conferenceseries.com

2nd Global Summit and Expo on **Multimedia & Applications** August 15-16, 2016 London, UK

Building visual web

Ramesh Jain University of California, USA

The 21st century began with a major disruption: the rapid rise of smartphones meant that capturing, storing, and sharing photos and their context became easier than using text. Photos and videos communicate directly, without the need for language or literacy. Thus, everyone in the world with a phone is a potential prosumer who can generate as well as consume these new documents. A photo represents information and experience related to a moment. A photo may be linked to many other photos along different dimensions. One may also create explicit links among photos or objects in photos. All photos on the Web form a Visual Web that links photos with other photos and other information elements including all documents on the WWW. This Visual Web offers opportunities to address many difficult yet unsolved problems. We will discuss role of photos as powerful information sources, technical challenges, and some interesting opportunities in this area. We will present a prototype system that could be used for creating such a system and outline technical challenges.

jain@ics.uci.edu

Personalized model of kinematic and dynamic of physical activities

Ruzena Bajcsy University of California, USA

By now it has become a cliché the statement that the population in industrial world is aging and hence the problem of physical agility is a serious health problem. Moreover this issue is aggravated even with younger population due to our sedative life style. It also is an undeniable (perhaps even too obvious) fact that every human's anatomy and physiology is different. In recognition of this fact we are focusing in our efforts in development of personalized models of kinematic and dynamics of an individual during physical activities. For this purpose we are focusing on non-invasive observations in order to extract the necessary physical parameters to develop veritable kinematic and dynamic models of the human physical capabilities. The above mentioned kinematic and dynamical models are facilitated by: Availability of various relatively inexpensive/affordable and noninvasive devices that can deliver the necessary parameters of the position, velocity, acceleration, masses of not only the body but individual limbs, forces generated during various physical activities. These devices are not only the standard cameras, motion capture, force plates and force sensors, Inertial measuring devices, but also hand held ultrasound cameras, infrared sensors measuring oxygen in the blood. More advanced sensors are rapidly developing such as glucose measurements. In this presentation we shall show how this multimedia observation on people enables to develop the individual kinematic and dynamic predictive models of the physical performance of the individual. These models predict not only the physical activities and dynamic generated by a soft the physical performance of the individual but also delineate the boundaries of stable reachable space both for kinematic workspace as well as for dynamic workspace.

bajcsy@eecs.berkeley.edu