6th CSRC Conference

Numerical Methods for Fractional-Derivative Problems

To be held online 11–13 August 2022

45-minute time slot: | *40 minutes for the talk* | *+ 5 minutes for questions and change of speakers;*

30-minute time slot: | *25 minutes for the talk* | *+ 5 minutes for questions and change of speakers.*

Chairpersons of sessions: Please check the list at the end of this Program to see if you are requested to act as Chairperson for any session. The conference organisers hope that the people on this list are willing to accept this responsibility. If you are unable to do so, please let the organisers know as soon as possible.

All times are Beijing/China time

Thursday 11 August	
08:30–08:35	*Opening of Conference*
08:35–09:20	**Buyang Li**, An exponential spectral method using VP means for semilinear subdiffusion equations with rough data
09:20–10:05	**Minghua Chen**, Modified BDF2 schemes for subdiffusion models with a singular source term
10:05–10:30	*Tea/Coffee Break*
10:30–11:15	**Xiaoping Xie**, Error estimation of a discontinuous Galerkin method for time fractional subdiffusion equations with nonsmooth data
11:15–11:45	**Xueyang Li**, An efficient numerical method on modified space-time sparse grid for time-fractional diffusion equation with nonsmooth data
11:45–13:45	*Lunch*
13:50–14:00	*Group photo*
14:00–14:45	**Weihua Deng**, Algorithm and analysis for the anomalous Feynman-Kac equation
14:45–15:30	**Can Li**, Applications of Padé approximation in solving time-fractional differential equations
15:30–16:00	*Tea/Coffee Break*
16:00–16:45	**Natalia Kopteva**, Pointwise-in-time a-priori and a-posteriori error control for time-fractional semilinear parabolic equations
16:45–17:30	**Dongfang Li**, Sharp pointwise-in-time error estimate of L1 scheme for nonlinear subdiffusion equations

Friday 12 August	
08:30–09:15	**Hong-lin Liao**, Discrete gradient structure of the second-order integral averaged formula for nonlinear integro-differential models
09:15–10:00	**Hongfei Fu**, High-order two-grid finite difference algorithm and its application in nonlinear time-fractional biharmonic problems
10:00–10:30	*Tea/Coffee Break*
10:30–11:15	**Li-Lian Wang**, Numerical analysis of some singular partial differential equations with logarithmic nonlinearity
11:15–12:00	**Qifeng Zhang**, Numerical study for the nonlinear fractional complex Ginzburg-Landau equation in finite difference setting
12:00–14:00	*Lunch*
14:00–14:45	**Changpin Li**, Approximation formulae for Caputo-Hadamard fractional derivatives and their applications in large time integration
14:45–15:30	**Dongling Wang**, Numerical stability of Grünwald-Letnikov method for time fractional delay differential equations
15:30–16:00	*Tea/Coffee Break*
16:00–16:45	**Xiangcheng Zheng**, Solution landscape of space-fractional problems and model comparison
16:45–17:30	**Yongtao Zhou**, Fast predictor-corrector methods for solving nonlinear time-fractional differential equations

Saturday 13 August	
08:30–09:15	**Fanhai Zeng**, A unified fast method for the fractional operators
09:15–09:45	**Zhi-Wei Fang**, A fast finite volume method for spatial fractional diffusion equations on nonuniform meshes
09:45–10:15	*Tea/Coffee Break*
10:15–11:00	**Da Xu**, Sinc methods based on the single and double exponential transformations for high-order fractional differential equations
11:00–11:45	**Zhi Zhou**, Inverse potential problem for subdiffusion from terminal observation
11:45–13:45	*Lunch*
13:45–14:30	**Changtao Sheng**, Efficient Monte Carlo methods for fractional PDEs in high dimensions
14:30–15:15	**Beiping Duan**, A quadrature scheme for steady-state diffusion equations involving fractional power of regularly accretive operator
15:15–15:45	*Tea/Coffee Break*
15:45–16:30	**Xiangyun Meng**, A global dynamics preserving method for a class of time-fractional epidemic model with reaction-diffusion
16:30–17:00	**Mengxia Shen**, An efficient spectral method for the fractional Schrödinger equation on the real line
17:00–17:05	*Closing of Conference*

Chairpersons of sessions	
Thursday 08:35–10:05	Xiaoping Xie
Thursday 10:30–11:45	Buyang Li
Thursday 14:00–15:30	Changpin Li
Thursday 16:00–17:30	Hong-lin Liao
Friday 08:30–10:00	Li-Lian Wang
Friday 10:30–12:00	Minghua Chen
Friday 14:00–15:30	Dongfang Li
Friday 16:00–17:30	Fanhai Zeng
Saturday 08:30–09:45	Zhi Zhou
Saturday 10:15–11:45	Changtao Sheng
Saturday 13:45–15:15	Weihua Deng
Saturday 15:45–17:00	Qifeng Zhang