<Updated>Program of 9th GCB Summer School for Medical Physics

Japan Standard Time As of 2022/7/26

Monday, August 22					
Chapter	Japan Standard Time		Title	Lecturer	Place
	9:45 AM	10:00 AM	Introduction	Prof. Yuji Kuge (Hokkaido Univ.)	ZOOM/ EN5-205
1	10:00 AM	10:45 AM	Overview of radiation therapy (Therapeutic Window in New Era)	Prof. Hidefumi Aoyama (Hokkaido Univ.)	
	15 min. break				
2	11:00 AM	11:45 AM	Physics and Disease	Prof. Burcin Unlu (Bogazici Univ.)	
	15 min. break				
	60 min. break				
3	1:00 PM	1:45 PM	Overview of Medical AI	Prof. Kohsuke Kudo (Hokkaido Univ.)	
	15 min. break				
4	2:00 PM	2:45 PM	Current and Future Ischemic Stroke Imaging: How Physicists and Biomedical Engineers can Improve the Care of Stroke Patients	Prof. Greg Zaharchuk (Stanford Univ.)	

Tuesday, August 23					
Chapter	Japan Standard Time		Title	Lecturer	Place
5	9:00 AM	9:45 AM	Artificial intelligence and imaging for personalized cancer therapy	Dr. Xuejun Gu (Stanford Univ.)	ZOOM/ EN5-205
	15 min. break				
6	10:00 AM	10:45 AM	Interaction of therapeutic radiations with matter	Dr. Sodai Tanaka (QST)	ZOOM/ GCB Conference Room
	15 min. break				
7	11:00 AM	11:45 AM	Patient setup and image guidance technique in proton therapy	Dr. Seishin Takao (Hokkaido Univ.)	
	15 min. break				
	60 min. break				
8	1:00 PM	1:45 PM	SBRT and IGRT	Prof. Masayori Ishikawa (Hokkaido Univ.)	
	15 min. break				
9	2:00 PM	2:45 PM	Introduction to Geant4 for particle therapy	Dr. Ken Sutherland (Hokkaido Univ.)	
	15 min. break				
10	3:00 PM	3:45 PM	Molecular imaging and molecular probes	Prof. Yuji Kuge (Hokkaido Univ.)	ZOOM/ EN5-205

Wednesday, August 24					
Chapter	Japan Standard Time		Title	Lecturer	Place
11	9:00 AM	9:45 AM	Fractionation based on dose distribution and classical radiation biology	Prof. Hiroyuki Date (Hokkaido Univ.)	ZOOM/GCB Conference Room
	15 min. break				
12	10:00 AM	10:45 AM	Production of medical radioisotopes	Prof. Masayuki Aikawa (Hokkaido Univ.)	ZOOM/ EN5-205
	15 min. break				
13	11:00 AM	11:45 AM	Introduction to AI with Keras Part 1	Dr. Ken Sutherland (Hokkaido Univ.)	

Thursday, August 25					
Chapter	Japan Standard Time		Title	Lecturer	Place
14	9:00 AM	9:45 AM	Clinical application of proton beam therapy	Dr. Takayuki Hashimoto (Hokkaido Univ.)	ZOOM/ EN5-205
	15 min. break				
15	10:00 AM	10:45 AM	Nuclear medicine therapy	Dr. Shiro Watanabe (Hokkaido Univ.)	
	15 min. break				
16	11:00 AM	11:45 AM	Clinical molecular imaging and image analysis	Prof. Chietsugu Katoh (Hokkaido Univ.)	
	15 min. break				
	60 min. break				ZOOM/GCB Conference Room
17	1:00 PM	1:45 PM	Dose calculation algorithms for spot scanning proton therapy	Dr. Taeko Matsuura (Hokkaido Univ.)	
	15 min. break				
18	2:00 PM	2:45 PM	Quality assurance of four-dimensional radiation therapy system	Dr. Naoki Miyamoto (Hokkaido Univ.)	
	15 min. break				
19	3:00 PM	3:45 PM	Practical demonstration: treatment planning 1	Dr. Seishin Takao (HU) Dr. Taeko Matsuura (HU)	
20	3:45 PM	4:30 PM	Practical demonstration: treatment planning 2		
	15 min. break				ZOOM/TBD
21	4:45 PM	5:30 PM	Practical demonstration: QA1	Dr. Takahiro Kanehira (HU)	
22	5:30 PM	6:15 PM	Practical demonstration: QA2		

Friday, August 26					
Chapter	Japan Standard Time		Title	Lecturer	Place
23, 24	9:00 AM	10:30 AM	Presentation by GCB summer school participants	Prof. Masayori Ishikawa (Hokkaido Univ.)	ZOOM/GCB Conference Room
	30 min. break				
25, 26	11:00 AM	12:30 PM	Radiation Biology: Fundamental Knowledge and Recent Advances	Dr. Everett Moding (Stanford Univ.)	ZOOM/ EN5-205
	90 min. break				
27, 28	2:00 PM	3:30 PM	Clinical and biological evaluation metrics and biomarker in silico in radiation oncology	Dr. Keiji Kobashi (Hokkaido Univ.)	
	30 min. break				
29, 30	4:00 PM	5:30 PM	Self-evaluation Certificate	Prof. Yuji Kuge (Hokkaido Univ.)	

* Schedule is subject to change. QST: National Institutes for Quantum Science and Technology

Joint lectures with Molecular Biomedical Science and Engineering

Venues: Zoom meeting/EN5-205, Northeast Research Bldg, Graduate School of Medicine