title: “Optical fiber polarimetric techniques for ultra high resolution measurements”. Tutor: prof. A. Galtarossa.

Awards

2003 Awarded the “Antonio Sarpi” gold medal for the best graduate student of the Faculty of Engineering of the University of Padova for the academic year 2002/03.

2007 and 2008 In 2007 and 2008 he has been nominated for “C. Offelli Award” selection for best young researchers in the Department of Information Engineering, University of Padova.

International Experiences

04/2004–10/2004 Internship as visiting graduated student at the Gwangju Institute of Science and Technology, Gwangju, South Korea, in the framework of the Project of Particular Relevance “New Generation Fiber Optics and All-Fiber Devices” (2004-2006), established between the Italian Republic and the Republic of Korea. Italian supervisor: prof. A. Galtarossa. Korean supervisor: prof. U. C. Paek.

02/2006–08/2006 Internship as Research Scholar at Bell Labs (Lucent Technologies) in Holmdel, New Jersey, US. Research activity on parametric amplification in optical fiber (spun/unspun) affected by polarization mode dispersion. References: dr. R. Jopson, dr. C. J. McKinstry.

Working Experiences

11/2003–12/2003 In charge of the project “Numerical calculation on PMD emulator data” by the Dept. of Information Engineering, University of Padova.

Teaching Experiences

- 05/2005–06/2005 Assistant activity in “Optical Circuit Laboratory” class (Telecommunication Engineer undergraduated course). Teacher: prof. Luca Palmieri.
- 04/2007–06/2007 Assistant activity in “Optical Circuit Laboratory” class (2nd Level Master of Applied Optics, University of Padova). Teacher: prof. Luca Palmieri.
- 01/2008–03/2008 Assistant activity in “Microwaves” and “Microwave devices” classes (Telecommunication and Electronic Engineer undergraduated course). Teacher: prof. Andrea Galtarossa.
- 05/2008–06/2008 Assistant activity in “Optical Circuit Laboratory” class (2nd Level Master of Applied Optics, University of Padova). Teacher: prof. Luca Palmieri.
- 10/2008–01/2009 Assistant activity in “Radio Technologies for Aerospace Engineering” class (Aerospace Engineer undergraduated course). Teacher: prof. Andrea Galtarossa.
- 05/2009–06/2009 Assistant activity in “Optical Circuit Laboratory” class (2nd Level Master of Applied Optics, University of Padova). Teacher: prof. Luca Palmieri.

Referee Activity

He is a referee for IEEE Journal of Lightwave Technology, Optics Express, Optics letters and Optical Fiber Technology.

Language Knowledge

Italian	Native
English	Fluently (read, written, spoken)

References

These persons are familiar with my professional qualifications and my character:

Prof. Andrea Galtarossa (Ph.D. advisor)

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List of Publications

Publications of dr. Schenato are the following: 1 international patent, 22 peer-review journal papers, 20 international conference papers, 17 national conference papers and 4 abstract papers. Journal papers have been published in:

- (a) Comptes Rendus Physique – IF 1.384;
- (b) Fiber And Integrated Optics – IF 0.425;
- (c) IEEE Journal of Lightwave Technology – IF 2.185;
- (d) IEEE Photonics Technology Letters – IF 1.815;
- (e) Optical Fiber Technology – IF 0.939;
- (f) Optics Letters – IF 3.059;
- (g) Optics Express – IF 3.278.

They have been cited 64 times, in total, with h-index of 6 (source: ISI WEB of Knowledge).

Patent

1. A. Galtarossa, P. Griggio, L. Palmieri, A. Pizzinat, L. Schenato, “Optical fibers with very long polarization correlation length and method for obtaining very long polarization correlation length”, PCT, WO 2006006192 (2006).

International Peer-Review Papers

1. M. Santagiustina, L. Schenato, “Single-Pump Parametric Amplification in Randomly Birefringent Unidirectionally Spun Fibers,” *IEEE Photonics Technology Letters* **22** (2), 73–75, 2010.
2. L. Schenato, M. Park, L. Palmieri, S. Lee, R. Sassi, A. Galtarossa, K. Oh, “Characterization of a novel dual-core elliptical hollow optical fiber with wavelength decreasing differential group delay,” *Opt. Express* **18** (19), 20344–20349, 2010.
3. R. Cigliutti, A. Galtarossa, M. Giltrelli, D. Grosso, A. W. R. Leitch, L. Palmieri, S. Santoni, L. Schenato, D. Waswa, “Design, estimation and experimental validation of optical Polarization Mode Dispersion Compensator in 40 Gbit/s NRZ AND RZ optical systems,” *Optical Fiber Technology* **15** (3), 242–250, 2009.
4. M. Santagiustina, L. Schenato, C. Someda, “Polarization control for slow and fast light in fiber optical, Raman-assisted, parametric amplification,” *Comptes Rendus Physique* **10** (10), 980–990, 2009.
5. E. Bettini, A. Galtarossa, L. Palmieri, M. Santagiustina, L. Schenato, L. Ursini, “Polarized Backward Raman Amplification in Unidirectionally Spun Fibers,” *IEEE Photonics Technology Letters* **20** (1), 27–29, 2008.
6. A. Galtarossa, D. Grosso, L. Palmieri, L. Schenato, “Distributed Polarization-Mode-Dispersion Measurement in Fiber Links by Polarization-Sensitive Reflectometric Techniques,” *IEEE Photonics Technology Letters* **20** (23), 1944–1946, 2008.

7. A. Galtarossa, D. Grosso, L. Palmieri, L. Schenato, "Reflectometric characterization of hinges in optical fiber links," *IEEE Photonics Technology Letters* **20** (10), 854–856, 2008.
8. A. Galtarossa, M. Guglielmucci, L. Palmieri, L. Schenato, C. G. Someda, "Modeling and design of low-PMD spun fiber," *Fiber and Integrated Optics* **27** (4), 216–222, 2008.
9. A. Galtarossa, L. Palmieri, M. Santagiustina, L. Schenato, L. Ursini, "Polarized Brillouin Amplification in Randomly Birefringent and Unidirectionally Spun Fibers," *IEEE Photonics Technology Letters* **20** (16), 1420–1422, 2008.
10. A. Galtarossa, L. Palmieri, L. Schenato, "About the Differential Group Delay of Spun Fibers," *IEEE Journal of Lightwave Technology* **26** (22), 3660–3668, 2008.
11. A. Galtarossa, D. Grosso, L. Palmieri, L. Schenato, "Reflectometric measurement of birefringence rotation in single-mode optical fibers," *Opt. Lett.* **33** (20), 2284–2286, 2008.
12. L. Schenato, M. Santagiustina, C. G. Someda, "Fundamental and Random Birefringence Limitations to Delay in Slow Light Fiber Parametric Amplification," *IEEE Journal of Lightwave Technology* **26** (23), 3721–3726, 2008.
13. A. Galtarossa, L. Palmieri, L. Schenato, "Influence of the birefringence autocorrelation function on the polarization mode dispersion of constantly spun fibers," *Optics Letters* **32** (22), 3236–3238, 2007.
14. C. J. McKinstrie, H. Kogelnik, G. G. Luther, L. Schenato, "Stokes-space derivations of generalized Schrodinger equations for wave propagation in various fibers," *Optics Express* **15** (17), 10964–10983, 2007.
15. C. J. McKinstrie, S. Radic, M. G. Raymer, L. Schenato, "Unimpaired phase-sensitive amplification by vector four-wave mixing near the zero-dispersion frequency," *Optics Express* **15** (5), 2178–2189, 2007.
16. A. Galtarossa, M. Guglielmucci, L. Palmieri, A. Pizzinat, L. Schenato, C. Someda, "Experimental justification of a method for low-PMD measurements," *IEEE Photonics Technology Letters* **18** (11), 1228–1230, 2006.
17. A. Galtarossa, Y. Jung, J. Kim, B. H. Lee, K. Oh, U. C. Paek, L. Palmieri, A. Pizzinat, L. Schenato, C. G. Someda, "Low polarization mode dispersion measurements in ad hoc drawn spun fibers," *Optical Fiber Technology* **12** (4), 323–327, 2006.
18. A. Galtarossa, L. Palmieri, A. Pizzinat, L. Schenato, "Polarization Mode Dispersion Management Using Unidirectionally Spun Fibers," *IEEE Journal of Lightwave Technology* **24** (11), 3976–3981, 2006.
19. A. Galtarossa, L. Palmieri, A. Pizzinat, L. Schenato, "Polarization properties of randomly-birefringent spun fibers," *Optical Fiber Technology* **12** (3), 205–216, 2006.
20. A. Galtarossa, L. Palmieri, L. Schenato, "Simplified phenomenological model for randomly birefringent strongly spun fibers," *Optics Letters* **31** (15), 2275–2277, 2006.
21. C. J. McKinstrie, H. Kogelnik, L. Schenato, "Four-wave mixing in a rapidly-spun fiber," *Optics Express* **14** (19), 8516–8534, 2006.
22. A. Galtarossa, Y. Jung, M. Kim, B. Lee, K. Oh, U.-C. Paek, L. Palmieri, A. Pizzinat, L. Schenato, "Effects of spin inaccuracy on PMD reduction in spun fibers," *IEEE Journal of Lightwave Technology* **23** (12), 4184–4191, 2005.

International Conference Papers

1. M. Park, L. Schenato, L. Palmieri, S. Lee, A. Galtarossa, K. Oh, "Dual-Core Elliptical Hollow Optical Fiber with Linearly Wavelength-Decreasing Birefringence," *ECOC 2010 - 36th European Conference and Exhibition on Optical Communication*, 2010.
2. H. Ferraro, A. Galtarossa, L. Palmieri, M. Santagiustina, L. Schenato, "Unidirectionally spun fibers for efficient narrow band parametric amplification," *Proc. Conference on Optical Fiber communication/National Fiber Optic Engineers Conference OFC/NFOEC 2009*, 2009, pp. 1–3.
3. M. Santagiustina, A. Galtarossa, L. Palmieri, L. Schenato, C. G. Someda, L. Ursini, "Polarization control in fiber slow and fast light," *Dasan Conference on Slow Light (INVITED)*, 2009.
4. R. Cigliutti, A. Galtarossa, M. Giltrelli, D. Grosso, A. W. R. Leitch, L. Palmieri, S. Santoni, L. Schenato, D. Waswa, "Optical Polarization Mode Dispersion Compensator for 40 Gbit/s NRZ and RZ systems," *Proc. Southern Africa Telecommunication Networks and Applications Conference (SATNAC)*, 2008.
5. A. Galtarossa, D. Grosso, L. Palmieri, L. Schenato, "A Reflectometric Technique for an Almost Complete Characterization of Birefringence in Single-Mode Optical Fibers," *Proc. 34th European Conference on Optical Communication (ECOC)*, 2008.
6. A. Galtarossa, D. Grosso, L. Palmieri, L. Schenato, "Reflectometric Characterization of Hinges in Fiber Optic Links," *Proc. Conference on Optical Fiber communication/National Fiber Optic Engineers Conference OFC/NFOEC 2008*, 2008, pp. 1–3.
7. A. Galtarossa, L. Palmieri, M. Santagiustina, L. Schenato, L. Ursini, "Nonlinear polarization-sensitive properties of unidirectionally spun fibers," *2008 Bilateral Korea-Italy Workshop on Photonics for Communication and Sensing*, 2008, pp. 59–60.
8. L. Palmieri, M. Santagiustina, L. Schenato, L. Ursini, "Stimulated Brillouin Scattering in Randomly Birefringent, Unidirectionally Spun Fibers," *Tech. Digest Optical Fiber Conference '08*, 2008, pp. 1–3.
9. M. Santagiustina, L. Schenato, C. G. Someda, "Fundamental limit of the achievable time delay in Slow-light NB-OPA," *Proc. IEEE/LEOS Winter Topical Meeting Series*, 2008, pp. 71–72.
10. M. Santagiustina, L. Schenato, C. G. Someda, "Slow Light in Spun Fiber Optical Parametric Amplification," *Proc. of 2008 Slow and Fast Light (SL) Topical Meeting*, 2008.
11. L. Schenato, M. Santagiustina, C. G. Someda, "Narrow Band Optical Parametric Amplification for Slow Light in Randomly Birefringent Fibers," *Tech. Digest Optical Fiber Conference '08*, 2008, pp. 1–3.
12. E. Bettini, A. Galtarossa, L. Palmieri, M. Santagiustina, L. Schenato, C. Someda, "Optical parametric amplification for slow light in random birefringence fibers," *Proc. Photonics in Switching*, 2007, pp. 47–48.
13. A. Galtarossa, D. Grosso, L. Palmieri, L. Schenato, "Location and temporal characterization of hinges in optical fiber links," *Proc. 33rd European Conference on Optical Communication (ECOC)*, 2007, vol. 4, pp. 103–104.
14. A. Galtarossa, M. Guglielmucci, L. Palmieri, L. Schenato, "Anomalous Polarization Properties of Single-Mode Randomly Birefringent Spun Fibers," *Tech. Digest 2007 Japan-Italy Bilateral Workshop on Photonics for Communication*, 2007, pp. 65–68.

15. A. Galtarossa, M. Guglielmucci, L. Palmieri, L. Schenato, "Unusual Polarization Properties of Single-Mode Randomly Birefringent Spun Fibers," *Proc. 9th International Conference on Transparent Optical Networks ICTON '07*, 2007, vol. 1, pp. 160–163.
16. A. Galtarossa, L. Palmieri, L. Schenato, "The role of birefringence correlation in spun fiber PMD properties," *Proc. 33rd European Conference on Optical Communication (ECOC)*, 2007, vol. 4, pp. 109–110.
17. A. Galtarossa, L. Palmieri, A. Pizzinat, L. Schenato, "PMD management in unidirectionally spun fiber links," *Proc. 32th European Conference on Optical Communication (ECOC)*, 2006, vol. 3, pp. 177–178.
18. A. Galtarossa, L. Palmieri, A. Pizzinat, L. Schenato, M. Guglielmucci, "Experimental validation of a method for low-PMD measurements," *Tech. Digest Optical Fiber Conference '06*, 2006.
19. A. Galtarossa, L. Palmieri, L. Schenato, "Eccentric polarization properties of single-mode spun fibers," *Proc. Bilateral China-Italy workshop on Photonics for communication and sensing*, 2006.
20. A. Galtarossa, L. Palmieri, A. Pizzinat, L. Schenato, "Polarization Optical time domain Reflectometry Measurements," *Proc. Pacific Rim Conference on Lasers and Electro-Optics CLEO/Pacific Rim '05*, Invited, 2005, vol. 1, pp. 1490–1491.

National Conference Papers

1. A. Galtarossa, M. Guglielmucci, S. K. Fosuhene, A. W. R. Leitch, L. Palmieri, L. Schenato, L. Ursini, "Misura riflettometrica del ritardo di gruppo differenziale quadratico medio in fibre ottiche a singolo modo," *Fotonica '10*, 2010.
2. L. Schenato, A. Galtarossa, L. Palmieri, L. Ursini, M. Park, S. Lee, K. Oh, M. Guglielmucci, "Caratterizzazione sperimentale di una fibra ellittica a nucleo cavo," *Fotonica '10*, 2010.
3. L. Ursini, F. Chiarello, M. Santagiustina, L. Schenato, "Comunicazioni Sicure In Spazio Libero Su Portante Ottica Caotica," *Fotonica '10*, 2010.
4. E. De Zotti, L. Palmieri, L. Schenato, "Riflettometria ottica in guide d'onda affette da dicroismo," *Proc. Fotonica '09*, 2009.
5. A. Galtarossa, D. Grosso, L. Palmieri, L. Schenato, R. Cigliutti, M. Giltrelli, S. Santoni, M. Guglielmucci, A. W. R. Leitch, D. Waswa, "Sviluppo e sperimentazione di un compensatore di dispersione di polarizzazione per sistemi ottici NRZ e RZ a 40 Gbit/s," *Proc. Fotonica '09*, 2009.
6. A. Galtarossa, L. Palmieri, M. Santagiustina, L. Schenato, C. G. Someda, "Four wave mixing degenerare in fibre affette da birifrangenza aleatoria e sottoposte a torsione unidirezionale a caldo," *Proc. Fotonica '09*, 2009.
7. A. Galtarossa, L. Palmieri, M. Santagiustina, L. Schenato, L. Ursini, M. Guglielmucci, "Evoluzione della polarizzazione negli amplificatori Brillouin e Raman in fibre affette da birifrangenza aleatoria," *Proc. Fotonica '09*, 2009.
8. A. Galtarossa, D. Grosso, M. Guglielmucci, L. Palmieri, L. Schenato, C. G. Someda, L. Ursini, "Caratterizzazione quasi-completa della birifrangenza in fibre ottiche singolo modo attraverso tecnica riflettometrica," *Proc. XVII Riunione Nazionale di Elettromagnetismo - RiNEm*, 2008.

9. A. Galtarossa, L. Palmieri, L. Schenato, L. Ursini, “Amplificazione brillouin in fibre ottiche a birifrangenza aleatoria e dotate di spin unidirezionale,” *Proc. XVII Riunione Nazionale di Elettromagnetismo - RiNEM*, 2008.
10. M. Santagiustina, L. Schenato, C. G. Someda, “Luce lenta e luce veloce: dai primi esperimenti alle applicazioni nell’Ingegneria dell’Informazione,” *Atti e Memorie dell’Accademia Galileiana di Scienze, Lettere ed Arti già dei Ricovrati e Patavina*, 2008, vol. CXX, pp. 31–46.
11. L. Schenato, G. Vadalà, “Generazione di luce lenta in cristalli fotonici e amplificatori parametrici in fibra ottica,” *Proc. XVII Riunione Nazionale di Elettromagnetismo - RiNEM*, 2008.
12. A. Galtarossa, L. Palmieri, L. Schenato, “Fibre ottiche a torsione unidirezionale a bassa dispersione di polarizzazione,” *Proc. Fotonica '07*, 2007, pp. 31–34.
13. L. Schenato, C. J. McKinstrie, H. Kogelnik, “Four-wave mixing in fibre a rapida torsione,” *Proc. Fotonica '07*, 2007, pp. 41–44.
14. L. Schenato, C. J. McKinstrie, S. Radic, M. G. Raymer, “Amplificazione parametrica sensibile alla fase in condizioni di dispersione quasi nulla,” *Proc. Fotonica '07*, 2007, pp. 473–476.
15. A. Galtarossa, L. Palmieri, A. Pizzinat, L. Schenato, M. Guglielmucci, “Fibre ottiche a torsione unidirezionale in collegamenti a bassa dispersione di polarizzazione,” *Proc. XVI Riunione Nazionale di Elettromagnetismo - RiNEM*, 2006, pp. 330–333.
16. A. Galtarossa, L. Palmieri, L. Schenato, C. G. Someda, M. Visentini, “Robustezza delle funzioni di torsione a caldo in fibre ottiche a singolo modo,” *Proc. Fotonica '05*, 2005, pp. 419–422,
17. A. Galtarossa, P. Griggio, L. Palmieri, A. Pizzinat, L. Schenato, “Dispersione di polarizzazione in fibre ottiche a birifrangenza aleatoria sottoposte a torsione a “caldo” unidirezionale,” *Proc. XV Riunione Nazionale di Elettromagnetismo - RiNEM*, 2004, vol. 1, pp. 309–312.

Abstracts

1. A. Galtarossa, L. Palmieri, M. Santagiustina, L. Schenato, C. G. Someda, L. Ursini, “Polarized nonlinear amplifiers in randomly birefringent and spun fibers,” *Abstract 2008 SIAM Conference on Nonlinear Waves and Coherent Structures*, 2008.
2. A. Galtarossa, L. Palmieri, L. Schenato, “Modeling of randomly birefringent spun fibers,” *Abstract of 2008 SIAM Conference on Nonlinear Waves and Coherent Structures*, 2008.
3. A. Galtarossa, L. Palmieri, L. Schenato, “Reflectometric Measurements of PMD,” *Abstract of IV Seminar in Multi-Gigabit Optical Networks - Polarization and Quantum Effects in Optical Communication Systems*, 2007.
4. L. Schenato, M. Santagiustina, C. G. Someda, “Polarization effects in slow and fast light fiber amplification,” *Abstract of Slow and Fast Light: Fundamental Issues and Applications*, 2007.