

TECHNICAL UNIVERSITY OF LIBEREC
FACULTY OF HEALTH STUDIES



ERASMUS+
BLENDED INTENSIVE PROGRAMME
ON ASSISTIVE TECHNOLOGY IN MEDICINE

VIRTUAL PART (ONLINE)
7, 14 & 21 MARCH 2024

PHYSICAL PART (ONSITE)
8 - 12 APRIL 2024

TECHNICAL UNIVERSITY OF LIBEREC
INSTITUTE FOR CLINICAL AND EXPERIMENTAL MEDICINE, PRAGUE

ORGANISING INSTITUTION



TECHNICAL UNIVERSITY OF LIBEREC, CZECH REPUBLIC

PROJECT LEADER: ING. TOMAS SOUCEK
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PARTNER UNIVERSITIES



UNIVERSITY OF COOPERATIVE EDUCATION, BAUTZEN, GERMANY

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GUEST UNIVERSITY



UNIVERSITY OF BRISTOL, UNITED KINGDOM
SCHOOL OF ENGINEERING MATHEMATICS AND TECHNOLOGY
AND BRISTOL ROBOTICS LABORATORY

KEYNOTE SPEAKER

[GB] DR. ANTONIA TZEMANAKI
- SURGICAL NEEDLE STEERING

MAIN SPEAKERS/LECTURERS

[DE] PROF. DR.-ING. DANIEL RAABE
- SURGICAL ROBOTICS
- ROBOTICS ASSISTED MINIMALLY INVASIVE SURGERY

[DE] DIPL.-ING. MAHDI ABDEL HAQ
- ROBOTICS ASSISTED MINIMALLY INVASIVE SURGERY

[DE] PROF. DR. ALEXANDER FLORY
- ROBOTICS ASSISTED MINIMALLY INVASIVE SURGERY

[SK] PROF. ING. LADISLAV JANOUSEK, PH.D.
- ELECTROMAGNETIC BIOCOMPATIBILITY

[SK] ING. MAROS SMONDRK, PH.D.
- ELECTROMAGNETIC BIOCOMPATIBILITY

[CZ] DOC. ING. DANIEL JIRAK, PH.D.
- BIOMEDICAL IMAGE PROCESSING

[CZ] DOC. ING. JOSEF CERNOHORSKY, PH.D.
- INTRODUCTION TO MOTION CONTROL FOR MEDICAL DEVICES

[CZ] ING. JAN KOPRNICKY, PH.D.
- ELECTROMYOGRAPHY CONTROL OF ROBOTIC SYSTEMS

[CZ] ING. TOMAS SOUCEK
- ELECTROMYOGRAPHY CONTROL OF ROBOTIC SYSTEMS





- MODELLING A NEEDLE INSERTING ROBOT IN MATLAB
- ELECTROMAGNETIC FIELD - HUMAN BODY INTERACTION
NUMERICAL MODELLING
- MR IMAGING - DATA ACQUIRING AND POSTPROCESSING
- PROGRAMMING MEDICAL DEVICES MOTION CONTROL
- ELECTROMYOGRAPHY SIGNAL ACQUISITION AND
PROCESSING FOR ASSISTIVE ROBOTIC SYSTEMS
CONTROL