

## Program of Medical Physics School 2020

As of 2021/1/20

Monday, February 15					
Chapter	Time		Title	Lecturer	Place
1	10:00 AM	10:45 AM	Introduction	Prof. Hiroki Shirato	Zoom
			Overview of radiation therapy (Therapeutic Window in New Era)		
15 min. break					
2	11:00 AM	11:45 AM	Molecular imaging and molecular probes	Prof. Yuji Kuge	
			15 min. break		
60 min. break					
3	1:00 PM	1:45 PM	Four-dimensional Radiation Oncology, Real-time-image Guided Radiation Therapy	Prof. Shinichi Shimizu	
			15 min. break		
4	2:00 PM	2:45 PM	Production of medical radioisotopes	Prof. Masayuki Aikawa	
			15 min. break		
5	3:00 PM	3:45 PM	Intellectual property and international standard for translational research in medicine	Dr. Yuichi Hirata	
			15 min. break		

Tuesday, February 16					
Chapter	Time		Title	Lecturer	Place
6	10:00 AM	10:45 AM	Interaction of Therapeutic Radiations with Matter	Dr. Sodai Tanaka	Zoom
			15 min. break		
7	11:00 AM	11:45 AM	Dose Calculation Algorithms for Spot Scanning Proton Therapy	Dr. Taeko Matsuura	
			15 min. break		
60 min. break					
8	1:00 PM	1:45 PM	SBRT and IGRT	Prof. Masayori Ishikawa	
			15 min. break		
9	2:00 PM	2:45 PM	Imaging analytics for in vivo assessment of tumor biology: deep learning and image classification	Dr. Ken Sutherland	
			15 min. break		
10	3:00 PM	3:45 PM	Recent advances in cancer radiotherapy using molecular imaging and radioisotopes	Dr. Hironobu Yasui	
			15 min. break		

Wednesday, February 17					
Chapter	Time		Title	Lecturer	Place
11	9:00 AM	9:45 AM	Application of Monte Carlo to Particle Therapy	Dr. Ken Sutherland	Zoom
			15 min. break		
12	10:00 AM	10:45 AM	Clinical Application of Proton Beam Therapy	Dr. Takayuki Hashimoto	
			15 min. break		
13	11:00 AM	11:45 AM	Clinical molecular imaging and image analysis	Prof. Chietsugu Katoh	
			15 min. break		
60 min. break					
14	1:00 PM	1:45 PM	Quality Assurance of Four-Dimensional Radiation Therapy System	Dr. Naoki Miyamoto	
			15 min. break		
15	1:45 PM	2:30 PM	Patient Setup and Image Guidance Technique in Proton Therapy	Dr. Seishin Takao	
			15 min. break		
16	2:45 PM	3:30 PM	Practical Demonstration: Treatment Planning 1	Dr. Seishin Takao	
			15 min. break		
17	3:30 PM	4:15 PM	Practical Demonstration: Treatment Planning 2	Dr. Sodai Tanaka	
			15 min. break		
18	4:30 PM	5:15 PM	Practical Demonstration: QA 1	Dr. Taeko Matsuura	
			15 min. break		
19	5:15 PM	6:00 PM	Practical Demonstration: QA 2	Dr. Koichi Miyazaki	
			15 min. break		

Thursday, February 18					
Chapter	Time		Title	Lecturer	Place
30 min. break					
22, 23	11:00 AM	12:30 AM	Artificial Intelligence in Radiation Oncology	Prof. Lei Xing (Stanford Univ.)	Zoom
			15 min. break		

Friday, February 19					
Chapter	Time		Title	Lecturer	Place
24, 25	9:00 AM	10:30 AM	Real-time Adaptive Radiotherapy	Prof. Shimizu (organizer)	Zoom
			Daniel Chang: PET + Linac		
30 min. break					
26, 27	11:00 AM	12:30 AM	Deep Learning in Biomedical Science and Engineering	Dr. Yusuke Nomura (Stanford Univ.)	
			90 min. break		
28, 29	2:00 PM	3:30 PM	Clinical and Biological Evaluation Metrics and Biomarker in silico in Radiation Oncology	Dr. Keiji Kobashi	
			15 min. break		

\* Schedule is subject to change.

Joint lectures with Molecular Biomedical Science and Engineering School

Venues: Zoom meeting