The Second HKSIAM Biennial Meeting
Tuesday, 29th August 2023

9:00 - 10:40	Plenary Session LT1 Chair: Qiang Du	Barbara Wohlmuth Multi-physics models with mixed dimensions: Bio-medical and seismic applications			
		Zuowei Shen Deep Approximation via Deep Learning			
10:40 - 11:00	Coffee Break				
11:00 - 12:30	MS02, Room 201	MS06, Room 202	MS12, Room 203	MS14, Room 209A	MS15, Room 209B
	Atsushi Kawamoto	Shubin Fu	James Scott	Qiyu Jin	Xue Jiang
	Zhiyuan Li	Changqing Ye	Jieqiong Zhang	Zhi LI	Xiaokai Yuan
		Shan Jiang	Kuang Huang	Meng Ding	Maohui Lyu
12:30 - 14:30	Lunch Break				
14:30 - 15:20	Plenary Session LT1 Chair: Barbara Wohlmuth	Habib Ammari Mathematical foundations of subwavelength physics			
15:20 - 15:50	Coffee Break				
15:50 - 17:50	MS04, Room 201	MS07, Room 202	MS17, Room 203	MS09, Room 209A	MS10, Room 209B
	Tim Jahn	Kai Zhang	Yong Yu	In-Jee Jeong	Min Tang
	Sui Tang	Yonglin Li	Shu Ma	Donghyun Lee	Shuai Su
	Lingyun Qiu	Wei Gong	Hantaek Bae	Jinmyoung Seok	Chunmei Su
	Tianhao Hu	Shengfeng Zhu	Qiqi Rao	Young-Pil Choi	Jie Du

Tuesday, 29th August 2023

2nd HKSIAM Meeting @ LT1

9:00 - 10:40 Plenary Session Chair: Qiang Du	Barbara Wohlmuth Multi-physics models with mixed dimensions: Bio-medical and seismic applications
	Zuowei Shen Deep Approximation via Deep Learning
14:30 - 15:20 Plenary Session Chair: Barbara Wohlmuth	Habib Ammari Mathematical foundations of subwavelength physics

Tuesday, 29th August 2023

2nd HKSIAM Meeting @ Room 201

11:00 - 11:30, MS02, Atsushi Kawamoto
Homogenization and Inverse Problems for Fractional Diffusion Equations

11:30 - 12:00, MS02, Zhiyuan Li
Hopf lemma for fractional diffusion equations and application to inverse problem

15:50 - 16:20, MS04, Tim Jahn
Early stopping of untrained neural networks

16:20 - 16:50, MS04, Sui Tang
A Robust Data-Driven Approach for Estimating Non-Local Interaction Potential in Aggregation-Diffusion Equations from Noisy Data

16:50 - 17:20, MS04, Lingyun Qiu
Robust Full Waveform Inversion: A Source Wavelet Manipulation Perspective

17:20 - 17:50, MS04, Tianhao Hu
Solving elliptic problems with singular solutions using splitting technique

Tuesday, 29th August 2023

2nd HKSIAM Meeting @ Room 202

11:00 - 11:30, MS06, Shubin Fu
Generalized multiscale finite element method for highly heterogeneous compressible flow

11:30 - 12:00, MS06, Changqing Ye
FFT-based homogenization: analysis and implementation

12:00 - 12:30, MS06, Shan Jiang
Parameter-uniform superconvergence of multiscale computation on layer-adapted meshes for singularly perturbed problems

15:50 - 16:20, MS07, Kai Zhang
Deep neural networks for inverse scattering problems

16:20 - 16:50, MS07, Yonglin Li
A new perfectly matched layer method for the Helmholtz equation in nonconvex domains

16:50 - 17:20, MS07, Wei Gong
A new finite element method for elliptic optimal control problems with pointwise state constraints in energy spaces

17:20 - 17:50, MS07, Shengfeng Zhu
Geometric inverse problems in time-fractional subdiffusion

Tuesday, 29th August 2023

2nd HKSIAM Meeting @ Room 203

11:00 - 11:30, MS12, James Scott
Nonlocal Korn Inequalities and Applications

11:30 - 12:00, MS12, Jieqiong Zhang
Coupling of atomistic and bond-based peridynamic models using an extended Arlequin framework

12:00 - 12:30, MS12, Kuang Huang
Stability analysis and robust numerical computation of a nonlocal traffic flow model for connected vehicles

15:50 - 16:20, MS17, Yong Yu
PNP and Keller Segel equation and their related topics

16:20 - 16:50, MS17, Shu Ma
Analysis of fully discrete finite element methods for 2D Navier–Stokes equations with critical initial data

16:50 - 17:20, MS17, Hantaek Bae
Mathematical Analysis of Some MHD models

17:20 - 17:50, MS17, Qiqi Rao
Convergent Evolving Finite Element Approximations of Boundary Evolution under Shape Gradient Flow

Tuesday, 29th August 2023

2nd HKSIAM Meeting @ Room 209A

11:00 - 11:30, MS14, Qiyu Jin
Non-local means theory and its extension

11:30 - 12:00, MS14, Zhi LI
Phase retrieval from incomplete data via weighted nuclear norm minimization

12:00 - 12:30, MS14, Meng Ding
Hyperspectral Super-Resolution via Interpretable Block-Term Tensor Modeling

15:50 - 16:20, MS09, In-Jee Jeong
Twisting in Hamiltonian Flows

16:20 - 16:50, MS09, Donghyun Lee
On the constructive coercivity of the linearized Boltzmamm operator in concentric cylinder with specular boundary condition

16:50 - 17:20, MS09, Jinmyoung Seok
Theory of stars in nonlinear PDEs

17:20 - 17:50, MS09, Young-Pil Choi
Quantified overdamped limit for Vlasov–Fokker–Planck equations with singular interaction forces

Tuesday, 29th August 2023

2nd HKSIAM Meeting @ Room 209B

11:00 - 11:30, MS15, Xue Jiang
A PML method for signal-propagation problems in axon

11:30 - 12:00, MS15, Xiaokai Yuan
A fast algorithm for the scattering by layered multiple cavities in 2D

12:00 - 12:30, MS15, Maohui Lyu
Nodal discontinuous Galerkin methods for Maxwell's equations in nonlinear optical media

15:50 - 16:20, MS10, Min Tang
Multiscale solver for radiation transport equation with strong nonlinearity

16:20 - 16:50, MS10, Shuai Su
Positivity-preserving finite volume schemes for radiation diffusion equations on general meshes

16:50 - 17:20, MS10, Chunmei Su
A second-order in time, BGN-based parametric finite element method for geometric flows of curves

17:20 - 17:50, MS10, Jie Du
High order bound preserving methods for compressible multi-species flow with chemical reactions