Prof. CARLOS ROBERTO GRANDINI, FBSE

Carlos Roberto Grandini earned his B.S. degree at Physics from Universidade Federal de São Carlos (Brazil) in 1985, his Master's at Basic Physics from Universidade de São Paulo (Brazil) in 1988 and his Ph.D. at Basic Physics from Universidade de São Paulo (Brazil) in 1993. He joined the Physics Department at the Universidade Estadual Paulista (UNESP) at Bauru (Brazil) as an Assistant Professor in 1988 and since 1995 is leader of Anelasticity and Biomaterials Laboratory. Beto Grandini compled post-doctoral research at Università Degli Studi di Roma "La Sapienza" as a FAPESP fellow in 1998 and obtained the position of Associate Professor in 2003. It was Head of Physics Department (1998-2000) and since 2009, is Full Professor at UNESP, in Bauru. Since 2014 is member of Institute of Biomaterials, Tribocorrosion and Nanomedicine (IBTN). He is member of several physics and materials societies and, has been Vice-President (2010-2012 and 2012-2014) and President (2016-2018) of the Latin American Society for Biomaterials and Artificial Organs. He is currently Latin-American Delegate in the International Union of Societies for Biomaterials Science and Engineering since 2016. He was elected a Fellow Biomaterials Science and Engineering in 2016. In his more than 30 years in academics, Prof. Grandini has graduated/supervised over 120 visiting faculty, post-doctoral students, and thesis completing B.S., M.S., and Ph.D. students. He published more than 120 paper in refereed journals. The major focus of Grandini's group is the development and characterization of new metastable titanium alloys with low elastic modulus and no elements that can cause cytotoxicity, aiming orthopedic and dental applications. We have developed binary and ternary systems containing molybdenum, tantalum, niobium and zirconium. Such titanium alloys have the predominance of beta phase (in some situations have the coexistence of up to three metastable phases) and have elastic modulus between 60-80 GPa, reducing the stress-shielding effect. We also have acted in the functionalization of titanium alloys surfaces, with the aim of favoring osseointegration and antimicrobial action, improving corrosion and wear resistance, besides the tribocorrosion.