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Virtual reality platform for medical doctors

New research project at Uniklinik RWTH Aachen measures 3.3 million Euros

Providing a new virtual reality platform to medical doctors in order to assist and train them during regional anaesthesia practice. That is the ambitious objective of the Regional Anaesthesia Simulator and Assistant (RASimAs) research project for the coming three years. "Patient-specific training of regional anaesthesia provides a safer environment for the patients while saving costs of health care", confirms Prof. Rolf Rossaint, Leading Anaesthesiologist at Uniklinik RWTH Aachen and Vice Rector of RWTH Aachen University (Germany).

For that purpose, Prof. Thomas Deserno from the Department of Medical Informatics at Uniklinik RWTH Aachen (Germany), is leading a consortium of 14 academic, clinical and industrial partners from ten different European countries. "International specialists from science, patient care, and industry cooperate for medical innovation. We aim at creating cutting-edge technology", explains Prof. Deserno. The RASimAs project is funded with 3.3 million Euros by the European Union under the Seventh Framework Programme.

Regional anaesthesia, increasingly replacing general anaesthesia for its lower costs and impacts for the patient, requires the clinicians to locate a specific nerve with a needle inside the patient. Currently, it is taught on cadavers, generic virtual systems or simply learned by doing. "This operation requires advanced medical skills, calling for substantial training, in order to ensure the safest possible practice in clinical routine", explains Prof. Erifyli Argyra, ESRA-Hellas President of the European Society of Regional Anaesthesia & Pain Therapy of Athens (Greece), who joined the RASimAs Advisory Board.

Virtual reality will provide anaesthesiologists a flexible authentic training environment while performing regional anaesthesia. Physicians will also benefit from an augmented reality assistant, supporting needle localization during the procedure. As details Prof. Deserno: "Beyond the technological challenge to develop such a system, a core innovation of the project is its automatic adaption to the anatomy of each patient using routine pre-operative imaging". Within the scope of the Virtual Physiology Human (FP7 ICT-2013.5.2, No 610425), the project will run until 2016.



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RASimAs Impressum:

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