

Optosensing Srl

Scientific Publications

authors	title	info	year
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
R. Bernini, A. Minardo, L. Zeni	Reconstruction technique for stimulated Brillouin scattering distributed fiber optic sensors	Optical Engineering, 41, nr.9, 2186- 2194	2002
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
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
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
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
R. Bernini, A. Minardo, L. Zeni	Distributed fiber-optic frequency-domain Brillouin sensing	Sensors and Actuators A:Physical, 123, 337-342	2005

via Vincenzo Tiberio, 13 - Napoli
via Adriano Olivetti, 1 - Pozzuoli (NA)

+39 081 7510326

info@hpsystem.it

info@optosensing.it

www.hpssystem.it

www.optosensing.it



HPSYSTEM.IT



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
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
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
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
R. Bernini, A. Minardo, L. Zeni	Self-demodulated Heterodyne Frequency Domain Distributed Brillouin Fiber Sensor	IEEE Photonics Technology Letters, 19, 447 - 449	2007
A. Minardo, R. Bernini, and L. Zeni	Stimulated Brillouin scattering modeling for high-resolution, time-domain distributed sensing	Optics Express, 15, 10397-10407	2007
R. Bernini, A. Minardo, L. Zeni	Vectorial dislocation monitoring of pipelines by use of Brillouin-based fiber-optics sensors	Smart Materials and Structures, 17 15006-15014	2008
A. Minardo, R. Bernini, W. Urbanczyk, J. Wojcik, N. Gorbатов, M. Tur, L. Zeni	Stimulated Brillouin scattering in highly-birefringent microstructure fiber: experimental analysis	Optics Letters, .33, n. 20, 2329-2331	2008
L. Olivares, E. Damiano, L. Picarelli, R. Greco, R. Bernini, A. Minardo, L. Zeni	An instrumented flume for investigation of the mechanics of rainfall-induced landslides in unsaturated granular soils	Geotechnical Testing Journal, 32, No. 2, 108-118	2009
A. Minardo, R. Bernini, L. Zeni	Brillouin optical frequency-domain single-ended distributed fiber sensor	IEEE Sensors Journal, 9, no. 3, 221-222, 10.1109/JSEN.2008.2011962	2009
A. Minardo, R. Bernini, L. Zeni	A simple technique for reducing pump depletion in long-range distributed Brillouin fiber sensors	IEEE Sensors Journal, 9, no.6, 633-634	2009

via Vincenzo Tiberio, 13 - Napoli
via Adriano Olivetti, 1 - Pozzuoli (NA)

+39 081 7510326

info@hpsystem.it
info@optosensing.it

www.hpssystem.it
www.optosensing.it



HPSYSTEM.IT

**opto
sensing**

A. Minardo, R. Bernini, L. Zeni	Dynamic strain measurement in optical fibers by stimulated Brillouin scattering	Optics Letters, 34 n.17, 2613-2615	2009
L. Picarelli, L. Zeni	Discussion on "Test on application of distributed fibre optic sensing technique into soil slope monitoring"	Landslides, 6:361-363	2009
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	IEEE/OSA Journal of Lightwave Technology, 28 193-200	2010
R. Bernini, A. Minardo, G. Testa, L. Zeni	Dynamic strain measurements on a cantilever beam using stimulated Brillouin scattering	Smart Materials and Structures, 19, 045024	2010
L. Nunziante, M. Fraldi, M.C. Pernice, A. Gesualdo, L. Zeni and K.M. Mahmoud	Distributed optical fibre sensor measurements on rods and bridge cable wires - Part II: Experimental	Bridge Structures 6, 49-63	2010
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, 1530-437X, Vol. 4, 1067-1068, DOI: 10.1109/JSEN.2010.2078805	2011
R. Bernini, A. Minardo, S. Ciaramella, V. Minutolo, L. Zeni	Distributed strain measurement along a concrete beam via stimulated Brillouin scattering in optical fibers	International Journal of Geophysics	2011
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, no. 20, 19233-19244	2011
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, no. 24, 23845-23856	2011
A. Minardo, R. Bernini, L. Amato, L. Zeni	Bridge monitoring using Brillouin fiber-optic sensors	IEEE Sensor Journal, 12 (1), 145-150	2012

via Vincenzo Tiberio, 13 - Napoli
via Adriano Olivetti, 1 - Pozzuoli (NA)

+39 081 7510326

info@hpsystem.it
info@optosensing.it

www.hpssystem.it
www.optosensing.it



A. Minardo, R. Bernini, L. Zeni	Distributed sensing at cm-scale spatial resolution by BOFDA: measurements and signal processing	IEEE Photonics Journal, 4(1), 48-56	2012
A. Minardo, R. Bernini, L. Zeni	Spatial resolution enhancement in preactivated BOTDA schemes by numerical processing	IEEE Photonics Technology Letters 24 (12) , art. no. 6176202, pp. 1003-1005	2012
A. Minardo, R. Bernini, L. Zeni	Differential Techniques for High-Resolution BOTDA: An Analytical Approach	IEEE Photonics Technology Letters, 24 (15), pp. 1295-1297, 10.1109/LPT.2012.2202223	2012
A. Minardo, A. Coscetta, S. Pirozzi, R. Bernini, L. Zeni	Modal analysis of a cantilever beam by use of Brillouin based distributed dynamic strain measurements	Smart Materials & Structures 21	2012
Picarelli, L., Olivares, L., Damiano, E., Comegna, L., Greco, R., Mercogliano, P., Zeni. L.	Short-term prediction of rainfall-induced flow-like landslides in unsaturated granular soils	Inaugural conference, Vulnerabilidad y Gestion del Riesgo en la Region Tropical de Centro y Suramerica, Atti IV Simposio Panamericano de Deslizamientos, Paipa, Colombia, su CD, ISBN 978-958-98770-4-3	2012
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
A. Minardo, R. Bernini, L. Zeni	Bend-induced Brillouin frequency shift variation in a single-mode fiber	IEEE Photonics Technology Letters	2013
A. Minardo, A. Coscetta, S. Pirozzi, R. Bernini, L. Zeni	Experimental modal analysis of an aluminum rectangular plate by use of the slope-assisted BOTDA method	Smart Materials & Structures 22	2013
A. Minardo, R. Bernini, L. Zeni	Limitations and strategies to improve measurement accuracy in DPP-BOTDA sensing	Applied Optics 52, n.13, doi: 10.1364/AO.52.003020 pp. 3020-3026	2013
A. Minardo, R. Bernini, L. Zeni	Distributed temperature sensing in polymer optical fiber by BOFDA	IEEE Photonics Technology Letters 26 (4) pp. 387 - 390,	2014
. Minardo, A. Coscetta, L. Zeni, R. Bernini	High-spatial-resolution DPP-BOTDA by real-time balanced detection,	IEEE Photonics Technology Letters, vol. 26, no. 12, pp. 1251-1254	2014

via Vincenzo Tiberio, 13 - Napoli
via Adriano Olivetti, 1 - Pozzuoli (NA)

+39 081 7510326

info@hpsystem.it
info@optosensing.it

www.hpssystem.it
www.optosensing.it



HPSYSTEM.IT



A. Minardo, R. Bernini, L. Zeni	Experimental and numerical study on stimulated Brillouin scattering in a graded-index multimode fiber	Optics Express, vol. 22, no. 14, pp. 17480-17489	2014
. Minardo, A. Coscetta, G. Porcaro, D. Giannetta, R. Bernini and L. Zeni	Distributed optical fiber sensors for integrated monitoring of railway infrastructures	Structural Monitoring and Maintenance, vol. 1, no. 2, pp. 173-182, 2014, DOI: 10.12989/smm.2014.1.2.173, 2014.	2014
A. Minardo, A. Coscetta, R. Bernini, R. Ruiz-Lombera, J. Mirapeix Serrano, J. Miguel Lopez-Higuera, and L. Zeni	Structural damage identification in an aluminum composite plate by Brillouin sensing	IEEE Sensors Journal, vol. 15, no. 2, pp. 659-660	2015
L. Zeni, L. Picarelli, B. Avolio, A. Coscetta, R. Papa, G. Zeni, C. Di Maio, R. Vassallo, A. Minardo,	Brillouin Optical Time Domain Analysis for Geotechnical Monitoring	Journal of Rock Mechanics and Geotechnical Engineering, vol. 7, pp. 458-462	2015
E. Damiano, L. Olivares, R. Greco, A. Minardo, L. Zeni, L. Picarelli	Performance of Slope Behaviour Indicators in Unsaturated Pyroclastic Soils	Journal of Mountain Science, vol. 12, no. 6, pp. 1434-1447	2015
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, vol. 18, no. 2, 025601	2015
A. Minardo, L. Zeni, R. Bernini, M. Mirabile	Fully automated gluing station for continuous pipeline deformation monitoring and 3-D positioning	Pipeline Technology Conference 2015 - Berlin	2015
A. Minardo, A. Coscetta, R. Bernini, L. Zeni	Heterodyne Slope-Assisted Brillouin Optical Time-Domain Analysis for dynamic strain measurements	Journal of Optics, vol. 18, no. 2, 025606	2016
A. Minardo, A. Coscetta, S. Pirozzi, L. Zeni	Brillouin Optical Time Domain Analysis Sensor for Active Vibration Control of a Cantilever Beam	Journal of Sensors, vol. 2016, Article ID 1351378, 6 pages	2016
F. Catani, M. Costanzo, A. Minardo, M. Mirabile, L. Picarelli, G. Soda, A. Tiranti, L. Zeni	Pipeline monitoring and third-party damage assessment by multi-platform sensor networks	Pipeline Technology Conference 2016 - Berlin	2016

via Vincenzo Tiberio, 13 - Napoli
via Adriano Olivetti, 1 - Pozzuoli (NA)

+39 081 7510326

info@hpsystem.it
info@optosensing.it

www.hpssystem.it
www.optosensing.it



via Vincenzo Tiberio, 13 - Napoli
via Adriano Olivetti, 1 - Pozzuoli (NA)

+39 081 7510326

info@hpsystem.it
info@optosensing.it

www.hpssystem.it
www.optosensing.it



HPSYSTEM.IT

