

1106-VG-1926 **Vahid Anvari*** (anvari@math.usask.ca), 106 Wiggins Road, Saskatoon, SK S7N5E6, Canada.
Motion Tracking Simulations in Health Training. Preliminary report.

Motion tracking or motion capture started as a photogrammetric analysis tool in biomechanics research in the 1970s and 1980s. This procedure involves sensing, digitizing, and recording the object in motion and is a collection of techniques and methodologies to attain automatically the motion of the objects of interest. The Motion tracking has been used in various fields such as robotics, military, entertainment, sports, robotics for surgery and biometric applications. In general a study of human's body or in other words human dynamics falls into two categories as follows 1) Tracking, this part includes articulated motion, full body human motion analysis, 3D pose estimation and gait and gesture recognition and 2) Human body motion analysis, which is mainly focused on tracking heads/faces, tracking hands, and tracking human body/bodies. The talk includes a brief discretion of: sensors and their requirements (both hardware/software, and user friendly aspects) for health training purposes; data recording and collection converting the database to management information system (MIS); designing a dynamic modeling system to perform simulation and measure the performance; testing, monitoring and control modules. (Received September 15, 2014)