

*London Mathematical Society
Durham Symposium on Dynamical Systems
30th June - 10th July 1988*

PROGRAMME

All lectures last 50 minutes followed by 5 minutes for questions

Friday 1st July

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| 0915 | <i>M Herman On invariant tori by symplectic diffeomorphisms</i> |
| 1020 | <i>S van Strien The Sharkovski ordering for maps of the disc</i> |
| 1115 | Coffee |
| 1145 | <i>P Boyland Invariant circles for dual billiards</i> |
| 1300 | Lunch |
| 1515 | <i>J Smillie Ergodic theory of polygonal billiards</i> |
| 1610 | Tea |
| 1640 | <i>V Donnay Billiard systems with positive entropy</i> |
| 1830 | Sherry Reception |
| 1900 | Dinner |
| 2030 | <i>Discussion on Billiards</i> |

Saturday 2nd July

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| 0915 | <i>D A Rand Global universality, rigidity and renormalisation of dynamical systems</i> |
| 1020 | <i>A Fathi Bonahon's intersection function and Katok's inequality for metrics of negative curvature on surfaces</i> |
| 1115 | Coffee |
| 1145 | <i>M Urbanski Hausdorff dimension of invariant subsets for one dimensional systems</i> |
| 1300 | Lunch |
| 1515 | <i>G Swiatek Phase locking for critical circle homeomorphisms</i> |
| 1610 | Tea |
| 1640 | <i>M Benedicks (Stockholm) The dynamics of the Hénon map</i> |
| 1745 | <i>M Misiurewicz (Warsaw) Topological entropy of skew tent maps</i> |
| 1900 | Dinner |

Monday 4th July

- 0915 **S Newhouse** *Entropy, volume, and continuity*
1020 **Y Yomdin** *Moduli of semicontinuity of the entropy*
1145 **F Ledrappier** *Ergodic Properties of the Harmonic Measure on the sphere of infinity*
1515 **L-S Young** *Yorke's conjecture on the dimension of attractors*
1640 **Y Kifer** *Attractors via random perturbations*
1745 **J Franks** *Automorphisms of One-sided subshifts of finite type*
2030 *Discussion on Smooth Ergodic Theory. Chairman: S Newhouse*

Tuesday 5th July

- 0915 **R Feres/A Katok** *Rigidity of Geodesic Flows*
1020 **M Wojtkowski** *Hamiltonian systems with nonvanishing Lyapunov exponents*
1145 **W de Melo** *Finiteness of attractors for one-dimensional maps*
1515 **Cathedral Tour**
1640 **Cathedral Tour**
1745 **A Douady** *Surgery on complex polynomials*

Wednesday 6th July

- 0915 **Ya Sinai** *Space-Time Chaos in systems of coupled hyperbolic maps*
1020 **F Przytycki** *Gibbs measures for iterations of holomorphic maps*
1145 **I N Baker** *Some dynamical properties of transcendental entire functions*
1515 **R Devaney** *Homoclinic points and baby Mandelbrot sets*
1640 **M Shishikura** *Rational maps and piecewise linear maps on trees*
1745 **M Rees** *Rational maps of degree two*
2030 *Discussion on complex dynamics. Chairman: M Herman*

Thursday 7th July

- 0915 **S Smale** *Computational theory and dynamics*
- 1020 **D Fried** *Counting closed orbits*
- 1145 **R C Robinson** *Bifurcation to a transitive attractor of Lorenz type*
- 1515 **C C Pugh** *Recurrence in planar flows*
- 1640 **R Edwards** *The Hilbert-Smith Question: Can the p -adic integers act effectively on a manifold?*
- 1745 **M Shub** *Computing and dynamics*
- 2030 **Ya Sinai** *Survey of some work on dynamical systems done recently in Moscow*

Friday 8th July

- 0915 **J Palis** *Recent results on homoclinic bifurcations*
- 1020 **C Penrose** *Uniformly expanded metrics on dendrite Julia sets*
- 1145 **H Weiss** *Regularity of Topological entropy for an Geodesic flows.*
- 1515 **D Salamon** *Floer homology and the Arnold conjecture*
- 1640 **I C Percival** *Critical functions and trees*
- 1745 **O Lanford** *Renormalisation group methods for circle mappings with general rotation number*
- 1945 *Symposium dinner*

Saturday 9th July

- 0915 **A Chenciner** *Invariant punctured tori in the restricted 3-body problem*
- 1020 **R S MacKay** *Maps of a torus isotopic to the identity*
- 1145 **P Le Calvez** *Hyperbolicity of Aubry-Mather sets*
- 1515 **S Bullett** *Dynamics of correspondences - Gauss' arithmetic-geometric mean*
- 1640 **C Simo** *Practical stability of totally elliptic fixed points of Hamiltonian systems*
- 1745 **M Herman** *Recent results on Siegel singular disks*
- 2030 *Discussion on twist maps*