



## Europass Curriculum Vitae

### Personal information

First name(s) / Surname(s) **Federico Pederzoli**

Address(es)

Telephone(s)

E-mail

Nationality

Date of birth

Gender

### Work experience

Dates 01/01/2017 – 31/10/2018, 05/11/2018 - Present

Occupation or position held Researcher

Main activities and responsibilities Identify potential new research areas, devise and develop algorithms and protocols for the routing and control of multi-layer (packet-optical) networks, including applications of Machine Learning, with an eye towards network security and robustness.

Name and address of employer FBK, Via Somarive 18 Povo - 38123 Trento - Italy

Type of business or sector Research Centre

Dates 01/11/2013 – 31/12/2016

Occupation or position held Graduate Researcher

Main activities and responsibilities Identify issues in control and resource allocation in optical networks, develop algorithms to address them, and analyse their performance through the development of custom simulation tools.

Name and address of employer CREATE-NET, Via alla Cascata 56/D Povo - 38123 Trento - Italy

Type of business or sector Research Centre

Dates 12/03/2013 - 15/09/2013

Occupation or position held Research Intern

Main activities and responsibilities Develop and study algorithms and simulation tools for resource allocation in optical networks.

Name and address of employer CREATE-NET, Via alla Cascata 56/D Povo - 38123 Trento - Italy

Type of business or sector Research Centre

Dates 2010 - 2012 (winters)

Occupation or position held Web developer intern

Main activities and responsibilities Development and testing of Ruby-on-Rails applications for internal management

Name and address of employer D.I.S.I., Università degli studi di Trento

Type of business or sector University department

Dates 2004 - 2006 (summers)

Occupation or position held IT technician intern

Main activities and responsibilities Identification and resolution of software and hardware issues on consumer PCs and devices, custom PC building.

Name and address of employer Tecnoprogress s.r.l Via S. Andrea, 53 Arco (Tn) - Italy

Type of business or sector Computer shop

## Education and training

|  |   |
|--|---|
| Dates  | 15/06/2018  |
| Title of qualification awarded                                 | Ph. D. in Information and Communications Technology                 |
| Principal subjects/occupational skills covered                 | Information and Communications Technology                           |
| Name and type of organisation providing education and training | ICT School, University of Trento, PhD School (University)           |
| Level in national or international classification              | PhD   |
| Dates  | 25/10/2013  |
| Title of qualification awarded                                 | Master Degree in Computer Science                                   |
| Principal subjects/occupational skills covered                 | Computer Science  |
| Name and type of organisation providing education and training | Università degli studi di Trento (University of Trento), University |
| Level in national or international classification              | Master Degree   |
| Dates  | 13/07/2011  |
| Title of qualification awarded                                 | Bachelor Degree in Computer Science                                 |
| Principal subjects/occupational skills covered                 | Computer Science  |
| Name and type of organisation providing education and training | Università degli studi di Trento (University of Trento), University |
| Level in national or international classification              | Bachelor Degree   |

## Personal skills and competences

Mother tongue(s) **Italian**

Other language(s) **English**

Self-assessment  
*European level (\*)*

**English**

| Understanding |    | Speaking |    | Writing            |    |                   |    |
|---------------|----|----------|----|--------------------|----|-------------------|----|
| Listening     |    | Reading  |    | Spoken interaction |    | Spoken production |    |
|               | C1 |          | C1 |                    | C1 |                   | C1 |

(\*) [Common European Framework of Reference for Languages](#)

|                                       |  |
|---------------------------------------|--|
| Social skills and competences         | Used to living and working with different persons (students), often from different cultures. Used to dealing with consumers (as an IT technician).                       |
| Organisational skills and competences | Limited experience in deputising for the (short-term) coordination of projects. Volunteer Firefighter and head of the IT support group of Arco's volunteer firefighters. |
| Technical skills and competences      | Software Development (C/C++, Python, Bash, Java, Ruby), research & scientific writing, computer maintenance.   |
| Computer skills and competences       | Computer Maintenance, E.C.D.L., Linux and Windows administration experience, limited software development experience.  |
| Other skills and competences          | Firefighting and fire-related security, limited first-aid knowledge, paragliding.  |
| Driving licence                       | Italian Driving Licence for cat. B vehicles.   |

## List of Publications

- F. Pederzoli, D. Siracusa, A. Zanardi, G. Galimberti, D. L. Fauci and G. Martinelli, "Path-based fragmentation metric and RSA algorithms for elastic optical networks," in *IEEE/OSA Journal of Optical Communications and Networking*, vol. 11, no. 3, pp. 15-25, March 2019.
- F. Pederzoli, M. Savi, D. Siracusa and E. Salvadori, "Optimization of Secure Quantum Key Distribution Backbones in Core Transport Networks," *2019 Optical Fiber Communications Conference and Exhibition (OFC)*, San Diego, CA, USA, 2019, pp. 1-3.
- S. Ben-Ezra, M. Gerola, D. Siracusa, F. Pederzoli, D. M. Marom, M. Blau, J. Macdonald, N. Psaila, C. Sanchez-Costa, A. D. Ellis, X. Forns, J. F. Ferran, F. Jimenez, N. Christodoulia, B. Shariati, D. Klondis, and I. Tomkos, "First WDM-SDM Optical Network with Spatial Sub-Group Routing ROADMs Supporting Spatial Lane Changes," in *Advanced Photonics 2018 (BGPP, IPR, NP, NOMA, Sensors, Networks, SPPCom, SOF)*, OSA Technical Digest (online) (Optical Society of America, 2018), paper NeTh1F.3.
- D. Marom, M. Blau, J. Macdonald, N. Psaila, C. Sanchez, A. Ellis, J. F. Ferran, F. Jimenez, G. Papastergiou, S. Ben-Ezra, M. Gerola, D. Siracusa, F. Pederzoli, B. Shariati, D. Klondis, and I. Tomkos, "Technologies for the Implementation of Spectrally-Spatially Flexible Optical Networks (SS-FONs)," in *Advanced Photonics 2018 (BGPP, IPR, NP, NOMA, Sensors, Networks, SPPCom, SOF)*, OSA Technical Digest (online) (Optical Society of America, 2018), paper NeTh1F.6.
- F. Pederzoli, M. Gerola, A. Zanardi, X. Forns, J. F. Ferran and D. Siracusa, "YAMATO: The First SDN Control Plane for Independent, Joint, and Fractional-Joint Switched SDM Optical Networks," in *Journal of Lightwave Technology*, vol. 35, no. 8, pp. 1335-1341, April15, 15 2017.
- F. Pederzoli, D. Siracusa, B. Shariati, J. M. Rivas-Moscoso, E. Salvadori and I. Tomkos, "Improving performance of spatially joint-switched space division multiplexing optical networks via spatial group sharing," in *IEEE/OSA Journal of Optical Communications and Networking*, vol. 9, no. 3, pp. B1-B11, March 2017.
- M. Savi, F. Pederzoli and D. Siracusa, "An application-aware multi-layer service provisioning algorithm based on auxiliary graphs," *2017 Optical Fiber Communications Conference and Exhibition (OFC)*, Los Angeles, CA, 2017, pp. 1-3.
- B. Shariati, D. Klondis, D. Siracusa, F. Pederzoli, J. M. Rivas-Moscoso, L. Velasco, I. Tomkos, "Impact of Traffic Profile on the Performance of Spatial Superchannel Switching in SDM Networks," *ECOC 2016; 42nd European Conference on Optical Communication*, Dusseldorf, Germany, 2016, pp. 1-3.
- F. Pederzoli, M. Gerola, A. Zanardi, X. Forns, J. F. Ferran and D. Siracusa, "Experimental Evaluation of YAMATO, a SDN Control Plane for Joint and Fractional-Joint Switched SDM Optical Networks," *ECOC 2016; 42nd European Conference on Optical Communication*, Dusseldorf, Germany, 2016, pp. 1-3.
- D. Siracusa, F. Pederzoli, M. Gerola, A. Zanardi, D. La Fauci and G. M. Galimberti, "Demonstration of a Hybrid SDN/GMPLS Control Plane for Optical Virtual Private Networks with Restoration Capabilities," *ECOC 2016; 42nd European Conference on Optical Communication*, Dusseldorf, Germany, 2016, pp. 1-3.
- P. S. Khodashenas *et al.*, "Comparison of Spectral and Spatial Super-Channel Allocation Schemes for SDM Networks," in *Journal of Lightwave Technology*, vol. 34, no. 11, pp. 2710-2716, June1, 1 2016.
- F. Pederzoli *et al.*, "SDN application-centric orchestration for multi-layer transport networks," *2016 18th International Conference on Transparent Optical Networks (ICTON)*, Trento, 2016, pp. 1-4.
- F. Pederzoli, D. Siracusa, J. M. Rivas-Moscoso, B. Shariati, E. Salvadori and I. Tomkos, "Spatial group sharing for SDM optical networks with Joint Switching," *2016 International Conference on Optical Network Design and Modeling (ONDM)*, Cartagena, Spain, 2016, pp. 1-6.

V. Lopez, Jose Manuel Gran, Juan Pedro Fernandez-Palacios, Domenico Siracusa, Federico Pederzoli, Ori Gerstel, Yona Shikhmanter, Jonas Mårtensson, Pontus Sköldström, Thomas Szyrkowiec, Mohit Chamania, Achim Autenrieth, Ioannis Tomkos, Dimitrios Klonidis, "The role of SDN in application centric IP and optical networks," *2016 European Conference on Networks and Communications (EuCNC)*, Athens, 2016, pp. 138-142.

D. Siracusa, F. Pederzoli, P. S. Khodashenas, J. M. Rivas-Moscoso, D. Klonidis, E. Salvadori, I. Tomkos, "Spectral vs. spatial super-channel allocation in SDM networks under independent and joint switching paradigms," *2015 European Conference on Optical Communication (ECOC)*, Valencia, 2015, pp. 1-3.

F. Pederzoli, D. Siracusa, E. Salvadori and R. Lo Cigno, "Energy Saving Through Traffic Profiling in Self-Optimizing Optical Networks," in *IEEE Systems Journal*, vol. 11, no. 2, pp. 752-761, June 2017.

D. Siracusa, F. Pederzoli, D. Klonidis, V. Lopezy and E. Salvadori, "Resource allocation policies in SDM optical networks (Invited paper)," *2015 International Conference on Optical Network Design and Modeling (ONDM)*, Pisa, 2015, pp. 168-173.

D. Siracusa, F. Pederzoli, R. Lo Cigno and E. Salvadori, "Energy saving through traffic profiling and prediction in self-optimizing optical networks," *OFC 2014*, San Francisco, CA, 2014, pp. 1-3.

D. Siracusa, F. Pederzoli, E. Salvadori, R. L. Cigno and I. T. Monroy, "Proactive restoration of slow-failures in optical networks," *2014 16th International Conference on Transparent Optical Networks (ICTON)*, Graz, 2014, pp. 1-4.