

**Recent Trends in PDE**  
**King's College London, London, UK**

**January 8 - 11, 2018**

**PROGRAMME**

(All talks will take place in the OLD ANATOMY THEATRE, room K6.29)

**MONDAY 8 January:**

10:15–11:00: REGISTRATION AND COFFEE, OLD ANATOMY MUSEUM

11:00–11:50: MACIEJ ZWORSKI (UC Berkeley)  
*Rough control for Schrödinger operators on 2-tori*

LUNCH

14:00–14:50: TAREK ELGINDI (UC San Diego)  
*Singularity formation in incompressible fluids*

COFFEE BREAK

15:20–16:10: ANDREAS SEEGER (University of Wisconsin, Madison)  
*Singular integrals and a Problem on Mixing Flows*

COFFEE BREAK

16:40–17:30: OANA POCOVNICU (Heriot-Watt University)  
*Higher order expansions for the probabilistic well-posedness of dispersive PDEs*

17:30–19:00: WELCOME RECEPTION WITH DRINKS, OLD ANATOMY MUSEUM

**TUESDAY 9 January:**

10:00–10:50: HATEM ZAAG (Paris 13)

*Blow-up solutions for two non-variational semilinear parabolic systems*

COFFEE BREAK

11:20–12:10: ROLAND DONNINGER (University of Vienna)

*A globally stable blowup profile for supercritical wave maps*

LUNCH

14:00–14:50: CLAUDE WARNICK (University of Cambridge)

*Dynamics of anti-de Sitter black holes*

COFFEE BREAK

15:20–16:10: GÖKALP ALPAN (Rice)

*Asymptotic behaviour of Jacobi matrices on zero measure Cantor sets*

COFFEE BREAK

16:40–17:30: JOSE RODRIGO (University of Warwick)

*Smooth Solutions to a family of Prandtl-like equations arising from fluid mechanics*

**WEDNESDAY 10 January:**

10:00–10:50: BERNARD HELFFER (Nantes)

*On Courant's nodal domain property for linear combinations of eigenfunctions  
(after P. Bérard and B. Helffer)*

COFFEE BREAK

11:20–12:10: JONATHAN LUK (Stanford)

*Recent progress on the strong cosmic censorship conjecture in general relativity*

LUNCH

14:00–14:50: STEFANOS ARETAKIS (University of Toronto)

*Asymptotics and scattering for the wave equation on black holes*

COFFEE BREAK

15:20–16:10: GUI-QIANG CHEN (University of Oxford)

*Multidimensional Shock Waves, Free Boundary Problems and Nonlinear PDEs of  
Mixed Type*

COFFEE BREAK

16:40–17:30: DAVID DAMANIK (Rice)

*Localization for the one-dimensional Anderson model via positivity and large deviations for the Lyapunov exponent*

18:30–21:00 (TBC): CONFERENCE DINNER at the Tas The Cut

**THURSDAY 11 January:**

10:00–10:50: ALESSIO FIGALLI (ETH, Zurich)  
*On the free boundary in the classical obstacle problem*

COFFEE BREAK

11:20–12:10: MATHIEU LEWIN (Paris-Dauphine)  
*Derivation of the Euler-Heisenberg energy*

LUNCH

14:00–14:50: GALINA PERELMAN (Paris-Est)  
*Near ground state dynamics for the energy critical NLS*

COFFEE BREAK

15:20–16:10: LAURI OKSANEN (University College London)  
*Coefficient determination problems for wave equations*

COFFEE BREAK

16:40–17:30: MARTIN TAYLOR (Imperial College London)  
*Global nonlinear stability of Minkowski space for the massive and massless Einstein–Vlasov systems*