Recent Progresses in Applied and Computational PDEs

Dec 17-20, 2020

Venue: Online
ZOOM ID: 666 2501 8888
PIN Code: 053840

Thur. Dec. 17th	20:50-21:00	Opening Remark	
	\ Chair: Zhennan Zhou		
	21:00-21:45	1. Shi Jin Shanghai Jiao Tong University	Random batch methods for N-body classical and quantum systems
	21:50-22:35	2. Benoît Perthame Sorbonne-Université	Adaptive evolution and concentrations in parabolic PDEs
Fri. Dec. 18th	\ Chair: Shi Jin		
	9:00-9:45	3. Eitan Tadmor University of Maryland	Collective dynamics of multi-species
	9:50-10:35	4. Sijue Wu University of Michigan	The quartic integrability and long time existence of steep water waves in 2d
	10:40-11:25	5. Wei-Cheng Wang National Tsing Hua University	An efficient solver for fractional diffusion equations
	\ Chair: Li Chen		
	21:00-21:45	6. Gui-Qiang G. Chen University of Oxford	Multidimensional transonic shock waves and free boundary problems for the compressible Euler equations and related nonlinear PDEs
	21:50-22:35	7. Chun Liu Illinois Institute of Technology	Generalized law of mass action (LMA) with energetic variational approaches (EnVarA) and applications
Sat. Dec. 19th	\ Chair: Tiejun Li		
	9:00-9:45	8. Weinan E Princeton University	A mathematical perspective of machine learning
	9:50-10:35	9. Xiangsheng Xu Mississippi State University	Existence assertion for a doubly nonlinear fourth order elliptic equation
	10:40-11:25	10. Jianfeng Lu Duke University	Quantitative convergence analysis of hypocoercive sampling dynamics
	\ Chair: Robert Pego		
	21:00-21:45	11. José A. Carrillo University of Oxford	Particle methods & gradient flow structure
	21:50-22:35	12. Zhouping Xin The Chinese University of Hong Kong	Free interface problems for the incompressible inviscid resistive MHD
	22:35-22:45	Closing Remark	

		Chair: Lei Li	
Sun. Dec. 20th	9:00-9:45	13. Robert Pego Carnegie Mellon University	Dynamics and oscillations in models of coagulation and fragmentation
	9:50-10:35	14. Alina Chertock North Carolina State University	An asymptotic preserving scheme for the two-dimensional shallow water equations with Coriolis forces
	10:40-11:25	15. Alexander Kurganov Southern University of Science and Technology	Well-balanced schemes via flux globalization