OS9: Biomedical Flow Dynamics

October 29, 2020
ROOM4 (Zoom Webinar)

OS9-1
15:20-16:00
Numerical Simulation of the Hemodynamic Interaction between Bicuspid Aortic Valve and Aortic Dilatation *(Invited)*
Qianwen Hou, Aike Qiao, Ning Liu, Youlian Pan (Beijing University of Technology, China)

OS9-2
16:00-16:20
Construction of the Split-Tip Catheter Model of the Segmental Adrenal Venous Sampling Procedure using Computational Fluid Dynamics
Johanna Muliany, Narendra Kurnia Putra, Nugraha (Insitut Teknologi Bandung, Indonesia), Tomo Kinoshita, Makoto Ohta, Hitomi Anzai (Tohoku University, Japan)

OS9-3
16:20-16:40
Accelerated Puncture into Kidney Phantom
Kojiro Sugiyama, Kenji Kikuchi, Kei Takase, Takuji Ishikawa (Tohoku University, Japan)

OS9-4
17:10-17:50
Patient-Specific Hemodynamic Simulation for Stroke Lesion Prediction *(Invited)*
Noëlie Debs, Méghane Decroocq, Tae-Hee Cho (INSA Lyon, France), Carole Frindel (Tohoku University, Japan / INSA Lyon, France)

OS9-5
17:50-18:10
Numerical Modeling of Biofluid Dynamics in a Cavity with Applications to Laser Cyst Obliteration
Vladimir Chudnovskii, Mikhail Guzev (FEB RAS, Russia), Junnosuke Okajima (Tohoku University, Japan), Dmitry Tereshko (FEB RAS, Russia)

OS9-6
18:10-18:30
Prediction of 3D Cardiovascular Hemodynamics before and after Coronary Artery Bypass Surgery via Deep Learning *(Invited)*
Gaoyang Li, Haoran Wang, Mingzi Zhang (Tohoku University, Japan), Makoto Ohta (Tohoku University / ELyTMaX UMI 3757, CNRS – Université de Lyon – Tohoku University, International Joint Unit, Tohoku University, Japan), Hitomi Anzai (Tohoku University, Japan)

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OS9-7
13:30-13:50
Importance of an Exit Strategy in Medical Device Development *(Invited)*
Keisuke Mamada (Tohoku University Hospital, Japan)

OS9-8
13:50-14:10
Fundamental Study of the Blood Flow Field in the Left Ventricle with Aortic Regurgitation
Ryuji Sugahara, Suguru Miyauchi, Toshiyuki Hayase, Kenichi Funamoto (Tohoku University, Japan)

OS9-9
14:10-14:30
Improved Method of Estimating the Contact Force Acting on an Endovascular Treatment Device Using Image Processing
Toyo Onishi, Kazuto Takashima (Kyushu Institute of Technology, Japan)

OS9-10
14:30-14:50

Development of Wearable Device for Daily Continuous Blood Pressure Estimation Based on Pulse Rate Measurement: Effect of Pulse Rate Measurement Interval
Soshi Kuroe, Toshiyuki Hayase, Suguru Miyauchi, Akihiko Sato, Daisuke Ito (Tohoku University, Japan), Shunkei Pak, Osamu Iwamoto, Ryosuke Hirohata (ELECOM Co., Ltd., Japan)

OS9-11
15:20-16:00

Association between Rupture of Multilobed Cerebral Aneurysm and Local Flow Stagnation and High Local Viscosity *(Invited)*
Tamer Hassan (Alexandria University / Alexandria University Hospital, Egypt), Khalid M. Saqr (Arab Academy for Science, Technology and Maritime Transport / Alexandria University Hospital, Egypt), Dalia Ibrahim (Alexandria University / Alexandria University Hospital, Egypt), Amr Abdelkerim, Shadya Abu-Seif (Alexandria University, Egypt)

OS9-12
16:00-16:20

Hydrodynamic Interaction of Two sperm
Nanami Taketoshi, Toshihiro Omori, Takuji Ishikawa (Tohoku University, Japan)

OS9-13
16:20-16:40

Meshing Arterial Networks From Manually Extracted Centerlines
Meghane Decroocq (INSA Lyon, France / Tohoku University, Japan), Carole Frindel (INSA Lyon, France), Makoto Ohta (Tohoku University, Japan), Guillaume Lavoue (INSA Lyon, France)

OS9-14
17:10-17:50

Anomalous Platelet Transport & Fat-Tailed Distributions *(Invited)*
Christos Kotsalos (University of Geneva, Switzerland), Karim Zouaoui Boudjeltia (Universit Libre de Bruxelles & CHU Charleroi, Belgium), Rittabrat Dutta (Warwick University, UK), Jonas Lätt, Bastien Chopard (University of Geneva, Switzerland)

OS9-15
17:50-18:10

Enhancement of Nanoparticles Permeation by Mechanical Skin Extension
Rempei Yasuda, Kenji Kikuchi, Keiko Numayama-Tsuruta, Takuji Ishikawa (Tohoku University, Japan)

OS9-16
18:10-18:30

CFD Analysis of the Effect of Flush Flow Conditions on Angioscopy Visibility
Kohei Mitsuzuka, Yujie Li (Tohoku University, Japan), Toshio Nakayama (National Institute of Technology, Tsuruoka College, Japan), Hitomi Anzai, Wang Haoran, Makoto Ohta, Simon Tupin (Tohoku University, Japan)

OS9-17
18:30-18:50

An Approach to Solve the Problem of Nonuniform Corrosion of Biodegradable Stent
Hanbing Zhang, Sicong Liu, Aike Qiao (Beijing University of Technology, China), Hongfang Song (Capital Medical University, China), Wenyu Fu (Beijing Union University, China), Hitomi Anzai, Makoto Ohta (Tohoku University, Japan)