

CURRICULUM VITAE

COSIMO TRONO



WORK EXPERIENCE

Current position	Senior Researcher Consiglio Nazionale delle Ricerche, Istituto di Fisica Applicata "Nello Carrara", CNR-IFAC, Via Madonna de Piano 10, 50019 Sesto Fiorentino (FI), Italy. Identification N. CNR: 10337.
From 1/2/2010 to 31/12/2020	Researcher in permanent position. Consiglio Nazionale delle Ricerche, Istituto di Fisica Applicata "Nello Carrara", CNR-IFAC, Via Madonna de Piano 10, 50019 Sesto Fiorentino (FI), Italy. Identification N. CNR: 10337.
17/7/2006 to 31/1/2010	Researcher in temporary position. Consiglio Nazionale delle Ricerche, Istituto di Fisica Applicata "Nello Carrara", CNR-IFAC, Via Madonna de Piano 10, 50019 Sesto Fiorentino (FI), Italy. Subject of the contract: "Development of optical sensors for the detection of chemical and biochemical parameters of clinical interest". Prot. IFAC-CNR N. 0001017 del 18/07/2006.
12/6/2006 to 30/6/2006	Fixed term contract. Consiglio Nazionale delle Ricerche, Istituto di Fisica Applicata "Nello Carrara", CNR-IFAC, subject: "Characterization of an erbium doped fiber laser for acoustic waves detection". Prot. IFAC-CNR N. 0000721 del 13/06/2006.
23/2/2006 to 22/6/2006	Fixed term contract. "Cecchi S.r.l."
1/5/2005 to 31/12/2005	Research fellowship. CNR/MIUR-SAIA, Project "Sensori Elettroottici per Applicazioni Ambientali". Subject: "Distributed laser radar". Bando n. 126.115.AS.49. Prot. IFAC-CNR N. 214 del 28/04/2005.
3/3/2005 to 30/4/2005	Fixed term contract University of Pisa. Subject: "Design and development of in fiber bragg gratings and fiber lasers". Prot. A/368/MORG del 2/3/2005.
25/2/2005 to 25/3/2005	Fixed term contract. Consiglio Nazionale delle Ricerche, Istituto di Fisica Applicata "Nello Carrara", CNR-IFAC. Subject: "Development of a fiber laser sensor". Prot. IFAC N. 0000466 del 22/05/2006.
1/6/2004 to 30/11/2004	Fixed term contract. Università degli Studi di Pisa.
1/11/2003 to 31/5/2004	Research fellowship Consiglio Nazionale delle Ricerche, Istituto di Fisica Applicata "Nello Carrara", CNR-IFAC. Prot. IFAC N. 428, del 27/10/2003.
15/9/2003 to 13/10/2003	Fixed term contract. Università Politecnica delle Marche. Subject: "Application and interrogation methodology of fiber bragg gratings".
21/3/2003 to 31/8/2003	Research fellowship Consiglio Nazionale delle Ricerche, Istituto di Fisica Applicata "Nello Carrara", CNR-IFAC. Subject: "Design and development of fiber grating based sensor network". Ordine IFAC N. 377 del 21/03/2003.
26/2/2003 to 26/3/2003	Fixed term contract. DISTART – Università degli studi di Bologna. Subject: " Development of a deformation sensor based on FBGs for application on composite materials".
6/1/2003 to 31/1/2003	Fixed term contract. Università degli Studi di Perugia. Subject: "Technical advice on the application of fiber bragg gratings for the mechanical structures monitoring.
1/11/2001 to 30/4/2002	Fixed term contract. C.N.R. Istituto di Ricerca sulle Onde Elettromagnetiche, Firenze. Subject: "Fotometry and radiometry by means of optical fibers and photochromic transducer with application to the museum environment".
8/1/2001 to 8/6/2001	Fixed term contract. C.N.R. Istituto di Ricerca sulle Onde Elettromagnetiche, Firenze. Subject: "realization of the "Realted section of the website http://www.fos-en.net of the thematic network 'Fiber Optic Sensors'.

- 1/9/1999 to 31/3/2000 **Research fellowship.** I.R.O.E. Istituto di Ricerca sulle Onde Elettromagnetiche "Comitato Nazionale per la Scienza e la Tecnologia dei Beni Culturali", Subject: "Diagnostics and conservation of cultural heritage by means of electromagnetic waves". Utilizzo della radiazione elettromagnetica per la diagnostica e la conservazione dei beni culturali".
- 21/12/98 to 21/3/99 **Fixed term contract.** C.N.R. Istituto di Ricerca sulle Onde Elettromagnetiche, Firenze. Subject: "Spectrometric characterization of gasolines".

WORK EXPERIENCE ABROAD

- Dicember 2014 *Visiting researcher* "Central Glass and Ceramic Research Institute" Kolkata, India) in the scope of bilateral joint project (no. 22/EU/Italy/CNR/proj./2012) CNR, Italy – CSIR, India (Bilateral S&T Programme) "Development of Long Period Grating (LPG) based immunoassay for bio-sensing applications".
- Dicember 2012 *Visiting researcher* "Central Glass and Ceramic Research Institute" Kolkata, India) in the scope of bilateral joint project (no. 22/EU/Italy/CNR/proj./2012) CNR, Italy – CSIR, India (Bilateral S&T Programme) "Development of Long Period Grating (LPG) based immunoassay for bio-sensing applications".

EDUCATION

- 14/07/2003 **PhD doctor** in "Non destructive testing", XV Ciclo, Università degli Studi di Firenze, Italy. Subject: "Optical fiber bragg gratings for non destructive testing on extended structures".
Activity: design and development of a complete measurement system based on FBGs, in particular: the development of the optoelectronics control system, the fiber sensors, the measurement methodology and the control and acquisition software.
- 20/10/1998 **Master degree in Physics.** Università degli studi di Firenze. Subject: "Fotometry and radiometry by means of optical fibers and photochromic transducer with application to the museum environment".
- National and international schools**
- 2014 Cortona School of Photonics, "Seeing sharp and further with the optical microscope", Cortona, 30 marzo – 3 aprile 2014.
- 2010 8th European short course on "Principles and Applications of Time-resolved Fluorescence Spectroscopy", November 1 - 4, 2010 in Berlin, Germany.
- 1997 22nd Course: Optical Sensors and Microsystems: New Concepts materials Technologies, Erice-Sicily, 27 November – 2 December 1997.

LANGUAGE KNOWLEDGE LEVEL

MOTHER TONGUE

Italian

OTHER

English

- Reading Excellent
- Writing Excellent
- Speaking Excellent

LEADING IN RESEARCH GRANTS

- Giugno 2018 – ongoing Tuscany Region, PROGRAMMA OPERATIVO REGIONALE FESR 2014 – 2020, BANDO N.2: PROGETTI STRATEGICI DI RICERCA E SVILUPPO DELLE MPMI, Project "CIREBI, Componenti Intelligenti con Reticoli di Bragg Integrati". Duration: 18 months. CNR funding: 129000 €. Research unit scientific leader.
- 2012-2014 Joint Research Proposal under CSIR, India - CNR, Italy – bilateral S&T Programme (2012-2014), title: "Development of Long Period Grating (LPG) based immunoassay for bio-sensing applications". Research unit scientific leader.

Research activity: design and development of a measurement system based on long period gratings (LPG). Definition of the measurement methodologies, development of the optoelectronics components, development of the control, acquisition and signal analysis software.

2001 "Progetto Giovani Ricercatori 2001" of the Università di Firenze. Subject: "Optical fiber sensors for the deformation monitoring of wooden works of art".

AGREEMENTS LIABILITY

2014 Intersys S.r.L. Subject: "Characterization of photoluminescent materials excited by solid state blue laser sources".

2014 CERN. Subject: "Design and production of in fiber long period gratings". (Order n. CA5791198).

2013 OPTOADVANCE. Subject: "Design and development of optical devices based on in fiber long period gratings". (Quotation request n. 2013-001).

2012 CERICT. Subject: "Design, production and supply of N. 10 Long Period Gratings (LPG)". (Preventivo fornitore n. 49/p del 08/08/2012).

2009 NURC-NATO. Subject: "'- No. 24 fibre Bragg gratings into sections of optical fibres for underwater acoustic sensing". (IFAC record n. 0000749, 01/04/2009).

2009 Q-Tech. Subject: "UV irradiation test (wavelength < 315 nm) on laser safety glasses". (IFAC record n. 0002318, 07/10/2009).

PARTICIPATION TO SCIENTIFIC GRANTS

2018 – in corso Co-fund action PhotonicSensing (G.A. n.688735), project "SAFE-WATER On Chip Whispering Gallery Mode Optical Microcavities for Emerging Microcontaminant Determination in Waters". (In the unit of the principal investigator).
Activity: fabrication of low refractive index optical waveguides and development of the microfluidic system.

2012-2016 EU Integrated project, Seventh framework, "NANODEM, NANOPhotonic DEvice for Multiple therapeutic drug monitoring". (In the unit of the principal investigator).
Activity: design and development of the fluorescence based measurement optoelectronic system, of the microfluidic chip, of the microfluidics and control software of the final prototype.

2013-2017 EU INTEGRATED PROJECT, Seventh framework, "HEMOSPEC, Advanced spectroscopic hemogram for personalized care against live threatening infections using an integrated chip-assisted bio-photonic system". (In the unit of the principal investigator).
Activity: design and development of the fluorescence based measurement optoelectronic system, of the microfluidic chip, of the microfluidics and control software of the final prototype.

2012-2016 Italian project MIUR-FIR, SENS4BIO, "Microrisonatori Optofluidici Ultra-Sensibili di Tipo "Flow-Through" per Applicazioni Biosensoristiche".
Activity: development of optical fiber scan system for the fluorescence detection.

2013-2015 Italian project MIUR, PRIN 2010, "ARTEMIDE, Lab-on-chip totalmente integrato per la diagnosi precoce di infezioni virali".
Activity: design and development of microfluidic systems. Design of the detection scheme based on the fluorescence anisotropy emission.

2011-2013 PAR FAS REGIONE TOSCANA 2011, project "NANOCELL-Optical nanosensors inside cells" (2011-2013).
Activity: development of an optical platform for fluorescence spectroscopy.

2006-2011 EU INTEGRATED PROJECT, Seventh framework, "CARE-MAN" "HealthCARE by Biosensor Measurements and Networking".
Activity: design and development of a multi-channel microfluidic chip and of the excitation and detection optoelectronic system, for the measurement of biochemical parameters of clinical interest.

CURRENT RESEARCH INTEREST

Optics and photonics, sensor science, optical fibers, optical fiber gratings, fiber lasers, microfluidics, spectroscopy, biosensing.

SFTWARE KNOLEDGE

Microsoft Windows family, Linux operative systems. Thorough knowledge of C programming language. Ni Labview and Labwindows CVI programming environment. Matlab. OriginLab Origin. Rhinoceros 3D CAD design software.

CONGRESS ORGANIZATION

- 2019 In the Organizing Committee of 11th Advanced Study Course on Optical Chemical Sensors, Bertinoro (Italy), 21-28 Luglio 2019. <http://www.ascos.org/>
- 2019 In the Local Organization Committee of Second European Biosensor Symposium; Firenze (Italy), 18-21 February 2019. <http://www2.chim.unifi.it/vp-353-committees.html>
- 2018 In the organizing committee of "Europt(r)ode XIV Conference on optical, chemical sensors and biosensors", Napoli, 25-28 Marzo 2018. www.europtrode2018.eu/index.php/123/organising-committee
- 2014 In the organizing committee of "Seconda Scuola Nazionale Biosensori Ottici E Biofotonica" Otranto, 15-20 Settembre 2014.
- 2013 In the organizing committee of "Secondo Workshop del Gruppo Biosensori Ottici e Biofotonica della Società Italiana di Ottica e Fotonica", Sestri Levante, 19-20 Settembre 2013.
- 2012 In the scientific secretary of "Convegno Nazionale Sensori - Innovazione, attualità e prospettive", Roma, 15-17 Febbraio 2012.
- 2010 In the organizing committee of "Primo workshop del Gruppo Biosensori Ottici e Biofotonica", Sesto Fiorentino 25 - 26 ottobre 2010.
- 2010 In the organizing committee of "Prima Scuola Nazionale Sui Biosensori Ottici E Biofotonica", Ischia 25 settembre - 1 ottobre 2010.
- 2008 In the organizing committee of "International School Of Quantum Electronics - 45th Course - Optical Biosensors And Biochips For Clinical Applications", Erice-Sicily, 27 June - 4 July 2008.
- 2007 In the organizing committee of "CARE-MAN School "Basics of fluorescence-based biosensors and applications to capillary-based systems", IFAC-CNR 15-16 March, 2007, Florence, Italy.
- 2006 In the organizing committee of "Ottiche diffrattive, microottica e microsistemi – ODIMI 2006", Firenze 11-12 maggio 2006.
- 2002 In the organizing committee of "Ottiche diffrattive, microottica e microsistemi – ODIMI 2002", Montecatini terme 31 maggio 2002.

THEACHING ACTIVITY

Lectures

- 2019 PhD school in Information Engineering, Università degli Studi Di Siena, Department of Information Engineering and Mathematics. 10 hour course. Subject: "Fibre ottiche e sensori a fibra ottica, teoria e applicazioni".
- 06-08/06/2017 Optical characterization of photonic structures International School (Pisa, Italy) organized by SYNCHRONICS. Subject: "Optical fiber-based devices for (bio)sensing"
- 15-16/3/2007 CARE-MAN School "Basics of fluorescence-based biosensors and applications to capillary-based systems", IFAC-CNR 15-16 March, 2007, Florence, Italy. Subject: "The CARE-MAN optical system for biochemical detection".
- 15-21/9/2013 International School of Physics and Technology of Matter, Italy, Otranto. Subject: "Direct and chemical-mediated spectroscopy using guided-wave technologies and nanostructures for sensing".
- Giugno 2011 Università degli Studi di Firenze, degree course in Engineering. Subject: "Erbium doped fiber lasers".

PhD, master degree thesis supervising

- 2018-2019 Supervisor of the master degree thesis in Physics of Federico Valeri. Subject: Optical fiber long period gratings with superimposed different grating pitches: theory, fabrication and application to

- simultaneous multi-parameter sensing.
- 2017 Supervisor PhD thesis in "Information Engineering and Science", XXIX Cycle, Università degli Studi di Siena, of Chiara Berrettoni. Subject: "Design, implementation and characterization of an optoelectronic platform for the detection of immunosuppressants in transplanted patients by means of a microfluidic optical chip".
- 2014 In the evaluation commission of the PhD thesis of Massimo Calamai in Experimental Physics, XXIV cycle. Subject: "Sensors for Underwater Acoustic and Geophysical Applications".
- 2012 Supervisor of the PhD thesis in "Information Engineering", Università degli Studi di Siena, del Dott. Francesco Chiavaioli. Subject: "Design, development and testing of a refractometer based on optical fiber gratings: physical and biomedical applications".
- 2011-2012 Supervisor of the master degree thesis in Telecommunication Engineering of Chiara Berrettoni. Subject: "Studio e realizzazione di un rifrattometro con reticoli in fibra ottica in configurazione ibrida".
- 2010-2011 Supervisor of the master degree thesis in Telecommunication Engineering of Michele Marzini. Subject: "Refractometer based on in fiber Michelson interferometer with long period gratings".

INVITED LECTURES AND CHAIR

Invited talk: "Optimization of optical fiber long period gratings for biosensing applications". Asia Communications and Photonics Conference, International Conference on Information Photonics and Optical Communications (ACP/IPOC 2020), Beijing, China, October 24-27, 2020.

41st PIERS, Photonics & Electromagnetics Research Symposium, Roma 17-20 June 2019, chair of the section 4A9, SC3: Label-based and Label-free Optical Biosensors 1, e 4PA9, SC3: Label-based and Label-free Optical Biosensors 2.

Invited talk: Filtering Issues in Fluorescence Detection: An Approach Based on High Numerical Aperture Waveguide Absorption Filters". 41st PIERS, Photonics & Electromagnetics Research Symposium, Roma 17-20 June 2019.

Invited talk: "Multichannel integrated optical platform based on an array of absorbing waveguides". Fotonica 2018, Lecce, 23-25 maggio 2018.

Fotonica 2018, Lecce, 23-25 maggio 2018, chair of the section C3 Solar Cells and Spectroscopy.

AWARDS

- 16/04/2014 **Best Poster Award**, non presenting author, International conference Europtrode XII, Athens (Greece), 13-16/04/2014: "Complex nanostructures based on oligonucleotide optical switches and nanoparticles for intracellular sensing" (S. Tombelli, A. Giannetti, C. Trono, B. Adinolfi, M. Pellegrino, P. Nieri, G. Sotgiu, G. Varchi, F. Baldini) (Poster, Prize for Best Poster Presentation).
- 24-29/09/2007 **Best oral talk**, non presenting author, XCIII Congresso Nazionale della Società Italiana di Fisica - Sezione Va: Fisica applicata, Pisa, 24-29/09/2007: "Fiber laser strain sensor device."

PROFESSIONAL AND SCIENTIFIC ASSIGNMENT

National and International Phd and Master Degrees

- 2020 External expert evaluator of the PhD thesis of Guido Ielasi, Universidad Politécnica de Madrid. Thesis title: "Luminescent Ru(II) dyes and materials for GaN-based gas microsensors".
- 16/06/2021 Member on the international panel of the PhD Thesis defense of Guido Ielasi, Universidad Politécnica de Madrid. Thesis title: "Luminescent Ru(II) dyes and materials for GaN-based gas microsensors".

Member of conference scientific and technical committee

- 2020 Member of the technical committee of Italian Conference on Optics and Photonics, ICOP 2020, September 8-11 2020, Parma, Italy.

- 2018 Member of the technical committee of "Fotonica 2018 – AEIT, 19th Convegno italiano delle tecnologie fotoniche".
- 2017-2018 Member of the program committee of "Photoptics 2018 – 6th International conference on photonics, optics and laser technology".
- 2017 Member of the technical committee of "Fotonica 2017 – AEIT, 19th Convegno italiano delle tecnologie fotoniche".
- 2016 Member of the technical committee of "Fotonica 2016 – AEIT, 18th Convegno italiano delle tecnologie fotoniche".
- 2016 Member of the program committee of "Photoptics 2017 – 5th International conference on photonics, optics and laser technology".

REFeree/EVALUATOR ACTIVITY

International scientific journals

- 2008 - ongoing Scientific Reports, Journal of Lightwave Technology, Measurement Science and Technology, Journal of Optics A, Applied Optics, Lab on a Chip, Analytical Chemistry, Biosensors & Bioelectronics, Sensors and Actuators A, Sensors and Actuators B, Hindawi Journal of Sensors, MDPI Sensors, IEEE Photonics Technology Letters, IEEE Sensors Journal, IEEE/ASME Journal of Microelectromechanical Systems, Analytical and Bioanalytical Chemistry, Analytical Chemistry, Biosensors & Bioelectronics, Journal of Biophotonics, Optical Engineering, Optical Fiber Technology.

International Projects

- 2017 - ongoing Remote reviewer of H2020 FET OPEN RIA (EXPERT CONTRACT NUMBER CT-EX2017D296171-101 of 24/10/2017) projects.
- Remote reviewer of H2020 FET OPEN RIA (EXPERT CONTRACT NUMBER CT-EX2017D296171-102 of 14/06/2018) projects.
- Remote reviewer of BRIDGE Discovery (Swiss National Science Foundation (SNSF) e Swiss Innovation Agency (Innosuisse) projects (2018).
- Remote reviewer of Central Finance and Contracting Agency (CFCA) of the Republic of Latvia, operational programme "Growth and Employment" of the EU Structural and Cohesion Fund 2014-2020, service agreement N. 39-1-8/288 del 12/12/2018.

- Aprile 2019 **Special Issue Editor** per la rivista Sensors (ISSN 1424-8220). Special issue dal titolo "Fibre Optic Biosensing", www.mdpi.com/journal/sensors/special_issues/Fibre_Optic_Biosensing.

BIBLIOMETRIC INDICATORS

Web of Science:
 Results found: 119
 Sum of times cited: 1064
 Citing articles: 786
h-index: 21

Scopus:
 Results found: 139
 Sum of the Times Cited with self-citations: 947
h-index: 23

Da Google Scholar:
 Sum of Times Cited: 1728
h-index: 26

PUBLICATION LIST (* indicates the role of corresponding author)

International Journals

1. T.K. Dey S.Tombelli, P.Biswas, A.Giannetti, N.Basumallick, F.Baldini, S.Bandyopadhyay, C. Trono., "Analysis of the Lowest Order Cladding Mode of Long Period Fiber Gratings near Turn Around Point," *J. Lightwave Technol.* (Early Access), doi: 10.1109/JLT.2020.2987795, (2020).
2. S. Berneschi, C. Trono*, M. Mirasoli, A. Giannetti, M. Zangheri, M. Guardigli, S. Tombelli, E. Marchegiani, F. Baldini, A. Roda, In-Parallel Polar Monitoring of Chemiluminescence Emission Anisotropy at the Solid-Liquid Interface by an Optical Fiber Radial Array, *CHEMOSENSORS*, Volume: 8, Issue: 1, Article Number: 18, 2020.
3. Giannetti, Ambra; Trono, Cosimo; Porro, Giampiero; Domenici, Claudio; Puntoni, Mariarita; Baldini, Francesco, Towards an Integrated System as Point-of-Care Device for the Optical Detection of Sepsis Biomarkers, *CHEMOSENSORS* Volume: 8, Issue: 1, Article Number: 12, 2020.
4. Trono, Cosimo; Valeri, Federico; Baldini, Francesco, Discretized superimposed optical fiber long-period gratings, *OPTICS LETTERS* Volume: 45, Issue: 4, Pages: 807-810, 2020.
5. Giovanni Giacomelli, Stefano Lepri, and Cosimo Trono, Optical networks as complex lasers, *Phys. Rev. A* 99, 023841 – Published 22 February 2019.
6. Berneschi, S; Trono, C; Bernini, R; Giannetti, A; Persichetti, G; Testa, G; Tombelli, S; Baldini, F, A waveguide absorption filter for fluorescence measurements, *SENSORS AND ACTUATORS B-CHEMICAL*, Volume: 281, Pages: 90-95, 2019.
7. Francesco Chiavaioli, Pablo Zubiarte, Ignacio Del Villar, Carlos R. Zamarreño, Ambra Giannetti, Sara Tombelli, Cosimo Trono, Francisco J. Arregui, Ignacio R. Matias, Francesco Baldini, Femtomolar Detection by Nanocoated Fiber Label-Free Biosensors, *ACS Sensors* 2018 3 (5), 936-943, DOI: 10.1021/acssensors.7b00918.
8. Dessi, A., Monai, M., Bessi, M., Montini, T., Calamante, M., Mordini, A., Reginato, G., Trono, C., Fornasiero, P. and Zani, L. (2018), Towards Sustainable H₂ Production: Rational Design of Hydrophobic Triphenylamine-based Dyes for Sensitized Ethanol Photoreforming. *ChemSusChem* 2018. doi:10.1002/cssc.201701707.
9. P. Biswas, F. Chiavaioli, S. Jana, N. Basumallick, C. Trono, A. Giannetti, S. Tombelli, A. Mallick, F. Baldini, S. Bandyopadhyay, Design, fabrication and characterisation of silica-titania thin film coated over coupled long period fibre gratings: Towards bio-sensing applications, *Sensors and Actuators B: Chemical*, Volume 253, 2017, Pages 418-427, ISSN 0925-4005, <http://dx.doi.org/10.1016/j.snb.2017.06.139>.
10. S. Lepri, C. Trono, and G. Giacomelli. Complex active optical networks as a new laser concept. *Physical Review Letters* 118, 123901 (Feb 2017). (IF₂₀₁₅: 7.645).
11. Lukowiak A., Zur L., Tran T.N.L., Meneghetti M., Berneschi S., Conti G.N., Pelli S., Trono C., Bhaktha B.N.S., Zonta D., Taccheo S., Righini G.C., Ferrari M., "Sol-gel-derived glass-ceramic photorefractive films for photonic structures", *Crystals* (2017) 7(2), 61; doi:10.3390/cryst7020061. (IF: 1.566)
12. B. Adinolfi, M. Pellegrino, A. Giannetti, S. Tombelli, C. Trono, G. Sotgiu, G. Varchi, M. Ballestri, T. Posati, S. Carpi, P. Nieri, F. Baldini. Molecular beacon-decorated Polymethylmethacrylate Core-shell Fluorescent Nanoparticles for the Detection of Survivin mRNA in Human Cancer Cells. *Biosensors and Bioelectronics*, (2017), DOI 10.1016/j.bios.2016.05.102 (IF₂₀₁₅: 7.476).
13. F. Chiavaioli, F. Baldini, S. Tombelli, C. Trono, A. Giannetti. Biosensing with optical fibre gratings. *Nanophotonics* accepted (Dec 29, 2016). (IF₂₀₁₅: 4.333)
14. S. Berneschi, F. Baldini, A. Cosci, D. Farnesi, G. Nunzi Conti, S. Tombelli, C. Trono, S. Pelli, A. Giannetti. Fluorescence biosensing in selectively photo-activated microbubble resonators. *Sensors and Actuators B: Chemical* (2017) 242, 1057–1064. (IF₂₀₁₅: 4.758)
15. Mojtaba Arjmand, Francesco Chiavaioli, Simone Berneschi, Francesco Baldini, Mahmood Soltanolkotabi, and Cosimo Trono. Effect of induced inner curvature on refractive index sensitivity in internally tilted long-period gratings. *Optics Letters* 41, 1443-1446 (2016). (IF₂₀₁₅: 3.040)
16. A Aray, F. Chiavaioli, M. Arjmand, C. Trono*, S. Tombelli, A. Giannetti, N. Cennamo, M. Soltanolkotabi, L. Zeni, F. Baldini. SPR-based plastic optical fibre biosensor for the detection of C-reactive protein in serum. *Journal of Biophotonics* 1–8 (2016) / DOI 10.1002/jbio.201500315. (IF₂₀₁₅: 3.818)
17. N. Cennamo, F. Chiavaioli, C. Trono*, S. Tombelli, A. Giannetti, F. Baldini, L.i Zeni. A complete optical sensor system based on a POF-SPR platform and a thermo-stabilized flow cell for biochemical applications. *Sensors*, (2016) 16(2), 196. doi:10.3390/s16020196. (IF₂₀₁₅: 2.033)
18. D. Ristić, S. Berneschi, M. Camerini, D. Farnesi, S. Pelli, C. Trono, A. Chiappini, A. Chiasera, M. Ferrari, A. Lukowiak, Y. Dumeige, P. Féron, G.C. Righini, S. Soria, G. Nunzi Conti. Photoluminescence and lasing in whispering gallery mode glass microspherical resonators. *Journal of Luminescence* 170, (2016) 755–760. (IF₂₀₁₅: 2.693)
19. F. Chiavaioli, P. Biswas, C. Trono*, S. Jana, S. Bandyopadhyay, N. Basumallick, A. Giannetti, S. Tombelli, S.a Bera, A. Mallick, F. Baldini. Sol-gel based titania-silica thin film overlay for long period fiber grating-based biosensors. *Analytical Chemistry* (2015), 15, 87(24), 12024-31. doi: 10.1021/acs.analchem.5b01841 (IF₂₀₁₅: 5.886)

20. A Giannetti, A. Barucci, F. Cosi, S. Pelli, S. Tombelli, C. Trono, F. Baldini. Optical Fiber Nanotips Coated with Molecular Beacons for DNA Detection. *Sensors* (2015) 15, 9666-9680; doi:10.3390/s150509666. (IF2015: 2.033)
21. Farnesi D, Chiavaioli F, Baldini F, Righini GC, Soria S, Trono C, Conti GN. Quasi-distributed and wavelength selective addressing of optical micro-resonators based on long period fiber gratings. *Opt Express*. (2015) 23, 21175-80. (IF2015: 3.148)
22. G. Tuci, L. Luconi, A. Rossin, F. Baldini, S. Tombelli, C. Trono, A. Giannetti, S. Cicchi, I. Manet, S. Fedeli, A. Brandi, G. Giambastiani. Hetero-bi-Functional Spacer for the Smart Engineering of Carbon-based Nanostructures. *ChemPlusChem* (2015) 80, 704–714 (Front cover article). (IF2015: 2.836)
23. C. Berrettoni, C. Trono*, V. Vignoli, F. Baldini. Fibre Tip Sensor with Embedded FBG-LPG for Temperature and Refractive Index Determination by means of the Simple Measurement of the FBG Characteristics. *Journal of Sensors* Volume 2015, (2015) Article number 491391. (IF2015: 0.712)
24. D. Farnesi, F. Chiavaioli, G. C. Righini, S. Soria, C. Trono, P. Jorge, G. Nunzi Conti: Long period grating-based fiber coupler to whispering gallery mode resonators. *Opt Lett*. (2014) 39, 6525-8. (IF2014: 3.292)
25. Daniele Farnesi, Franco Cosi, Cosimo Trono, Giancarlo C. Righini, Gualtiero Nunzi Conti, Silvia Soria: Stimulated anti-Stokes Raman scattering resonantly enhanced in silica microspheres. *Optics Letters* 39, (2014) 5993-5996. (IF2014: 3.292)
26. F. Chiavaioli, P. Biswas, C. Trono*, S. Bandyopadhyay, A. Giannetti, S. Tombelli, N. Basumallick, K. Dasgupta, F. Baldini: Towards sensitive label-free immunosensing by means of turn-around point long period fiber gratings. *Biosensors & Bioelectronics* 01/2014; 60:305–310. (IF2014: 6.409)
27. Francesco Chiavaioli, Cosimo Trono*, Ambra Giannetti, Massimo Brenci, Francesco Baldini: Characterisation of a label-free biosensor based on long period grating. *Journal of Biophotonics* (2014) 7(5):312-322. (IF2014: 4.447)
28. G. Ghini, C. Trono, A. Giannetti, G.L. Puleo, L. Luconi, J. Amadou, G. Giambastiani, F. Baldini: Carbon nanotubes modified with fluorescein derivatives for pH nanosensing. *Sensors and Actuators B Chemical* 03/2013; 179:163–169. (IF2013: 3.840)
29. F. Chiavaioli, C. Trono*, F. Baldini: Specially designed long period grating with internal geometric bending for enhanced refractive index sensitivity. *Applied Physics Letters* 01/2013; 102(23):231109. (IF2013: 3.515)
30. Pierluigi Pilla, Cosimo Trono, Francesco Baldini, Francesco Chiavaioli, Michele Giordano, Andrea Cusano: Giant sensitivity of long period gratings in transition mode near the dispersion turning point: an integrated design approach. *Optics Letters* 10/2012; 37(19):4152-4. (IF2012: 3.385)
31. S. Surdo, S. Merlo, F. Carpignano, L. M. Strambini, C. Trono, A. Giannetti, F. Baldini, G. Barillaro: Optofluidic microsystems with integrated vertical one-dimensional photonic crystals for chemical analysis. *Lab on a Chip* 08/2012; 12(21):4403-15. (IF2012: 5.697)
32. G. Nunzi Conti, S. Berneschi, A. Barucci, F. Cosi, S. Soria and C. Trono: Fiber ring laser for intracavity sensing using a whispering-gallery-mode resonator. *Optics Letters* 07/2012; 37(13):2697-9. (IF2012: 3.385)
33. F. Baldini, M. Brenci, F. Chiavaioli, A. Giannetti, C. Trono: Optical fibre gratings as tools for chemical and biochemical sensing. *Analytical and Bioanalytical Chemistry* 01/2012; 402(1):109-16. (IF2012: 3.659)
34. C. Trono*, F. Baldini, M. Brenci, F. Chiavaioli and M. Mugnaini, "Flow cell for strain- and temperature-compensated refractive index measurements by means of cascaded optical fibre long period and Bragg gratings", *Measurement Science and Technology*, Volume 22, Number 7, 2011. (IF2011: 1.494)
35. E. Lubian, F. Baldini, A. Giannetti, C. Trono and T. Carofiglio, "Solid-supported Zn(II) porphyrin tweezers as optical sensors for diamines", *Chem Comm*, 46, 3678-3680, 2010. (IF2010: 5.787)
36. F. Baldini, L. Bolzoni, A. Giannetti, M. Kess, P. M. Krämer, E. Kremmer, G. Porro, F. Senesi, C. Trono, "A new procalcitonin optical immunosensor for POCT applications", *Anal. Bioanal. Chem.*, 393, pp. 1183–1190, 2009. (IF2009: 3.480)
37. F. Baldini, A. Carloni, A. Giannetti, G. Porro and C. Trono: "An optical PMMA biochip based on fluorescence anisotropy: Application to C-reactive protein assay"; *Sensors and Actuators B: Chemical*, Volume 139, Issue 1, 20 May 2009, Pages 64-68. (IF2009: 3.083)
38. Baldini, F.; Carloni, A.; Giannetti, A.; Mencaglia, A.; Porro, G.; Tedeschi, L.; Trono, C.; "Optical PMMA Chip Suitable for Multianalyte Detection"; *IEEE Sensors Journal*, Volume 8, Issue 7, July 2008 Page(s):1305 – 1309. (IF2008: 1.610)
39. F. Baldini, A. Giannetti, A. A. Mencaglia and C. Trono; "Fiber optic sensors for biomedical applications"; *Current Analytical Chemistry*, 2008, Vol. 4 N. 4, pp. 378-390. (IF2008: 1.633)
40. E. Maccioni, N. Beverini, M. Morganti, F. Stefani, R. Falciai and C. Trono; "Low-frequency strain sensor using a fiber Bragg laser; *Nuovo Cimento B*, Volume 122, Issue 06-07, 2007, pp 751-757. (IF2010: 0.286)
41. F. Baldini, A. Carloni, A. Giannetti, G. Porro and C. Trono; "A new optical platform for biosensing based on fluorescence anisotropy"; *Analytical and Bioanalytical Chemistry*, 2008 Jul, 391(5), pp 1837-44. (IF2008: 3.328)
42. N. Beverini, E. Maccioni, M. Morganti, F. Stefani, R. Falciai and C. Trono; "Fiber laser strain sensor device"; *Journal of Optics A: Pure and Applied Optics*, 9 No 10 (October 2007) 958-962. (IF2007: 1.752)

43. E. Maccioni, P.E. Bagnoli, N. Beverini, B. Bouhadef, E. Castorina, E. Falchini, R. Falciai, V. Flaminio, M. Morganti, F. Stefani and C. Trono "Fiber laser hydrophone as possible detector of UHE neutrinos"; Nuclear Instruments and Methods in Physics Research A, Volume 572, Issue 1, 1 March 2007, Pages 490-492. (IF2007: 1.114)
44. P. E. Bagnoli, N. Beverini, E. Castorina, E. Falchini, R. Falciai, V. Flaminio, E. Maccioni, M. Morganti, F. Sorrentino, F. Stefani, C. Trono: FIBER LASER HYDROPHONES AS PRESSURE SENSORS. Int. J. Mod. Phys. A 21, 102 (2006). (IF2006: 0.914)
45. P.E. Bagnoli, N. Beverini, B. Bouhadef, E. Castorina, E. Falchini, R. Falciai, V. Flaminio, E. Maccioni, M. Morganti, F. Sorrentino, F. Stefani, C. Trono; "Erbium-doped fiber lasers as deep-sea hydrophones"; Nuclear Instruments and Methods in Physics Research A, Volume 567, Issue 2, 15 November 2006, Pages 515-517. (IF2006: 1.185)
46. P.E. Bagnoli, N. Beverini, B. Bouhadef, E. Castorina, E. Falchini, R. Falciai, V. Flaminio, E. Maccioni, M. Morganti, F. Sorrentino, F. Stefani, C. Trono; "Fiber Laser Hydrophones as Pressure Sensors"; International Journal of Modern Physics A, Vol. 21 supplement 1 (2006), pp. 102-106. (IF2006: 0.914)
47. P. E. Bagnoli, N. Beverini, R. Falciai, E. Maccioni, M. Morganti, F. Sorrentino, F. Stefani, C. Trono; "Development of an erbium-doped fiber laser as a deep sea hydrophone"; Journal of Optics A: Pure and Applied Optics, 8 No 7 (July 2006), pp. S535-S539. (IF2006: 1.604)
48. N. Beverini, R. Falciai, E. Maccioni, M. Morganti, F. Sorrentino, C. Trono; "Developing fiber lasers with Bragg reflectors as deep sea hydrophones"; Annals of Geophysics, Vol. 46, N. 6, December 2006. (IF2006: 0.441)
49. R. Falciai, C. Trono*; Curved elastic beam with opposed fiber-Bragg gratings for measurement of large displacements with temperature compensation. IEEE Sensors Journal 01/2006. (IF2006: 1.117)
50. R. Falciai, M. Morganti, C. Trono*; Fibre Bragg grating location and spatial period determination in DBR lasers by side-scatter detection of pump radiation. Electronics Letters 08/2005. (IF2005: 1.016)
51. R. Falciai, C. Trono, G. Lanterna, C. Castelli; Continuous monitoring of wooden works of art using fiber Bragg grating sensors. Journal of Cultural Heritage 01/2003; 4(4):285-290. (IF2004: 1.066)
52. Riccardo Falciai, Cosimo Trono: Simple tunable chirp of fiber Bragg gratings without center wavelength shift. Optical Engineering 01/2003; 42(8):2263-2267. (IF2003: 0.877)

Brevetti

53. US patent US9772292 B2, F. Baldini, C. Trono, "Fiber optic probe and measuring sensor using said probe", data di concessione 26/09/2017, data di registrazione 30/11/2011.
54. US patent US6567158 B1, A.G. Mignani, R. Falciai, C. Trono: "Fiber optic sensor with photochromic transducer, and corresponding method", data di concessione 20/05/03.

Proceedings e Atti estesi di congressi

55. Falconi M.C., Palma G., Ameruoso A., Laterza C., Popolizio S., Rinaldi L., Rizzi A., Testa G., Traghi F., Chiavaioli F., Baldini F., Farnesi D., Nunzi Conti G., Pelli S., Righini G.C., Soria S., Trono C., Prudenzano F., "Design of microspheres and microbubbles for environmental chemical/biological optical sensing", 2017, "I2MTC 2017 - 2017 IEEE International Instrumentation and Measurement Technology Conference, Proceedings" (2017).
56. Biswas, P., Chiavaioli, F., Jana, S., Bandyopadhyay, S., Basumallick, N., Giannetti, A., Tombelli, S., Bera, S., Mallick, A., Baldini, F., Trono, C. Manufacturing and optimization of sol-gel-based TiO₂-SiO₂ thin films as high refractive index overlays for long period grating-based biosensing. PHOTOPTICS 2016 - Proceedings of the 4th International Conference on Photonics, Optics and Laser Technology, pp. 351 - 357 (2016).
57. N. Cennamo, F. Chiavaioli, C. Trono, S. Tombelli, A. Giannetti, F. Baldini, L. Zeni. A thermo-stabilized flow cell for surface plasmon resonance sensors in D-shaped plastic optical fibers. Proceedings of SPIE - The International Society for Optical Engineering, 6th European Workshop on Optical Fibre Sensors 9916, 2016, Article number 99161C.
58. S. Berneschi ; F. Baldini ; A. Barucci ; A. Cosci ; F. Cosi ; D. Farnesi ; G. Nunzi Conti ; G. C. Righini ; S. Soria ; S. Tombelli ; C. Trono ; S. Pelli ; A. Giannetti. Localized biomolecules immobilization in optical microbubble resonators, Proc. SPIE 9727, Laser Resonators, Microresonators, and Beam Control XVIII, 972719 (March 8, 2016); doi:10.1117/12.2213683.
59. F. Chiavaioli; C. Trono; P. Biswas; S. Bandyopadhyay; A. Giannetti; S. Tombelli; F. Baldini. Comparative assessment of the performance of long period fiber grating-based biosensors. IET Conference Publications, Volume 2015, Issue CP667, (2015) 17th Italian Conference on Photonics Technologies, Fotonica AEIT 2015; Turin; Italy; 6 May 2015 through 8 May 2015; Code 115951.
60. F. Baldini, F. Chiavaioli, A. Giannetti, S. Tombelli, and C. Trono, "High-performance Label-free Biosensing by Long Period Gratings," in Frontiers in Optics 2015, OSA Technical Digest (online) (Optical Society of America, 2015), paper FTh2E.1. ISBN: 978-1-943580-03-3
61. Giannetti, A., Barucci, A., Berneschi, S., Cosci, A., Cosi, F., Farnesi, D., Nunzi Conti, G., Pelli, S., Soria, S., Tombelli, S., Trono, C., Righini, G.C., Baldini, F. Optical micro-bubble resonators as promising biosensors. (2015) Proceedings of SPIE - The International Society for Optical Engineering, 9506, art. no. 950617.

62. B. Adinolfi, M. Pellegrino, A. Giannetti, S. Tombelli, C. Trono, G. Sotgiu, G. Varchi, and F. Baldini, "Detection of mRNA by bi-color imaging based on PMMA nanoparticles and molecular beacons in human cancer cells," in 2015 European Conference on Lasers and Electro-Optics - European Quantum Electronics Conference, (Optical Society of America, 2015), paper CL_P_13. ISBN: 978-1-4673-7475-0
63. B. Adinolfi, F. Baldini, C. Berrettoni, S. Berneschi, A. Giannetti, S. Tombelli, C. Trono, R. Bernini, I. A. Grimaldi, G. Persichetti, G. Testa, C. Kremer, C. Gärtner. Total internal reflection fluorescence-based optical biochip for the detection of immunosuppressants in transplanted patients. Proceedings of the 1st Workshop on Nanotechnology in Instrumentation and Measurement NANOFIM 2015, (2015). ISBN: 9 788896 496381.
64. B. Adinolfi, F. Baldini, A. Giannetti, S. Tombelli, C. Trono, G. Sotgiu, G. Varchi, M. Pellegrino, C. Domenici. Polymethylmethacrylate nanoparticles as vehicle for a molecular beacon specific for survivin mRNA in A549 Cells. Proceedings of the 1st Workshop on Nanotechnology in Instrumentation and Measurement NANOFIM 2015, (2015). ISBN: 9 788896 496381.
65. B. Adinolfi, A. Giannetti, S. Tombelli, C. Trono, F. Baldini, G. Sotgiu, G. Varchi, M. Pellegrino. Polymethylmethacrylate Nanoparticles as Carrier of an Oligodeoxynucleotide Molecular Beacon Specific for Survivin mRNA in A549 Human Lung Adenocarcinoma Epithelial Cells. Proceedings of AISEM Annual Conference, 2015 XVIII, IEEE Xplore Digital Library (2015).
66. F. Chiavaioli; C. Trono; A. Giannetti; S. Tombelli; P. Biswas; S. Bandyopadhyay; Sunirmal Jana; S. Bera; A. Mallick; F. Baldini. Label-free IgG/anti-IgG biosensing based on long period fiber gratings: a comprehensive feasibility study. Proc. SPIE 9313, Advanced Biomedical and Clinical Diagnostic and Surgical Guidance Systems XIII, 93130R (March 2015). doi: 10.1117/12.2082809
67. S. Tombelli, C. Trono (equal contribution come primo autore), B. Adinolfi, F. Chiavaioli, A. Giannetti, J. Eugen-Olsen, R. Bernini, I.A. Grimaldi, G. Persichetti, G. Testa, F. Baldini. Optical heterogeneous bioassay for the detection of the inflammatory biomarker suPAR. Proc. SPIE 9313, Advanced Biomedical and Clinical Diagnostic and Surgical Guidance Systems XIII, 93130W (March 4, 2015). doi:10.1117/12.2082804.
68. Barucci, A., Baldini, F., Berneschi, S., Cosi, F., Giannetti, A., Nunzi Conti, G., Soria, S., Tombelli, S., Trono, C., Farnesi, D., Pelli, S., Righini, G.C., Lunelli, L., Pasquardini, L., Pederzoli, C. Whispering gallery modes microresonators for sensing and biosensing applications. D. Compagnone et al. (eds.), Sensors, Lecture Notes in Electrical Engineering 319 (2015) 183-186. DOI 10.1007/978-3-319-09617-9_6. (ISBN 978-3-319-09616-2).
69. C. Berrettoni, S. Berneschi, R. Bernini, A. Giannetti, I.A. Grimaldi, G. Persichetti, G. Testa, S. Tombelli, C. Trono, F. Baldini; Optical Monitoring of Therapeutic Drugs with a Novel Fluorescence- Based POCT Device; Procedia Engineering, Volume 87, 2014, Pages 392-395 (2014).
70. C. Berrettoni, C. Trono, S. Tombelli, A. Giannetti, S. Berneschi, F. Baldini, I. A. Grimaldi, G. Persichetti, G. Testa, R. Bernini, G. Porro and C. Gärtner. A Point-of-Care Device for Immunosuppressants Monitoring in Transplanted Patients. D. Compagnone et al. (eds.), Sensors, Lecture Notes in Electrical Engineering 319, DOI 10.1007/978-3-319-09617-9_6. (ISBN 978-3-319-09616-2).
71. C. Berrettoni ; C. Trono ; S. Berneschi ; A. Giannetti ; S. Tombelli ; R. Bernini ; A. Grimaldi ; G. Persichetti ; G. Testa ; L. Bolzoni; G. Porro ; H. Becker ; C. Gärtner ; F. Baldini. A newly designed optical biochip for a TDM-POCT device. Proceedings of SPIE - The International Society for Optical Engineering, 8976 (2014), Article number 89760P.
72. Chiavaioli, F., Trono, C., Baldini, F.; Internally curved long period gratings for improved refractive index sensitivity; (2015) Lecture Notes in Electrical Engineering, 319, pp. 265-269.
73. Chiavaioli, F., Trono, C., Giannetti, A., Brenci, M., Baldini, F.; Label-free biosensor based on copolymer-functionalized optical fiber long-period grating; (2014) Lecture Notes in Electrical Engineering, 268 LNEE, pp. 199-203.
74. Giannetti, A., Baldini, F., Ballestri, M., Ghini, G., Giambastiani, G., Guerrini, A., Sotgiu, G., Tombelli, S., Trono, C., Tuci, G., Varchi, G.; Intracellular nanosensing and nanodelivery by PMMA nanoparticles; (2014) Lecture Notes in Electrical Engineering, 162 LNEE, pp. 69-75.
75. Surdo, S., Carpignano, F., Giannetti, A., Strambini, L.M., Trono, C., Baldini, F., Merlo, S., Barillaro, G.; Photonic crystal optofluidic silicon microsystems for (bio)sensing; (2014) Lecture Notes in Electrical Engineering, 162 LNEE, pp. 353-357.
76. Chiavaioli, F., Trono*, C., Baldini, F.; Improvement in refractive index sensitivity by means of internally curved long period fiber gratings; (2014) Proceedings of SPIE - The International Society for Optical Engineering, 9157, art. no. 91578P.
77. Trono*, C., Chiavaioli, F., Giannetti, A., Brenci, M., Baldini, F.; Thermostatized flow cell and hybrid LPG-FBG configuration for accurate measurement of refractive index; (2014) Lecture Notes in Electrical Engineering, 162 LNEE, pp. 327-331.
78. Farnesi, D., Righini, G.C., Barucci, A., Berneschi, S., Chiavaioli, F., Cosi, F., Pelli, S., Soria, S., Trono, C., Ristic, D., Ferrari, M., Nunzi Conti, G.; Coupling light to whispering gallery mode resonators; (2014) Proceedings of SPIE - The International Society for Optical Engineering, 9133, art. no. 913314.
79. Chiavaioli, F., Biswas, P., Trono*, C., Giannetti, A., Tombelli, S., Bandyopadhyay, S., Basumallick, N., Dasgupta, K., Baldini, F.; IgG/anti-IgG immunoassay based on a turn-around point long period grating; (2014) Progress in Biomedical Optics and Imaging - Proceedings of SPIE, 8935, art. no. 89350V.
80. Barucci, A., Giannetti, A., Cosi, F., Tombelli, S., Trono, C., Righini, G.C., Baldini, F., Pelli, S.; Optical fiber nanotips as carriers for molecular beacon-based biosensors; (2013) : Lasers and Electro-Optics Europe (CLEO EUROPE/IQEC), 2013 Conference on and International Quantum Electronics Conference, Issue Date: 12-16 May 2013.

81. Berneschi, S., Baldini, F., Barucci, A., Cosi, F., Farnesi, D., Giannetti, A., Conti, G.N., Pelli, S., Soria, S., Tombelli, S., Trono, C., Righini, G.C.; Biosensing with microresonators and fibre nanotips; (2013) International Conference on Transparent Optical Networks, art. no. 6602947.
82. Baldini, F., Chiavaioli, F., Cosi, F., Giannetti, A., Tombelli, S., Trono, C.; Miniaturised optical fiber pH sensor for gastro-esophageal applications; (2013) Proceedings of SPIE - The International Society for Optical Engineering, 8794, art. no. 87941Q.
83. Giannetti, A., Tombelli, S., Trono, C., Ballestri, M., Giambastiani, G., Guerrini, A., Sotgiu, G., Tuci, G., Varchi, G., Baldini, F.; Intracellular delivery of molecular beacons by PMMA nanoparticles and carbon nanotubes for mRNA sensing; (2013) Progress in Biomedical Optics and Imaging - Proceedings of SPIE, 8596, art. no. 85960U.
84. Nunzi Conti, G., Baldini, F., Berneschi, S., Farnesi, D., Giannetti, A., Soria, S., Trono, C., Lunelli, L., Pasquardini, L., Pederzoli, C.; Whispering gallery mode microresonators: Results on aptasensors and on a new sensing approach; (2013) Proceedings of SPIE - The International Society for Optical Engineering, 8600, art. no. 86001O.
85. Baldini, F., Chiavaioli, F., Giannetti, A., Brenci, M., Trono, C.; Label-free biosensor based on long period grating; (2013) Progress in Biomedical Optics and Imaging - Proceedings of SPIE, 8572, art. no. 857217.
86. Tombelli, S., Ballestri, M., Giambastiani, G., Giannetti, A., Guerrini, A., Sotgiu, G., Trono, C., Tuci, G., Varchi, G., Baldini, F.; Oligonucleotide switches and nanomaterials for intracellular mRNA sensing; Proc. SPIE 8798, Clinical and Biomedical Spectroscopy and Imaging III, 879802 (18 June 2013).
87. I. A. Kolmychek, S.E. Svyakhovskiy, T.V. Murzina, F. Baldini, G. Ghini, A. Giannetti, C. Trono, G. Nunzi Conti, and S. Soria, "Colorimetric resonant detection of biochemical agents in mesoporous silicon based photonic crystals", Proc.SPIE 8264, Integrated Optics: Devices, Materials, and Technologies XVI, (21-26 Gennaio 2012, San Francisco, USA), 82641L (2012)
88. F. Baldini, A. Giannetti, C. Trono, L. Bolzoni, and G. Porro, "The CAI Instrument: a Novel Optical Device for Sepsis Analysis for POCT applications", Proc. CLEO, Conference on Lasers and Electro-Optics/Pacific Rim (28 Agosto - 1 Settembre 2011, Sydney Australia), C974, 2011
89. F. Baldini, M. Brenci, F. Chiavaioli, R. Falciai, A. Giannetti, M. Mugnaini, C. Trono, "Long period and fiber Bragg gratings written within the same fiber for sensing purposes", Proc.SPIE 7941, Integrated Optics: Devices, Materials, and Technologies XV (24-26 Gennaio 2011, San Francisco, USA), 794112 (2011)
90. F. Baldini, G. Ghini, A. Giannetti, F. Senesi, C. Trono, "A novel optical probe for pH sensing in gastro-esophageal apparatus", Proc. SPIE 7890, Advanced Biomedical and Clinical Diagnostic Systems IX, (24-26 Gennaio 2011, San Francisco, USA), pp.78901J-78901J6, 2011
91. F. Baldini, M. Brenci, F. Chiavaioli, R.Falciai, C.Trono*, "Flow cell with hybrid LPG and FBG optical fiber sensor for refractometric measurements", Proc. SPIE 7753, 21st International Conference on Optical Fiber Sensors (15-19 May 2011, Ottawa, Canada), 775392-1 (2011)
92. F.Baldini, G.Ghini, A.Giannetti, F.Senesi, C. Trono, "Novel fiber tip sensor potentially suitable for gastric pH measurement", IEEE Proc. International Workshop on BioPhotonics, 2011, (8-10 June 2011, Parma), 978-1-4244-9837-6/11
93. A.Giannetti, C. Trono, F. Baldini, L. Bolzoni, G. Porro, "The channel array interrogation (CAI) instrument for C-reactive protein analysis", IEEE Proc. International Workshop on BioPhotonics, 2011, (8-10 June 2011, Parma), 978-1-4244-9836-9
94. F.Baldini, L.Bolzoni, A.Giannetti, G.Porro, C.Trono, "A portable instrument for the optical interrogation of a novel biochip", Proc. SPIE 7653, Fourth European Workshop on Optical Fibre Sensors (8-10 Settembre 2010, Porto, Portugal) 76531H-1- 76531H-4 (2010)
95. G. Ghini, G.L. Puleo, C. Trono, A. Giannetti, L. Luconi, C. Bianchini, G. Giambastiani, F. Baldini (invited paper), "Modified multi-walled carbon nanotubes potentially suitable for intracellular pH measurements", Proc.SPIE 7574, Nanoscale Imaging, Sensing, and Actuation for Biomedical Applications VII (27-28 Gennaio 2010, San Francisco, USA), 75740C-75740C-8 (2010)
96. N. Beverini, S. Firpi, E. Maccioni, M. Morganti, F. Stefani, P. Guerrini, A. Maguer, C. Trono; "Fiber laser hydrophone for underwater acoustic surveillance and marine mammals monitoring"; Proc. SPIE 7994, 79941D (2010); doi:10.1117/12.880973.
97. Baldini, F., Giannetti, A., Senesi, F., Trono, C., Bolzoni, L., Porro, G.; An optical platform based on fluorescence anisotropy for C reactive protein and procalcitonine assay; (2010) Lecture Notes in Electrical Engineering, 54 LNEE, pp. 127-131.
98. Baldini, F., Giannetti, A., Trono, C., Carofiglio, T., Lubian, E.; Porphyrin-porphyrin diads as potential transducers for the determination of cadaverine in aqueous solution; (2010) Lecture Notes in Electrical Engineering, 54 LNEE, pp. 177-180.
99. Berneschi, S., Bhaktha, S.N.B., Chiappini, A., Chiasera, A., Ferrari, M., Kinowski, C., Turrell, S., Trono, C., Brenci, M., Cacciari, I., Nunzi Conti, G., Pelli, S., Righini, G.C.; Highly photorefractive Eu³⁺ activated sol-gel SiO₂-SnO₂ thin film waveguides; (2010) Proceedings of SPIE - The International Society for Optical Engineering, 7604, art. no. 76040Z
100. Baldini, F., Giannetti, A., Senesi, F., Trono, C., Bolzoni, L., Porro, G.; Stand-alone system for sepsis analysis; (2010) Smart Systems Integration 2010 - 4th European Conference and Exhibition on Integration Issues of Miniaturized Systems - MEMS, MOEMS, ICs and Electronic Components.
101. F. Baldini, A. Carloni, R. Falciai, A. Giannetti, A. Mencaglia, G. Porro and C. Trono; "Optical PMMA chip for multianalyte detection"; accepted for publication after review on the Proc. Of the Third European Workshop on Optical fibre Sensors to be held in Napoli, Italy, July 4-7, 2007. Extension will be published on the IEEE Sensors Journal special issue.

102. F. Baldini, F. Feichtner, A. Giannetti, G. Gori, A. Mencaglia, V. Pavoni, A. M. Perna and C. Trono; "In-vivo characterization of a microdialysis-based pH sensor"; accepted for publication after review on the Proc. Of the Third European Workshop on Optical fibre Sensors to be held in Napoli, Italy, July 4-7, 2007.
103. F. Baldini, A. Bizzarri, M. Cajlakovic, F. Feichtner, L. Gianesello, A. Giannetti, G. Gori, C. Konrad, A. A. Mencaglia, E. Mori, V. Pavoni, A. M. Perna and C. Trono; "Carbon dioxide, oxygen and pH detection in animal adipose tissue by means of extracorporeal microdialysis"; Proc. of SPIE, Vol. 6585, pp. 658510-1 658510-7, 2007.
104. P. E. Bagnoli, N. Beverini, R. Falciai, E. Maccioni, M. Morganti, F. Sorrentino, F. Stefani, C. Trono; "Sviluppo di idrofoni basati su laser in fibra ottica drogata all'erbio"; Atti di "Odimi 2006" – Quaderni di Ottica e Fotonica 15, S. Berneschi, I. Cacciari, C. Trono, G. C. Righini Ed., SIOF 2006.
105. D. Capello, R. Falciai, G. Fontana, N. Pallaro, G. Soncini, C. Trono; "Sistema rilievo ostacoli distribuito"; Atti di "Odimi 2006" – Quaderni di Ottica e Fotonica, S. Berneschi, I. Cacciari, C. Trono, G. C. Righini Ed., SIOF 2006.
106. P.E. Bagnoli, N. Beverini, E. Castorina, E. Falchini, R. Falciai, V. Flaminio, E. Maccioni, M. Morganti, F. Sorrentino, F. Stefani, C. Trono; "Fiber Laser Hydrophones as Pressure Sensors"; Proc. of the International Workshop "ARENA 2005", R. Nahnauer, S. Boser ed., World Scientific 2006, pages 102-106.
107. N. Beverini, R. Falciai, E. Maccioni, M. Morganti, F. Sorrentino, C. Trono; "Developing fiber lasers with Bragg reflectors as pressure sensor"; Proc. of Matter, Materials and Devices, Genova June 22-25 2005.
108. R. Falciai, C. Trono; "Displacement fiber Bragg grating sensor with temperature compensation"; Proc. of 17th International Conference on Optical Fiber Sensors "OFS-17", 23-27 May 2005, SPIE vol. 5855, pp. 787-790.
109. R. Falciai, C. Trono, G. Pascale, B. Bonfiglioli; "Some aspects of FRP monitoring with fiber Bragg grating sensors"; Proceedings of 2nd European Workshop on Structural Health Monitoring 2004; C. Boller, W J. Staszewski Ed.; DEStech Pub., 2004; pp. 877-882.
110. R. Falciai, J. M. Kenny, A. Terenzi, C. Trono, R. Mezzacasa; "FBGs embedded in carbon fiber pultruded composite strips for concrete beam reinforcement and monitoring"; Proc. of the 12th International Conference on Experimental Mechanics, Advanced in Experimental Mechanics, C. Paplettere Ed., McGraw-Hill 2004, pp. 719-720.
111. R. Falciai, J. M. Kenny, A. Terenzi, C. Trono, R. Mezzacasa; "Reinforcing and monitoring of concrete structures with composites and fiber optic sensors"; Proc. of the 9th Conference Sensors and Microsystems "Aisem 2004"; C. Di Natale A. D'amico Ed., World Scientific Pub. 2005, pp. 329-336.
112. R. Falciai, C. Trono; "Chirping variabile su di un reticolo di Bragg uniforme"; Atti di "Odimi 2004" – Quaderni di Ottica e Fotonica 11, S. Berneschi, S. Pelli, G. C. Righini Ed., SIOF 2004, pp. 115-119.
113. R. Falciai, G. Fontana, E. Mosca, N. Pallaro, G. Soncini, C. Trono, F. Visintainer; "Sistema rilievo ostacoli distribuito"; Atti di "Odimi 2004" – Quaderni di Ottica e Fotonica 11, S. Berneschi, S. Pelli, G. C. Righini Ed., SIOF 2004, pp. 42-47.
114. R. Falciai, C. Trono, P. Castelli, R. Galli, N. Mattiucci, N. Pallaro; "Automotive applications of fiber Bragg grating sensors"; Proc. of the 8th Conference Sensors and Microsystems "Aisem 2003"; Ed. C. Di Natale, A. D'Amico, G. Soncini, L. Ferrario, M. Zen; World Scientific Pub., 2004, p. 545.
115. C. Castelli, G. Lanterna, R. Falciai, C. Trono; "Painted wood panels monitoring by fiber Bragg grating sensors"; Conservation Science 2002, Edinburgo 22-24 maggio 2002. J. H. Townsend, K. Eremin, A. Adriaens Ed., Archetype Pub, 2003, pp 65-69.
116. C. Castelli, G. Lanterna, R. Falciai, C. Trono; "Deformation monitoring of painted wood panels by fiber Bragg gratings"; Tech. Dig. of "ICO XIX – Optics for the Quality of Life"; A. Consortini, G. C. Righini Ed., Spie Proc. Vol. 4829, 2002, pp. 101-102.
117. P. Castelli, R. Falciai, R. Galli, N. Mattiucci, N. Pallaro, C. Trono; "Applicazioni di reticoli di Bragg per il monitoraggio strutturale in campo automobilistico"; in Atti del 3° Workshop Ottiche diffrattive, microottica e microsistemi; Montecatini 31 maggio 2002; G. C. Righini, C. Trono Ed., SIOF pub., pp 53-58.
118. C. Castelli, G. Lanterna, R. Falciai, C. Trono; "Sensori a reticolo di Bragg in fibra per il monitoraggio di pannelli lignei dipinti"; in Atti del 7° Convegno nazionale "Strumentazione e metodi di misura elettroottici", Montecatini, 29-31 maggio 2002.
119. P. Castelli, R. Falciai, R. Galli, N. Mattiucci, N. Pallaro, C. Trono; "Application of FBG sensors for the monitoring of critical components of vehicles"; European workshop on smart structures in engineering and technology, B. Culshaw Ed., Spie Vol. 4763, 2002, pp. 252-258.
120. R. Falciai, C. Trono; "Temperature effect measurements of glued FBG strain sensors"; Fiber Optic sensors and application 2001, M. A. Marcus, B. Culshaw Ed., Proc. of Spie Vol. 4578, 2002, pp. 422-427.
121. R. Falciai, C. Trono; "Temperature effect on glued FBG strain sensors"; in Proceedings of Odimap III; Pavia 20-22 Settembre 2001; Leos Italy pub., pp. 325-330.
122. R. Falciai, A. G. Mignani, C. Trono; "The monitoring of lighting in the Uffizi Gallery using an innovative optical fiber sensor"; in Proceedings of Science and Technology for the safeguard of Cultural Heritage in the Mediterranean Basin; Alcalà de Henares, Spagna, 9-14 luglio 2001; A. Guarino Ed., CNR Progetto Finalizzato beni Culturali Pub.; p. 1000.
123. M. Bacci, R. Falciai, A. Mencaglia, A. G. Mignani, F. Senesi, C. Trono; "Lighting monitoring in museums by means of optical fiber sensors"; in Proceedings of Microelectronics and Cultural Heritage; Firenze 19 Marzo 2001; M. Bacci, S. Iarossi Ed., Madess II Pub.; pp. 92-100.

124. R. Falciai, C. Trono; "Temperature effects on FBG sensors"; Proc. of the 6th Italian Conference "Sensors and Microsystem"; Pisa 5-7 Febbraio 2001; in corso di stampa.
125. A. G. Mignani, C. Trono; "Optical fiber spectral measurements for analysis of hydrocarbon products"; Proc. of the 5th Italian Conference "Sensors and Microsystem", Lecce 12-16 Febbraio 2000; C. Di Natale, A. D'Amico Ed.; Word Scientific, Singapore, 2000; pp 395-398.
126. R. Falciai, A. G. Mignani, C. Trono, B. Tiribilli; "Optical fibers for the monitoring of lighting in museum environment"; Proc. of the 4th Italian Conference "Sensors and Microsystem"; C. Di Natale, A. D'Amico Ed.; Word Scientific, Singapore, 1999; pp 329-333.
127. R. Falciai, A. G. Mignani, C. Trono, B. Tiribilli; "Optical fibers for the cultural heritage II: The monitoring of lighting in the museum environment"; Optics and Lasers in Biomedicine and Culture; Springer-Verlag Pbl. 2000; pp 135-138.
128. M. Bacci, A. G. Mignani, C. Trono; "Optical fibers for the cultural heritage I: picture varnishes as thermosensitive fiber cladding"; Optics and Lasers in Biomedicine and Culture; Springer-Verlag Pbl. 2000; pp 169-173.
129. R. Falciai, A. G. Mignani, C. Trono, B. Tiribilli; "Fotometria tramite fibre ottiche e trasduttore fotocromico per applicazioni al microclima museale"; Proc. XII Riunione Nazionale di Elettromagnetismo; 28 settembre – 1 ottobre 1998; pp 375-378.
130. M. Bacci, A. Mencaglia, A. G. Mignani, C. Trono; "Fiber optics for the cultural heritage: picture varnishes as thermosensitive fiber-cladding"; Proc. 12th International Conference on Optical Fiber Sensors, OSA Technical Digest Vol. 16, 1997, pp 394-397.
131. M. Bacci, A. Mencaglia, A. G. Mignani, C. Trono; "Optical fibers for monitoring the effects of temperature on picture varnishes"; Proc. SPIE, Vol. 3105, "Chemical, Biochemical and Environmental Fiber Sensors IX", R.A. Lieberman Ed., 1997, pp 154-158.

Capitoli libri

132. F. Baldini, A. Giannetti, S. Tombelli, C. Trono, Optical Biosensing in Medical and Clinical Diagnostics, in Photonics for Safety and Security (World Scientific Publishing Singapore) (2014) 353- 367. ISBN 978-981-4412-96-4
133. B. Adinolfi, F. Baldini, A. Giannetti, S. Tombelli, C. Trono, M. Ballestri, G. Sotgiu, G. Varchi, S. Carpi, P. Nieri, C. Domenici, M. Pellegrino, Fari molecolari: luce nelle cellule, in Ed. speciale Anno della Luce (IFAC - Book Series, CNR Publisher, Series Editor Daniela Mugnai) (2015). ISBN 9788890685958
134. F. Chiavaioli, C. Trono, A. Giannetti, S. Tombelli, F. Baldini, La luce nelle fibre ottiche: reticoli a passo lungo come strumento di rivelazione di parametri chimici e biochimici, in Ed. speciale Anno della Luce (IFAC - Book Series, CNR Publisher, Series Editor Daniela Mugnai) (2015). ISBN 9788890685958
135. B. Adinolfi, S. Berneschi, C. Berrettoni, F. Chiavaioli, A. Giannetti, S. Tombelli, C. Trono, F. Baldini, La luce al servizio della medicina: i biosensori ottici a fianco del letto del paziente, in Ed. speciale Anno della Luce (IFAC - Book Series, CNR Publisher, Series Editor Daniela Mugnai) (2015). ISBN 9788890685958

Partecipazione a Congressi con presentazione orale o poster

1. SPIE Optics + Optoelectronics, Praga 1-4 aprile 2019, presentazione orale: "High numerical aperture waveguide absorption filter for fluorescence detection".
2. Fotonica 2018, Lecce, 23-25 maggio 2018, lavoro accettato come presentazione Invited: "Multichannel integrated optical platform based on an array of absorbing waveguides".
3. EUROPT(R)ODE XIV, Napoli 25-28 marzo 2018, presentazione orale: "A novel fluorescence-based integrated platform for POCT".
4. XIX Conferenza Annuale dell'Associazione Italiana Sensori e Microsistemi, AISEM 2017, Lecce 21-23 Febbraio 2017, presentazione orale: "A parallel multichannel fluorescence detection system for poct".
5. Photoptics 2016, 4th International Conference on Photonics, Optics, and Laser Technology, Roma 27-29 Febbraio 2016. Presentazione orale: "Manufacturing and optimization of sol-gel-based TiO₂-SiO₂ thin films as high refractive index overlays for long period grating-based biosensing".
6. Convegno del Gruppo Sensori della SCI, GS2015 - Sensori e biosensori: stato dell'arte e nuove prospettive, Parma 15-17 giugno 2015. Presentazione orale: Comparative analysis of long period gratings-based label-free biosensors".
7. XVIII Conferenza Annuale dell'Associazione Italiana Sensori e Microsistem, AISEM 2015, Trento 3-5 febbraio 2015. Presentazione poster: "Performance assessment of long period fiber gratings as biosensors: a comparative analysis".
8. Europtrode 2014, XII Conference on Chemical Sensors and Biosensors, Atene 13-16 aprile 2014. Presentazione poster: "Long period grating as an emergent optical platform for label-free biosensing".
9. SPIE Photonics West 2014, San Francisco 1-6 febbraio 2014. Presentazione orale: "IgG/Anti-IgG immunoassay based on a turn-around point long period grating".
10. Il Convegno Nazionale Sensori, Roma 19-21 febbraio 2014. Presentazione poster: "A Point Of Care Device for Immunosuppressant in transplanted patients".
11. XVII Conferenza Annuale dell'Associazione Italiana Sensori e Microsistem, AISEM 2013, Brescia 5-7 febbraio 2013. Presentazione poster: "intracellular mrna sensing by pmma nanoparticles and carbon nanotubes coated with an oligonucleotide switch".

12. XIV Convegno nazionale Fotonica 2012, Firenze 15-17 maggio 2012. Presentazione orale: "Testing Fibre Laser Hydrophones".
13. Convegno "Il Tabernacolo dei Linaioli del Beato Angelico restaurato", Ferrara 29/03/2012. Presentazione orale: "Le indagini scientifiche dell'IFAC-CNR".
14. CONVEGNO NAZIONALE SENSORI, Roma 15 – 17 Febbraio 2012. Presentazione orale: "Thermostated flow cell and hybrid lpg-fbg configuration for accurate measurement of refractive index".
15. XCVII Congresso Nazionale della Società Italiana di Fisica, L'Aquila 26-30 settembre 2011. Presentazione orale: "Flow cell with hybrid optical fiber long period and bragg grating for label-free detection of bioanalytes".
16. Smart Systems Integration 2010, Como 23-24 marzo 2010. Presentazione poster: "Stand-alone system for sepsis analysis."
17. Convegno congiunto DGAO (Deutsche Gesellschaft für Angewandte Optik e.V.) – SIOF (Società Italiana di Ottica e Fotonica), Brescia 3-5 giugno 2009. Presentazione orale: "Detection of bioanalytes by a fluorescence-based innovative platform".
18. XII National Conference on Sensors and Microsystems, AISEM 2008, Roma 19-21 Febbraio 2008. Presentazione orale: "A new optical platform based on fluorescence anisotropy for immunosensing applications".
19. XII National Conference on Sensors and Microsystems, AISEM 2008, Roma 19-21 Febbraio 2008. Presentazione orale: "Clinical validation of a microdialysis-based pH sensor".
20. Ottiche diffrattive, microottica e microsistemi – ODIMI 2006", Firenze 11-12 maggio 2006. Presentazione orale: "Sviluppo di idrofoni basati su laser in fibra ottica drogata all'erbio".
21. International workshop on Acoustic and Radio EeV Neutrino detection Arena 2005, Berlino 17-19 maggio 2005. Presentazione orale: "Fiber Laser Hydrophones as Pressure Sensors".
22. I International Mediterranean Workshop on Marine Geophysics Portovenere 26-28 ottobre 2004. Presentazione orale: "Developing fiber lasers with Bragg reflectors as pressure sensors for deep sea hydrophones".
23. Ottiche diffrattive, microottica e microsistemi – ODIMI 2004, Firenze 1-2 aprile 2004. Presentazione orale: "Chirping variabile su di un reticolo di Bragg uniforme".
24. ICO XIX – Optics for the Quality of Life, Firenze 25-30 agosto 2002. Presentazione orale: "Deformation monitoring of painted wood panels by fiber Bragg gratings".
25. Elettroottica 2002, Montecatini Terme, 29-31 maggio 2002. Presentazione poster: "Sensori a reticolo di bragg in fibra per il monitoraggio di pannelli lignei dipinti".
26. Conservation Science 2002, Edinburgo 22-24 maggio 2002. Presentazione orale: "Painted wood panels monitoring by fiber Bragg grating sensors".
27. Odimap III; Pavia 20-22 Settembre 2001. Presentazione orale: "Temperature effect on glued FBG strain sensors".
28. Science and Technology for the Safeguard of Cultural Heritage in the Mediterranean Basin; Alcalà de Henares, Spagna, 9-14 luglio 2001. Presentazione orale: "The monitoring of lighting in the Uffizi Gallery using an innovative optical fiber sensor".