

The Department of Mechanical Engineering at the University of İzmir Institute High Technology in Turkey has 4 fully funded PhD positions and a Post-Doc position starting from the Fall 2020 for four years. The research topics for this position are related to biomechanics of movement to extract boundary conditions for implants and design of implant simulators, *in silico* implant design and wear simulations including testing according to the ISO standards for medical device design.

It is expected that the thesis work will involve interdisciplinary themes related to motion capture, human movement science, modelling and testing of implants, design of machinery-simulators, human-machine physical interaction, robotics, design of implants, wear, and wear measurements.

The call is open to any nationalities, however the applicants must reside in Turkey within the duration of the PhD.

Required Qualifications:

- M.Sc. or PhD degree in either Mechanical Engineering, Biomedical Engineering, Robotics, Mechatronics
- Knowledge of wear modelling and coding
- Highly proficient in spoken and written English.
- Strong background in mechanics, problem solving, analytical thinking and trouble shooting ability

Preferred Qualifications:

- Background in biomechanics, proficient with kinematics, kinetics, data analysis and statistics, modelling, simulations, finite element modelling, design of implants, wear mechanics, tribology, measurement of wear.
- Experience in experimental methods related to human movement analysis (e.g. motion capture technology, Visual 3D, wearable systems, marker systems, force plates, EMG etc),
- Demonstrable effectiveness in disseminating scientific results (e.g. publications/talks in conferences).
- Experience in programming real-time control software in Simulink.
- Experience with medical device testing and ISO standards, application of SOPs, for quality control assessments
- Experience with mechanical engineering, mechatronics, and human-machine interfaces, design of machinery, programming, control, and robotics.
- Analytical skills to select and interpret tests appropriate for the research
- Communication skills to write detailed explanatory reports and articles and to present results of research at meetings and conferences
- Fluency in English language to be able to conduct research to produce high quality journal papers, communicate with international collaborators
- Interpersonal skills necessary to communicate effectively with clinicians, study participants, engineers, research team members, project collaborators, industrial partners, high level academics, funding body

Submission Guidelines & Timeline:

- 1) These positions will be filled as soon as possible. The successful candidates are expected to start the PhD program in Fall 2020.
- 2) Please submit your CV (max 4 pages) and a 1-page motivation letter to senaymihcin@iyte.edu.tr
- 3) Shortlisted candidates will be interviewed remotely (Skype, Teams etc)
- 4) For more information on how to apply, please visit university website.