SSI
Joint International Master in Smart Systems Integration

Duration: 24 months

Course description:

A new Joint International Master in Smart Systems Integration (SSI) is proposed to meet the pressing industrial needs for qualified graduates in the field. Smart systems, integrated from microsystems and microelectronics, have become ubiquitous in many industrial sectors including automotive, security, safety, biomedicine, avionics, care for the elderly and in the home. Current research in SSI is global and dynamic, finding fast outlets in industry. There is not however enough young graduates to sustain this exponential industrial growth.

A Consortium of three reputed institutions, namely Heriot-Watt University (HW, UK), Vestfold University College (HiVe, Norway) and Budapest University of Technology and Economics (BME, Hungary) are proposing therefore this new 2-year masters programme (120 ECTS).The first three semesters are devoted to taught courses, 1 semester at each institution, with a large percentage of laboratory work and hands-on sessions. In the fourth semester, students spread across the three institutions to carry out a research project to culminate in a thesis dissertation. The SSI programme uses the complementary expertise of the three institutions to provide a unique programme that truly offers a system-level approach to Smart Systems Integration. HW in the first semester covers all the fundamental aspects of modelling, manufacturing, packaging and applications of smart systems, as well as laboratory training in non-silicon microsystems manufacturing. HiVe teaches smart systems specialization in the second semester, including the important and expanding field of biomedical applications. Manufacturing training in silicon processing complements the first semester laboratory. BME teaches design for system integration in the third semester. The main focus is on their world renowned speciality of design, and the integration to create complete smart systems with integrated sensing, actuating and signal processing functionalities.Courses in culture, society and language allow the students to fully appreciate the European diversity aspect of the programme.Successful graduates will make very attractive candidates for industry employment as well as for doctoral studies.

The programme will run in close contact with industry (particularly through master thesis projects), assured by two major industry networks being associated partners: European Technology Platform of Smart Systems Integration (EPoSS) and Norwegian Centre of Expertise – Micro and Nano Technologies (NCE-MNT).On an individual institution level, all partners have been running their own specialized master programmes and are eminently qualified to participate in a truly unique three country mobility programme. The Consortium has been collaborating with each other in research and student exchange over the last 9 years. The award to successful students will be a joint degree with a single parchment, which will bear the logos of all three institutions.

Website: http://ssi-master.eu

Partners:
HERIOT WATT UNIVERSITY IN EDINBURGH, Scotland, United Kingdom (Co-ordinating Institution)
BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS, Hungary
VESTFOLD UNIVERSITY COLLEGE, Norway

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