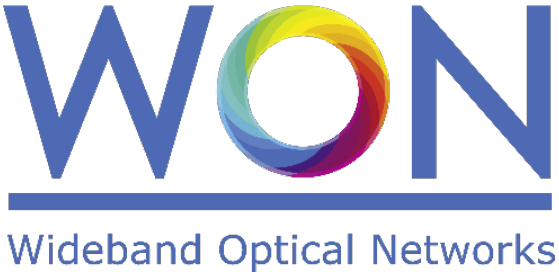
Marie Skłodowska-Curie (MSCA) – Innovative Training Networks (ITN)
H2020-MSCA-ITN European Training Networks




# Wideband Optical Networks [WON]

Grant agreement ID: 814276

**WP5 – Management and Governance**
**Deliverable 7.2 All ESRs recruited**



*This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement 814276.*

## Document Details

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|---|---|
| Work Package | WP7 Management and Governance |
| Deliverable number | D7.2 |
| Deliverable Title | All ESRs recruited |
| Deliverable due date | 30 September 2019 |
| Actual delivery date | 20 May 2020 |
| Resubmission date | 21 March 2021 |
| Lead Beneficiary: | Aston University |
| Dissemination level: | Public |

## Project Details

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|---|---|
| Project Acronym | WON |
| Project Title | Wideband Optical Networks |
| Call Identifier | H2020-MSCA-2018 Innovative Training Networks |
| Coordinated by | Aston University, UK |
| Start of the Project | 1 January 2019 |
| Project Duration | 48 months |
| WON website: | https://won.astonphotonics.uk/ |
| CORDIS Link | https://cordis.europa.eu/project/rcn/218205/en |

## WON Consortium and Acronyms

| Consortium member | Legal Entity Short Name |
|---|---|
| Aston University | Aston |
| Danmarks Tekniske Universitet | DTU |
| VPIphotonics GmbH | VPI |
| Infinera Portugal | INF PT |
| Infinera Germany | INF G |
| Fraunhofer HHI | HHI |
| Politecnico di Torino | PoliTo |
| Technische Universiteit Eidhoven | TUE |
| Universiteit Gent | UG |
| Keysight Technologies | Keysight |
| Finisar Germany GmbH | Finisar |
| Orange SA | Orange |
| Technische Universität Berlin | TUB |
| Instituto Superior Technico, University of Lisboa | IST |

## CONTENTS

## EXECUTIVE SUMMARY

The Deliverable 7.2 titled “All ESRs recruited” provides an overview of the strategy and implementation of the recruitment process in the ETN project WON “Wideband Optical Network” funded under the Horizon 2020 Marie Sklodowska-Curie Grant Agreement (GA) 814276. The report covers strategies for advertising and selecting candidates, as well as justifications for delays in recruitment and the contingency plan implemented by the Consortium.

The document includes a list of the Early-Stage Researchers (ESRs) recruited by the WON Consortium to date. On the date of the deliverable’s resubmission, all 14 ESR positions have been successfully filled in. The report notes that delays in the recruitment process did not impact the project's progress outlined in the GA.

## 1. INTRODUCTION

ETN WON is a doctoral-level training network funded by the European Commission under Horizon 2020 Marie Sklodowska-Curie ITN Action. The consortium consists of eight academic institutions, namely: Aston University (Birmingham, UK); Politecnico di Torino (Turin, Italy); Fraunhofer HHI (Berlin, Germany), Technische Universiteit Eindhoven (Eindhoven, Netherlands), Danmarks Tekniske Universitet (Copenhagen, Denmark), Universiteit Gent (Gent, Belgium), Technische Universitaet Berlin (Berlin, Germany), Institute Superior Tecnico (IST), University of Lisboa (Portugal) and five industrial companies: VPIphotonics GmbH (Berlin, Germany), Infinera Portugal (Lisbon, Portugal), Keysight Technologies Deutschland GmbH (Germany), Finisar Germany GmbH (Germany), Orange SA (France).

The two main goals of the ETN are: 1) training of ESRs to occupy leading positions in the field of wideband optical networks; and 2) development of ground-breaking and commercially attractive, short-to-medium term solutions targeting European industry leadership in this highly challenging sector. The consortium recruits and train 14 ESRs in the unexploited area of wideband optical networks through the synergy of highly qualified academic and industrial institutions in three main areas:

1. Network management and control plane algorithms
2. Design, prototyping and test of transceiver and in-line components
3. Digital signal processing techniques and system modelling

Solutions identified within WON will enable full exploitation of the total capacity of optical fibres to sustain efficiently the Internet traffic growth and to overcome a possible traffic crunch. The research focuses on developing novel digital signal processing (DSP) algorithms to increase the overall system performance. WON provides cost-effective and realistic solutions to current bandwidth saturation, progressively impairing already deployed networks.

**Research and training objectives** in WON are being achieved through 14 individual research projects assigned to ESRs and combined into for technical Work Packages (WPs) and for non-technical WPs. The research topics reflect the industrial demand and the need for training across many synergetic photonic techniques and methods. The project structure is designed around a series of technical deliverables and the prime target of providing multinational, multidisciplinary, inter-sectorial trained researchers.

## 2. ESR POSITIONS ADVERTISED

*Table 1: Individual Research projects advertised in ETN WON as per original GA (EURAXESS offer ID: 358843)*

| ESR N | Project Title | Host Institution | | Enrolment in PhD |
|---|---|---|---|---|
| ESR 1 | Widebandwidth multi-layer orchestration of optical networks | Politecnico di Torino | Italy | Politecnico di Torino |
| ESR 2 | Machine learning techniques for system performance prediction. | Danmarks Tekniske Universitet | Denmark | Danmarks Tekniske Universitet |
| ESR 3 | Optimized impairment aware design of wideband optical networks | Infinera | Portugal | Politecnico di Torino |
| ESR 4 | Modeling of fibre nonlinearities and their applications in autonomous wideband optical systems. | University of Peloponnese | Greece | University of Peloponnese |
| ESR 5 | Widebandwidth transmission models enabling advanced DSP techniques and physical-layer aware networking | Politecnico di Torino | Italy | Politecnico di Torino |
| ESR 6 | Efficient modelling of high-capacity wideband transmission systems | VPIphotonics GmbH | Germany | Technische Universität Berlin |
| ESR 7 | Efficient digital compensation techniques for wideband optical communication systems | Infinera | Germany | Aston University |
| ESR 8 | Broadband Raman amplification for transmission bandwidth extension | Aston University | United Kingdom | Aston University |
| ESR 9 | Novel wideband optical filters for wideband optical systems | Technische Universiteit Eindhoven | Netherlands | Technische Universiteit Eindhoven |
| ESR 10 | Novel wideband optical switches for wideband systems | Technische Universiteit Eindhoven | Netherlands | Technische Universiteit Eindhoven |
| ESR 11 | Bismuth-doped ultra-broadband fibre amplifier | Aston University | United Kingdom | Aston University |
| ESR 12 | Cognitive transponders for wideband optical networks | Fraunhofer HHI | Germany | Technische Universität Berlin |
| ESR 13 | Ultra-broadband Multi-Mode-Interference (MMI) couplers on Indiumphosphide (InP) using metamaterials | Fraunhofer HHI | Germany | Technische Universität Berlin |
| ESR 14 | Wideband tunable laser source on a III-V-on-silicon photonic platform | Ghent University | Belgium | Ghent University |

## 3. CHANGES TO THE ORIGINAL RECTUITMENT PLAN

The initial recruitment plan was changes by the following Amendments to the Grant Agreement and a Formal Notification :

*Table 2: Amendments to the GA and changes in the recruitment plan*

| | |
|---|---|
| **Amendment N** | AMD-814276-6 |
| **Request date** | 27 September 2019 |
| **Acceptance date** | 14 October 2019 |
| **Amendment core** | ⇒ Termination of beneficiary University of Peloponnese (UOP)<br>⇒ ESR 4 position transferred from UOP to beneficiary Politecnico di Torino (PoliTo)<br>⇒ Transfer of budget associated with ESR 4 recruitment from beneficiary UOP to PoliTo |
| **Outcome** | The ESR 4 position was repeatedly advertised for PoliTo; the appointed candidate started their employment contract in December 2019. |
| | |
| **Amendment N** | AMD-814276-14 |
| **Request date** | 6 November 2020 |
| **Acceptance date** | 15 December 2020 |
| **Amendment core** | ⇒ Termination of Infinera Germany as a beneficiary and change its status to a partner organisation<br>⇒ Reassign ESR 7 to the beneficiary Fraunhofer HHI<br>⇒ Reassign WP2 and lead role to the beneficiary PoliTo<br>⇒ Request for the project extension for 6 months, with new end date 30th June 2023 |
| **Outcome** | Delay in the recruitment process of ESR 7. The selected candidate commenced their employment contract on September 16, 2021. |

**Change via a Formal Notification:**

According to the initial project plan (Part B of GA), it was planned that ESR3 would be recruited by INF PT and enrolled in a PhD program at PoliTo. During the preparation of the kick-off meeting, it was discovered that PoliTo's internal regulations prohibit ESRs from enrolling in a PhD program if they are not physically present for more than 18 months. Therefore, PoliTo could not serve as the academic host for ESR3's PhD degree. In response, the Consortium undertook efforts to find an alternative solution, which resulted in inviting Instituto Superior Technico (IST), University of Lisboa to join as a Partner Organisation to serve as ESR3's academic host. Through careful consideration, the area of expertise of IST was found to be an excellent match for ESR3's research project and overall scientific contribution to the project. The Consortium then completed the process by formally notifying the Commission in PPGMS, which was subsequently evaluated and accepted by the EC in August 2019.

## 4. RECRUITMENT STRATEGY

The recruitment strategy strictly adhered to the principles outlined in the European Charter for Researchers (The Code of Conduct for Recruitment of Researchers[1]), which ensures worldwide accessibility and a fair and competitive selection process for fellows by host institutions in accordance with gender equality and minority rights. This strategy involved intensive national and international advertising through various channels available to the members of the consortium, with the aim of attracting the highest number of qualified applicants possible. During the project kick-off meeting, all beneficiaries were provided with a comprehensive presentation that covered the recruitment procedure guidelines, MSCA eligibility and mobility criteria, post-selection obligations, required employment conditions, and other critical matters relating to recruitment in H2020 ITN projects.

### 4.1 Dissemination of positions

The objective of the recruitment process was to identify 14 highly qualified candidates for the ETN WON training network. The process was initiated on 27 November 2018 (EURAXESS Call ID: 358843), prior to the project's kick-off meeting, in order to ensure that the advertisement call was disseminated widely throughout the community. The recruitment efforts were multifaceted, encompassing both consortium-wide and individual beneficiary approaches. The positions were advertised globally, using a variety of different channels and social media platforms, in order to maximize visibility and attract a diverse pool of applicants.

Some examples of the channels used for dissemination are listed below:

**EURAXESS:**

- EURAXESS offer ID: 358843 – Consortium
- EURAXESS offer ID: 390745 – INF PT
- EURAXESS offer ID: 386192 – INF G
- EURAXESS offer ID: 429993 – PoliTo
- EURAXESS offer ID: 366120 – Aston
- EURAXESS offer ID: 365760 – Aston
- EURAXESS offer ID: 364385 – VPI

**CONFERENCES (FLYERS &POSTERS):**

- OFC 2019 3-7 March 2019, San Diego, USA
- ECOC 2019 22-26 September 2020, Dublin, Ireland
- CLEO/EUROPE 2019, 23-27 June, Munich, Germany

**BENEFICIARIES' WEBSITES:**

- https://www.dtu.dk
- https://www.vpiphotonics.com
- https://jobs.tue.nl
- https://www.hhi.fraunhofer.de/en/jobs-and-career.html
- https://www.ugent.be/en/work
- https:aston.ac.uk

**ADDITIONAL WEBSITES:**

- Jobs.ac.uk
- Academicpositions.com
- Myscience.org
- Indeed.co.uk
- https://www.academictransfer.com

[1] https://euraxess.ec.europa.eu/sites/default/files/am509774cee_en_e4.pdf

- https://www.academicgates.com

Advertisements of the ESRs positions provided a broad description of knowledge and competences required, including an accurate overview of the project, working conditions and entitlements, planned secondment programme, and benefits of the programme such as career development opportunities.

### 4.2 Recruitment process

The recruitment process in WON was decentralised in order to leave as much freedom to the beneficiaries when recruiting ESRs, however, it was nevertheless coordinated insofar as the Grant Agreement recruitment and working conditions obligations (Article 32 of the GA) were systematically communicated to beneficiaries. Upon completion of the recruitment process, each beneficiary was required to submit a "Post-Selection Justification Form" as part of the internal reporting process for the ETN WON project. This form requested partners to provide details on where and how available positions were advertised, the number of applicants and relevant statistics, information on the shortlisting and selection process, and any deviations from the GA. Additionally, through the "Post-Selection Justification Form," each beneficiary confirmed that the recruitment process was conducted in an open, transparent, impartial, equitable, and merit-based manner, and that any potential conflicts of interest and unconscious bias were appropriately mitigated. Template of the "Post-Selection Justification Form" can be found in Appendix I

**Geographic Aspect**

The recruitment strategy, utilizing both traditional and social media channels to attract applicants, has resulted in a diverse pool of formal applications from various geographical locations.

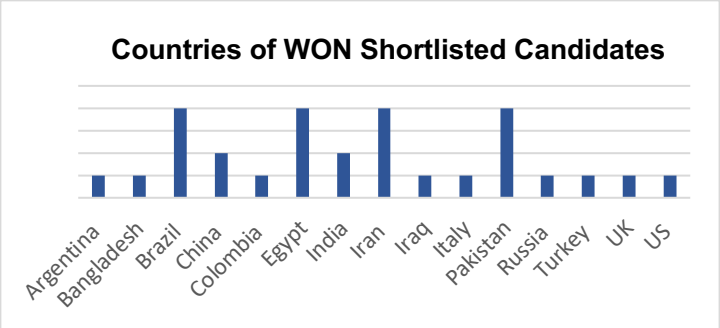


*Figure 1: Countries of shortlisted candidates*

The beneficiaries have received expressions of interest from Africa, Asia, Europe, North America, and South America, leading to a range of applications from a multitude of countries. These countries include, but are not limited to, Albania, Algeria, Argentina, Armenia, Bangladesh, Brazil, Cameroon, China, Egypt, Ethiopia, France, Ghana, India, Iraq, Iran, Italy, Jordan, Kenya, Lebanon, Mexico, Morocco, Nepal, Nigeria, Pakistan, Portugal, Romania, Russia, Serbia, South Korea, Spain, Syria, Taiwan, Tunisia, Turkey, the United Kingdom, the United States, and Vietnam.

### Applications received

In total, the Consortium received 383 applications for 13 ESRs positions (data is not included for ESR7 position as the recruitment process is still ongoing). 46 applicants were shortlisted for interviews which represents an average of about 8 candidates per a position.

### Gender Dimension

All beneficiaries collected data on gender in their application process. The Consortium took all possible measures to attract female candidates. As Photonics, Engineering, Physics, Mathematics, Technologies etc – i.e. areas targeted by the WON adverts – are all heavily male dominated disciplines this outcome was expected and subsequently reflected in the shortlist.

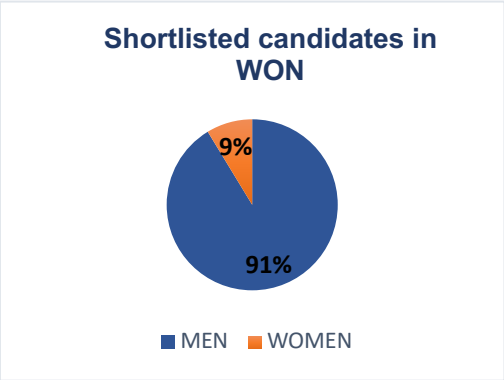


*Figure 2: Female and male applicants*

Out of 383 applications received, candidates identified themselves as male (318 applications), female (58 applications) and unknown (7 applications). Among 46 shortlisted candidates, 4 were female and 42 male.

The Consortium recruited one female researcher Yaonian Cui (ESR 13, recruited by Fraunhofer HHI). Another female candidate declined the offer to the ESR 14 position.

## 5. RECRUITED COHORT

The formal recruitment process ended in September 2021 when the ESR 7 was recruited by the beneficiary Fraunhofer HHI. All 14 ESRs were fully designated, with contracts signed and Research Declarations submitted in the Participant's Portal. The delays in the recruitment did not impede with course of the project. The periods for secondment of the ESRs are flexible and can be adapted according to each fellow's Career Development Plan.

The recruited positions were covered as follows:

*Table 3: Recruited cohord of ESRs in ETN WON*

| ERS N | Name | Nationality | Recruiting Beneficiary | Contract start date |
|---|---|---|---|---|
| ESR 1 | Rasoul Sadeghi Yamchi | Iran | Politecnico di Torino | 1 September 2019 |
| ESR 2 | Thyago Monteiro Sá Pinto | Brazil | Danmarks Tekniske Universitet | 1 September 2019 |
| ESR 3 | André Luiz Nunes de Souza | Brazil | Infinera Portugal | 18 January 2021 |
| ESR 4 | Bruno Vinicius de Araujo Correia | Brazil | Politecnico di Torino | 1 December 2019 |
| ESR 5 | Elliot Peter London | United Kingdom | Politecnico di Torino | 1 September 2019 |
| ESR 6 | Gabriele Di Rosa | Italy | VPIphotonics GmbH | 01 May 2019 |
| ESR 7 | Caio Marciano Santos | Brazil | Fraunhofer HHI | 16 September 2021 |
| ESR 8 | Pratim Hazarika | India | Aston University | 1 November 2019 |
| ESR 9 | Yu Wang | China | Technische Universiteit Eidhoven | 15 November 2019 |
| ESR 10 | Rafael Magalhães Gomes Kraemer | Brazil | Technische Universiteit Eidhoven | 1 December 2019 |
| ESR 11 | Aleksandr Donodin | Russia | Aston University | 16 September 2019 |
| ESR 12 | Matheus Sena | Brazil | Fraunhofer HHI | 10 June 2019 |
| ESR 13 | Yaonian Cui | China | Fraunhofer HHI | 1 August 2019 |
| ESR 14 | Emadreza Soltanian | Iran | Universiteit Gent | 19 August 2019 |

## 6. LATE RECRUITMENT

Some delays were suffered recruiting ESRs for multiple and linked reasons such as offer turned down, re-advertising, visa delays.

- **ESR3: Andre Luiz Nunes de Souza (recruited by the beneficiary Infinera Portugal)**

Recruitment was delayed due to Infinera's acquisition of Coriant. During the 2nd year of WON the beneficiary INF PT continued to undergo company restructuring, thus the process of hiring ESR3 was put on hold during the first half of 2020. In September, the INF PT team selected André Luiz Nunes de Souza (Brazil) as the successful candidate and immediately started the hiring process. The candidate signed the contract with a preliminary starting date in December 2020. However, due to delays caused by COVID-19, the candidate was only able to start his contract in January 2021.

- **ESR7: Caio Santos (recruited by the beneficiary Fraunhofer HHI)**

In accordance with Amendment AMD-814276-14 to the GA, the recruitment of ESR 7 was reassigned to Fraunhofer HHI. Infinera Germany, the beneficiary of WON, initially identified the candidate for the ESR 7 position. However, the COVID-19 pandemic caused significant travel restrictions, leading to delays in the recruitment process. The selected candidate commenced their employment contract on September 16, 2021.

## APPENDIX I: Post-Selection Justification Form

GA 814276 ETN WON

### Project Details

| | |
|---|---|
| Project Acronym | WON |
| Project Number | 814276 |
| Project Title | Wideband Optical Networks |
| Call Identifier | H2020-MSCA-2018 Innovative Training Networks |
| Coordinated by | Aston University, UK |
| Start of the Project | 1 January 2019 |
| Project Duration | 48 months |
| CORDIS Link | https://cordis.europa.eu/project/rcn/218205/factsheet/en |
| Project website | https://won.astonphotonics.uk |

### ESR Position

| | |
|---|---|
| Fellow | |
| Host institution | |
| Planned secondment | |
| Position advertised (Links to the websites) | |
| | |
| | |

### Number of applicants

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| No Candidates | | Female | | Male | | Unknown | |
| Countries | | | | | | | |

### Shortlisted candidates

| Name | Gender | Country | Education (BSc, MSc, date) | Comments |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

| | |
|---|---|
| Member of the selection/interview panel | |
| Date of the Interviews | |
| Place of the Interviews/ Skype call | |

□ I declare that no conflict of interest existed in or arose from the recruitment procedure.

□ I declare that the recruitment procedure was open, transparent, merit-based and impartial.

Date and signature: _____