

## Curriculum scientifico e professionale di Romeo Bernini

### Posizione ed esperienza professionale

- Dal 17/02/2020 è dirigente di ricerca presso l'Istituto per il Rivelamento Elettromagnetico dell'Ambiente (IREA) del Consiglio Nazionale delle Ricerche (CNR)
- Dal 01/01/2007 è primo ricercatore presso l'Istituto per il Rivelamento Elettromagnetico dell'Ambiente (IREA) del Consiglio Nazionale delle Ricerche (CNR)
- Dal 15/03/2001 è ricercatore presso l'Istituto per il Rivelamento Elettromagnetico dell'Ambiente (IREA) del Consiglio Nazionale delle Ricerche (CNR)
- Dal 01/11/1999 è titolare di un assegno di ricerca, presso il Dipartimento di Ingegneria dell'Informazione della Seconda Università di Napoli, sulla caratterizzazione di dispositivi elettronici e materiali semiconduttori.

### Formazione

- Laurea in Ingegneria Elettronica con votazione 110/100 e lode presso la Facoltà di Ingegneria dell'Università di Napoli Federico II, 1995.
- Dottore di ricerca in Ingegneria Elettronica presso la Facoltà di Ingegneria della Seconda Università di Napoli, 1999

### Responsabilità di progetti scientifici internazionali

- Responsabile IREA del progetto europeo H2020 CLEAN SKY 2 STRONGRCRAFT " Safe, Technically Robust and Optical New Generation fuel system to be integrated on new RotorCRAFT ". Grant Agreement number 785306.
- Responsabile IREA del progetto europeo H2020 WaterWorks2015 ERA-NET Cofund SMARTECOPONICS "On-site microbial sensing for minimising environmental risks from aquaponics to human health",
- Responsabile IREA del progetto europeo H2020 CLEAN SKY 2 BRIDAS "Brillouin Distributed sensor for Aeronautical Structures ". Grant Agreement number 717064.
- Responsabile IREA del progetto europeo FP7 HEMOSPEC "Advanced spectroscopic hemogram for personalized care against live threatening infections using an integrated chip-assisted bio-photonic system", Grant Agreement number 611682.
- Responsabile IREA del progetto europeo FP7 NANODEM " NANOphtonic DEvice for Multiple therapeutic drug monitoring ". Grant Agreement number 318372.
- Responsabile IREA del progetto europeo FP7 SAFUEL " The SAfer FUEL system ". Grant Agreement number 314032.

### Attività didattica, di diffusione scientifica e di formazione dei giovani alla ricerca.

- Direttore e docente delle Terza scuola nazionale d Sui Biosensori Ottici E Biofotonica, Napoli, 2017
- Organizzatore e docente della "Seconda Scuola Nazionale sui Biosensori Ottici e Biofotonica" (Otranto, 14-20 Settembre 2014)
- Docente delle Prima scuola nazionale di Prima Scuola Nazionale Sui Biosensori Ottici E Biofotonica, Ischia, 2010.
- Docente a contratto dal 2002 al 2005 per l'insegnamento di "Elettronica" per il corso di laurea in Ingegneria Energetica della Facoltà di Ingegneria dell'Università degli studi del Sannio.
- Relatore e Correlatore di tesi di laurea e di dottorato

### Partecipazione a Commissioni, Commissioni di valutazione.

- Valutatore progetti di ricerca e sviluppo a valere sul fondo per la crescita sostenibile (FCS) del MISE , Italia, 2014 - 205
- Valutatore progetti ricerca Programma per Giovani Ricercatori "Rita Levi Montalcini", Italia
- Valutatore progetti ricerca per il National Science Centre (Narodowe Centrum Nauki – NCN), Polonia
- Valutatore progetti ricerca futuro in ricerca (FIR) giovani, Italia

### Partecipazione a Comitati Organizzatori di Congressi scientifici

- Membro del program committee della conferenza internazionale PHOTOPTICS 2019
- Membro dell' Advisory Committee of ASCOS, the Advanced Study Course on Optical Sensors dal 19/07/2019
- Organizzatore e general chair della conferenza Internazionale sui sensori chimici e biosensori Europtrode XIV dal 25-03-2018 al 28-03-2018
- Europt(ro)de conference permanent steering committee member dal 22-04-2018 a oggi
- Membro del Subcommittee "Biophotonics and Optofluidics" della Conference on Lasers and Electro-Optics/International Quantum Electronics (CLEO) 2012-2015.
- Membro del program committee della conferenza Integrated Optics: Devices, Materials, and Technologies XIX, Photonic west , 2015-oggi.

### Lezioni magistrali ad invito e Keynote in congressi nazionali ed internazionali

- Invited talk "Optofluidics for lab on chip applications" alla conferenza internazionale Photonics and Electromagnetics Research Symposium, PIERS 2019 in Prague, Czech Republic, 17-20 June, 2019
- Invited talk "Versatile optofluidic platform for Raman and fluorescence spectroscopy of liquids" alla conferenza internazionale SPIE 2019 International Symposium on Optics + Optoelectronics, in Prague, Czech Republic, 01-04 April, 2019.
- Plenary talk "Optofluidic Waveguides for Photonic Devices and Sensing Applications" alla conferenza internazionale Optofluidics 2016, 24-27, July, Beijing, China
- Atto di riferimento: Mail invito a Romeo Bernini, atti conferenza
- Invited talk "Optofluidic devices and platforms for sensing applications" alla conferenza internazionale Progress In Electromagnetics Research Symposium, PIERS 2015 in Prague, Czech Republic, 06-09 July, 2015
- Invited talk "Silicon-PDMS optofluidic integration" alla conferenza internazionale Silicon Photonics X, San Francisco California USA, 9-12 February 2015.
- Invited lecture "Optofluidics: a new tool for sensing" alla conferenza internazionale European Workshop on Optical Fibre Sensors (EWOFS-2013), Krakow POLAND 19-22 MAY 2013.
- Invited talk "Optofluidics as a novel platform for optical sensors" alla conferenza nazionale Italian National Conference on Condensed Matter Physics Fismat 2013, Milan (Italy), 09-13 September 2013.
- Invited talk "Optofluidics: waveguides and devices" alla conferenza internazionale Integrated Optics: Devices, Materials, and Technologies XVI Conference, SPIE Photonic West 2012, San Francisco, California, USA. 21–26 January 2012
- Invited talk "Integrated optofluidic interferometric devices" alla conferenza internazionale 1 EOS Conference on Optofluidics (EOSOF 2011) 23 May 2011 - 25 May 2011 Munich (ICM), Germany.
- Invited Talk "Waveguide-based optofluidics" alla conferenza internazionale Silicon Photonics V Conference, SPIE Photonic West 2010, San Francisco, USA, 23 – 28 January 2010.
- Invited Talk "Integrated silicon optical sensors based on hollow core waveguide" alla conferenza internazionale Silicon Photonics II Conference, Photonics West 2007, San Jose, California USA, 20–25 January 2007.
- Invited talk "Metal-cladding leaky waveguides for chemical and biochemical sensing applications" alla conferenza nazionale dell'associazione sensori e microsistemi AISEM 2007. AISEM 2007, Napoli, 12-14 February.

### Publicazioni su riviste internazionali

1. G. Testa, G. Persichetti, and R. Bernini. "Low-cost high-resolution distributed optical fiber system for spectrophotometric analysis of liquid samples: Application to detection of azo dyes." *Sensors and Actuators Reports* 7 (2024): 100190.
2. R. Zahoor, R. Vallifuoco, E. Catalano, R. Bernini, L. Zeni and A. Minardo, "Distributed Vibration Sensing Through a Network Analysis Optical Frequency-Domain Reflectometer," in *Journal of Lightwave Technology*, vol. 42, no. 5, pp. 1733-1739, 1 March, 2024.
3. G. Breglio, R. Bernini, G. M. Berruti, F. A. Bruno, S. Buontempo, S. Campopiano, E. Catalano, M. Consales, A. Coscetta, A. Cutolo, and et al. "Innovative Photonic Sensors for Safety and Security, Part III: Environment, Agriculture and Soil Monitoring" *Sensors* 23, no. 6: 3187, 2023.
4. A. Minardo, R. Bernini, G. M. Berruti, G. Breglio, F. A. Bruno, S. Buontempo, S. Campopiano, E. Catalano, M. Consales, A. Coscetta, and et al. 2023. "Innovative Photonic Sensors for Safety and Security, Part I: Fundamentals, Infrastructural and Ground Transportations" *Sensors* 23, no. 5: 2558. 2023.
5. A. Cutolo, R. Bernini, G. M. Berruti, G. Breglio, F. A. Bruno, S. Buontempo, E. Catalano, M. Consales, A. Coscetta, A. Cusano, and et al.. "Innovative Photonic Sensors for Safety and Security, Part II: Aerospace and Submarine Applications" *Sensors* 23, no. 5: 2417, 2023.
6. E. Catalano, R. Vallifuoco, R. Bernini, L. Zeni, and A. Minardo, "Multi-taper array for dynamic strain measurements by a Brillouin optical frequency-domain analysis," *Opt. Continuum* 2, 54-64, 2023.
7. G. Persichetti, G. Testa, P. Imperatore and R. Bernini, "Light Diffusing Optical Fiber Sensor for Distributed Optical Absorption Spectroscopy and Chemical Sensing," in *IEEE Sensors Journal*, vol. 23, no. 3, pp. 2176-2183, 1 Feb.1, 2023.
8. E. Catalano, R. Vallifuoco, R. Bernini, L. Zeni, and A. Minardo, "Brillouin scattering for refractive index sensing in non-adiabatic tapers," *Opt. Express* 30, 39868-39876, 2022.
9. G. Testa, G. Persichetti, and R. Bernini. "Planar Optofluidic Integration of Ring Resonator and Microfluidic Channels" *Micromachines* 13, no. 7: 1028, 2022.
10. P. Imperatore, G. Testa, G. Persichetti, R. Bernini, R., "Power Coupling Between Light Diffusing Fibers: Modelling and Validation", *Journal of Lightwave Technology*, 40 (3), pp. 813-821, 2022.
11. Catalano, E., Vallifuoco, R., Bernini, R., Zeni, L., Minardo, A., "Quasi-distributed refractive index sensing by stimulated Brillouin scattering in tapered optical fibers", *Journal of Lightwave Technology* 40 (8), 2619-2624, 2022.
12. Tombelli, S., Trono, C., Berneschi, S., Berrettoni, C., Giannetti, A., Bernini, R., Persichetti, G., Testa, G., Orellana, G., Salis, F., Weber, S., Luppa, P.B., Porro, G., Quarto, G., Schubert, M., Berner, M., Freitas, P.P., Cardoso, S., Franco, F., Silverio, V., Lopez-Martinez, M., Hilbig, U., Freudenberger, K., Gauglitz, G., Becker, H., Gärtner, C., O'Connell, M.T., Baldini, F. "An

- integrated device for fast and sensitive immunosuppressant detection”, *Analytical and bioanalytical chemistry* 414 (10), 3243-3255, 2022.
13. G. Testa, G. Persichetti, R. Bernini, ”All-polymeric high-Q optofluidic Fabry–Perot resonator”, *Optics Letters*, 46 (2), pp. 352-355, 2021.
  14. Imperatore, P., Persichetti, G., Testa, G., Bernini, R.,” Continuous Liquid Level Sensor Based on Coupled Light Diffusing Fibers”, *IEEE Journal of Selected Topics in Quantum Electronics*, 26 (4),2020.
  15. S Berneschi, C Trono, R Bernini, A Giannetti, G Persichetti, G Testa, S. Tombelli, F. Baldini, ”A waveguide absorption filter for fluorescence measurements”, *Sensors and Actuators B: Chemical* 281, 90-95, 2019.
  16. G. Persichetti, E. Viaggiu, G. Testa, R. Congestri, R. Bernini, “Spectral discrimination of planktonic cyanobacteria and microalgae based on deep UV fluorescence”, *Sensors and Actuators B: Chemical* 284, 228-235, 2019.
  17. R Bernini, G Persichetti, E Catalano, L Zeni, A Minardo , “Refractive index sensing by Brillouin scattering in side-polished optical fibers”, *Optics letters* 43 (10), 2280-2283, 2018.
  18. G Testa, G Persichetti, R Bernini, ”Hollow-Core-Integrated Optical Waveguides for Mid-IR Sensors”, *IEEE Journal of Selected Topics in Quantum Electronics* 24 (6), 1-8, 2018.
  19. G Persichetti, IA Grimaldi, G Testa, R Bernini, ”Self-assembling and packaging of microbottle resonators for all-polymer lab-on-chip platform”, *Sensors and Actuators A: Physical* 280, 271-276,2018.
  20. R Bernini, G Persichetti, E Catalano, L Zeni, A Minardo ,”Refractive index sensing by Brillouin scattering in side-polished optical fibers”, *Optics letters* 43 (10), 2280-2283, 2018.
  21. A Barucci, IA Grimaldi, G Persichetti, S Berneschi, S Soria, B Tiribilli, R. Bernini, F. Baldini, G. Nunzi Conti, ”Selective coupling of Whispering Gallery Modes in film coated micro-resonators”, *Optics express* 26 (9), 11737-11743, 2018.
  22. P. Minzioni, R. Osellame, C. Sada, S. Zhao, F.G. Omenetto, K. B Gylfason, T. Haraldsson, Y. Zhang, A. Ozcan, A. Wax, F. Mugele, H. Schmidt, G. Testa, R. Bernini, J. Guck, C. Liberale, K. Berg-Sørensen, J. Chen, M. Pollnau, S. Xiong, A.Q. Liu, C.C. Shiu, S.K. Fan, D. Erickson, D. Sinton, ”Roadmap for optofluidics”, *Journal of Optics* 19 (9), 093003, 2017.
  23. G Onorato, G Persichetti, IA Grimaldi, G Testa, R Bernini, “Optical fiber fuel level sensor for aeronautical applications”, *Sensors and Actuators A: Physical* 260, 1-9, 2017.
  24. G Persichetti, IA Grimaldi, G Testa, R Bernini, ”Multifunctional optofluidic lab-on-chip platform for Raman and fluorescence spectroscopic microfluidic analysis”, *Lab on a Chip* 17 (15), 2631-2639, 2017.
  25. N. Cennamo, G Testa, S Marchetti, L De Maria, R Bernini, L Zeni, , “Intensity-based plastic optical fiber sensor with molecularly imprinted polymer sensitive layer”, *Sensors and Actuators B: Chemical* 241, 534-540, 2017.
  26. A. Minardo, R. Bernini, R Ruiz-Lombera, J Mirapeix, JM Lopez-Higuera, “Proposal of Brillouin optical frequency-domain reflectometry (BOFDR)”, *Optics Express* 24 (26), 29994-30001, 2016.
  27. IA Grimaldi, G Testa, G Persichetti, F Loffredo, F Villani, R. Bernini, “Plasma functionalization procedure for antibody immobilization for SU-8 based sensor”, *Biosensors and Bioelectronics* 86, 827-833, 2016.
  28. A Minardo, A Coscetta, R. Bernini, L Zeni , “Brillouin Optical Time Domain Analysis in Silica Fibers at 850-nm Wavelength”, *IEEE Photonics Technology Letters* 28 (22), 2577-2580, 2016.
  29. G. Persichetti, R. Bernini, “Water monitoring by optofluidic Raman spectroscopy for in situ applications”, *Talanta* 155, 145-152, 2016.
  30. G. Testa, G. Persichetti, R. Bernini, ”Liquid core ARROW waveguides: a promising photonic structure for integrated optofluidic microsensors”, *Micromachines* 7 (3), 47, 2016.
  31. A. Minardo, A. Coscetta, R. Bernini, L. Zeni, “Heterodyne slope-assisted Brillouin optical time-domain analysis for dynamic strain measurements”, *Journal of Optics* 18 (2), 025606, 2016.
  32. A. Minardo, R. Bernini, L. Zeni, ”Analysis of SNR penalty in Brillouin Optical Time-Domain Analysis sensors induced by laser source phase noise”, *Journal of Optics* 18 (2), 025601,2016. .
  33. G. Testa, C. Collini, L. Lorenzelli and R. Bernini, "Planar Silicon-Polydimethylsiloxane Optofluidic Ring Resonator Sensors," in *IEEE Photonics Technology Letters*, vol. 28, no. 2, pp. 155-158, 15 Jan.15, 2016.
  34. I.A. Grimaldi, G. Testa, R. Bernini, ”Flow through ring resonator sensing platform”, *RSC Advances* 5 (86), 70156-70162, 2015.
  35. G. Testa, G. Persichetti, and R. Bernini, “Optofluidic Approaches for Enhanced Microsensor Performances “, *Sensors*, Vol.15, pp. 465-484, 2015.
  36. G. Testa, G. Persichetti, and R. Bernini, “Micro flow cytometer with self-aligned 3D hydrodynamic focusing”, *Biomedical Optics Express*, Vol. 6, Issue 1, pp. 54-62, 2015.
  37. G. Persichetti, G. Testa, and R. Bernini, “Optofluidic jet waveguide enhanced Raman spectroscopy”, *Sensors And Actuators B-Chemical*, Vol. 207, pp.732-739, Part: A, 2015.
  38. A. Minardo, A. Coscetta, R. Bernini, R. Ruiz-Lombera, JM. Serrano, JM. Lopez-Higuera, L. Zeni, “Structural Damage Identification in an Aluminum Composite Plate by Brillouin Sensing”, *IEEE Sensors Journal*, Vol. 15, Issue: 2, Pages: 659-660, 2015.
  39. I.A. Grimaldi, S. Berneschi, G. Testa, F. Baldini, G. N. Conti, R. Bernini, ”Polymer based planar coupling of self-assembled bottle microresonators” *Applied Physics Letters*, Vol. 105, Issue: 23, 2014.
  40. G. Testa, G. Persichetti, R. Bernini, ”Design and Optimization of an Optofluidic Ring Resonator Based on Liquid-Core Hybrid ARROWS”, *IEEE Photonics Journal*, Vol. 6, 2014

41. A. Minardo, R. Bernini, L. Zeni, "Experimental and numerical study on stimulated Brillouin scattering in a graded-index multimode fiber", *Optics Express*, Vol. 22, Issue 14, pp. 17480-17489, 2014.
42. A. Minardo, A. Coscetta, L. Zeni, R. Bernini "High-Spatial Resolution DPP-BOTDA by Real-Time Balanced Detection", *IEEE Photonics Technology Letters*, Vol.26, pp.1251-1254, 2014.
43. A. Minardo, R. Bernini, and L. Zeni, "Distributed Temperature Sensing in Polymer Optical Fiber by BOFDA", *IEEE Photonics Technology Letters*, Vol.26, pp.387-390, 2014.
44. G. Testa, G. Persichetti, P.M. Sarro, R. Bernini, "A hybrid silicon-PDMS optofluidic platform for sensing applications", *Biomedical Optics Express*, Vol.5, pp.417-426, 2014.
45. A. Minardo, R. Bernini, and L. Zeni, "Bend-Induced Brillouin Frequency Shift Variation in a Single-Mode Fiber", *IEEE Photonics Technology Letters*, Vol.25, pp.2362-2364, 2013.
46. A. Minardo, G. Porcaro, D. Giannetta, R. Bernini, and L. Zeni, "Real-time monitoring of railway traffic using slope-assisted Brillouin distributed sensors," *Appl. Opt.* 52, 3770-3776, 2013.
47. A. Minardo, R. Bernini, and L. Zeni, "Limitations and strategies to improve measurement accuracy in differential pulse-width pair Brillouin optical time-domain analysis sensing", *Applied Optics* Vol. 52, pp. 3020–3026, 2013.
48. G. Persichetti, G. Testa, R. Bernini, "High sensitivity UV fluorescence spectroscopy based on an optofluidic jet waveguide", *Optics Express*, Vol.21, pp. 24219-24230, 2013.
49. A. Minardo, A. Coscetta, S. Pirozzi, R. Bernini and L. Zeni, "Experimental modal analysis of an aluminum rectangular plate by use of the slope-assisted BOTDA method", *Smart Materials And Structures*, Vol. 22, Article Number 125035, 2013.
50. A. Minardo, A. Coscetta, S. Pirozzi, R. Bernini, L. Zeni, "Experimental modal analysis of a cantilever beam by use of Brillouin based distributed dynamic strain measurements", *Smart Materials And Structures*, Volume: 21, Issue: 12, Article Number: 125022, 2012
51. G. Persichetti, G. Testa, R. Bernini, "Optofluidic jet waveguide for laser induced fluorescence spectroscopy", *Optics Letters*, Vol. 37, Issue 24, pp. 5115-5117, 2012.
52. A. Minardo, L. Zeni, R. Bernini, "High-Spatial- and Spectral-Resolution Time-Domain Brillouin Distributed Sensing by Use of Two Frequency-Shifted Optical Beam Pairs", *Ieee Photonics Journal*, Volume: 4 Issue: 5 Pages: 1900-1908, 2012.
53. A. Minardo, G. Persichetti, G. Testa, L. Zeni, R. Bernini, "Long term structural health monitoring by Brillouin fiber-optic sensing: a real case", *Journal of geophysical and engineering*, Volume: 9 Issue: 4 Pages: S64-S69, 2012.
54. G. Testa, R. Bernini, "Integrated tunable liquid optical fiber", *Lab on Chip*, Volume: 12 Issue: 19 Pages: 3670-3672, 2012.
55. A. Minardo, R. Bernini L. Zeni, "Spatial Resolution Enhancement in Preactivated BOTDA Schemes by Numerical Processing", *IEEE Photon. Technol. Lett.*, Volume: 24 Issue: 12 Pages: 1003-1005, 2012.
56. A. Minardo, R. Bernini L. Zeni, "Differential techniques for high-resolution BOTDA: an analytical approach", *IEEE Photon. Technol. Lett.*, Volume: 24 Issue: 15 Pages: 1295-1297, 2012.
57. G. Testa, Y. Huang, L. Zeni, P. M. Sarro and R. Bernini, "Hybrid Silicon-PDMS optofluidic ARROW waveguide", *IEEE Photon. Technol. Lett.*, Volume: 24 Issue: 15 Pages: 1307-1309, 2012.
58. R. Bernini A. Minardo, L. Zeni, "Distributed sensing at cm-scale spatial resolution by BOFDA: measurements and signal processing", *IEEE Photonics Journal*, Vol.4, N.1, pp.48-56, 2012.
59. A. Minardo, R. Bernini, L. Amato, L. Zeni, "Bridge monitoring using Brillouin fiber-optic sensors", *IEEE Sensors Journal*, vol.12, no.1, pp.145-150, 2012.
60. R. Bernini, A. Minardo, and L. Zeni, "Long-range distributed Brillouin fiber sensors by use of an unbalanced double sideband probe", *Optics Express* Vol. 19, Iss. 24, pp. 23845–23856. 2011.
61. G. Testa and R. Bernini, "Slot and Layer-Slot Waveguide in the Visible Spectrum", *Journal of Lightwave Technology*, VOL. 29, NO. 19, pp.2979-2984, 2011,
62. A. Minardo, R. Bernini, L. Zeni, "Numerical analysis of single pulse and differential pulse-width pair BOTDA systems in the high spatial resolution regime", *Optics Express*, Vol. 19, Issue 20, pp. 19233-19244 (2011)
63. R. Bernini, A. Minardo, S. Ciaramella, V. Minutolo, and L. Zeni, "Distributed Strain Measurement along a Concrete Beam via Stimulated Brillouin Scattering in Optical Fibers," *International Journal of Geophysics*, vol. 2011, Article ID 710941, 5 pages, 2011.
64. A. Zornoza; A. Minardo, R. Bernini, A. Loayssa, L. Zeni, "Pulsing the Probe Wave to Reduce Nonlocal Effects in Brillouin Optical Time Domain Analysis (BOTDA) Sensors", *IEEE Sensors Journal*, VOL. 11, NO. 4, APRIL 2011.
65. Proto, M.; Bavusi, M.; Bernini, R.; Bigagli, L.; Bost, M.; Bourquin, F.; Cottineau, L.-M.; Cuomo, V.; Vecchia, P.D.; Dolce, M.; Dumoulin, J.; Eppelbaum, L.; Fornaro, G.; Gustafsson, M.; Hugenschmidt, J.; Kaspersen, P.; Kim, H.; Lapenna, V.; Leggio, M.; Loperte, A.; Mazzetti, P.; Moroni, C.; Nativi, S.; Nordebo, S.; Pacini, F.; Palombo, A.; Pascucci, S.; Perrone, A.; Pignatti, S.; Ponzio, F.C.; Rizzo, E.; Soldovieri, F.; Taillade, F. *Transport Infrastructure Surveillance and Monitoring by Electromagnetic Sensing: The ISTIMES Project*. *Sensors*, Vol. 10, pp. 10620-10639, 2010.
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68. R. Bernini, A. Minardo, G. Testa and L. Zeni, "Dynamic strain measurements on a cantilever beam using stimulated Brillouin scattering", *Journal of Smart Materials and Structures*, Volume 19, Number 4, 19 045024, 2010.

69. A. Minardo, G. Testa, L. Zeni, R. Bernini, "Theoretical and Experimental Analysis of Brillouin Scattering in Single-Mode Optical Fiber Excited by an Intensity- and Phase-Modulated Pump", *Journal of Lightwave Technology*, Vol. 28, Iss. 2, pp. 193–200 (2010)
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76. R. Bernini, A. Minardo, L. Zeni, "Dynamic strain measurement in optical fibers by stimulated Brillouin scattering." , *Optics Letters*, Vol. 34, Issue 17, pp. 2613-2615, 2009
77. A Minardo, R Bernini, and L Zeni "Brillouin optical frequency-domain single-ended distributed fiber sensor", *IEEE Sensors Journal*, VOL. 9, NO. 3, 221-222, 2009.
78. A. Minardo, R. Bernini, W. Urbanczyk, Jan Wojcik, N. Gorbатов, M. Tur, L. Zeni, "Stimulated Brillouin scattering in highly-birefringent microstructure fiber: experimental analysis", Vol. 33, No. 20, *Optics Letters*, pp.2329-2331, 2008.
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80. O. Zeni, R. Palumbo, R. Bernini, L. Zeni, M. Sarti, M. R. Scarfi, "Cytotoxicity Investigation on Cultured Human Blood Cells Treated with Single-Wall Carbon Nanotubes", *Sensors* , Vol. 8, pp.488-499, 2008.
81. R. Bernini, E. De Nuccio, A. Minardo, L. Zeni and P.M. Sarro, "Liquid-core/liquid-cladding integrated silicon ARROW waveguides", *Optics Communications*, Vol.281, pp.2062-2066, 2008.
82. R Bernini, A Minardo, and L Zeni, "Vectorial dislocation monitoring of pipelines by use of Brillouin-based fiber-optics sensors", *Journal of Smart Materials and Structures*, Vol. 17, n.1, 015006 (8pp.), 2008.
83. R. Bernini, M. Tonezzer, F. Mottola, L. Zeni, A. Quaranta, G. Maggioni, S. Carturan and G. Della Mea "Volatile organic compounds detection using porphyrin-based metal-cladding leaky waveguides", *Sensors and Actuators B*, Vol.127, Issue.1, pp.231-236 2007.
84. A. Minardo, R. Bernini, and L. Zeni " Stimulated Brillouin scattering modeling for high-resolution, time-domain distributed sensing", *Optics Express*, Vol. 15, No. 16, pp.10397-10407, 2007.
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