



P03: Faculté Polytechnique de Mons - FPMs (Belgium)

Description of expertise & activities

FPMs (Faculté Polytechnique de Mons) is a Belgian Faculty of Engineering located in Mons, Hainaut, Belgium. The SET (Service d'Electromagnétisme et de Télécommunications) department has more than 25 years of competencies in the fields of optical fibre transmission and of telecommunication systems.

Research activities are covering fundamentals but also applied studies of electrical and optical transmission systems for both telecommunication and sensing purposes. In collaboration with international research centres and industries, SET works particularly on the following research themes: characterization and metrology of active and passive optical components (all facilities), bit-error-rate metrology (up to 10 Gbit/s), photonic telecommunications systems (metrology and simulation facilities – OptiSim software), (bio)sensing applications of optical fibres, study and characterisation of hybrid cable television networks (analogue and digital transmission).

On the average, SET counts about 15 members (including professors, researchers and PhD students) and hosts between 5 and 10 master thesis students per year. During the last decade, SET participated to several national and European projects, but had also developed partnership with industry for training, consultancy and research. These activities lead to about 10 PhDs in applied sciences and more than 350 publications in international journals and conference proceedings.

Tasks within BONE

WP02	Global participation to activities of WP02 with a focus on creation of teaching material, the coordination of the 'optical transmissions' course and the teaching to students during summer/winter schools.
WP15	Global participation to activities of the VCE-T (identifying key research issues, running surveys, research collaboration with partners, joint publications, ...) with a particular focus on the 'monitoring' key topic (aiming to monitor the status of the network and of individual channels) due to the SET mastering of, for example: OTDR, OFDR and POTDR techniques.

Key personnel

Patrice Mégret (patrice.megret@fpms.ac.be) - born in 1964 - he received his PhD degree in Applied Sciences in 1993 from the Faculté Polytechnique de Mons, Belgium. Since 2001, he is full professor at the Faculté Polytechnique de Mons where he teaches basic electricity, microwaves and optical telecommunications. He has supervised 11 PhD theses. His main research interests are in the metrology of optical transmission quality, on optical fibre metrology like dispersion, polarization, fibre sensors, fibre lasers and on laser dynamics. Patrice MEGRET has been president of the IEEE LEOS Benelux Chapter from 2003 to 2005, is associate member of URSI and author and co-author of more than 200 publications in journals and conference proceedings. Since October 2005, he is head of the Electromagnetism and Telecommunication Department of Faculté Polytechnique de Mons.

Véronique Moeyaert (veronique.moeyaert@fpms.ac.be) - born in 1970 - she received her PhD degree in Applied Sciences in 2002 from the Faculté Polytechnique de Mons, Belgium. Since 2005, she is professor associate in telecommunications at the Faculté Polytechnique de Mons. Her main interests are in the physical layer characterisation of bi-directional communications over hybrid fibre optic and coaxial (HFC) CATV networks and in digital systems performance estimation in non gaussian environments. She is member of the TC209 CENELEC committee.

Marc Wuilpart (marc.wuilpart@fpms.ac.be) – born in 1976 - he received his PhD degree in Applied Sciences in 2003 from the Faculté Polytechnique de Mons, Belgium. He is an assistant professor in telecommunications at the Faculté Polytechnique de Mons. His main interests are in spatially distributed measurements of the polarisation properties, chromatic dispersion and Raman gain. Marc WUILPART was chairman of a study group of EU action COST 265 and is the chairman of a working group of the COST action 299 FIDES.

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