



# 29th Hands-on Intensive Training for Engineers: Surgery in Practice

06th - 07th November 2025









Ladies and Gentlemen,

further progress in surgery will only be possible in the future if new tools and procedures are made available by medical technology. In order to accelerate the development of new diagnostic and therapeutic concepts, and to focus efficiently on the user needs, a more intensive exchange between surgeons, researchers and developers is required, more urgently than ever before.

In practice, this exchange is often more difficult than expected, as engineers and physicians come from different professional worlds. The diverse knowledge domains are characterized by their own language and methodological approaches and therefore require a common interface. Thus, interaction in the context of joint development projects holds great potential, a process we have termed Surgineering. This process requires profound fundamental knowledge of each other's domains.

In order to mediate a better understanding of surgical activities, the Research Group for Minimally Invasive Interdisciplinary Therapeutic Intervention (MITI) at TUM University Hospital, together with the German Society for Biomedical Engineering (DGBMT) in the VDE, have decided to offer a hands-on training course for engineers. The course is under the auspices of the Surgical Working Group for Computer- and Robot-Associated Surgery (CTAC) and is led by the topic "Surgery in Practice".

The course is supposed to illustrate the essential practical principles of interventional medicine and, above all, show areas of development that represent current challenges for medical technology. As courses of this kind have found a great echo in the past years, we are pleased to invite you once again to Munich, in November 2025.

Prof. Dr. med. D. Wilhelm Dr. C. Schlötelburg

### Lecturers and tutors

Prof. Dr. med. Dirk Wilhelm

Clinical director at MITI, surgineering (TUM University Hospital, MITI)

Prof. Dr. med. Hubertus Feußner

Founder of MITI, surgical data science, experimental surgery

(TUM University Hospital, MITI)

PD Dr. med. Jeannine Bachmann

Endoscopy (TUM University Hospital)

Dr. med. Alissa Jell

Gastrointestinal function diagnostics (TUM University Hospital, MITI)

Dr. med. Maximilian Berlet

Model based medicine (TUM University Hospital, MITI)

PD Dr. med. Michael Kranzfelder

Data communication (Klinik Hallerwiese-Cnopfsche Kinderklinik)

Jonas Fuchtmann, M.Sc.

Intraoperative data analysis (TUM University Hospital, MITI)

Lukas Bernhard, M.Sc.

Organizational director at MITI, clinical robotics, assistance systems (MITI)

Dr. Ing. Jana Steger

Trauma minimization, manipulator systems, additive manufacturing (MITI)

Lars Wagner, M.Sc.

Multimodal machine learning in surgery (MITI)

Sven Kolb, M.Sc.

Telediagnostics, medical robotics (MITI)

Alexander Geiger, M.Sc.

Al in medicine, multimodal data science (MITI)

Luca Wegener, M.Sc.

Mechatronic assistance systems (MITI)

Sonja Stabenow, M.Sc.

Human-Robot Interaction (MITI)

Emily Spicker, M.Sc.

Assistance technologies in hospitals (MITI)

Sidra Rashid M.Sc.

Assistance technologies in hospitals (MITI)

Dennis Schneider M.Sc.

Computer vision in surgery (MITI)

# Organization and contact

Tereza Baude

Team assistance (MITI)

Franziska Jurosch, M.Sc

6G in medicine, medical robotics (MITI)

Short-term changes are possible. For more details, please visit:

www.mitigroup.de

# Thursday, 06th November 2025

09:30-10:00 Registration

Conference room 1

10:00-10:30 Welcome

Conference room 1 (D. Wilhelm, Team MITI)

10:30-10:55 Surgery: An introduction

Conference room 1 (D. Wilhelm)

10:55-11:20 Open (conventional) surgery

Conference room 1 (M. Berlet)

11:20-11:45 Minimally invasive surgery

Conference room 1 (H. Feußner)

11:45-12:10 Robotic surgery

Conference room 1 (D. Wilhelm)

12:10-13:00 Lunch

13:00-15:15 Practical exercises and OR tour

Conference room 1/OR

15:15-15:45 Coffee break

15:45-18:00 Practical exercises and OR tour

Conference room 1/OR

from 19:30 Joint dinner

# Friday, 07th November 2025

08:30- 09:00 Conference room 1	OP hospitation allocation
09:00-11:30 ZPF/OR	Individual practical exercises and Live-surgery
11:30-12:00	Lunch
12:00-14:30 ZPF/OR	Individual practical exercises and Live-surgery
14:30-14:45	Pause
14:45-15:15 Conference room 1	Flexible endoscopy (J. Bachmann)
15:15-15:30 Conference room 1	What does the surgeon expect from engineers, computer scientists and medical technicians?  (D. Wilhelm)
15:30-15:45 Conference room 1	What does the engineer expect from surgeons? (L. Bernhard)
15:45-16:00 Conference room 1	Final discussion and farewell (D. Wilhelm)

## **General Information**

### **Organizers**

### Research group MITI

Minimally invasive interdisciplinary therapeutical intervention Department of Surgery at TUM University Hospital Trogerstr. 10 81675 Munich chirurgiekurs@mitigroup.de www.miti.med.tum.de

# Supported by DGBMT in VDE e.V.

Merianstraße 28 63069 Offenbach am Main dgbmt@vde.com www.vde.com/dgbmt

#### Venue

TUM University Hospital University Hospital rechts der Isar Ismaninger Straße 22 81675 Munich

#### Bank details

TUM Universitätsklinikum Bayerische Landesbank

BIC: BYLA DEMM

IBAN: DE82 7005 0000 0000 0202 72 Reason for payment (please specify):

## Workshop 8810002002

## Program changes

Short-term program changes may be necessary due to business, private and organizational matters and will be announced in the current program. No recourse claims can be derived from this.

#### Website

www.mitigroup.de

### Photography

Photos and film recordings are planned as part of the event, which will presumably be viewable afterwards via the homepage. As a participant of the event you agree to this, unless it is expressly contradicted in advance.

# Registration\* (06th and 07th November 2025)

Company
Surname/first name
Street
ZIP/Location
Phone
Mail
nvoice address
☐ Surgical basics and practical exercises with
hands-on intensive course
Max. number of participants 16 persons
Course fee 1250 Euro
Signature

# Please detach registration and return it by 12th September 2025 to:

TUM Universitätsklinikum Klinikum rechts der Isar Forschungsgruppe MITI Trogerstraße 10 81675 München

by mail to:

chirurgiekurs@mitigroup.de

#### Next course date

The next course is expected to take place in March 2026.

<sup>\*</sup> This registration is binding. A cost-neutral transfer of the place within the company is permitted, provided that the organisers are consulted. Cancellation fees: up to 4 weeks before the course: 50%, thereafter 100%

## **Sponsors:**







# Website:

www.mitigroup.de