

DICHIARAZIONE SOSTITUTIVA DI ATTO DI NOTORIETA'  
Articoli 19 e 47 del DPR 445 del 28/12/2000

IL sottoscritto Giampiero Contestabile nato a

: residente a l

Consapevole delle responsabilità penali previste dagli artt. 75 e 76 del DPR 445/2000 per le ipotesi di falsità in atti e dichiarazioni mendaci

DICHIARA

che quanto contenuto nel curriculum scientifico e didattico di seguito riportato è corrispondente al vero e di essere in possesso di tutti i titoli in esso riportati

Pisa, 15 dicembre 2016

IL\_ Dichiarante

***Resume of Scientific activities of Dr. Giampiero Contestabile with Japanese Institutions***

(In 2008 he has been one of the six pre-selected scientists interviewed for the position of Scientific Attache' to the Italian Embassy in Tokyo.)

**Awards from Japanese Institutions:**

- 2012 awarded with the *Erasmus Mundus MAPNET Visiting Scholarship (3 months)* at Osaka University (Japan).
- 2009 awarded with the *Visiting Professor fellowship (7 months)* to Osaka University (Japan) by the Japan Society for Promotion of Science (JSPS) in the “*FY2009 JSPS Invitation Fellowship Program for Research in Japan (Long Term)*”.

**Participation to scientific boards in Japan:**

Technical Committee member of the 24th Congress of the International Commission for Optics (ICO-24), Tokyo, Japan, August 2017

In 2013, Technical Committee member of *The Conference on Lasers and Electro-Optics Pacific Rim (CLEO-PR)*, Kyoto, Japan.

In 2013, Technical Committee member of *The OptoElectronics and Communications Conference (OECC)*, Kyoto, Japan.

**Institutional and scientific activities with Japanese counterparts:**

In 2010-2016 participated as teacher of the class “*Photonic Technologies*” to (MAPNET) Erasmus Mundus Master Consortium (<http://mapnet.sssup.it/index.html>). MAPNET is a full time two-year master program involving Scuola Superiore Sant’Anna and Osaka University as two of the four universities of the consortium which had a focus on optical communications and has been funded by the EU commission through the Erasmus mundus action.

In **2015** and **2016** hosted prof. A. Maruta and Dr. R. Matsumoto of Osaka University while being MAPNET visiting scholar (1 month) and JSPS student visitor (1 month) respectively at Scuola Superiore Sant'Anna

In **2007** he organized the “*Japan-Italy Bilateral Workshop on Photonics for Communication*”, Osaka (Japan).

In **2007** he managed the arrangement of a Memorandum of Understanding for joint research and exchange program between *Scuola Superiore Sant'Anna* of Pisa and *Waseda University* of Tokyo.

In **2007** he managed the arrangement of a Memorandum of Understanding for joint research and exchange program between *Scuola Superiore Sant'Anna* of Pisa and *Osaka University*.

**Scientific papers published by Dr. Giampiero Contestabile in collaboration with various Japanese Institutions, (Osaka University, Waseda University (Tokyo), National Institute of Information and Communications Technology (NICT) (Tokyo), Fujitsu Laboratories (Atsugi)):**

1. **G. Contestabile**, A. Maruta, and K.-I. Kitayama, "Four Wave Mixing in Quantum Dot Semiconductor Optical Amplifiers," *IEEE Journal of Quantum Electronics*, vol. 50, no. 5, pp. 379 - 389, **2014** (ISSN: 0018-9197)
2. S. Lange, **G. Contestabile**, Y. Yoshida, and K. Kitayama "Phase-transparent Amplification of 16 QAM Signals in a QD-SOA," *IEEE Photonics Technology Letters*, vol. 25, no. 24, pp. 2486-2489, **2013** (ISSN: 1041-1135)
3. **G. Contestabile**, Y. Yoshida, A. Maruta, and K. Kitayama, "Coherent Wavelength Conversion in a Quantum Dot SOA," *IEEE Photonics Technology Letters*, vol. 25, no. 9, pp. 791 - 794, **2013** (ISSN: 1041-1135)
4. **G. Contestabile**, Y. Yoshida, A. Maruta, and K. Kitayama, "Ultra-broad band, low power, highly efficient coherent wavelength conversion in quantum dot SOA," *Optics Express*, vol. 20, no. 25, pp. 27902-27907, **2012** (ISSN: 10944087)
5. **G. Contestabile**, A. Maruta, S. Sekiguchi, K. Morito, M. Sugawara, and K. Kitayama, "All-Optical Wavelength Multicasting in a QD-SOA " *IEEE Journal of Quantum Electronics*, vol. 47, pp. 541 – 547, **2011** (ISSN: 0018-9197)
6. **G. Contestabile**, A. Maruta, S. Sekiguchi, K. Morito, M. Sugawara, and K. Kitayama, "Cross-Gain Modulation in Quantum-Dot SOA at 1550 nm " *IEEE Journal of Quantum Electronics*, vol. 46, pp. 1696 - 1703, **2010** (ISSN: 0018-9197)
7. **G. Contestabile**, A. Maruta, and K. Kitayama "Gain Dynamics in Quantum Dot Semiconductor Optical Amplifiers at 1550 nm," *IEEE Photon. Technol. Lett.* vol. 22, pp. 987 – 989, **2010** (ISSN: 1041-1135)
8. **G. Contestabile**, A. Maruta, S. Sekiguchi, K. Morito, M. Sugawara, and K. Kitayama, "Regenerative Amplification by using Self Phase Modulation in a Quantum Dot SOA, " *IEEE Photon. Technol. Lett.*, vol. 22, pp. 492 - 494, **2010** (ISSN: 1041-1135)
9. E. Ciaramella, Y. Arimoto, **G. Contestabile**, M. Presi, A. D'Errico, V. Guarino, and M. Matsumoto, "1.28-Tb/s (32 x 40 Gb/s) Free-Space Optical WDM Transmission System *IEEE Photon. Technol. Lett.*, vol. 21, 16, pp. 1121 - 1123, **2009** (ISSN: 1041-1135)
10. E. Ciaramella, Y. Arimoto, **G. Contestabile**, M. Presi, A. D'Errico, V. Guarino, and M. Matsumoto, "1.28 terabit/s (32x40 Gbit/s) WDM transmission system for free space optical communications, " *IEEE Journal of Selected Areas in Communications*, vol. 27, 9, pp. 1639 - 1645, **2009** (ISSN: 0733-8716)
11. R. Matsumoto, **G. Contestabile**, Y. Yoshida, A. Maruta, Ken-ichi Kitayama, "Pattern-Independent Wavelength Conversion of PAM Signals in SOAs, " 21st OptoElectronics and Communications Conference/2016 International Conference on Photonics in Switching OECC/PS, paper MF2-3, **2016**, Niigata, Japan

12. *G. Contestabile*, Y. Yoshida, A. Maruta, K. Kitayama, "100 nm-bandwidth positive-efficiency wavelength conversion for m-PSK and m-QAM signals in QD-SOA," Optical Fiber Communication Conference, OFC/NFOEC 2013, Anaheim, USA

13. S. Lange, *G. Contestabile*, Y. Yoshida, K. Kitayama, "Phase transparent amplification of 40 Gbps 16 QAM signals using a QD-SOA," 18th OptoElectronics and Communications Conference held jointly with 2013 International Conference on Photonics in Switching OECC/PS, 2013, Kyoto, Japan

14. *G. Contestabile*, A. Maruta, S. Sekiguchi, K. Morito, M. Sugawara, K. Kitayama, "Regenerative amplification in a quantum dot SOA" Proc. of Optical Fiber Communication Conference, OFC 2010, San Diego, USA

15. *G. Contestabile*, A. Maruta, and K. Kitayama "Gain recovery in columnar quantum dot SOA at 1550 nm "Proc. of Conference on Laser and Electro-Optics, CLEO 2010, San Jose, USA

16. *G. Contestabile*, A. Maruta, S. Sekiguchi, K. Morito, M. Sugawara, K. Kitayama, "80 Gb/s multicast wavelength conversion by XGM in a QD-SOA, " Proc of European Conference on Optical Communications, ECOC 2010, Torino, Italy

17. (*Postdeadline paper*) *G. Contestabile*, A. Maruta, S. Sekiguchi, K. Morito, M. Sugawara, K. Kitayama, "160 Gb/s cross gain modulation in quantum Dot SOA at 1550 nm, "Proc of European Conference on Optical Communications, ECOC 2009, PDP 1.4, Vienna, Austria

18. E. Ciaramella, Y. Arimoto, *G. Contestabile*, M. Presi, A. D'Errico, V. Guarino, M. Matsumoto, "1.28 Terabit/s (32x40 Gbit/s) WDM Transmission over a Double-Pass Free Space Optical Link", Proc. of Optical Fiber Communication Conference, paper OMN7, OFC 2009, San Diego, USA

19. Y. Arimoto, M. Presi, V. Guarino, A. D'Errico, *G. Contestabile*, M. Matsumoto, E. Ciaramella, "320 Gbit/s (8x40 Gbit/s) double-pass terrestrial free-space optical link transparently connected to optical fibre lines", Proc of European Conference on Optical Communications, ECOC 2008, Paper Th.3.F.2, Brussels, Belgium

### *Curriculum Vitae et Studiorum*

**GIAMPIERO CONTESTABILE**, Assistant Professor ("*Ricercatore Universitario Confermato*") at the *Scuola Superiore Sant'Anna of University Studies and Doctoral Research* of Pisa, Italy

#### **Personal information**

First name/ Surname	<i>Giampiero Contestabile</i>
Telephone	<i>Mobile:</i>
E-mail	<i>,</i>
Nationality	<i>Italian</i>
Date of birth	
Mother tongue	<i>Italian</i>
Other language(s)	<i>English, Japanese</i>
Self-assessment	<i>English: proficient; Japanese: basic.</i>

- **December 2013**: "Abilitazione Scientifica Nazionale (ASN)": National qualification to Associate Professor in "*09/F2 Telecomunicazioni*".  
(<https://abilitazione.cineca.it/ministero.php/public/esitoAbilitati/settore/09%252FF2/fascia/2>)

- (2012 - now) Technical Coordinator of PIC (*"Photonic Integrated Circuits: Fotonica Integrata a Pisa, una infrastruttura cruciale per il trasferimento tecnologico"*) under the PRSE 2007/2010 and PAR FAS 2007/2013 . Regional project which led to the set-up of the INPHOTEC center of Scuola Superiore Sant'Anna (budget: 6.4 millions Euros)

- 2012 awarded with the *Erasmus Mundus MAPNET Visiting Scholarship (3 months)* at Osaka University (Japan).

- From **September 2010** he is Assistant Professor (*"Ricercatore Universitario Confermato"*) at the *Scuola Superiore Sant'Anna of University Studies and Doctoral Research* of Pisa, Italy.

- 2009 awarded with the *Visiting Professor fellowship (7 months)* to Osaka University (Japan) by the Japan Society for Promotion of Science (JSPS) in the *"FY2009 JSPS Invitation Fellowship Program for Research in Japan (Long Term)"*.

### **Education and training**

- **November 2001:** *Ph.D. in Electrical Engineering - Telecommunications* from *"Tor Vergata"* University of Rome, Italy.

Title of Ph.D. dissertation: *"Miscelazione a quattro onde in amplificatori ottici a semiconduttore: un metodo pratico per la realizzazione di convertitori di lunghezza d'onda completamente ottici"*.

Tutors: Dr. Paolo Spano and prof. Paolo Lugli.

- **March 1998:** *Laurea degree in Physics* from *"La Sapienza"* University of Rome, Italy.

Title of Laurea dissertation: *"Configurazioni a due pompe nella miscelazione a quattro onde in amplificatori ottici a semiconduttore"*.

Tutors: Dr. Faustino Martelli and prof. Paolo Mataloni.

- From **November 1996** to **May 2000** he was undergraduate and graduate student with the Semiconductor Devices Group of *"Fondazione Ugo Bordonini"*, Rome, Italy.

### **Previous work experience**

- From **March** to **September 2010** he was *Research Scientist* at CNIT (Italian Consortium for Research in Telecommunication), Pisa, Italy.

- From **September 2008** to **February 2010** he was *Research Scientist ("Collaboratore a Contratto")* at the *Scuola Superiore Sant'Anna of University Studies and Doctoral Research* of Pisa, Italy.

- From **September 2002** to **September 2008** he was *Assistant Professor* (non-permanent, *"Ricercatore Universitario a tempo determinato"*) at the *Scuola Superiore Sant'Anna of University Studies and Doctoral Research* of Pisa, Italy.

- From **December 2000** to **December 2001** he was *Research Scientist* at *Optospeed Italia*, Rome, Italy.

- From **May 2000** to **September 2000** he was *Research Scientist* at *Alenia Difesa* (now Galileo Avionica), Finmeccanica Group, Pomezia, Rome, Italy.

## Scientific experience

- From **2013** to now, Dr. Contestabile is *Deputy Area Leader* of the "*Advanced Technologies for Integrated Photonics*" group at the *TeCIP Institute of Scuola Superiore Sant'Anna*, Pisa.
- From **2010** to **2012** he has been Coordinator of the "*Photonic Integrated Circuit*" group at *Scuola Superiore Sant'Anna*, Pisa. Aim of the group was the design, simulation and test of photonic integrated circuits realized in III-V semiconductor and Silicon. At the same time, he is technical coordinator of the *PIC regional project* for the set-up of a clean-room for III-V and Silicon optical circuit manufacturing (project ongoing).
- From **May** to **August 2012** he has been *Erasmus Mundus MAPNET Visiting Scholar* at Osaka University (Japan).
- From **May** to **December 2009** he has been *Visiting Professor* at Osaka University (Japan), awarded by the Japan Society for Promotion of Science (JSPS) in the "*FY2009 JSPS Invitation Fellowship Program for Research in Japan (Long Term)*".
- From **2002** to **2009**, Dr. Contestabile has been *Deputy Area Leader* of the "*Transmission System*" group at the *TeCIP Institute of Scuola Superiore Sant'Anna*, Pisa.
- From **2002** he is affiliate member of the CNIT (Consorzio Nazionale Interuniversitario per le Telecomunicazioni).

He participated to the following projects funded by:

### *European Union*

- (**2013 - now**) **FP7 ACTPHAST** (Photonic innovation solutions and support for European companies driven by their business needs) Integrated Project- (*Expert and project manager*).
- (**2011 - 2013**) **FP7-PEOPLE-2011-IIF**: Photonic Integrated Circuits and Systems - (*Project leader*)
- (**2006 - 2007**) **FP7 Integrated Project NOBEL II** (Next generation Optical network for Broadband European Leadership) phase II - (*Responsible for experimental activities*).
- (**2004 - 2005**) **FP 6 Integrated Project NOBEL** (Next generation Optical network for Broadband European Leadership) - (*Responsible for experimental activities*).
- (**1999 - 2001**) **IST-ATLAS** (WDM optical transmission system at 160 Gbit/s with wavelength conversion functionality) - (*Researcher*).

### *Ministry of Foreign Affairs*

- (**2016 - 2018**) Progetto di grande rilevanza **CANTON** "Commutatori ottici ad Altissima velocità in foTONica integrata" *Italy – China bilateral collaborations* - (*Project Leader*)

- (2007 – 2010) **FIRB – PEDROS** – “Dispositivi fotonici abilitanti per la rigenerazione e la commutazione ottica”, *Italy – Canada bilateral collaborations - (Researcher)*.

- (2005 – 2007) Joint research projects of particular relevance: ICT A1 “Design and implementation of a 2.5 Tbit/s Optical Time Division Multiplexing (OTDM) system” with Korean Institute of Science and Technologies, Seoul, Korea. *(Researcher)*.

- (2002 – 2004) Indo-Italian Science and Technology Collaboration, “Design of packet switched re-configurable DWDM network with wavelength conversion for multimedia” with l’Indian Institute of Technology (IIT). *(Researcher)*.

### **Ministry of University**

- (2005 - 2006) **PRIN TOSCA** (Transmission of Optical Systems using Competitive Amplification). *(Responsible for experimental activities)*.

- (2001 - 2002) **PRIN OTDM 2** (“Trasmissione su sistemi OTDM ad altissimo bit rate”). *(Researcher)*.

### **Tuscany Regional Government**

- (2012 - now) **PIC** (“*Photonic Integrated Circuits: Fotonica Integrata a Pisa, una infrastruttura cruciale per il trasferimento tecnologico*”) under the *PRSE 2007/2010* and *PAR FAS 2007/2013* *(Technical Coordinator)*.

- (2012 - 2014) **FORTEC** “Formare alla ricerca applicata e tecnologica” Regione Toscana, under *POR CRO FSE 2007-2013*. Asse IV Capitale Umano *(Project manager)*.

- (2011 - 2015) **ARNO T3** (“*Architetture di Reti e Nodi Ottici per la Trasmissione ad alta capacità e il Trasporto accesso-metro-core basati su Tecnologie fotoniche integrate*”) under the *POR CReO FESR 2007-2013*. *(one of the Project Managers)*.

### **Industrial relations**

- From 2002 to now, consulting activity for **Ericsson Italia**;  
he participates to the joint research and development activities between Sant’Anna and *Marconi Communication* (now *Ericsson Italia*) as defined year by year in the framework of the strategic long term agreement between the two research partners (2001-2016). These activities led to the assignment/filing of 7 *international patents*.

- 2000: Research and development for **Alenia Difesa** (now **Galileo Avionica**), Pomezia, Roma, Italy (high power Er/Yb optical amplifiers).

- 1997 – 2001: Research and development for **Opto Speed CH** (characterization and development of semiconductor optical amplifiers (SOA)).

### ***Scientific achievements***

Giampiero Contestabile has been working from the time of his master degree thesis (1997) to now in the field of opto-electronic devices and broadband transmission in fibers, with special emphasis on the study and experimental demonstration of novel schemes and techniques for the all-optical processing of high speed signals, and on the design and exploitation of novel photonic integrated circuits (PICs).

He contributed to the study, design and characterization of novel optical devices, to the demonstration of novel all-optical subsystems for next generation networks and, at the same time, he contributed to several experimental demonstrations and field trials.

He is a leading expert in the field of *photonic integrated circuits* (PICs), *semiconductor laser* and *semiconductor optical amplifiers* (SOAs) and their linear and nonlinear applications.

### ***Funding achievements***

He wrote and was technical coordinator of the Tuscany regional government project "*Photonic Integrated Circuits: Fotonica Integrata a Pisa, una infrastruttura cruciale per il trasferimento tecnologico*". A 8 millions Euros project (**funding: 3.6 millions**) for the realization of a new building with around 550 square meter clean room for the fabrication of silica and silicon PICs.

As PIC group coordinator he participated to the preparation of the Tuscany regional government project *ARNO T3* (**funding: 1.25 millions Euros**).

He was project leader of the *FP7-PEOPLE-2011-IIF* project (**funding: 193700 Euros**).

He was project leader of *FORTEC* "Formare alla ricerca applicata e tecnologica Regione Toscana", (**funding: 60000 Euros**).

He was project leader of the *LAMPO* project - *Scuola Sant'Anna internal funding* (**funding: 40000 Euros**).

He is project leader of *CANTON* project - "Progetto bilaterale di grande rilevanza, Ministero degli Affari Esteri" (**funding: 100000 Euros**)

### ***Teaching Experience***

- From 2010/2011 to now, "*Commutazione Fotonica (Photonics Switching)*" (6 CFU) in "Corso di Laurea in Informatica e Networking", of "*Università di Pisa*".

- From 2010/2011 to now, "*Photonic Technologies*" (3 CFU) in the "Erasmus Mundus Master on Photonic Networks Engineering (MAPNET)" of *Scuola Superiore Sant'Anna*.

- From 2012/2013 to 2014/2015, "*Optical Communication and Technologies*" (6 CFU) in the "Joint Graduate Program in Information and Communication Technologies" of "*Università di Trento*" and *Scuola Superiore Sant'Anna*.

- From 2010/2011, "*Photonic Integrated Technologies*" (3 CFU) in the *TeCIP Institute*, PhD program.

- From 2005 to 2009, he taught the course “*Laboratory of Networks, Systems and Components*” in the “International Master’s program in Communication Networks Engineering (IMCNE)” at *Scuola Superiore Sant’Anna*.

- From 2002 to 2008, he gave series of support seminars (“*Dispositivi e tecniche per le comunicazioni fotoniche*”) in the course “*Progettazione di Sistemi di Comunicazione Ottica*” of professor Ernesto Ciaramella at *Scuola Superiore Sant’Anna*.

In the years at Sant’Anna, Giampiero Contestabile has been supervisor for the experimental activities of the *PhD students* and *PostDoc* of professor *E. Ciaramella* group: Dr. *R. Proietti*, Dr. *M. Presi*, Dr. *A. D’Errico*, Dr. *L. Banchi* and Dr. *F. Bontempi*.

### **Participation to scientific committees and editorial boards**

From 2015 Giampiero Contestabile is Associate Editor of Elsevier Heliyon Journal (<http://www.journals.elsevier.com/heliyon/>)

He is Technical Co-chair of *Photonics in Switching 2017* (New Orleans, Louisiana, USA)

He is member of the following conference technical program committees:

- 24th Congress of the International Commission for Optics (ICO-24), Tokyo, Japan, August 2017

- From 2015, **IBP** (*International Broadband and Photonics Conference 2015*).

- From 2014, *OPTICS, International Conference on Optical Communication Systems*

- In 2013, *The Conference on Lasers and Electro-Optics Pacific Rim (CLEO-PR)* and *The OptoElectronics and Communications Conference (OECC)*

- From 2010, *IEEE Photonics in Switching*

- From 2010 FOTONICA, the Italian conference organized by AEIT e AICT.

He is in the board of reviewers of the following journals:

*IEEE Photonics Technology Letters, IEEE/OSA Journal of Lightwave Technology, IEEE Journal of Quantum Electronics, IEEE Journal of Selected Topics in Quantum Electronics, IEEE Photonics Journal, IET Electronic Letters, OSA Optics Express, OSA Optics Letters, Journal of Optical Society of America, Elsevier Optics Communication, Optics, Chinese Optics Letters.*

### **International relations**

- In 2007 he organized the “*Japan-Italy Bilateral Workshop on Photonics for Communication*”, Osaka (Japan).

- In 2007 he managed the arrangement of a Memorandum of Understanding for joint research and exchange program with *Waseda University* of Tokyo and *Osaka University*.



In 2006 he organized the “2006 China-Italy Bilateral Workshop on Photonics for Communication and Sensing”, Xi'an (China).

In 2005 and 2007, Giampiero Contestabile participated, as *Scuola Superiore Sant'Anna* representative person, to the roadshow in India “Invest your talent in Italy” (<http://www.postgradinitaly.org/>) for the promotion of high education in Italy.

- He has been member of the steering committee of the “*China-Italy agreement for Research Collaboration*” with the Institute of Optics and Precision Mechanics of the Chinese Academy of Sciences, Xi'an.

- In 2004, he was *Scuola Superiore Sant'Anna* representative person at the “*Indo Italian Workshop on Photonic Technologies, Networking and Applications*” March 29, 2004, Kharagpur, West Bengali, India.

### **Academic Experience**

- From 2013, he is member of the *Quality Assessment Board* (“*Presidio della qualità*”) of the *Scuola Superiore Sant'Anna*.

- From 2012 to 2015, Giampiero Contestabile has been elected member of the *TeCIP Institute Board of Governors* (“*Giunta dell'Istituto TeCIP*”).

- From 2012, he is member of the *PhD Selection Committee* and *PhD Coordinator and Scientific Board* of the TeCIP Institute.

- From 2010, he is member of the *Erasmus Mundus Master "MAPNET" Selection Committee*.

- From 2008, he is member of the *International Master on Communication Networks Engineering Selection Committee*.

### **Publications and patents**

Giampiero Contestabile is author/co-author of:

- 87 papers on *international peer reviewed journals*  
(*First author of 29, last author of 14*)
- 103 papers in *proceedings of major international conferences* (including 8 invited and 4 postdeadline papers)
- 18 papers in *Italian journals and conferences*
- 7 *international patents*

## Citation report (December 14th, 2016)

From *Google Scholar*

Citations **2043**

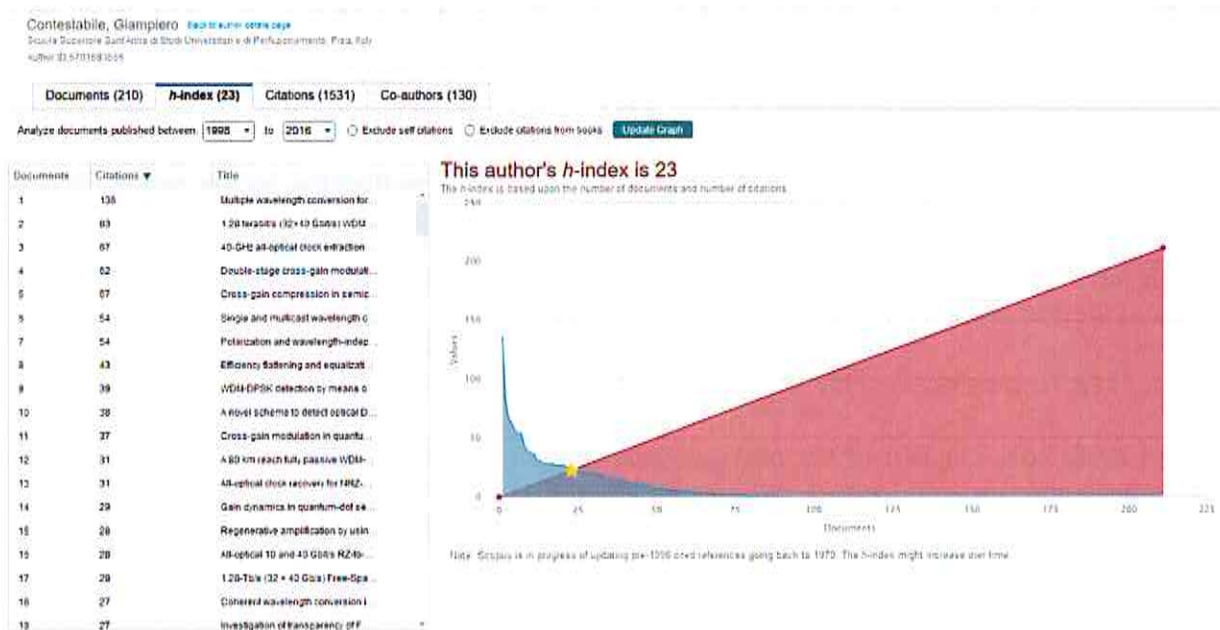
h-index **24**

([http://scholar.google.com/citations?hl=it&user=131qSIsAAAAJ&view\\_op=list\\_works&pagesize=100](http://scholar.google.com/citations?hl=it&user=131qSIsAAAAJ&view_op=list_works&pagesize=100))

From *Scopus*

Total Citations: **1531**

h-index: **23**



## List of publications and patents

### Patents

- P1] "An Optical PON Network using Passive DPSK", N. Calabretta, M. Presi, *G. Contestabile*, E. Ciaramella, P. Ghiggino, F. Cavaliere - *US 8478125 B2, WO/2008/145464*
- P2] "Asynchronous all-optical circuit for simultaneous extraction and serial-to-parallel conversion of label bits from optical DPSK packets based on time-to-wavelength conversion", N. Calabretta, M. Presi, *G. Contestabile*, E. Ciaramella - International patent number: *P/64101, US 20100189446 A1, WO 2008078309 A3*
- P3] "A novel code preserving regenerative NRZ-DPSK wavelength and format conversion", N. Calabretta, M. Presi, *G. Contestabile*, E. Ciaramella - *Patent pending - P/64125/X8*

- P4] "OSSB WDM-PON with multi-wavelength recovery and distribution to reflective ONT", F. Cavaliere, M. Presi, R. Proietti, A. D'Errico, *G. Contestabile*, E. Ciaramella –US 20120321316 A1
- P5] "IRZ/RZ coding for long reach WDM-PONs based on R-SOAs", M. Presi, E. Ciaramella, R. Proietti, *G. Contestabile* – US 2011/0236021, WO 2010025767 A1
- P6] "All-Optical Selective Wavelength Shifter in an integrated SOA-MZI", C. Porzi, *G. Contestabile*, A. Bogoni, - Patent Pending - P34369
- P7] "Optical Communication Signal Conversion," *G. Contestabile*, L. Giorgi and L. Bottari, - Patent Pending - P42178

### *International peer-reviewed journals*

- J1] P. Velha, N. Andriolli, and *G. Contestabile*, "Preamplified Demodulation of 56-Gb/s WDM-DPSK Signals by an AWG-Based InP PIC," *IEEE Photonics Journal*, vol. 8, no. 2, 2016
- J2] P. Velha, S. Faralli, *G. Contestabile*, "A Compact Silicon Photonic DQPSK Receiver based on Micro-Ring Filters," *IEEE Journal of Selected Topics in Quantum Electronics*, accepted, to be published 2016 (ISSN: 1077-260X)
- J3] *G. Contestabile*, P. Velha, and N. Andriolli, "High-Speed InP-Integrated Pre-Amplified Demodulator for WDM-DPSK Signals," *IEEE Photonics Technology Letters*, vol. 27, no. 24, pp. 2547 - 2550, 2015 (ISSN: 1041-1135)
- J4] S. Faralli, G. Meloni, F. Gambini, J. Klamkin, L. Poti, and *G. Contestabile*, "A Compact Silicon Coherent Receiver without Waveguide-Crossing," *IEEE Photonics Journal*, vol. 7, no. 4, 2015
- J5] F. Fresi, F. Bontempi, A. Malacarne, G. Meloni, N. Andriolli, J. Klamkin, L. Poti, and *G. Contestabile*, "Integrated Reconfigurable Coherent Transmitter Driven by Binary Signals," *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 21, no. 6, 2015 (ISSN: 1077-260X)
- J6] P. Velha, S. Faralli, and *G. Contestabile*, "Microring-Based Fully Integrated Silicon DQPSK Receiver," *IEEE Photonics Technology Letters*, vol. 27, no. 15, pp. 1605 - 1608, 2015 (ISSN: 1041-1135)
- J7] N. Andriolli, F. Fresi, F. Bontempi, A. Malacarne, G. Meloni, J. Klamkin, L. Poti, and *G. Contestabile*, "InP monolithically integrated coherent transmitter," *Optics Express*, vol. 23, no. 8, pp. 10741-10746, 2015 (ISSN: 10944087)
- J8] F. Bontempi, S. Faralli, X. J.M. Leijtens, J. Bolk, *G. Contestabile*, and N. Andriolli, "A 40 Gb/s InP-monolithically integrated DPSK-demodulator enhanced by cross-gain-compression in an SOA," *Optics Communications*, vol. 340, pp. 155-158, 2015 (ISSN: 0030-4018)
- J9] *G. Contestabile* and F. Bontempi, "All-Optical Distribution Node for Long Reach PON Downlink," *IEEE Photonics Technology Letters*, vol. 26, no. 14, pp. 1403 - 1406, 2014 (ISSN: 1041-1135)
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### ***Proceedings of International Conferences***

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