

Curriculum vitae

Personal data

Name Luigi
Surname Zeni
Date of birth December 02, 1962
Office address Department of Engineering – University of Campania *Luigi Vanvitelli*
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Work experience

1993-1998 Assistant Professor in Electronics at Department of Electronic Engineering - University of Naples Federico II - Italy
1994 Visiting scientist at DIMES (Delft Institute of Microelectronics and Submicrontechnology) Technical University of Delft -The Netherlands (Under a grant from Italian Research Council)
1998-2006 Associate Professor in Electronics at Department of Information Engineering - Second University of Naples - Italy
2006- pres. Full Professor in Electronics at Department of Information Engineering - Second University of Naples - Italy
2010-pres. Research Associate at Institute for Electromagnetic Sensing of the Environment - Italian Research Council – Italy
2015 Visiting Professor at University of Cluj-Napoca (Romania)

Management activity

2000-2012 Vice-Director of Department of Information Engineering - Second University of Naples (www.dii.unina2.it)
2008-pres. President and Member of the Board of Directors of Research Consortium on Advanced Remote Sensing Systems – CO.R.I.S.T.A. (www.corista.eu) – Naples – Italy. CO.R.I.S.T.A. is a no-profit consortium established in 1988 and aimed to promote close cooperation between universities and industry, presently the members are Thales Alenia Space Italy & Second University of Naples, its current staff comprises 12 permanent researchers, 2 permanent administrative employers, 2 external consultants and about 10 researchers under contract. The annual turnover is about 1.5M€.
2006-2010 Member of the Management Committee of the COST 299 “Optical fibers for new challenges facing the information society” of the European Union and chair of the “Linear and nonlinear distributed measurement” group
2010-2014 Member of the Management Committee of the COST TD1001 “Novel and Reliable Optical Fibre Sensor Systems for Future Security and Safety Applications” of the European Union

2013-pres. Member of the Board of Directors of Second University of Naples
2017-pres. Rector's Delegate for Technology Transfer - University of Campania
Luigi Vanvitelli

Education

February 1988 Degree in Electronic Engineering, summa cum laude, from University of Naples Federico II
September 1992 Ph.D. in Electronics and Computer Science from the Italian Ministry of University and Scientific Research
November 1988 Professional Engineer Certificate from University of Naples Federico II

Awards

1995 Italian Research Council award for research activity carried out at Technical University of Delft – The Netherlands
2003 Best Poster Award - AISEM - Italian Association for Sensors and Microsystems for the paper “ARROW structures for sensing applications”
2007 Best Poster Award - AISEM - Italian Association for Sensors and Microsystems for the paper “Characterization of a silicon integrated Micro-flow cytometer”

Academic services

1996-pres. Member of Research Doctorate Council in Electronic Engineering – Second University of Naples
2001-pres. Coordinator of the Optoelectronics Laboratory - Department of Information Engineering - Second University of Naples
1996-2006 Delegate for Erasmus/Socrates student exchange program of European Union at Second University of Naples
1998-pres. Supervisor of 15 Ph.D. students at Second University of Naples
2002-2004 Member of examination boards for the appointment of assistant and associate professors in Italian Universities
2004 Member of the jury for Ph.D. thesis defense at Technical University of Delft – The Netherlands
2007 Member of the Technical Committee in charge for the selection of furniture and fittings for classrooms and offices at Second University of Naples
2008 Member of the jury for Ph.D. thesis defense at Faculté Polytechnique de Mons - Belgium
2009-pres. President of the Area Committee (CAR 09) for the evaluation of research quality in Industrial and Information Engineering at Second University of Naples
2009 Member of the jury for Ph.D. thesis defense at Scuola Superiore Sant'Anna - Pisa - Italy
2011 Member of the jury for Ph.D. thesis defense at Università Mediterranea di Reggio Calabria - Italy

2011	President of the Committee in charge for testing the optical fiber communication/data network at Second University of Naples
2012	Member of the jury for Ph.D. thesis defense at Università di Napoli Federico II - Italy
2012	President of the Qualification Committee for Professional Engineer Certificate granting at Second University of Naples
2013	Member of the jury for Ph.D. thesis defense at Scuola Superiore Sant'Anna - Pisa - Italy
2014	Member of the jury for Ph.D. thesis defense at Vrije University of Amsterdam – The Netherlands
2014	Member of the jury for Ph.D. thesis defense at Public University of Navarra - Pamplona –Spain
2014	Member of the examination board for the appointment of n. 1 Researcher at University of Sannio
2015	Supervisor of a Visiting Professor from University of Cluj-Napoca (Romania)
2015-pres.	Supervisor of ERASMUS students from University of Cluj-Napoca (Romania)
2016	President of the examination board for the appointment of n. 1 Researcher at Scuola Superiore Sant'Anna - Pisa
2016	President of the examination board for the appointment of n. 2 researchers at Italian Research Council
2016-pres.	Member of the national evaluation committee for full professorship assessment
2017	Member of the examination board for the appointment of n. 1 researcher at University of Sassari
2017	Member of the examination board for the appointment of n. 1 technician – expert in telecommunications – at Provincia Autonoma di Trento

Editorial services

2005-pres.	Member of Editorial Board of Sensors & Transducers Journal (ISSN 1726-5479)
2005-pres.	Member of Editorial Board of Sensors (ISSN 1424-8220)
2006	Member of the Steering Committee: Bilateral China-Italy Workshop on Photonics for Communication and Sensing, Xi'an –China
2007	Guest Editor of the special issue “Optical biosensors” of the journal “Sensors”
2008	Member of the Scientific Committee of the First Mediterranean Photonics Conference – Ischia – Italy
2011	Member of the Scientific Committee of the National Conference Fotonica2011 – Genoa - Italy
2012	Member of the Technical Program Committee of 2012 IEEE International Power Modulator and High Voltage Conference - San Diego CA - USA
2014	Member of the Executive Committee of the National Conference Fotonica2014 – Naples - Italy
2014	Member of the Executive Committee of Fotonica2014 – Napoli
2015	Member of the Scientific Committee of the International Conference on Sensors Engineering and Electronics Instrumental Advances (SEIA' 2015)

- 2015-pres. Member of the Technical Program Committee of European Workshop on Optical fiber Sensors (EWOFS)
- 2017 Co-Chair of the Academic & Technical Committee of the 6th International Forum on Opto-electronic Sensor-based Monitoring in Geo-engineering – Nanjing China 2017
- 2017 Guest Editor of the special issue “Optical Biochemical Sensor Systems and Applications” of the journal “Sensors”

Funded research

- 2000 National coordinator of a PRIN project, funded by the Italian Ministry of University and Research
- 2001 Scientific coordinator of a research contract funded by ENEA - Italy
- 2004 Scientific coordinator of a research contract funded by CITEL - Italy
- 2005 National coordinator of a PRIN project, funded by the Italian Ministry of University and Research
- 2005 Scientific coordinator of a research contract funded by Regione Campania L.R. 5 - Italy
- 2006 Scientific coordinator of a research contract funded by INGV - Italy
- 2007 Local scientific coordinator of two research projects funded by Regione Campania L.R. 3.17 - Italy
- 2009 Scientific coordinator of a research project (PRIST) funded by Second University of Naples
- 2010 Local scientific coordinator of FP7 Project ACEM-Rail (GA n. 265954) funded by European Union
- 2011 Local scientific coordinator of a research project (PON01_01525 - MONICA) funded by the Italian Ministry of University and Research
- 2012 Scientific coordinator of a research contract funded by DIMMS Control S.p.A. - Italy
- 2014 Local scientific coordinator of a research initiative (PON03_00767 - TOP-IN) funded by the Italian Ministry of University and Research
- 2014 Local scientific coordinator of a research project (SIRENA) funded by the Italian Ministry of Economic Development
- 2014 Local coordinator of a research initiative (WISCH) funded by Regione Campania - Italy
- 2014 Scientific coordinator of a research contract funded by RSE - Milan - Italy
- 2014 Scientific coordinator of a research contract funded by INAF - Italy
- 2015 Scientific coordinator of a research contract funded by RSE - Milan - Italy
- 2015 Scientific coordinator of a research contract funded by MEDINOK – Italy
- 2017 Scientific coordinator of a research contract funded by Copernico - Italy

National and International Patents

- 1991 A. Cutolo, S. Solimeno, L. Zeni, “Analizzatore di stabilità modale per laser pulsati” N. MI91A001822

- 1991 A. Cutolo, T. Isernia, R. Pierri, L. Zeni, "Analizzatore di modi trasversi per fasci laser" N.MI91A002056
- 2005 A. De Angelis, L. Zeni "Generatore di impulsi di tensione di durata e polarità variabile mediante la configurazione Blumlein" N. RM2005A000355
- 2006 R. Bernini, A. Minardo, L. Zeni, "Metodo di misura di profilo di shift Brillouin in fibra ottica basato sulla demodulazione ottica dei segnali, e relativo apparato" N. RM2006A000302
- 2007 R. Bernini, A. Minardo, L. Zeni, "Method for measuring the Brillouin shift distribution along optical fiber based on the optical demodulation of the signals, and relevant apparatus", European Patent EP1865289
- 2008 R. Bernini, A. Minardo, L. Zeni, "Metodo di misura di deformazioni dinamiche in fibra ottica basato sullo scattering di Brillouin tra due impulsi ottici, e relativo apparato", N. RM2008A626
- 2009 R. Bernini, A. Minardo, L. Zeni, "Method for measuring the Brillouin shift distribution along optical fiber based on the optical demodulation of the signals, and relevant apparatus", US PATENT no. 7515273
- 2011 R. Bernini, A. Minardo, L. Zeni "Metodo di ricostruzione del profilo di shift Brillouin in fibra ottica a partire da misure di scattering di Brillouin eseguite nel dominio della frequenza", N. RM2011A000525 Second University of Naples 06-04-2013
- 2011 A. Buonanno, M. D'Urso, C. Falessi, M. G. Labate, G. Sorrentino, L. Zeni "Interruttore fotoconduttivo" N. RM2011A000410 SELEX SISTEMI INTEGRATI S.p.A.
- 2011 A. Buonanno, M. D'Urso, C. Falessi, M. G. Labate, G. Sorrentino, L. Zeni "Apparato di irradiazione di un impulso elettromagnetico nel dominio del tempo a relativo metodo di sintesi di un impulso elettromagnetico" N. RM2011A000412 SELEX SISTEMI INTEGRATI S.p.A.
- 2016 N. Cennamo, G. D'Agostino, A. Donà, P. Pallavicini, M. Pesavento, L. Zeni, "Sensore ottico per la rilevazione della concentrazione di almeno una sostanza esplosiva in una soluzione acquosa e metodo di rilevazione che utilizza tale sensore" N. 0001422644 del 03-06-2016 Second University of Naples
- 2016 N. Cennamo, G. D'Agostino, L. De Maria, M. Pesavento, L. Zeni, "Metodo per la rilevazione in linea della concentrazione di almeno un composto furanico e/o di suoi derivati nell'olio di trasformatori" N. 0001422844 del 16-06-2016 - Ricerca sul Sistema Energetico SpA - Milan

Third Mission activity

- 2013 Founder of the Spinoff Company OPTOSENSING

Reviewing activity

Research projects reviewing

- 1998-pres. Italian Ministry of University and Research projects and industrial research projects
- 2011 Israel Science Foundation (ISF) project
- 2014 Polish Academy of Science
- 2015 European Research Council

Journals peer reviewing

1998-pres. Referee for: Solid State Electronics, Optics Letters, Journal of the Electrochemical Society, IEEE-OSA Journal of Lightwave Technology, Smart Materials and Structures, IEEE Sensor Journal, Optics Express, Journal of the Optical Society of America, Optics Communications, Measurement Science and Technology, Analytical & Bioanalytical Chemistry, Bioelectromagnetics, Sensors and Actuators, Sensors, IEEE Photonic Technology Letters, IEEE Transactions on Dielectrics and Electrical Insulation, PlosOne, Geophysical Research Letters.

Reviewer Boards

2002-pres. Member of the Reviewer's Board of the Italian Ministry of University and Research
2004-pres. Member of the Reviewer's Board for EU Framework Programs

Research activity

1988-1995 Laser beams characterization
1992-2000 Materials for electronics and optoelectronics characterization
2001-pres. Optical fiber distributed sensors
2001-pres. Optoelectronic integrated devices and biosensors
2004-pres. Dielectric waveguide based sensors
2005-pres. High voltage pulse generators for bio-electric applications
2010-pres. Sensors based on surface plasmon resonance in polymeric optical fibers and slabs

Teaching activity

1993-1998 Analog electronics at University of Naples Federico II
2003-2005 Digital electronics at University of Naples Parthenope
1999-pres. Digital electronics and Optoelectronics at University of Campania *Luigi Vanvitelli*

International collaborations

1994-pres. Delft Institute for Microelectronics and Submicron technology (DIMES) – TU-Delft, The Netherlands
1998-1999 IMEC – Leuven – Belgium
2004-pres. Ecole Polytechnique Fédérale de Lausanne, Switzerland
2007-pres. Frank Reidy Research Center for Bioelectronics, Old Dominion University, Norfolk, Virginia, USA
2007-pres. Tel-Aviv University, Tel-Aviv, Israel
2008-pres. Wroclaw University of Technology, Poland
2009-pres. University of Southern California, USA
2010-pres. Military University, Warsaw, Poland

2010-pres.	Public University of Navarra – Pamplona - Spain
2010-pres.	Vrije University Amsterdam, The Netherlands
2012-pres.	University of Cluj-Napoca - Romania
2013-2015	Tufts University - Boston - USA
2013-pres.	INESCPORTO- Porto - Portugal
2014-pres.	University of Cantabria - Santander - Spain
2016-pres.	Nanjing University – Nanjing - P. R. China
2016-pres.	University of Aveiro – Aveiro - Portugal

National collaborations

2000-pres.	National Research Council – Institute for Electromagnetic Sensing of the Environment (CNR-IREA)
2005-pres.	University of Naples Federico II
2005-pres.	Scuola Superiore Sant Anna – Pisa - Italy
2005-pres.	National Research Council - Institute for Protein Biochemistry (CNR-IBP)
2006-pres.	Istituto Nazionale di Geofisica e Vulcanologia - Italy
2009-pres.	CIRA - Centro Italiano di Ricerche Aerospaziali - Italy
2013-pres.	University of Pavia - Department of Chemistry

Scientific publications

1988-pres.	146 papers in international journals, 7 international book chapters, 6 papers in national journals, 141 international conference proceedings, 40 national conference proceedings.
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Scientific qualification (according to SCOPUS)

1988-pres.	H-Index: 29; Citations: 2760; Documents: 272
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List of scientific publications:

- International Journals

- AI1** R. Bruzzese, V. Berardi, F. Cappiello, S. Solimeno, N. Spinelli, A. Cutolo, L. Zeni, «Experimental investigation of macropulse fluctuations in a picosecond neodymium-doped yttrium aluminium garnet laser», JOURNAL OF PHYSICS D: APPLIED PHYSICS **21**, 1710 (1988).
- AI2** A. Cutolo, L. Zeni, V. Berardi, R. Bruzzese, S. Solimeno, N. Spinelli, «Measurement of pulse lengthening with pulse energy increase in picosecond Nd:YAG laser pulses», JOURNAL OF APPLIED PHYSICS **65**, 2187 (1989).
- AI3** A. Cutolo, L. Zeni, V. Berardi, R. Bruzzese, S. Solimeno, N. Spinelli, «Mode size and time duration fluctuations in a picosecond Nd:YAG laser», OPTICS LETTERS **14**, 494 (1989).
- AI4** L. Zeni, A. Cutolo, S. Solimeno, «Second harmonic generation as a tool for measuring mode coupling, pulse length and mode size in short laser pulses», JOURNAL OF MODERN OPTICS, **37**,

2085 (1990).

AI5 A. Cutolo, L. Zeni, «Self induced mismatching effects in harmonic generation with ultrashort laser pulses», *OPTICS AND LASER TECHNOLOGY*, **23**, 109 (1991).

AI6 A. Cutolo, A. Esposito, T. Isernia, R. Pierri, L. Zeni, «Characterization of the transverse modes in a laser beam: Analysis and application to a Q-switched Nd:YAG laser», *APPLIED OPTICS*, **31**, 2722 (1992).

AI7 A. Cutolo, L. Zeni, «Improvements to the diagnostics of beam quality in CW and pulsed laser systems», *OPTICS COMMUNICATIONS*, **89**, 223 (1992).

AI8 A. Cutolo, F. Ferreri, T. Isernia, R. Pierri, L. Zeni, «Measurement of the waist and the power distribution across the transverse modes of a laser beam», *OPTICAL AND QUANTUM ELECTRONICS*, **24**, S963 (1992)

AI9 S. Panachia, A. Cutolo, S. Solimeno, L. Zeni, «Background free autocorrelators by counter propagating surface plasmons», *OPTICS COMMUNICATIONS*, **100**, 215 (1993).

AI10 G. Breglio, A. Cutolo, P. Spirito, L. Zeni, «Interferometric measurement of electron-hole pair recombination lifetime as a function of the injection level», *IEEE ELECTRON DEVICE LETTERS*, **14**, 487 (1993).

AI11 G. Breglio, A. Cutolo, L. Zeni, F. Corsi, D. De Venuto, G. Portacci, «Gain switched laser diodes for the characterization of subnanosecond voltage pulses», *OPTICS COMMUNICATIONS*, **111**, 276 (1994).

AI12 A. Cutolo, L. Zeni, «Electrically driven supergaussian mirrors», *PURE AND APPLIED OPTICS*, **3**, 467 (1994).

AI13 S. Daliento, A. Sanseverino, P. Spirito, P.M. Sarro, L. Zeni, «Recombination centers identification in very thin silicon epitaxial layers via lifetime measurements», *IEEE ELECTRON DEVICE LETTERS* **17**, 148 (1996)

AI14 A. Cutolo, T. Isernia, I. Izzo, R. Pierri, L. Zeni, «Transverse mode analysis of a laser beam by near and far field intensity measurements» *APPLIED OPTICS*, **34**, 7974 (1995)

AI15 A. Irace, G. Breglio, A. Luciano, A. Cutolo, L. Zeni, «A novel configuration for a wide range high power fiber optic current sensor», *EUROPEAN TRANSACTIONS ON ELECTRICAL POWER ENGINEERING* **7**, 319 (1997)

AI16 A. Cutolo, M. Della Noce, L. Zeni, «Real time measurement of transverse mode mixing effects in a Q-Switched Nd:YAG laser», *APPLIED OPTICS*, **35**, 2544 (1996)

AI17 R. Bernini, A. Cutolo, A. Irace, P. Spirito, L. Zeni, «Contactless characterization of the recombination process in silicon wafers: separation between bulk and surface contributions», *SOLID STATE ELECTRONICS*, **39**, 1165 (1996)

AI18 A. Cutolo, M. Iodice, P. Spirito, L. Zeni, «Silicon Electro-Optic Modulator Based on a Three Terminal Device Integrated in a Low-Loss Single-Mode SOI Waveguide», *IEEE JOURNAL OF LIGHTWAVE TECHNOLOGY*, **18**, 505-518 (1997)

AI19 A. Cutolo, M. Iodice, A. Irace, P. Spirito and L. Zeni «An electrically controlled Bragg reflector integrated in a rib SOI waveguide», *APPLIED PHYSICS LETTERS*, July (1997)

AI20 A. Cutolo, A. Irace, P. Spirito, L. Zeni, «Optical measurement of effective recombination lifetime in silicon epitaxial layers», *APPLIED PHYSICS LETTERS*, (1997)

AI21 S. Daliento, A. Sanseverino, P. Spirito, L. Zeni, «Parametric description of the effect of electron irradiation on recombination lifetime in silicon layers: an experimental approach», *IEEE TRANSACTIONS ON POWER ELECTRONICS*, **14**, 117 (1999)

AI22 A. Cutolo, S. Daliento, A. Sanseverino, G.F. Vitale, L. Zeni, «An optical technique to measure the bulk lifetime and the surface recombination velocity in silicon samples based on a laser diode probe system», *SOLID STATE ELECTRONICS*, **42**, 1035-1038 (1998)

AI23 G. Breglio, A. Cutolo, A. Irace, P. Spirito, L. Zeni, M. Iodice, P.M. Sarro, «Two silicon optical modulators realizable with a fully compatible bipolar process», *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*, **4**, 1003 (1998)

AI24 L. Zeni, R. Bernini, R. Pierri, «Reconstruction of doping profiles in semiconductor materials

- using optical tomography», *SOLID STATE ELECTRONICS*, **43**, 761-769 (1999)
- AI25** P. Spirito, S. Daliento, A. Sanseverino, L. Zeni, "Comment to: Temperature dependence of carrier recombination lifetime in Si wafers", *JOURNAL OF ELECTROCHEMICAL SOCIETY*, **146**, 1273 (1999)
- AI26** A. Irace, L. Sirleto, G.F. Vitale, A. Cutolo, L. Zeni, J. Horzel, J. Szlufcik, "Transverse probe optical lifetime measurement as a tool for in-line characterization of the fabrication process of a silicon solar cell", *SOLID STATE ELECTRONICS*, **45**, 2235-2242 (1999)
- AI27** G. Breglio, A. Cutolo, A. Irace, P. Spirito, L. Zeni, "New experimental results of optically activated BMFET switches with different cell design", *IEEE TRANSACTIONS ON POWER ELECTRONICS*, **14**, 877 (1999)
- AI28** L. Zeni, R. Bernini, R. Pierri, "Optical tomography for dielectric profiling in processing electronic and optoelectronic materials", *Chemical Engineering Journal*, **77**, 137-142 (2000).
- AI29** R. Bernini, R. Pierri, L. Zeni, "An iterative method for optical reconstruction of graded index profiles in planar dielectric waveguides", *IEEE/OSA Journal of Lightwave Technology*, **18**, 729-736 (2000)
- AI30** L. Zeni, S. Campopiano, A. Cutolo, G. D'Angelo, "Power semiconductor laser diode arrays characterization", *Optics and Lasers in Engineering*, **39**, 203-217 (2003)
- AI31** A. Irace, L. Sirleto, P. Spirito, G. F. Vitale, A. Cutolo, S. Campopiano and L. Zeni, "Optical Characterization of the Recombination Process in Silicon Wafers, Epilayers and Devices", *Optics and Lasers in Engineering*, **39**, 219-232 (2003).
- AI32** R. Bernini, S. Campopiano, L. Zeni, "Design and analysis of an integrated ARROW refractive index sensor ", *Applied Optics*, **41**, 70-73 (2002)
- AI33** L. Sirleto, A. Irace, G.F. Vitale, L. Zeni, A. Cutolo, "Separation of the bulk lifetime and surface recombination velocity obtained by transverse optical probing and multi-wavelength technique", *Optics and Lasers in Engineering*, **38**, 461-472 (2002)
- AI34** R. Bernini, L. Crocco, A. Minardo, F. Soldovieri, L. Zeni, "Frequency domain approach to distributed fiber-optic Brillouin sensing", *Optics Letters*, **27**, nr. 5, (2002)
- AI35** R. Bernini, S. Campopiano, L. Zeni, "Silicon micromachined hollow optical waveguides for sensing applications", *Journal of Selected Topics in Quantum Electronics*, **8**, 106-110 (2002)
- AI36** R. Bernini, A. Minardo, L. Zeni, "Reconstruction technique for stimulated Brillouin scattering distributed fiber optic sensors", *Optical Engineering*, **41**, nr.9, 2186-2194 (2002)
- AI37** R. Bernini, L. Crocco, A. Minardo, F. Soldovieri, L. Zeni "All frequency domain distributed fiber-optic Brillouin sensing", *IEEE Sensors Journal*, **3**, 36-43 (2003)
- AI38** L. Sirleto, A. Irace, G.F. Vitale, L. Zeni, A. Cutolo, "Separation of bulk lifetime and surface recombination velocity by multiwavelength technique", *Electronics Letters*, **38**, 1742-1743 (2002)
- AI39** L. Sirleto, A. Irace, G.F. Vitale, L. Zeni, A. Cutolo, "All optical multi-wavelength technique for the simultaneous measurement of bulk recombination lifetimes and front/rear surface recombination velocity in single crystal silicon samples", *Journal of Applied Physics*, **93**, 3407-3413 (2003)
- AI40** G. Coppola, A. Irace, G. Breglio, M. Iodice, L. Zeni, A. Cutolo, P. M. Sarro, "Three terminal optoelectronics devices integrated into a silicon on silicon waveguide", *Optics and Lasers in Engineering*, **39**, 317-332 (2003)
- AI41** R. Bernini, S. Campopiano, C. de Boer, P. M. Sarro, L. Zeni "Planar antiresonant reflecting optical waveguides as integrated optical refractometers", *IEEE Sensors Journal*, **3**, 652-657 (2003)
- AI42** R. Bernini, A. Minardo, L. Zeni, "Accuracy enhancement in Brillouin distributed fiber-optic temperature sensors using signal processing techniques", *IEEE Photonics Technology Letters*, **16**, 1143-1145 (2004)
- AI43** R. Bernini, S. Campopiano, L. Zeni, P.M. Sarro, "ARROW optical waveguides based sensors", *Sensors and Actuators B*, **100**, 143-146 (2004)
- AI44** S. Campopiano, R. Bernini, L. Zeni, P.M. Sarro, "Microfluidic sensor based on integrated optical hollow waveguides", *Optics Letters*, **29**, 1894-1896 (2004)

- AI45** R. Bernini, A. Minardo, L. Zeni, "Stimulated Brillouin scattering frequency-domain analysis in a single-mode optical fiber for distributed sensing", *Optics Letters*, **29**, 1977-1979 (2004)
- AI46** A. Cusano, A. Minardo, L. Zeni, R. Bernini, M. Giordano, "Response of Fiber Bragg Gratings to Longitudinal Ultrasonic waves", *IEEE Transactions on Ultrasonics, Ferroelectrics, and frequency Control*, **52**, 304-312 (2005)
- AI47** A. Minardo R. Bernini, L. Zeni, L. Thevenaz, F. Briffod, "A reconstruction technique for long-range Stimulated Brillouin Scattering distributed fiber-optic sensors: experimental results", *Measurement Science and Technology*, **16**, 900-908 (2005)
- AI48** R. Bernini, A. Minardo, L. Zeni, "Distributed fiber-optic frequency-domain Brillouin sensing", *Sensors and Actuators A:Physical*, **123**, 337-342 (2005)
- AI49** R. Bernini, M. Fraldi, A. Minardo, V. Minutolo, F. Carannante, L. Nunziante, L. Zeni, "Damage detection in bending beams through Brillouin distributed optic-fibre sensor", *Bridge Structures*, **1**, 355-363 (2005)
- AI50** R. Bernini, A. Minardo, N. Cennamo, L. Zeni, "Planar waveguides for fluorescence-based biosensing: optimization and analysis", *IEEE Sensors Journal* **6**, 1218-1226 (2006)
- AI51** S. D'Auria, M. Staino, A. Varriale, V. Scognamiglio, M. Rossi, A. Parracino, S. Campopiano, N. Cennamo, L. Zeni, "The Odorant-binding protein from *Canis familiaris*: purification, characterization and new perspectives in biohazard assessment", *Protein & Peptide Letters*, **13**, 349-352 (2006)
- AI52** R. Bernini, A. Minardo, L. Zeni, "An accurate high resolution technique for distributed sensing based on frequency domain Brillouin scattering", *IEEE Photonics Technology Letters* **18**, 280-282 (2006)
- AI53** A. de Angelis, L. Zeni, G. Leone, "Blumlein configuration for variable length high-voltage pulse generation by simultaneous switch control", *Electronics Letters*, **42**, 205-206 (2006)
- AI54** R. Bernini, M. Fraldi, A. Minardo, V. Minutolo, F. Carannante, L. Nunziante and L. Zeni, "Identification of defects and strain error estimation for bending steel beams using time domain Brillouin distributed optical fiber sensors", *Smart Materials and Structures*, **15** 612-622 (2006).
- AI55** A. Minardo, R. Bernini, F. Mottola and L. Zeni, "Optimization of metal-clad waveguides for sensitive fluorescence detection", *Optics Express*, **14**, 3512-3527 (2006)
- AI56** A. Minardo, R. Bernini, L. Zeni, "Low distortion Brillouin slow light in optical fibers using AM modulation", *Optics Express* **14**, 5866-5876 (2006)
- AI57** R. Bernini, E. De Nuccio, F. Brescia, A. Minardo, L. Zeni, P. M. Sarro, R. Palumbo, M. R. Scarfi, "Development and characterization of an integrated silicon micro flow cytometer", *Analytical & Bioanalytical Chemistry*, **386**, 1267-1272 (2006)
- AI58** R. Bernini, A. Minardo, L. Zeni, "Accurate high-resolution fiber-optic distributed strain measurements for structural health monitoring", *Sensors & Actuators: A. Physical*, **134**, 389-395 (2007)
- AI59** R. Bernini, A. Minardo, L. Zeni, "Self-demodulated Heterodyne Frequency Domain Distributed Brillouin Fiber Sensor", *IEEE Photonics Technology Letters*, **19**, 447 - 449 (2007)
- AI60** R. Bernini, E. De Nuccio, A. Minardo, L. Zeni, P. M. Sarro, "2D MMI devices based on integrated hollow ARROW waveguides", *Journal of Selected Topics in Quantum Electronics*, **13**, 194 - 201 (2007)
- AI61** R. Bernini, A. Minardo, G.V. Persiano, A. Vaccaro, D. Villacci, L. Zeni: "Dynamic Loading of Overhead Lines by Adaptive Learning Techniques and Distributed Temperature Sensing" *IET Generation Transmission and Distribution* **1**, 912-919 (2007)
- AI62** A. Minardo, R. Bernini, and L. Zeni, "Stimulated Brillouin scattering modeling for high-resolution, time-domain distributed sensing", *Optics Express*, **15**, 10397-10407 (2007)
- AI63** R. Bernini, M. Tonezzer, F. Mottola, L. Zeni, A. Quaranta, G. Maggioni, S. Carturan, G. Della Mea, "Volatile organic compounds detection using porphyrin-based metal-cladding leaky waveguides", *Sensors & Actuators: B. Chemical* **127**, 231-236 (2007)

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