

Harmonic Analysis, Geometry and Partial Differential Equations

BICMR, Peking University, May 28 – June 8

28-May

8:30–8:50 Opening Ceremony

9:00–11:30 A parametrix construction for the wave equation in a convex domain and applications

Lecturer: Fabrice Planchon (Universite de Nice, France)

14:00–17:00 Universality of blow up for wave maps

Lecturer: Hao Jia (University of Minnesota, USA)

29-May

9:00–10:00 Dispersive estimates for the wave equation outside strictly convex obstacles

Lecturer: Oana Ivanovici (Universite de Nice, France)

10:00–10:30 Taking Photos

10:30–11:30 A parametrix construction for the wave equation in a convex domain and applications

Lecturer: Fabrice Planchon (Universite de Nice, France)

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Lecturer: Hao Jia (University of Minnesota, USA)

30-May

9:00–11:30 A parametrix construction for the wave equation in a convex domain and applications

Lecturer: Fabrice Planchon (Universite de Nice, France)

14:00–17:00 L^2 Fourier restriction theorems

Lecturer: James Wright (University of Edinburgh, UK)

31-May

9:00–11:30 L^2 Fourier restriction theorems

Lecturer: James Wright (University of Edinburgh, UK)

14:00–17:00 Local smoothing of Fourier integrals

Lecturer: Chris Sogge (Johns Hopkins University, USA)

1-Jun

9:00–11:30 L^2 Fourier restriction theorems

Lecturer: James Wright (University of Edinburgh, UK)

14:00–17:00 Local smoothing of Fourier integrals

Lecturer: Chris Sogge (Johns Hopkins University, USA)

4-Jun

Chair: Professor James Wright

9:00–10:00 Nodal intersection and geometric control
Steve Zelditch (Northwestern University, USA)

10:00–10:30 Taking Photos

10:30–11:30 Local smoothing estimates for wave equations via decoupling inequalities
David Beltran (BCAM Basque Center for Applied Mathematics, Spain)

Chair: Professor Steve Zelditch

14:00–15:00 Fractional operators and SQG equation on the two dimensional sphere
Angel Martinez (Universidad Autonoma de Madrid, Spain)

15:00–15:10 Break

15:10–16:10 Energy identity for approximate harmonic maps from surface to general targets
Dongyi Wei (Peking University, China)

16:20–17:20 Blow-up of a critical Sobolev norm for energy-subcritical and energy-supercritical wave equations
Jianwei Yang (BICMR, Peking University, China)

18:00 Banquet

Address: He Restaurant, Zhongguanyuan Global Village, PKU

5-Jun

Chair: Professor Angel Martinez

9:00–10:00 Some results on Bochner–Riesz means for elliptic operators

Lixin Yan (Sun Yat–Sen University, China)

10:00–10:10 Break

10:10–11:10 Multilinear estimates for the higher order Calderon commutators

Xudong Lai (Harbin Institute of Technology, China)

Chair: Professor Lixin Yan

14:00–15:00 Control and stabilization on hyperbolic surfaces

Long Jin (Purdue University, USA)

15:00–15:10 Break

15:10–16:10 Low regularity blowup solutions for the mass-critical NLS
in higher dimensions

Jiqiang Zheng (Universite de Nice, France)

16:20–17:20 The boundedness of Hilbert transform along variable curve

Junfeng Li (Beijing Normal University, China)

6-Jun

Chair: Professor Changxing Miao

9:00–10:00 Recent progress on Schrodinger equations

Xiaochun Li (University of Illinois at Urbana – Champaign, USA)

10:00–10:10 Break

10:10–11:10 Channel of energy estimate for linear wave equation with application

Baoping Liu (Peking University, China)

Chair: Professor David Beltran

14:00–15:00 Concerning ill-posedness for semilinear wave equations

Chengbo Wang (Zhejiang University, China)

15:00–15:10 Break

15:10–16:10 Endpoint estimate for multi-parameter singular Radon transform

Lu Zhang (Binghamton University, USA)

16:20–17:20 Scattering of solutions to the 3D defocusing energy sub-critical wave equation

Ruipeng Shen (Tianjin Univeristy, China)

7-Jun

Chair: Professor Chengbo Wang

9:00–10:00 TBA

Nicolas Burq (Universite Paris-Sud, France)

10:00–10:10 Break

10:10–11:10 Some results on eigenvalues of Laplacians on graphs

Bobo Hua (Fudan University, China)

Chair: Professor Nicolas Burq

14:00–15:00 Period integrals of eigenfunctions in nonpositively curved manifolds

Emmett Wyman (Johns Hopkins University, USA)

15:00–15:10 Break

15:10–16:10 On the motion of free boundary problem of ideal incompressible MHD

Chengchun Hao (AMSS, CAS, China)

16:20–17:20 Long time behavior of semilinear tricomi equations

Daoyin He (Fudan University, China)

8-Jun

Chair: Professor Renjin Jiang

9:00–10:00 Spectrum of SYK mode

Renjie Feng (BICMR, Peking University, China)

10:00–10:10 Break

10:10–11:10 Strichartz estimate and Schrodinger operator in a conic singular space

Junyong Zhang (Beijing Institute of Technology, China)

Chair: Professor Chris Sogge

14:00–15:00 Strichartz estimates for linear wave equations with moving potentials

Gong Chen (University of Toronto, Canada)

15:00–15:10 Break

15:10–16:10 Recent developments on Riesz transform, harmonic functions and heat kernels

Renjin Jiang (Tianjin University, China)