

## **Wednesday 18 May (all talks in Room MS.01, ground floor)**

08:15-09:00 *Registration in Maths Research Centre office (Room B1.37, 1<sup>st</sup> floor)*  
*Coffee/Tea available in the Mathematics Common Room, 1<sup>st</sup> floor*

09:00-09:10 *Welcome and introduction (Claude Baesens)*

09:10-09:40 **Jean-Pierre Eckmann** (Geneva)  
*Hamiltonian chains with dissipation*

09:40-10:00 **Sinisa Slijepcevic** (Zagreb)  
*Lyapunov functions on spaces of measures and phase transitions*

10:00-10:20 **Bastien Fernandez** (Paris-Diderot)  
*Breaking of ergodicity in expanding systems of globally coupled piecewise affine circle maps*

10:20-10:40 **Stefano Luzzatto** (ICTP)  
*Sinai-Ruelle-Bowen measures for nonuniformly hyperbolic surface diffeomorphisms*

*10:40-11:10 Coffee/Tea in The Street*

11:10-11:40 **Tom Bridges** (Surrey)  
*Baesens and MacKay (1992): theme and variations*

11:40-12:00 **Thierry Dauxois** (ENS Lyon)  
*Energy cascade in internal-wave attractors*

12:00-12:20 **Greg King** (ICM-CSIC)  
*Turbulent cascades and intermittency in winds over the Tropical Pacific*

12:20-12:40 **Christian Beck** (QMUL)  
*Statistics of Lagrangian quantum turbulence*

*12:40-14:00 Lunch in The Street*

## **Mathematics Interdisciplinary Research at Warwick afternoon**

14:00-14:20 **Gabriela Gomes** (Liverpool School of Tropical Medicine)  
*A double-edged sword in the treatment of high-risk groups*

14:20-14:40 **Jacques-Alexandre Sepulchre** (INLN)  
*A discrete map approach to steady states of intracellular signaling cascades*

14:40-15:00 **Gianne Derks** (Surrey)  
*Sleep-wake dynamics: an interplay of maps, gaps and naps*

15:00-15:20 **Mark Muldoon** (Manchester)  
*Scores, parameters and the single cell*

*15:20-15:50 Tea/Coffee in The Street*

15:50-16:20 **Raphaël Douady** (Stony Brook and Paris I)  
*Nonlinear factor analysis by polymodels*

16:20-16:40 **Ralph Kenna** (Coventry)  
*Maths meets myths: quantitative investigations of ancient narratives*

16:40-17:00 **Mauro Mobilia** (Leeds)  
*Switching dynamics and non-equilibrium steady state in nonlinear q-voter models with zealotry*

17:00-17:20 **Alberto Pinto** (Porto)  
*Dynamics of human decisions*

*17:20-18:30 Poster session and drinks in The Street*

*18:30-20:00 Dinner in The Street and the Undergraduate Workroom (ground floor)*

## Thursday 19 May (morning talks in MS.01, afternoon talks in MS.02)

09:00-09:30 **Jim Meiss** (Colorado Boulder)

*Stickiness, drift and diffusion in volume-preserving maps*

09:30-10:00 **Rafael de la Llave** (Georgia Tech)

*A posteriori approach in KAM theory: rigorous results, efficient algorithms*

10:00-10:30 **Alessandra Celletti** (Rome – Tor Vergata)

*Breakdown of invariant attractors in dissipative (conformally symplectic) systems*

*10:30-11:00 Coffee/Tea in The Street*

11:00-11:30 **Serge Aubry** (CE Saclay)

*KAM tori in the 1D random DNLS model and absence of diffusion of a wave-packet?*

11:30-11:50 **Sergej Flach** (IBS PCS Daejeon)

*On FPU, and nonlinearity-induced destruction of Anderson localisation*

11:50-12:10 **Diogo Pinheiro** (City New York)

*Optimal control of dynamical systems with multiple sources of uncertainty*

12:10-12:30 **Celso Grebogi** (Aberdeen)

*Compressive sensing based prediction of complex dynamics and complex networks*

*12:30-12.40 Group photo*

*12:40-14:00 Lunch in The Street*

14:00-14:30 **Kostya Khanin** (Toronto)

*On renormalization for a class of generalized interval exchange transformations*

14:30-14:50 **João Lopes-Dias** (Lisbon)

*Renormalisation of vector fields with Gevrey regularity*

14:50-15:10 **Peter Ashwin** (Exeter)

*Tipping points for parameter shifts*

*15.10-15:40 Tea/Coffee in the Street*

15:40-16:10 **Jacques Laskar** (Observatoire de Paris)

*In search of new planets*

16:10-16:30 **Colin Rourke** (Warwick)

*How black holes feed and grow into spiral galaxies*

16:30-17:00 **Charles Tresser** (Ramat Hahayal)

*On a question of B. Riemann, a recorded remark of Napoléon, and a simple interpretation of quantum mechanics*

17:00-17:30 **Robert MacKay** (Warwick)

*TBA*

*17:30-18:45 Drinks in The Street*

*18:00 Announcement of winner of poster prize (Christian Beck)*

*19:15-22:00 Conference dinner at Radcliffe House (with after dinner speech by David Rand)*

## Friday 20 May (all talks in MS.01)

- 09:00-09:30 **Henk Broer** (Groningen)  
*Classification of constrained differential equations embedded in the theory of slow fast systems*
- 09:30-10:00 **Jaume Llibre** (Autonoma Barcelona)  
*On the real Jacobian conjecture*
- 10:00-10:20 **Yi-Chiu Chen** (Academia Sinica, Taipei)  
*Transitions for multi-hole Denjoy minimal sets*
- 10:20-10:40 **Paul Glendinning** (Manchester)  
*Creation of discontinuities in model mappings*

*10:40-11:10 Coffee/Tea in The Street*

- 11:10-11:40 **Sergey Bolotin** (Wisconsin Madison and Steklov)  
*Degenerate billiards*
- 11:40-12:00 **David Sanders** (National Autonomous Mexico)  
*Diffusion in quasiperiodic billiards*
- 12:00-12:20 **Ben Mestel** (Open)  
*The barrier billiard renormalization strange set: golden mean trajectory*

*12:20-13:40 Lunch in the Mathematics Common Room and the Complexity Common Room*

- 13:40-14:00 **Tassos Bountis** (Patras)  
*Invertible Maps, the Parametrization Method and Breathers in KG Lattices*
- 14:00-14:20 **Guillaume James** (Grenoble)  
*Solitary waves in the Burridge-Knopoff model*
- 14:20-14:40 **Marina Diakonova** (QMUL)  
*Irreducibility of a multiplex network: the case of the voter model*
- 14:40-15:00 **Jeff Johnson** (Open)  
*New dimensions for network science*

*15:00-15:25 Tea/Coffee in the Mathematics Common Room*

- 15:25-15:55 **John Guaschi** (Caen)  
*Braid groups and configuration spaces of surfaces*
- 16:00-17:00 Maths Colloquium: **Phil Boyland** (Florida Gainsville)  
*When topology forces dynamics*

*17:00-18:30 Drinks and snacks in the Mathematics Common Room*