Peking University National Biomedical Imaging Science Center

Summer Biomedical Imaging Course

The Multimodal Cross-scale Biomedical Imaging Facility is one of the priority projects under the "13th Five-Year Plan" national major science and technology infrastructure development, spearheaded by Chinese scientists in the biomedical imaging field, officially commencing operation in 2025. To continuously advance China's biomedical imaging domain and nurture the next generation of interdisciplinary young scientists, the Peking University National Biomedical Science Center (Huairou) plans to offer a summer course for graduate students in related fields.

The 2025 training content will focus on five modules:

1. Optical Super-resolution Imaging
2. Fluorescent Probes and Optogenetics
3. Illuminating the Mechanobiology
4. In Vivo Imaging
5. Computational Imaging & Visualization

Training Schedule: July 14 – July 27 (2 weeks), lectures + workshops
Application Period: April 1 – June 30
Application Method: Personal statement + two recommendation letters + academic transcripts, sent to beiliu@pku.edu.cn.
Participants: Graduate students (priority to 1st-3rd year), nationwide selection of 30 students + 10 internal students

Training Fee: Application fee 5000 RMB; accommodations and meals covered by the center.

Detailed Schedule:

Date	Contents	Lecturer
7.14 上午	Frontier Optical Imaging – Super-resolution Imaging I	Chen Liangyi
7.14 下午	SIM Imaging	Xiaoshuai Huang
7.15 上午	Frontier Optical Imaging – Super-resolution Imaging II	Wei Ji

7.15 下午	Polarization SIM Imaging	Peng Xi
7.16 上午	Frontier Optical Imaging – Super-resolution Imaging III	Abberior
7.16 下午	STORM Imaging	Facility (Jia Hao Niu)
7.17 上午	Fluorescent proteins and applications	Pingyong Xu
7.17 下午	MINFLUX	Facility (Jia Hao Niu)
7.18 上午	Fluorescent biosensors	Yuzheng Zhao
7.18 下午	FLIM	Facility (IBP, CAS)
7.19 上午	Optogenetics and chemogenetics	
7.19 下午	FRET imaging	Bei Liu
7.20 上午	Lab Visit	
7.20 下午	Group Activities	
7.21 上午	Visualizing the mechanobiology I	Mian Long or Ming LI
7.21 下午	Label-free imaging: ODT	Facility (Yue Wang)
7.22 上午	Visualizing the mechanobiology II	Fan Yang
7.22 下午	Brillouin Imaging	Facility (Jia Hao Niu)
7.23 上午	Visualizing the mechanobiology IIII	Zheng Liu
7.23 下午	Single-molecule force imaging	Jianyong Huang
7.24 上午	In vivo imaging – mmulti-photon miniature microscopy	Peace Heping Cheng
7.24 下午	Ca^{2+}	Fujian Lu
7.25 上午	In vivo imaging – Connectomics	Guoqiang Bi
7.25 下午	Connectomics Data Analysis	Kun Song
7.26 上午	Frontier Computational Imaging – Label-free Imaging	Kebin Shi
7.26 下午	Deep learning in Bioimaging Analysis	He Sun
7.27 上午	Frontier Computational Imaging – Light Field Imaging	Jiamin Wu
7.27 下午	Visulization techniques in bioimaging	Lei Ma