

## MAPNET Masters on Photonic Networks Engineering

**Duration:** 2 years

**Course description:**

The International Masters on Photonic Networks (MAPNET) is focused on the competence related to the generation, manipulation, transport and detection of signals exploiting photons as a support to convey information. This area is currently recognized as one of the most significant within Information and Communication Technologies (ICT) and the enabling architectures for the future Internet. In fact, the increasing quantity and importance of data exchange and relevant services in next generation Internet requires to utilize in an efficient manner advanced technologies such as data transport over optical fibers. MAPNET is a full-time programme offered by: Scuola Superiore Sant'Anna (SSSUP) acting as Coordinator, Aston University (ASTON), Technische Universität Berlin (TUB), Osaka University (OSAKA), and as Associated Members, Ericsson Research, Deutsch Telekom, Mitsubishi Electric Corporation, Fujitsu Laboratories Ltd, National Institute of Information and Communications Technologies (NICT). All these institutions have a long-standing tradition in Photonic Networks, and each university has a local pre-existing related Master program.

The Master's program consists of 120 ECTS (two academic years, divided into four semesters). Each semester allows 30 ECTS to be gained. The first three semesters are based on traditional courses, lab exercise and laboratory sessions, while the last is based on independent work related to the Masters thesis. See all details as well as admission requirements and degrees awarded at <http://mapnet.sssup.it>

Mobility options and study program

Numerous different mobility paths are envisioned depending on the mobility options selected and the modules taken by the prospective students. The first year of the Masters will be spent in the same institution. Each partner will offer a propaedeutic pool of fundamental courses for the first semester of the Masters programme. This semester will cover advanced topics in maths, physics, statistics, systems and programming. Each partner will also offer a pool of fundamental courses specific to the curriculum chosen in the second semester of the first year. The pool of courses selected in the second semester is oriented to the support of the area to be studied in the mobility period and becomes the basic root of the Masters curriculum. The third semester of the Masters will be spent in a different institution, while the Masters thesis can be done in any of the Masters partner institutions. The third semester will cover specialisation courses in view of the independent project developed during the last semester and will be reported in the Masters thesis

Language of study

English will be the working language of the Masters Course. Every official aspect of the MAPNET course will be dealt with in English, starting from the use of a common language for communication and document exchange. This is the first pillar of the MAPNET language policy. English proficiency is in fact considered a fundamental asset within the admission process and is also the world working language in the field. The second pillar is language learning. In order to improve the linguistic skills of the students selected the opportunity to learn a second European language will be compulsory.

**Website:** <http://mapnet.sssup.it>

**Partners:**

SANT'ANNA SCHOOL OF ADVANCED STUDIES, Italy (Co-ordinating institution)  
OSAKA UNIVERSITY, Japan  
ASTON UNIVERSTIY, United Kingdom  
TECHNICAL UNIVERSITY OF BERLIN, Germany

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**Maximum grant:**

924 400 € (30 000 € consortium + 894 400 € scholarships), 2010

763 600 € (30 000 € consortium + 733 600 € scholarships), 2011

568 400 € (30 000 € consortium + 538 400 € scholarships), 2012

617 400 € (30 000 € consortium + 587 400 € scholarships 2013)