

## Topics & Lecturers

The summer school addresses to Master and PhD students, young researchers or specialists working in mechanism designs that are used in medical applications such as surgery and rehabilitation. The summer school will deal with the following topics:

### Lecture #1

Robots in Medical Applications: Brachytherapy, Biopsy, Surgery

Lecturer: **Prof. Doina Pislă**, Universitatea Tehnică Cluj-Napoca, Romania

### Lecture #2 & 3

Medical Simulation and Robotics & Characterization of Soft Tissue Material Properties

Lecturer: **Prof. Çağatay Başdoğan**, Koç University, Turkey

### Lecture #4 & 5

Parallel Manipulator for Lower Limb Rehabilitation Applications

Lecturer: **Prof. Santhakumar Mohan**, IIT Indore, India

### Lecture #6 & 7

Motion Analysis of the Left Ventricle of a Human Heart (Mock-Heart Project)

Lecturer: **Prof. Burkard Corves**, RWTH Aachen, Germany

### Lecture #8 & 9

Lower Limb Rehabilitation Strategies & Exoskeletons for Rehabilitation and Daily Living Activities

Lecturers: **Prof. Hannes Bleuler & Dr. Mohamed Bouri**, EPFL, Switzerland

### Lecture #10 & 11

Design of Surgical Robots – Soft Robotics Approach

Lecturer: **Prof. Evren Samur**, Boğaziçi University, Turkey

### Lecture #12

Neuroscope Project: A Safety-Critical Teleoperation Approach

Lecturer: **Prof. M. İ. Can Dede**, İzmir Institute of Technology, Turkey

### Lecture #13

Remote Center of Motion Mechanisms for Single-Port Entry Surgeries

Lecturer: **Prof. Gökhan Kiper**, İzmir Institute of Technology, Turkey

### Lecture #14

Wearable Assist Robot for Walk Rehabilitation

Lecturer: **Prof. Hidetsugu Terada**, University of Yamanashi, Japan

### Lecture #15

Exoskeleton Mechanism Design for Rehabilitation Applications

Lecturer: **Prof. Volkan Patoğlu**, Sabancı University, Turkey

### Lecture #16

Mechanism Applications in Prosthesis Design

Lecturer: **Prof. Erwin-Christian Lovasz**, Politechnica University of Timisoara, Romania

### Lecture #17

Biokinematics: challenges in protein study

Lecturer: **Prof. Victor Petuya and Prof. Mikel Diez**, University of the Basque Country, Spain

### Lecture #18

Design and Development of a Hand Rehabilitation Robot for Medical Applications

Lecturer: **Prof. Erkin Gezgın**, İzmir Katip Çelebi University, Turkey

Registration fee is 170 Euro for **non-IFTToMM Members**. 150 Euro for **IFTToMM Members**.

\*Fee includes attendance to lectures, summer school materials, daily lunch and two coffee breaks per day, excursion and social event.

### Registration

Number of attendees is limited. Please fill in the registration form and send it before June 30, 2018 to [candede@iyte.edu.tr](mailto:candede@iyte.edu.tr) and to [gokhankiper@iyte.edu.tr](mailto:gokhankiper@iyte.edu.tr) After you receive the acceptance e-mail from the organizers then you can issue the payment as described below. The payment should be done before July 31, 2018.

### Accommodation

The summer school participants are invited to reserve rooms in IzTech Wellness Center (İYTE Yaşam Merkezi).

### Method of payment

Payment in EURO free of any charges to the beneficiary should be made by bank transfer to:

Account holder (mandatory): Makina Teorisi Derneği (IFTToMM Turkey)

Bank name: TURKIYE IS BANKASI A.S.

IBAN: TR73 0006 4000 0024 2293 6490 97

BIC/SWIFT: ISBKTRISXXX

Reason for payment (mandatory) must be indicated exactly as: Summer School MDMA 2018 and the name of participant.

### Support

The Summer School on Mechanism Design for Medical Applications 2018 is supported by the İzmir Institute of Technology, IFTToMM Turkey and the Technical Committee "Linkages and Mechanical Controls" of the International Federation for the Promotion of Mechanism and Machine Science (IFTToMM). The event is organized under the patronage and the support of IFTToMM, which offers grants for young delegates. In order to receive this grant, the application form in IFTToMM website should be filled in and submitted to programme chairs.