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Call for Papers IET *Computer Vision*



Journals

Editor-in-Chief: Professor Majid Mirmehdi, University of Bristol, UK

Special Issue:

Computer Vision in Healthcare and Assisted Living

In our ageing society, the proportion of people who need healthcare support and a safe and assistive environment is clearly increasing. Hence, there is a growing demand for technological solutions for the purpose of prevention, diagnosis and rehabilitation, not only to support clinicians, but also to enable patients to self-manage their health and wellbeing. Computer Vision is well placed to provide such solutions. In the last decade, enormous advances have been made with regard to automated and reliable recognition of image or video content, such as face, object and motion recognition, and gesture and activity recognition. Additionally, the affordability of modern depth sensors, such as the Microsoft Kinect, Asus Xtion Pro live, PrimeSense Carmine and Leap Motion, represent a huge leap forward, enabling 3D modelling and body pose estimation in real time with low cost and mostly simple setup solutions. In active and assisted living (AAL), the aim is to develop intelligent environments within which people's health can be monitored and assistance can be provided to deliver comfort, safety and eHealth services, among others.

Binary sensors were traditionally deployed, however they are limited in their ability to help with complex scenarios, while visual sensors, either located in the environment or worn by the person, provide a richer modality to analyse the person's activities and the environment. In healthcare, non-intrusive visual sensors may estimate and track the human body's physical state to provide real-time feedback to clinicians and/or support interactive and stimulating rehabilitation activities. As such, computer vision, pattern recognition and machine learning techniques are gaining popularity in healthcare and assisted living solutions. The aim of this Special Issue is to provide a platform for presenting those techniques and applications.

The topics of interest for this special issue include, but are not limited to:

Methods and techniques:

- Human behaviour analysis
- Gesture and action recognition
- Recognition of activities of daily living
- Gait analysis
- Quality of motion measurement
- Social robotics
- Gamification and serious games
- Egocentric vision
- Physiological monitoring
- Augmented and mixed reality

Applications:

- Tele-care and tele-health
- Prevention and management of chronic conditions
- Support to activities of daily living (ADL)
- Fall detection and prevention
- Rehabilitation
- Mental health and cognitive stimulation
- Indoor and outdoor mobility
- AAL at work

Associated issues:

- Privacy and ethical issues
- Datasets

All submissions are subject to the journal's peer-review procedures. The authors should follow the journal's Author Guide at http://digital-library.theiet.org/journals/author-guide when preparing papers for submission to the Special Issue.

Important dates:

Submission deadline: 23 Jan 2017

Publication date: Q3 2017

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