



INESC TEC

BILATERAL MEETINGS

Wednesday 10:40 h – 13:00 h

Wednesday 14:00 h – 18:00 h

DESCRIPTION INESC TEC brings together more than 725 researchers, of which more than 350 have PhDs, forming a robust cluster with complementary skills and with notable international presence. INESC TEC invests in Scientific Research and Technological Development, as well as in Advanced Training and Consulting, Technology Transfer and supports the establishment of new Technology-based Companies.

ORGANIZATION TYPE Research

AREAS OF ACTIVITIES MEDICAL DEVICES

INFORMATION AND COMMUNICATION TECHNOLOGY

Offer

IHANDU- WEARABLE DEVICE FOR WRIST RIGIDITY EVALUATION IN PARKINSON SURGERY

iHandU provides a reliable second opinion on wrist rigidity evaluation during surgical treatment of Parkinson's disease, with direct benefits to the clinical practice.

Patent pending: WO 2016166702

Patient's suffering from Parkinson's Disease (PD) often undergo Deep Brain Stimulation (DBS) surgery when drugs lose efficiency or symptoms become more severe. The procedure consists in the implantation of a stimulation electrode in the basal ganglia to promote the functional control of the dopaminergic motor pathways, which is dysregulated in PD patients. The implantation site is defined by medical imaging and electrophysiological inspection, whereas the electrical stimulation parameters are defined as those who best alleviate PD symptoms, such as muscle rigidity, without side effects. Neurologists impose a passive wrist flexion movement and qualitatively describe the perceived decrease in rigidity under different stimulations. Such evaluation is highly subjective and relies on the experience of the physician. Therefore, the iHandU device was developed as a comfortable and practical wearable system that provides accurate measures on wrist rigidity.

COOPERATION OFFERED

1. License agreement
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Offer

ACCURATE-BV - CAD FOR BLOOD VESSEL ANALISYS IN BREAST RECONSTRUCTION SURGERY

Accurate-BV is an image processing algorithm that automatically tracks and retrieves clinically relevant features from each perforator blood vessel.

Patent pending: EP 16206752.4

The gold standard in autologous breast reconstruction is the Deep Inferior Epigastric Perforator (DIEP) flap. This surgical technique requires preoperative imaging studies, which are critical since selecting the portion of the lower abdominal wall to be used is based on the location and features of the perforating arteries present in the tissue. Currently, the surgical planning of DIEP flap is made resorting to the qualitative and manual assessment carried-out by radiologists. However, such fallible methodology may lead to complications, mostly because the properties of the selected blood vessels, namely the caliber, is not what was expected. The main complications resulting from this mismatch are increased operative time, surgery re-scheduling and worse clinical outcome, which may be mitigated by accurate characterization of the blood vessels in the flap.

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Offer

NEUROKINECT - NOVEL PORTABLE AND LOW-COST 3D VIDEO SYSTEM FOR MOTION ANALYSIS IN PARKINSON PATIENTS

NeuroKinect is an affordable, easy to setup and operate software solution for motion assessment of neurological disease patients.

The system is protected by Intellectual Property Rights under Copyright.

Many neurological diseases, such as Parkinson's disease and epilepsy, can significantly impair the patients' motor function, often leading to a dramatic decrease in their quality of life. In these diseases, human motion analysis is seen as fundamental towards an early diagnosis and improved management. In clinical practice, neurologists usually rely on direct visual observation (or through a video) to evaluate motor symptoms following subjective methods of evaluation based on clinical scores. To address these limitations, we present the NeuroKinect, a portable and low-cost 3D video system designed to provide quantitative data on human motion in the context of neurological diseases with movement impairment.

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