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Seminars for Success Sponsor to develop futuristic healthcare

Seminars for Success sponsor to develop futuristic optical fibre based monitoring systems for healthcare.

Aston University is undertaking groundbreaking research in optical based monitoring. Aston University Photonics Research Group are participating within a pan european research project which is designed to create a dedicated artificial skin capable of detecting pressure points to avoid bedsours for bed-ridden patients will soon become reality.

A European project named PHOSFOS (Photonic Skins For Optical Sensing) has just kicked off with the aim to develop a unique sensor system applicable in civil engineering and in healthcare.

Aston University are sponsors of the technology transfer programme, Seminars for Success based at Aston Science Park. This futuristic research is consistent with the West Midlands ICT Cluster research agenda. Linkages with the Medilink West Midlands community will be explored.

The system relies on flexible and stretchable skin-like polymer films that are sensitive to touch, pressure or deformation. The sensitivity is provided by an optical sensor system built with dedicated glass and polymer optical fibres, connected to the necessary optical sources and detectors, all integrated within the polymer film. The films can be adapted to the specific needs of the application filed, either in civil engineering or in healthcare.

Partners from all over Europe have teamed up to achieve the project objectives. The project is funded by the European Commission and coordinated by the Vrije Universiteit Brussel (Belgium). PHOSFOS also relies on important contributions from other Belgian institutes (IMEC and Ghent University), from the United Kingdom (Aston University), from Poland (Wroclaw University of Technology and Marie Curie-Sklodowska University) and from Cyprus (Cyprus University of Technology). Two Small-Medium Enterprises, FOS&S (Belgium) and Astasense Ltd. (UK) will incorporate the developments in their technological portfolio.

The UK dimension has been led by Dr Kate Sugden a senior resercher within Aston University Photonics Research Group.

Dr Sugden advised, “Monitoring systems are important because integrity and the health of large structures such as dams, buildings and bridges and of aircraft wings or helicopter blades have a high impact on the safety of all citizens. It is therefore of broad interest to deploy effective, easy to use and affordable monitoring systems, which can warn at a very early stage of any possible failure, anomaly or danger. At the same time, the ageing of the population urgently requires improved healthcare. Providing means for the long term monitoring of respiration and cardiac activity, for enhanced rehabilitation following trauma or surgical interventions, as well as for the detection of pressure points under bed-ridden patients, are amongst the most important demands.”

Matthew Hidderley, Marketing and Communications Manager for Aston Science Park commented, “The PHOSFOS project, funded by the European Commission is developing new flexible and stretchable skin-like polymer sheets that are sensitive to various degrees of touch, pressure and deformation. The functionality is provided by optical sensing systems that rely on specialty glass and polymer optical fibres interfaced with the necessary optical sources and detectors, all integrated into the flexible sheets. I believe this can have a significant impact on commercial structural monitoring as well as providing improved medical treatment at the patient care level.”

To hear more on what happening at Aston Science Park visit **www.astonsciencepark.co.uk**

Notes for Editors
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