

AFSI 2019**Monday, June 24 2019**

10:00–10:20	Morning 1 Chair: Kenji Takizawa Thomas J.R. Hughes Some Applications of Isogeometric Analysis
10:20–10:40	J.S. Chen An Energy Based Regularization for RKPM Modeling Fractures in Fluid–Solid Systems
10:40–11:00	Coffee
11:00–11:20	Morning 2 Chair: Thomas J.R. Hughes Tayfun E. Tezduyar Space–Time Computational Parachute Analysis: A Summary of the 24-Year History
11:20–11:40	Kenji Takizawa Space–Time Computational Analysis: It is Not Your Father’s Oldsmobile
11:40–12:00	Takafumi Sasaki Medical-Image-Based Aorta Modeling with Zero-Stress-State Estimation Correlated with Anatomical Observation
12:00–14:00	Lunch Meeting
14:00–14:20	Afternoon 1 Chair: J.S. Chen Yuri Bazilevs Recent Advances in Air-Blast FSI: Core Methods and Treatment of Near-Incompressibility and Shocks. Part I.
14:20–14:40	Georgios Moutsanidis Recent Advances in Air-Blast FSI: Core Methods and Treatment of Near-Incompressibility and Shocks. Part II.
14:40–15:00	Coffee
15:00–15:20	Afternoon 2 Chair: Makoto Yamamoto Franco Rispoli Machine-Learnt Stabilization for Finite Element in Fluids
15:20–15:40	Artem Korobenko Variational Multiscale Methods for Multiphase Flows
15:40–16:00	Yuto Otoguro Space–Time Computational Methods and Isogeometric Discretization for Flow Problems with Complex Geometries and Moving Boundaries and Interfaces

Conference Dinner 7:00–9:00

Tuesday, June 25, 2019

Morning 1 Chair: Tayfun E. Tezduyar Narayan Aluru Nanoscale CFD: Structure, Dynamics and Transport at the Non-Classical Limit
Takashi Kuraishi Space–Time Computational Analysis of Tire Aerodynamics with Actual Geometry, Road Contact, Tire Deformation and Fluid
Coffee
Morning 2 Chair: Narayan Aluru Makoto Yamamoto Multi-Physics CFD Simulation of Deposition Phenomena in Engineering Problems
Amy Shen Flow of Polymer and Wormlike Micellar Solutions Around Microfluidic Cylinders with Low and High Aspect Ratio
Hirofumi Notsu A Lagrange–Galerkin Scheme with Adaptive Mesh Refinement for Two-Fluid Flow Problems

Lunch Meeting

Poster Session

Wednesday, June 26, 2019

Morning 1 Chair: Yuri Bazilevs Yoshihiro Shibata R-Boundedness, Maximal Regularity and Free Boundary Problem for the Navier–Stokes Equations
Miriam Mehl How to Fix Incompatibilities in Multi-Physics Simulation with a Coupling Library
Coffee
Morning 2 Chair: Yoshihiro Shibata Chao-An Lin Single and Multi-Phase Simulations using Artificial Compressibility Method on GPU Cluster
Alessandro Corsini Application of Computational Fluid–Structure Interaction in Turbomachinery
Jinhui Yan Isogeometric Methods for Multi-Phase Flows with Applications to Metallic Manufacturing Processes

Lunch Meeting

Afternoon 1 Chair: Chao-An Lin Ming-Chen Hsu Fluid-Structure Interaction Analysis of Transcatheter Aortic Valve Replacement
Takuya Terahara Ventricle-Valve-Aorta Flow Analysis with the Space–Time Isogeometric Discretization and Topology Change

Coffee

Afternoon 2 Chair: Ming-Chen Hsu Alessio Castorrini Evolution Method for Simulation of Long-Term Erosion and Deposit in Turbomachinery
Michael R.A. Abdelmalik Finite Element Boltzmann Schemes for Compressible Fluid Dynamics

Conference Dinner 7:00–9:00