BAIL 2016 Program

14–19 August 2016

All lectures at CSRC (Monday, Tuesday, Thursday, Friday) are in Conference Room 1 Wednesday Lecture at Zheng Yutong Lecture Hall, New Sciences Building, Tsinghua University

Each 25-minute time slot allows 20 minutes for the talk and 5 minutes for questions and change of speakers

Chairpersons of sessions: please consult the list at the end of this Program to see if you are requested to act as Chairperson for any session. The BAIL 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.

Sunday 14 August

17:00–18:30: Registration, CRSC 18:00–19:30: Welcome Reception, CSRC Main Foyer

Monday 15 August				
08:15-11:30	Registration outside Conference Room 1			
09:10-09:30	Opening of Conference: Hai-Qing Lin, Director of CSRC; Zhimin Zhang			
09:30-10:30	(BAIL Main Speaker) Pavel Bochev , A new parameter-free stabilization approach for advection-diffusion equations based on H(curl)-lifting of multi-scale fluxes			
10:30-10:40	Group photo			
10:40-11:10	Tea/Coffee Break			
11:10-11:35	Huoyuan Duan , Stabilized FEM for boundary and interior layers of convection- dominated problems			
11:35-12:00	Malte Braack, Local projection stabilization for problems with non-Dirichlet conditions			
12:00-12:25	Lutz Tobiska, Local projection stabilization for advection-diffusion equations			
12:25–12:50	Petr Knobloch , On the discrete maximum principle and linearity preservation for algebraic flux correction schemes			
13:00	Lunch			
14:00-14:25	Volker John , A review of variational multiscale methods for the simulation of turbulent incompressible flows			
14:25–14:50	Naveed Ahmed , On the grad-div stabilization for the steady Oseen and Navier-Stokes equations			
14:50-15:15	Gunar Matthies , Numerical studies of higher order variational time stepping schemes for evolutionary Navier-Stokes equations			
15:15-15:40	Gael de Oliveira Andrade, Self-similar solutions of laminar boundary layer flow subject to DBD plasma actuation			
15:40-16:10	Tea/Coffee Break			
16:10-16:35	Bosko Rasuo , Numerical calculation of aerodynamic noise generated from an aircraft in low Mach number flight			
16:35-17:00	Thomas Führer , Robust coupling of DPG and BEM for a singularly perturbed transmission problem			
17:00-17:25	Runchang Lin , A discontinuous Galerkin least-squares finite element method for solving coupled singularly perturbed reaction-diffusion equations			
17:25–17:50	Chakravarthy Pramod Podila , Higher-order fitted operator numerical scheme for singularly perturbed delay differential equations			
18:00	Dinner			

Tuesday:

Mini-symposium on Singular Perturbation Problems: Analysis 10:00–15:15 Mini-symposium on Singular Perturbation Problems: Applications 15:15–17:50 Both mini-symposia are organized by Zhongyi Huang and Yin-Tzer (Jerry) Shih

Tuesday 16 August				
08:30-09:00	Registration outside Conference Room 1			
09:00-10:00	(BAIL Main Speaker) Zhongyi Huang, The tailored finite point method			
10:00-10:25	Wenjun Ying, Adaptive tailored finite point method for a singularly perturbed			
	problem			
10:25 - 10:55	Tea/Coffee Break			
10:55-11:20	Ming Tang, Uniform convergent tailored finite point method for advection-diffusion equations with anisotropic, discontinuous and vanishing tensor diffusivity			
11:20-11:45	Yi Yang, Tailored finite point method for parabolic problems			
11:45-12:10	Yin-Tzer Shih, Tailored finite point methods for solving singular perturbed			
	eigenvalue problems with higher eigenvalues			
12:10-12:35	Wang Kong, The asymptotical analysis for singularly perturbed eigenvalue problem			
12:40	Lunch			
14:00-14:25	Suh-Yuh Yang , On the Il'in-Allen-Southwell scheme for strongly coupled systems of singularly perturbed convection-diffusion equations			
14:25 - 14:50	Zhiqiang Sheng, A finite volume scheme preserving positivity for diffusion equation			
14:50-15:15	Ziqing Xie, Solving singularly perturbed semilinear Neumann problems with multiple solutions			
15:15-15:40	Chaoqun Liu , Chebyshev method for stability analysis of general shear layer			
15:40 - 16:10	Tea/Coffee Break			
16:10-16:35	Wei-Cheng Wang, A fast iterative solver for the coupled Darcy-Stokes system			
16:35-17:00	Ren-Chuen Chen, A posteriori error control in numerical simulations of			
	semiconductor nanodevices			
17:00-17:25	Xianmin Xu, An efficient threshold dynamics method for wetting on rough surfaces			
17:25–17:50	Xiang Zhou, Small noise expansions and fast numerical methods for elliptic equations on domains			
18:00	Dinner			

Wednesday lecture is at Zheng Yutong Lecture Hall, New Sciences Building, Tsinghua University

Wednesday 17 August			
07:30	Buses leave CSRC/Holiday Inn Shangdi for Tsinghua University		
	Walking tour of Tsingua University campus		
10:00-11:00	(BAIL Main Speaker) Hans-Görg Roos, 20 years of finite elements on layer-adapted meshes		
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11:15	Lunch		
12:00	Bus 1 to Mutianyu Great Wall; Bus 2 to CSRC		
18:30	Dinner (CSRC)		

Thursday 18 August				
09:00-10:00	(BAIL Main Speaker) Zhimin Zhang, We still can't get enough layersbut why?			
10:00-10:25	Jin Zhang, SDFEMs on triangular meshes for convection-dominated problems			
10:25 - 10:55	Tea/Coffee Break			
10:55-11:20	Natalia Kopteva, A posteriori error estimates on anisotropic meshes			
11:20-11:45	Torsten Linß, A posteriori maximum-norm error estimates for parabolic equations			
11:45-12:10	Shaohong Du , Robust a posteriori error analytical techniques for adaptive finite element method for the singularly perturbed problems			
12:10-12:35	Xiaobo Yin, Optimal anisotropic meshes for the stabilized finite element method			
12:40	Lunch			
14:00-14:25	Shipeng Mao , Anistropic adaptive FEM with residual-free bubbles for MHD channel flow at high Hartmann numbers			
14:25-14:50	Sebastian Franz, On robust error estimation for singularly perturbed fourth- order problems			
14:50-15:15	Mohammed Sulman, A comparison study of parabolic Monge-Ampere equations adaptive grid methods			
15:15-15:40	Grigorii Shishkin , The use of standard finite difference schemes for solving singularly perturbed convection-diffusion equations in the presence of computer perturbations			
15:40 - 16:10	Tea/Coffee Break			
16:10-16:35	Eugene O'Riordan , Parameter-uniform numerical method for a singularly perturbed problem posed on a circular domain			
16:35-17:00	Alan Hegarty , Numerical methods for singularly perturbed problems on non-rectangular domains			
18:00	Conference Banquet			

Friday 19 August				
09:00-10:00	(BAIL Main Speaker) Julia Novo, Non inf-sup stable mixed finite element approximations			
	to the evolutionary Stokes equations			
10:00-10:25	Bosco García-Archilla, Error analysis of first order projection methods for the			
	Navier-Stokes equations			
10:25 - 10:55	Tea/Coffee Break			
10:55-11:20	Yanyi Jin, Local analysis of HDG methods for convection-dominated diffusion problems			
11:20-11:45	Lidia Shishkina, On the efficiency of the Shishkin grid for solving singularly perturbed initial-boundary value problem with a Neumann condition for a parabolic equation			
11.45 - 12.10	Jugal Mohapatra Higher order numerical method on layer adapted meshes for			
11110 12.10	singularly perturbed parabolic partial differential equation			
12:10-12:35	Kapil Kumar Sharma, A robust numerical method for singularly perturbed			
	convection-diffusion-reaction parabolic problems with general shift arguments			
12:40	Lunch			
14:00-14:25	Carmelo Clavero, Order reduction and uniform convergence of an alternating			
	direction method for solving 2D time dependent convection-diffusion problems			
14:25 - 14:50	Natesan Srinivasan, Robust numerical scheme for singularly perturbed system of			
	parabolic convection-diffusion PDEs on Shishkin-type meshes			
14:50-15:15	Jose Luis Gracia, Singularly perturbed initial-boundary value problems with a pulse			
	in the initial condition			
15:15-15:40	Igor Boglaev, Numerically solving nonlinear singularly perturbed parabolic systems			
	by a monotone method			
15:40	Closing of conference; announcement of BAIL 2018			
15:45-16:15	Tea/Coffee Break			
18:00	Dinner			

Chairpersons of sessions				
Monday 09:20–10:30	Martin Stynes			
Monday 11:00–12:40	Gunar Matthies			
Monday 14:00–15:40	Huoyuan Duan			
Monday 16:10–17:50	Pavel Bochev			
Tuesday 09:00–10:25	Yin-Tzer Shih			
Tuesday 10:55–12:35	Zhongyi Huang			
Tuesday 14:00–15:40	Hans-Görg Roos			
Tuesday 16:10–17:50	Volker John			
Wednesday 09:30–10:30	Lutz Tobiska			
Thursday 09:00–10:25	Julia Novo			
Thursday 10:55–12:35	Shipeng Mao			
Thursday 14:00–15:40	Natalia Kopteva			
Thursday 16:10–17:00	Grigorii Shishkin			
Friday 09:00–10:25	Zhimin Zhang			
Friday 10:55–12:35	Torsten Linß			
Friday 14:00–15:40	Eugene O'Riordan			