

Avison Biomedical Symposium 2016

“Artificial Intelligence in Medicine(AIM) : Imaging, Informatics and Robotics”

May 27- May 28, 2016

Yonsei University College of Medicine, Seoul, Korea

Main Symposium

Day 1: Friday, May 27, 2016

Location: Grandballroom, Baekyangro, Yonsei Unniversity, Seoul, Korea

Opening

09:00-09:05	Opening Remarks	Byung Seok Lee (Dean, Yonsei Univ. College of Medicine, Korea)
09:05-09:10	Welcome Address	Namsik Chung (President and CEO, Yonsei Univ. Health System, Korea)
09:10-09:15	Congratulatory Address	Seokyoung Jang (Director General, Office of Internet Convergence Policy, Korea)

Plenary Lecture 1

09:15-09:45	IBM Watson Health: Advancing Innovation Through Insights	Julie Bowser (IBM Watson, USA)
09:45-10:15	TBD	Byoung-Tak Zhang (Seoul National Univ. College of Engineering, Korea)
10:15-10:30	Q & A	
10:30-11:00	Coffee Break	

Session I - A : Development of Surgical Robotic System

11:00-11:30	Democratizing Surgery	Pablo Garcia Kilroy (Verb Surgical Inc., USA)
11:30-12:00	TBD	Mohan Nathan (Transenterix Inc., USA)
12:00-12:15	Communication between Developer and Surgeon: learning a foreign language	Byung Soh Min (Yonsei Univ. College of Medicine, Korea)
12:15-12:30	Q & A	
12:30-13:30	Lunch	

Session I - B : Machine Learning for Data Processing

Will machine learning replace physician interpretation in cardiac imaging?	Piotr Slomka (Cedars-Sinai Medical Center, USA)
Deep Learning for Medical Image Analysis	Junmo Kim (KAIST, Korea)
Machine Learning for Understanding Brain Images	Heung-Il Suk (Dept. of Brain and Cognitive Engineering, Korea Univ., Korea)
Machine Learning for Predicting Degenerative brain disease development	Changsoo Kim (Yonsei Univ. College of Medicine, Korea)
Q & A	

Plenary Lecture 2

13:40-14:00	Inventing the Future: Image-Guided Surgery	Jacques Marescaux (IRCAD France, France)
14:00-14:15	Past, Present and Future of Robotic Surgery : Yonsei Perspective 2016	Koon Ho Rha (Yonsei Univ. College of Medicine, Korea)
14:15-14:30	Q & A	
14:30-15:00	Coffee Break	

Session II - A : Future Imaging Technology

15:00-15:30	Future Imaging Technology in Surgical Robotics	Catherine Mohr (Intuitive Surgical Inc., USA)
15:30-15:50	New Trends in Diagnostic and Interventional Imaging	Huseyin Tek (Siemens Healthcare, USA)
15:50-16:10	Minimally invasive Image Guided Surgery: Today and Tomorrow	Joseph Kletzel (Novadaq, USA)
16:10-16:30	Future Technology of Olympus Imaging System	Yukinori Tomimuro (Olympus, Japan)
16:30-16:45	Q & A	
16:45-17:00	Closing Remarks	

Session II - B : AI for Clinical Decision Support

Computational intelligence in diagnosis of cancer in medical images	Kenji Suzuki (Illinois Institute of Technology, USA)
Deep Learning for Biomedical Informatics	Sungroh Yoon (Seoul National Univ. college of Engineering, Korea)
Smart CDSS and Authoring Tool	Sungyoung Lee (Kyung Hee Univ. College of Electronics and information, Korea)
The end of Eminence based Medicine – From Doctor to ‘I’	Kwang-Joon Kim (Yonsei Univ. College of Medicine, Korea)
Q & A	

Sue Goo Rhee (Honorary director, Avison Biomedical Research Center, Korea)

Satellite Symposium “Meet the professors”

Day 2: Saturday, May 28, 2016

Location: Helinox hall, Baekyangro, Yonsei Unniversity, Seoul, Korea

09:00-09:40	Clinical Needs about Artificial Intelligent based Image Processing	Reza Arsanjani (Cedars-Sinai Medical Center, USA)
09:40-10:20	Computer-Aided Detection and Diagnosis with Image-based Neural Networks	Kenji Suzuki (Illinois Institute of Technology, USA)
10:20-11:00	Coffee Break	
11:00-11:40	Development of automated myocardial perfusion quantification and multimodality image registration	Piotr Slomka (Cedars-Sinai Medical Center, USA)
11:40-12:20	Cardiovascular Image Analysis	Dongjin Han (Yonsei Univ. College of Medicine, Korea)
12:20-13:20	Lunch	
13:20-14:00	IBM Watson	Julie Bowser (IBM Watson, USA)
14:00-14:40	Segmentation with learning method	Huseyin Tek (Siemens Healthcare, USA)
14:40-15:20	Introduction of Novel S/W for CAD evaluation	Damini Dey (Cedars-Sinai Medical Center, USA)
15:20-15:35	Closing Remarks	

O.R.Avison, 1860 - 1956

The fourth Chejung-won superintendent
The founder of the Severance union medical college



YONSEI UNIVERSITY COLLEGE OF MEDICINE
BRAIN KOREA 21 PLUS PROJECT FOR MEDICAL SCIENCE