

SEMINAIRE SCIENTIFIQUE – ECOLE DOCTORALE MEGA

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Salle Leonard de Vinci, IFSTTAR, Bron

STABILITY OF IMPLANTS

Capek Lukas, Ph.D., Assistant Professor
Technical University of Liberec

Abstract: In spite of great progress in medical technologies, namely implants, there is still considerable amount of their fail. The percentage of fail is influenced by many parameters as construction of implant, biological material, surgeon protocol and others. Contrary of implants fail might be called as stability. It would be a great clinical demand to estimate the stability of implant in advance, so that the surgeon and treatment protocol can be changed before the end state (fail). Nowadays, only non-invasive, but harmful X-rays diagnostic tools are mostly used. One of the promising method is based on resonance frequency analyses of implant and bone interface. The benefits and limits will be discussed during this presentation.

Biosketch: Dr. Capek is a researcher at the Department of the Technologies and Structures, Technical University Liberec, Czech Republic. Dr. Capek is also a vice president of the Czech Society of Biomechanics. Dr. Capek's research focuses on biomechanics of human skin and stability of implants. His research group has developed a diagnostic tool aimed for detection of primary stability of total hip replacements. He is an author of more than 40 publications relating to biomechanics. Dr Capek underwent two research fellow: 2010 – Université de Franche-Comté (Besancon, France), 2017 – Waikato University of Technology (Hamilton, New Zealand). (lukas.capek@tul.cz)