

**EUROPEAN
CURRICULUM VITAE
FORMAT**



PERSONAL INFORMATION

Name
Address
Telephone
Fax
E-mail
Website

Nationality

Date of birth

STELLA CIVELLI

GENERAL RESEARCH INTERESTS

Optical fiber communication, digital communication, physical layer security

BIBLIOMETRIC SUMMARY DATA

- Total international publications
- Total citations
- Total cited paper
- H-index

[29]
[349] source scholar.google.com
[28] source scholar.google.com
[10] source scholar.google.com

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EDUCATION AND TRAINING

- Dates (from – to)
- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded
- Dates (from – to)
- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded
- Dates (from – to)
- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered

(2015 – 2019)
Tecip Institute, Scuola Superiore Sant'Anna

PhD course in emerging digital technologies. My PhD research project aimed at overcoming the limits imposed by nonlinearity to current fiber optic communication systems, investigating a pioneering transmission technique that encodes the information on the nonlinear spectrum of the optical signal.
PhD in emerging digital technologies, photonic technologies, with honors

(2012 – 2015)
Università degli studi di Firenze

Master degree in mathematics, applied mathematics.

Master degree in mathematics, with honors

(2008-2012)
Università degli studi di Firenze

Bachelor degree in mathematics.

- Title of qualification awarded

Bachelor degree in mathematics

PRINCIPAL POSITIONS

- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
-
- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities

(2022 – on going)
 CNR-IEIT, Via caruso 16, Pisa (IT)
 Research institute
 Researcher
 Researcher in optical fiber communication and digital communication

(2018-2022)
 Scuola Superiore Sant'Anna
 University
 Assegnista di ricerca, postdoctoral researcher
 Researcher in optical fiber communication and digital communication

VISITING POSITIONS

- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
-
- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities

May 2018
 Photonics Institute, Technical university of Denmark
 University
 Visiting researcher
 Researcher on NFT

November 2017 – May 2018
 Aston institute of photonic technologies, aston university
 University
 Visiting researcher
 Researcher on NFT

TEACHING

- Current
- Past

Universitas Mercatorum, I help with teaching activities Fondamenti di telecomunicazioni” L8 and “Sistemi ICT distribuiti” LM31 since 2020.
 I give webinars for Universitas Mercatorum PhD Dottorato Industriale in “Big Data ed Intelligenza Artificiale” since 2022 about how to do research and communicate research results.
 [Add topics]

GRANTS & PROJECTS

- Dates (from – to)
- Name of the project
 - Description
 - Total grant
- Dates (from – to)
- Name of the project
 - Description
 - Total grant

1/1/2024 on going
 PERSUADER
 Leader of CNR-IEIT research unit. PERSUADER is a bilateral Italy&Israel R&D Cooperation program with CNIT, Camgraphic, CyberRidge
 20k€ for CNR-IEIT

1/1/2023 on going
 ALLEGRO
 I am participating as CNIT in this horizon-ria project in Task 4.3. A third party to CNR-IEIT, for which I will be responsible, is currently under review (21k€ for CNR-IEIT)

- Dates (from – to)
- Name of the project
 - Description
- Total grant

From May 2022 to February 2023, from April 2020 to April 2021, from Nov 2021 to March 2022.
Huawei and Sant'Anna collaboration project
had a major contribution in the whole project (techniques design, software development, meetings, deliverables, simulations, results), working at methods for nonlinear probabilistic shaping and digital backpropagation.

SELECTED PUBLICATIONS AND RESEARCH REPORTS

(out of more than **X** book
publications)

- S. Civelli, E. Forestieri and M. Secondini, "Sequence-Selection-Based Constellation Shaping for Nonlinear Channels," *Journal of Lightwave Technologies* (2023). Invited paper.
- P. Nadimi Goki, S. Civelli, E. Parente, R. Caldelli, T. T. Mulugeta, N. Sambo M. Secondini and L. Poti, "Optical identification using physical unclonable functions," *Journal of Communications and Networks* (2023). Invited paper.
- S. Civelli, E. Parente, E. Forestieri and M. Secondini, "On the nonlinear shaping gain with probabilistic shaping and carrier phase recovery," *Journal of Lightwave Technologies* (2023).
- S. Civelli, M. Secondini, S. Civelli, E. Forestieri and L. Z. Khan, "New lower bounds on the capacity of optical fiber channels via optimized shaping and detection," *Journal of Lightwave Technologies* (2022). Invited paper.
- S. Civelli, E. Forestieri and M. Secondini, "Mitigating the impact of noise on nonlinear frequency division multiplexing," *Applied Science* (2020).
- S. Civelli, and M. Secondini, "Hierarchical distribution matching for probabilistic amplitude shaping," *Entropy* (2020).
- F. Da Ros, S. Civelli, S. Gaiarin, E. P. da Silva, N. De Renzis, M. Secondini, and D. Zibar, "Dual-polarization NFDM transmission with continuous and discrete spectral modulation," *Journal of Lightwave Technology* (2019).
- S. Civelli, S. Turitsyn, M. Secondini, and J. Prilepsky, "Polarization-multiplexed nonlinear inverse synthesis with standard and reduced-complexity NFT processing", *Optics Express* (2018).
- S. Civelli, E. Forestieri, and M. Secondini, "Decision-feedback detection strategy for nonlinear frequency-division multiplexing", *Optics Express* (2018).
- S. Civelli, E. Forestieri, and M. Secondini, "Why noise and dispersion may seriously hamper nonlinear frequency-division multiplexing," *IEEE Photonics Technology Letters* (2017).

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- Pub
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PERSONAL SKILLS AND COMPETENCES <i>Acquired in the course of life and career but not necessarily covered by formal certificates and diplomas.</i>	Strong communication and presentation skills, both oral and written, demonstrated by a number of invited talk at international conferences. Technical skills – Interdisciplinary skills. Strong mathematical background, obtained during the bachelor and master degrees in mathematics. Proven skills in optical fiber communication, digital communication theory, and information theory, obtained during the PhD degree, conferences, and by learning through experience and research. Computer Skills – Windows, Unix/Linux, Gnuplot, Matlab, Microsoft Office Suite, Open Office Suite, LATEX, LyX.
MOTHER TONGUE	ITALIAN
OTHER LANGUAGES	ENGLISH
• Reading skills • Writing skills • Verbal skills	GOOD GOOD GOOD
SOCIAL SKILLS AND COMPETENCES <i>Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential.</i>	[Describe these competences and indicate where they were acquired.]
ORGANISATIONAL SKILLS AND COMPETENCES <i>Coordination and administration of people, projects and budgets; at work, in voluntary work.</i>	Strong management and organization ability. Able to work independently as well as part of a group, as demonstrated by publications. Voluntary work for Club Alpino Italiano and Associazione Semi di Scienza.
ADDITIONAL INFORMATION	GTTI PhD Award 2020 – awarded by Associazione Gruppo Telecomunicazioni e Tecnologie dell'Informazione (GTTI) for PhD Theses in the field of Communication Technologies Best Doctoral Thesis Award in Applied Photonics 2019 – awarded by the IEEE Photonics Society Italian Chapter Best Student paper Award (2nd prize) – sponsored by the Electromagnetics Academy and awarded by the Subcommittee 3 of the PIERS Conference held in Toyama, Japan, in August 2018. Paper title: “Improved detection strategies for nonlinear frequency division multiplexing”. Best Contributed Paper – awarded by The Rank Prize Funds, Optoelectronics Committee, at the Symposium on Challenges to Achieving Capacity in Nonlinear Optical Networks held in Grasmere Cumbria (UK) in June 2018.