

# FIBRE OPTIC SENSORS IN BIOMECHANICS: BRAZILIAN RETROSPECTIVE

*Speaker: Prof. Hypolito José Kalinowski, UFF*

Fibre optic sensors (FOS) applications in biomedical science appeared as soon as the concept of the sensing device. Along the past 40 years, countless devices were demonstrated, with several of them reaching widespread commercial status. The reduced dimension of FOS, their passiveness, electromagnetic immunity, chemical inertness and biocompatibility drove the development of biochemical and biophysical transducers and their applications. Concerning biomechanics, FOS started to be used as dynamical transducers in human beings at the end of the 2000's. It is proud to the Brazilian FOS community that the first measurements of dynamical responses in humans was developed within Brazil. From that on, several groups are involved in searching new transducers and new application areas. There are remarkable results in biomechanics of animals (apart from humans), new materials (particularly for dentistry applications), prostheses and rehabilitation, among others. A few examples will be presented to enhance the potential of such sensors.