

**SELECTION OF ONE PROFESSOR (LEVEL 1 – PROFESSORE ORDINARIO), FOR THE ACADEMIC RECRUITMENT FIELD 09/F2 “TELECOMMUNICATIONS” AT THE INSTITUTE OF COMMUNICATION, INFORMATION AND PERCEPTION TECHNOLOGIES (TECIP) - ACADEMIC CLASS OF EXPERIMENTAL AND APPLIED SCIENCES, RESERVED, PURSUANT TO ART. 24, SUBSECTION 6, OF ITALIAN LAW 240/2010, FOR ASSOCIATE PROFESSORS AND RESEARCHERS EMPLOYED AT THE SCHOOL, ISSUED BY RECTOR DECREE NO. 373 DATED 07/07/2016.**

### **FINAL REPORT**

The year 2017, the 27<sup>th</sup> day of the month of January, at 5.00 PM, the committee held a meeting using telematics instruments, to review the selection process for the recruitment of one level 1 professor for the Academic Recruitment Field 09/F2 “Telecommunications” - Academic Discipline ING-INF/03 “Telecommunications” at the Institute of Communication, Information and Perception Technologies (TeCIP) - Academic Class of Experimental and Applied Sciences of the Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna di Pisa (The School), reserved for associate professors and researchers employed at the School to be selected pursuant to art. 24, subsection 6 of the Italian law 240/2010, the Committee nominated by decree No. 519 dated 29/09/2016 by the Rector and made up of :

- Prof. Andrea de Guttry, Full Professor of 12/E1 “International Law” member of the Recruitment Committee of the School;
- Prof. Giuseppe Bianchi, Full Professor of 09/F2 “Telecommunications” at the University of Roma Tor Vergata, designated expert by the TeCIP Institute;
- Prof. Martin Maier, Full Professor at the INRS - Montreal;
- Prof. Dimitra Simeonidou, Professor at the University of Bristol;
- Prof. Idelfonso Tafur Monroy, Professor at the Technical University of Denmark;
- Prof. Enrico Del Re, Full Professor of 09/F2 “Telecommunications” at the University of Florence.

The Committee completed its work on the following days:

Preliminary meeting: from October 14, 2016 to December 12, 2016 via teleconference

Second meeting: on January 27, 2017 from 5.00 PM to 9.00 PM, via teleconference and emails.

The Committee held a total of 2 meetings, and began its work on October 14, 2016 and concluded it on January 27, 2017.

In the preliminary meeting, the Committee nominated the President and Secretary. It was noted in the minutes that each member had declared that they had no kinship or affinity up to the fourth degree inclusive, either with each other or the candidate Prof. Piero Castoldi. The Committee established the date by which their work would

be concluded, the criteria for the assessment of the candidate.

In the second meeting the Committee examined the publications, the CVs and the didactic activity of the candidate, and after a comprehensive discussion, unanimously declared the following candidate to have won the position: Prof. Piero Castoldi.

Read, approved and signed.

THE COMMITTEE

THE COMMITTEE

Prof. Enrico Del Re, Chairperson



Prof. Giuseppe Bianchi, Secretary \_\_\_\_\_

Prof. Andrea de Guttry, \_\_\_\_\_

Prof. Martin Maier, \_\_\_\_\_

Prof. Idelfonso Tafur Monroy, \_\_\_\_\_

Prof. Dimitra Simeonidou, \_\_\_\_\_

**ANNEX 1 – MINUTES OF THE SECOND MEETING  
INDIVIDUAL ASSESSMENT**

**Individual Evaluation of the Candidate Piero Castoldi  
Prepared by Prof. Enrico DEL RE, University of Florence, Italy**

According to the criteria agreed upon by the Commission at the preliminary meeting this individual report is based on the criteria for:

- a) the assessment of teaching, supplementary teaching and service to students
- b) the evaluation of scientific publications
- c) the measurement of the quantity and quality of the scientific research

*Criterion a.*

The candidate has a long and intense activity of teaching at all levels of the university degrees, with very satisfactory achievements in more than one University. Most appreciated also his involvement in teaching management and organization activities.

*Criterion b.*

All the publications presented for the selection procedure and most of all the publications of the candidate are of high scientific level in the area of optical communications and networks. They have been published in journals of high scientific reputation and well indexed and cited in the international scientific community.

*Criterion c.*

The overall scientific research and involvement of the candidate is of high level, including organization, leadership and coordination of national and international projects, participation of high level international conferences and co-ownership of many patents. His research activity has obtained significant results also after the achievement of the positive national evaluation for the position of Level 1 Italian professor (professore ordinario).

Based on the above criteria achievements this evaluator expresses his full agreement for the academic recruitment of the candidate Piero CASTOLDI to the position of Professore ordinario (Level 1 Italian University Professor).

**Individual Evaluation of the Candidate Piero Castoldi  
Prepared by Prof. Dimitra SIMEONIDOU, University of Bristol, UK**

In accordance with Italian Ministerial Decree 344/2011, the candidate is assessed by considering the following three criteria:

*1) Assessment of teaching, supplementary teaching and service to students:*

Dr Castoldi is an excellent presenter with a lot of dedication to teaching and mentoring students. His teaching portfolio is large and up to current technology trends. He has also successfully supervised a large number of Masters and PhD students.

*2) Evaluation of scientific publications:*

Very strong publication record in top scientific journals and conferences (>300 conference and >100 journal papers), including numerous invited papers,

*3) Assessment of the scientific research:*

Piero Castoldi is one of the leading researchers in the field of Optical Networking. His reputation within the community is excellent in terms of technical contributions but also peer community presence and support.

I strongly support Dr Castoldi's promotion to a Chair. In my institution, this case will be certainly successful.

## **Individual Evaluation of the Candidate Piero Castoldi**

**Prepared by Prof. Giuseppe BIANCHI, University of Roma Tor Vergata, Italy**

Professor Piero Castoldi is currently Associate Professor at the Institute of Communication Technologies, Information and Perception (TeCIP) of Scuola Superiore Sant'Anna, Pisa, Italy, where he manages a Research Group called "Networks & Services", comprising 15 people. In December 2013, he was granted the National Scientific Habilitation to the position of Full Professor in the scientific sector 09/F2 (Telecommunications). In his scientific career, Piero Castoldi worked in a variety of fields related to telecommunication networks and services, including design and control of optical networks, performance and reliability schemes and models for core/metro/access networks, switching architectures and photonic integrated networks and relevant applications, and service-oriented network architectures based on emerging softwarization technologies and data/control planes (SDN, NFV, etc). His work has been significant, accounting for a huge number of scientific publications (including more than 100 scientific papers in prestigious peer-reviewed Journals, and more than 300 papers in scientific conferences, overall totalizing more than 3500 citations according to scholar.google.com), and a very sizeable involvement in research projects supported by either the European Commission, national funding agencies, and private industries, and totalizing more than 16 million euro to date. His international reputation is confirmed by a large number of international collaborations with prestigious foreign research groups, by several invited lectures and talks (7 in the last 5 years) at international conferences, and by a significant involvement in journals and conference technical program committees. The Candidate further exhibits a very intense teaching activity at several levels (university degrees, master programmes, Erasmus initiatives, etc), including management of Master programmes. The 20 publications specifically produced for the current assessment are all published, with no exception, in prestigious journals and magazines in the field, and document significant research achievements covering both theoretical and methodological results, as well as experimental ones. In conclusion, owing to the excellent results and performance in terms of both research activity and teaching, and with specific reference to the criteria set forth by the Evaluation Committee in the preliminary meeting, I believe that Prof. Castoldi is fully qualified to cover the position of Level-1 Professor (Professore Ordinario) for the academic recruitment field 09/F2 (Telecommunications) at the Institute of Communication, Information and Perception Technologies (TeCIP) - Academic Class of Experimental and Applied Sciences of the Scuola Superiore di Studi Universitari e di Perfezionamento Sant'Anna di Pisa.

## **Individual Evaluation of the Candidate Piero Castoldi**

**Prepared by Prof. Andrea de GUTTRY, SSSUP Sant'Anna, Pisa, Italy**

My expertise does not extend to the field 09/F2 "Telecommunications" and my role within the Committee is therefore limited.

The present individual report is based on the criteria for a) the assessment of teaching, supplementary teaching and service to students, b) the evaluation of scientific publications and c) the measurement of the quantity and quality of the scientific research, and on the conclusions of the National Qualification Committee (*Commissione Nazionale di Abilitazione*).

The candidate Piero CASTOLDI has performed brilliantly across all aforementioned criteria, presents an extraordinary record of scientific contributions and is considered one of the most promising scholars in his field of expertise. He fully meets the multifaceted excellence requirements of the Scuola Superiore S. Anna and I am very confident that he will offer a fundamental contribution to the successful development of several strategic projects currently under consideration at the Scuola. I therefore fully support his appointment to full professor (*professore ordinario*) at the Scuola S. Anna.

## **Individual Evaluation of the Candidate Piero Castoldi** **Prepared by Prof. Martin MAIER, INRS, Canada**

In accordance with Italian Ministerial Decree 344/2011, the candidate is assessed by considering the following three criteria:

### *1) Assessment of teaching, supplementary teaching and service to students:*

The candidate has a strong, long-standing record of teaching and student supervision activities, involving a large number of graduated master and doctoral students. He has been actively involved in organizing and chairing various committees and has successfully demonstrated administrative leadership. His courses and teaching skills were rated very positively by students.

### *2) Evaluation of scientific publications:*

The candidate has an excellent publication record with >300 conference proceedings papers and >100 journal papers, including several invited papers, most of them published in well-known and highly regarded IEEE/OSA publications. His publication record is highly consistent throughout the last 15 years. The research topics addressed by the candidate are in line with the latest scientific trends of the international optical networking community, investigating a wide area of important network design, control, and management aspects by means of analytical, simulation, and experimental methodologies.

### *3) Assessment of the scientific research:*

The candidate has served on a large number of technical program committee of internationally leading conferences. Furthermore, he held several conference chairing positions and served on the editorial board of internationally recognized journals. His scientific research was awarded with several best paper awards at prestigious conference, most notably the Corning student award at OFC 2015. Moreover, the candidate was very successful in receiving significant grants from both national and international research agencies as well as industrial partners, leading up to a sizable number of issued patents.

In conclusion, the candidate Piero Castoldi has shown an outstanding performance in all three aforementioned criteria. There is no doubt that his performance is comparable or even superior to leading international peers. I therefore strongly support his application and enthusiastically recommend him for promotion to the rank of full professor (professore ordinario) at Scuola Superiore Sant'Anna.

## **Individual Evaluation of the Candidate Piero Castoldi** **Prepared by Prof. Idelfonso Tafur MONROY, Technical University of Denmark**

The present individual report is based on the criteria for a) the assessment of teaching, supplementary teaching and service to students, b) the evaluation of scientific publications and c) the measurement of the quantity and quality of the scientific research, and on the conclusions of the National Qualification Committee (*Commissione Nazionale di Abilitazione*).

The candidate Piero CASTOLDI has performed outstanding in all aforementioned criteria. He has published over 100 contributions in scientific journals making him a major contributor and influential scholar in the area of optical networking. Furthermore, he is the co-inventor of over a dozen of inventions what reflects his outreach and commitment to translate his research into innovations as well. The candidate has contributed to the establishment of a master program and education in optical communication and networks that is successful in generated skilled graduates for industry and further PhD studies. My own university has employed as PhD students a number of such master students. Piero Castoldi is also a very active member of the scientific community in organizing conferences and workshops

He fully meets the multifaceted excellence requirements of the Scuola Superiore S. Anna and I am very confident that he will offer a fundamental contribution to the successful development of several strategic projects currently under consideration at the Scuola. I therefore fully support his appointment to full professor (*Professore Ordinario*) at the Scuola S. Anna.

**ANNEX 2 – MINUTES OF THE SECOND MEETING**  
**COLLEGIAL ASSESSMENT**

The research track of the candidate Piero Castoldi is characterized by a very large number of high quality publications, regularly produced over time, on a wide range of topics including optical networks, photonic systems, performance evaluation and reliability assessment, network control and management, and service-oriented network architectures. The publications selected by the Candidate for this evaluation are of very high quality, are published in prestigious international journal and magazines, document innovative and rigorous results of significant impact on the international community, and show the Candidate's ability in mastering (and further extending) a broad range of methodologies encompassing both theoretical approaches as well as experimental investigations. Such publications (as well as the remaining scientific production of the Candidate) are all coherent with the scientific sector 09/F2 for which the position of Level-1 Professor (Professore Ordinario) is called. Furthermore, the candidate has authored several publications awarded with a best paper award at prestigious conferences, most notably the Corning student award at OFC 2015.

The candidate has participated, frequently with managing roles, to several research projects funded by the European Commission, by national agencies, and by leading industries. Particularly impressive is the exceptional capability shown by the Candidate's to raise and manage major research fundings. He has been a member of several organizing and technical programme committees of international conferences, served as editor for a valuable international journal, has been invited to hold talks in several major conferences in the optical network field, and served as reviewer for many international journals, including top journals in the field of research of the Candidate.

For what concerns teaching, the Candidate exhibits a long and intense activity, involving teaching at several university levels (Bachelor, Master, PhD). Noteworthy, the candidate held major roles also in the organization of teaching programmes, including the set up and management of several Master programmes.

For all the above, the Committee unanimously agree that the curriculum of the Candidate is outstanding. There is no doubt that his performance is comparable or even superior to leading international peers. Overall, the Committee fully agrees that the Candidate perfectly responds to the requirements envisaged by the call issued by rector degree no. 373 dated 7/7/2016 for the position of Full Professor (Professore Ordinario di Prima Fascia) for the scientific sector 09/F2 (Telecommunications).