



GENERAL INFORMATION

VENUE

Technische Universität Berlin
TIB 21-C Lecture hall
Gustav-Meyer-Allee 25
13355 Berlin, Germany



SCHEDULE

Beginning: Monday, 21 July 2014, 1 pm

End: Friday, 25 July 2014, 3 pm

LANGUAGE

The course will be held in English.

REGISTRATION

Please complete and return the enclosed form or contact:

DECHEMA-Forschungsinstitut
Training dept.
P.O. Box 17 03 52
D-60077 Frankfurt am Main

Phone: +49 69 7564 253
Fax: +49 69 7564 414
Internet: www.qbio-summerschool.de
E-mail: gruss@dechema.de

REGISTRATION FEE

PhD and other students: € 630,-

University: € 750,-

Industry: € 980,-

(incl. course materials, lunch, snacks, coffee breaks and VAT)

DEADLINE

16 June 2014

ACCOMMODATION

Holiday Inn Berlin-Mitte
Hochstr. 2 - 3
13357 Berlin
Phone: +49 30 46003777
E-mail: reservation@hiberlin.de
Single room: 64,50 Euro per night

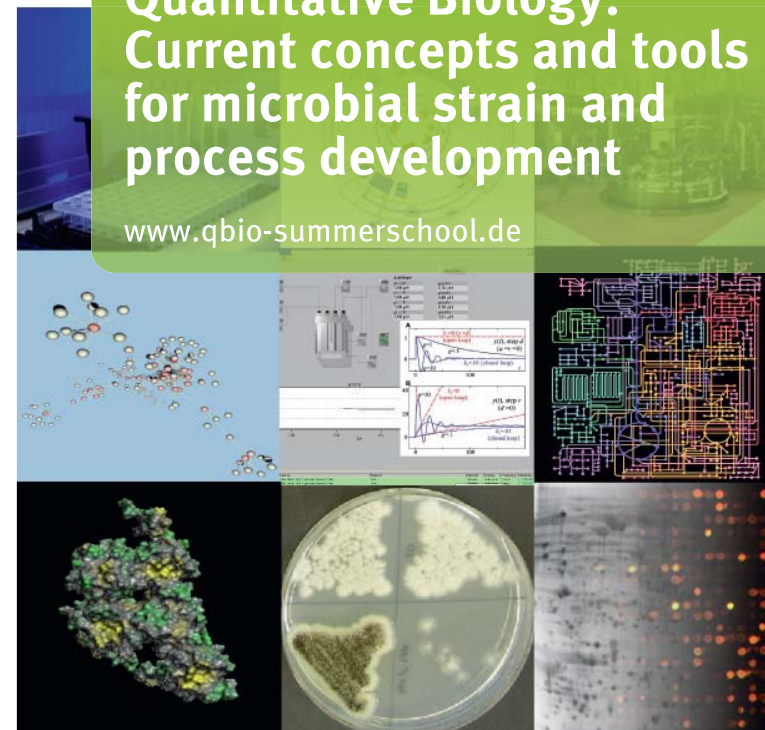
Please contact the hotel directly to book a room by 6 July 2014 mentioning the code "QBIO".

SUMMER SCHOOL

21 - 25 July 2014
Berlin / Germany

Quantitative Biology: Current concepts and tools for microbial strain and process development

www.qbio-summerschool.de



LECTURERS

QUANTITATIVE BIOLOGY: CURRENT CONCEPTS AND TOOLS FOR MICROBIAL STRAIN AND PROCESS DEVELOPMENT

Modern biology and biotechnology follow the chemical, physical and engineering sciences by using quantitative mathematical models for the description of complex cellular behaviors. Concepts from molecular and systems biology, synthetic biology, process engineering, and economy will have to be combined for the development of efficient biotechnological processes. To enable biologists, biotechnologists, and biochemical engineers to pursue this interdisciplinary challenge, it is mandatory to strengthen both the mathematical skills of biologists and the engineers' knowledge of basic biological concepts and nomenclatures.

Thus, the Society for Chemical Engineering and Biotechnology DECHEMA (Frankfurt) and the Innovation Centre Technologies for Health and Food (Berlin) devised a summer school schedule that would allow participants to familiarize themselves with relevant biological concepts from systems and synthetic biology, with mathematical modeling strategies and appropriate technologies and software tools. The summer school addresses both biologists and engineers: Biologists will learn how engineering approaches can help them in planning, performing and evaluating experiments, whereas engineers get insight into state-of-the-art measurement techniques that feed their biological models.

The course consists of formal lectures, workshops and tutorials for hands-on experience with state-of-the-art tools.

The participants are encouraged to bring their laptop computers. They will be informed on the system requirements and provided with respective software to be installed on the laptop PC.

Prof. Dr.-Ing. Lars Blank	RWTH Aachen (LB)
Prof. Dr.-Ing. Anja Drews	HTW Berlin (AD)
Dr. Lothar Eggeling	FZ Jülich (LE)
Dr.-Ing. Petra Först	TU München (PF)
Prof. Dr. Björn Junker	Martin-Luther-Universität Halle-Wittenberg (BJ)
Dr.-Ing. Stefan Junne	TU Berlin (SJ)
Dr. Lei Mao	HTW Berlin (LM)
Prof. Dr.-Ing. Vera Meyer	TU Berlin (VM)
Prof. Dr. Elke Nevoigt	Jacobs U Bremen (EN)
Prof. Dr. Marco Oldiges	FZ Jülich (MO)
Dr.-Ing. Jochen Schmid	TU München (JS)
Prof. Dr. Dirk Schwarzer	University Tübingen (DS)
Prof. Dr. Björn Usadel	RWTH Aachen (BU)
Prof. Dr. Wilfried Weber	University Freiburg (WW)



PROGRAMME

MONDAY, 21 JULY

- » Opening of the summer school (VM)
- » Fundamentals of process engineering (AD)
- » Fermentation strategies and dynamic models (PF or AD)

TUESDAY, 22 JULY

- » Rheology, fluid dynamics and bioreactors (AD)
- » Model based process design (SJ)
- » Transcriptomics (VM, BU)
- » Three parallel exercise courses

WEDNESDAY, 23 JULY

- » Proteomics (DS, BU)
- » Synthetic biology (WW)
- » Three parallel exercise courses

THURSDAY, 24 JULY

- » Metabolomics (MO)
- » Stoichiometric models (LB)
- » Metabolic flux analysis (BJ)
- » Evaluation of non-linear models: reaction kinetics (AD)
- » Mathematical modeling for systems biology (LM)
- » Four parallel exercise courses

FRIDAY, 25 JULY

- » Renewable resources and biorefinery concepts (JS)
- » Renewable resources and microbial strain optimization (EN)
- » Amino acids: trends in market and research (LE)
- » Feedback round and closing of the summer school (VM)

SOCIAL PROGRAMME / EVENINGS

Monday night, a get-together event is planned to facilitate the networking of the participants. There will be ample opportunity to familiarize oneself with the software of interest in the evenings.

(subject to modifications)

Reply form

(Fax-No.: +49 69 7564-414)

DECHEMA-Forschungsinstitut
 Training department
 P.O. Box 17 03 52
 D-60077 Frankfurt am Main

Registration to the DECHEMA summer school 7158**QBio****"Quantitative Biology"** Berlin, 21-25 July 2014

Deadline for registration: 16 June 2014

ParticipantMs Mr Title _____

Name _____ Surname _____

Company _____

Department _____

Street/POB _____

Code/Place _____

Phone/Fax _____ E-mail _____

Industry University PhD Student *

* Please attach proof.

Invoice address

Company _____

Department _____

Street/POB _____

Code/Place _____

Method of payment bank transfer after receipt of invoice by credit card: Mastercard Visa

Card number _____ Expiration date _____ / _____

The course fee amounts to € 980.- (industry), € 750.- (university), € 630.- (PhD students). If we receive a notice of withdrawal at least two weeks prior to the beginning of the course, the participation fee less 10% for administration expenses will be reimbursed. Thereafter, a reimbursement will not be possible.

Place, date_____
signature + company stamp