



# GCB/GRK2274

# VIRTUAL SUMMER SCHOOL

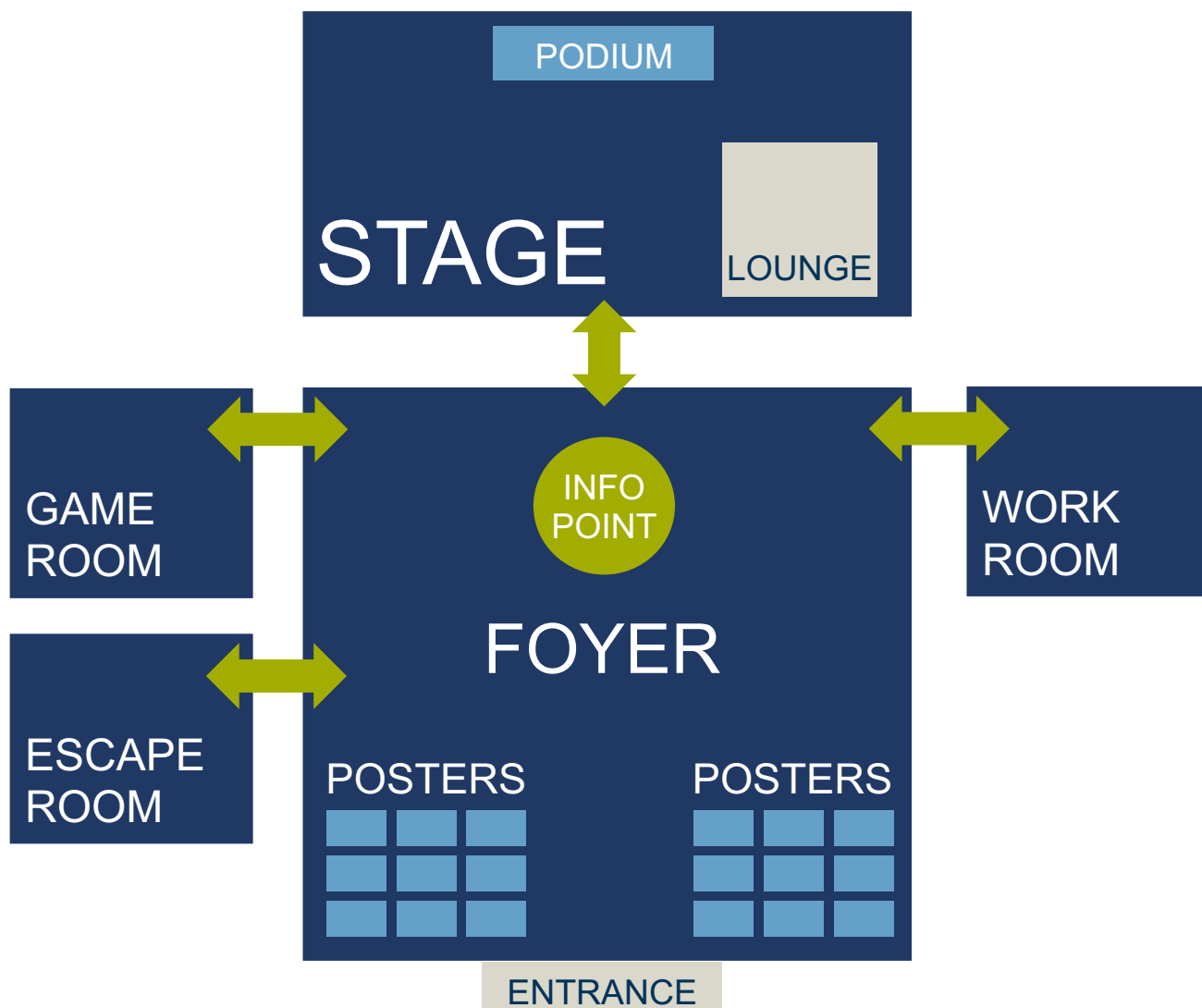
# 2021

September 27<sup>th</sup>-30<sup>th</sup>

# MAP EVENT SPACE

**Event space:** <https://gather.town/app/TBqwkIxadBfaPRja/gcbgrk2274summerschool21>

**Passcode:** bioengineering



## Please observe the following rules

- The use of the platform is intended for registered participants only. Please do not share the login information.
- By entering the event space, you agree to not download any provided content nor to make recordings.
- Please remember that you are in a digital space on a video platform (data protection). Therefore, please be sensitive to your own and others' personal information.
- Please be aware of respecting confidentiality at our summer school as you would in a non-virtual event.
- If you join gather.town their [privacy policies and regulations](#) apply. More information also in the [privacy policy of our summer school](#).

# SCHEDULE

<b>Monday, 27 September 2021</b>		
1:00 pm	EVENT SPACE OPEN	
1:30 - 1:45 pm	Guided Tour Eventspace	INFOPOINT
1:45 - 2:00 pm	Welcome (Speakers GCB/GRK)	STAGE
2:00 - 2:45 pm	Julia Schnabel (TUM, Helmholtz Zentrum)	STAGE
2:45 - 3:00 pm	Break (15 min)	
3:00 - 4:00 pm	Marc Kachelrieß (DKFZ)	STAGE
4:00 - 4:30 pm	Meet the Doctoral Representatives	LOUNGE
4:30 pm	Virtual Escape Game	ESCAPE ROOM
<b>Tuesday, 28 September 2021</b>		
12:30 - 1:30 pm	Anna Kreshuk (EMBL)	STAGE
1:30 - 1:45 pm	Meet the Speaker: Anna Kreshuk	LOUNGE
1:45 - 2:00 pm	Break (15 min)	
2:00 - 3:00 pm	Alena Buyx (TUM)	STAGE
3:00 - 3:30 pm	Break (30 min)	
3:30 - 6:30 pm	Workshop Mental Health	WORK ROOM
6:30 pm	Online Game Night	GAME ROOM
<b>Wednesday, 29 September 2021</b>		
1:45 - 3:30 pm	Poster Session	FOYER
3:30 - 4:30 pm	Pedro Gómez (Orbem)	STAGE
4:30 - 4:45 pm	Meet the Speaker: Pedro Gómez	LOUNGE
4:45 - 5:00 pm	Break (15 min)	
5:00 - 6:00 pm	Loic Royer (CZ Biohub)	STAGE
6:00 - 6:15 pm	Meet the Speaker: Loic Royer	LOUNGE
6:30 pm	Virtual Beer Tasting	GAME ROOM
<b>Thursday, 30 September 2021</b>		
1:00 - 2:00 pm	Daniela & Franz Pfeiffer (TUM)	STAGE
2:00 - 2:15 pm	Meet the Speakers: D. & F. Pfeiffer	LOUNGE
2:15 - 2:30 pm	Break (15 min)	
2:30 - 3:15 pm	Johannes Wöhrstein (LMU, Deoxy)	STAGE
3:15 - 3:30 pm	Meet the Speaker: Johannes Wöhrstein	LOUNGE
3:30 - 3:45 pm	Break (15 min)	
3:45 - 4:45 pm	Tobias Lasser (TUM)	STAGE
4:45 - 5:00 pm	Meet the Speaker: Tobias Lasser	LOUNGE
5:00 - 5:15 pm	Poster Prize and Closing Remarks	STAGE

## TALKS

## STAGE

**About the work of the Ethics Council**

Tuesday, 2:00 pm

**Alena Buyx**

Technical University of Munich

Professorship for Ethics in Medicine and Health

Director Institute of History and Ethics in Medicine

Chairwoman German Ethics Council

[More information](#)**From doctorate at GCB to TUM spin-off Orbem**

Wednesday, 3:30 pm

**Pedro Gómez**

CEO Orbem GmbH

Technical University of Munich

[More information](#)**Advances in CT Image Formation**

Monday, 3:00 pm

**Marc Kachelrieß**

Deutsches Krebsforschungszentrum

Division head and group leader X-Ray Imaging and Computed Tomography

[More information](#)**Machine learning for microscopy image analysis**

Tuesday, 12:30 pm

**Anna Kreshuk**

European Molecular Biology Laboratory

Group leader Machine Learning for Bioimage Analysis

[More information](#)**Algorithms for biological and medical imaging**

Thursday, 3:45 pm

**Tobias Lasser**

Technical University of Munich

Group leader Computational Imaging and Inverse Problems

[More information](#)**Dark field imaging for Covid-patients**

Thursday, 1:00 pm

**Daniela Pfeiffer**

Technical University of Munich

School of Medicine &amp; University Hospital rechts der Isar

**Franz Pfeiffer**

Technical University of Munich

Chair of Biomedical Physics

Director Munich School of BioEngineering

[More info D. Pfeiffer](#)[More info F. Pfeiffer](#)**Cells, Photons and Bits – A Pluridisciplinary Approach to Study Zebrafish Embryonic Development**

Wednesday, 5:00 pm

**Loic Royer**

Chan Zuckerberg Biohub

Group leader Royer lab

[More information](#)**AI-enabled medical imaging**

Monday, 2:00 pm

**Julia Schnabel**

Technical University of Munich

Imaging Helmholtz Zentrum München

Professorship for Computational Imaging and AI in Medicine

[More information](#)**Translating a physics invention into a molecular diagnostic product**

Thursday, 2:30 pm

**Johannes Wöhrstein**

Ludwig-Maximilians-Universität München

Group leader DEOXY Technologies

[More information](#)

# POSTER SESSION

WEDNESDAY 1:45 – 3:30 pm, FOYER

POSTER	RESEARCHER	TOPIC	TIME AT POSTER
1	Erika Kollitz	A patient-specific hybrid whole-body computational phantom for out-of-field dose and equivalent dose estimation in proton therapy	1:50 - 2:05 pm
2	Xiaoxiao Zhang	CINgo: Predicting CIN using gene ontology guided deep neural network	1:55 - 2:10 pm
3	Juan Pablo de la Cruz Gutierrez	Data driven tools to support the study of the human inner ear and its disorders	2:00 - 2:15 pm
4	Manuela Duda	Dual Energy CT for a Small Animal Radiation Research Platform (SARRP)	2:05 - 2:20 pm
5	Henning Schmitz	Experimental lung phantom based validation of scatter corrected 4D cone beam computed tomography for proton dose calculation	2:10 - 2:25 pm
6	Jakob Lingg	Fluorescent Probes, Optics, Imaging	2:15 - 2:30 pm
7	Jonathan Rapp	Inductive stimulation of the phrenic nerve	2:20 - 2:35 pm
8	Lucas Sommer	Pencil Beam Kernels for the Mixed Fast Neutron and Gamma Radiation Field at FRM II	2:25 - 2:40 pm
9	Manuel Schultheiss	Per-Pixel Lung Thickness Estimation on Chest Radiographs	2:30 - 2:45 pm
10	Tai Anh La	Photoacoustic mesoscopy on an sub-millimeter optical fiber probe	2:35 - 2:50 pm
11	Rami Al-Maskari	Segmentation of the peripheral nervous system	2:40 - 2:55 pm
12	Albert Croner	Simulation of Electrical Excitation Patterns with Degenerating Auditory Nerve Fibers	2:45 - 3:00 pm
13	Moritz Rabe	Time-resolved estimated synthetic CT for lung tumor treatments at the MR-Linac	2:50 - 3:05 pm
14	Bojan Sandurkov	Waveforms in Transcranial Magnetic Stimulation	2:55 - 3:10 pm
15	Sebastian Endt	Unmixing tissue compartments via deep learning T1-T2-relaxation correlation imaging	3:00 - 3:15 pm

3:15 – 3:30 POSTER VOTE & BREAK

## How to stay sane during a doctorate Mental health strategies for you and your surrounding

### About the Workshop

The workshop will be split up in two parts.

#### Part 1:

What is mental health, what are mental diseases and why is this topic important?

How can we recognize that we or our friends or colleagues are at risk of mental health problems?

If we recognize for example changes in behavior, how do we address those changes to others and how do we react?

If we recognize warning signals in our behavior or mood, what can we do and what do we need to do?

#### Part 2:

What can we do to stay healthy despite stress and challenges? What can we do to stay or become resilient?

How can we handle very stressful situations, crisis, and problems throughout the doctorate process?

From this workshop, you will get insights, know-how and techniques that you can use in your daily practice, but there is also time for exchange and self-reflection.



Image: David Höpfner

### About the Lecturer

**Dr. med. Tatjana Reichhart** is a physician specialized in psychiatry and psychotherapy. She used to work as a scientific and clinical physician at the TU Munich. In 2015 she co-founded "Kitchen2Soul", the first Coaching and Workshop coffee shop / bookstore in Munich. Her focus nowadays is on prevention. She helps individuals and employees in companies to take care of themselves prior to developing mental illnesses. She trains coaches and leaders in resilience. In 2019 her book "Das Prinzip Selbstfürsorge" (selfcare) has been published by Kösel Verlag.

### Website