

LMS Durham Symposium on
Complex Dynamics
Sunday 11th July - Wednesday 21st July 1993

ALL LECTURES WILL TAKE PLACE IN CG93

- Tuesday 13th morning session to be chaired by M. Rees
Tuesday 13th afternoon session to be chaired by P. Rippon
Wednesday 14th morning session to be chaired by S. Bullett
Wednesday 14th afternoon session to be chaired by F. Gehring
Thursday 15th morning session to be chaired by B. Branner
Friday 16th morning session to be chaired by R. Devaney
Friday 16th afternoon session to be chaired by P. Blanchard
Saturday 17th morning session to be chaired by J. Milnor
Monday 19th morning session to be chaired by A. Hinkkanen
Monday 19th afternoon session to be chaired by I. Baker
Tuesday 20th morning session to be chaired by M. Rees
Tuesday 20th afternoon session to be chaired by A. Beardon

PROGRAMME - MONDAY 12th JULY

- 9.10 a.m. - 10.10 a.m. J. Milnor - *An introduction to complex dynamics.*
10.15 a.m. - 11.15 a.m. M. Lyubich - *Dynamics on the Fatou set.*
COFFEE - Room CM211
11.40 a.m. - 12.40 p.m. B. Branner - *The dynamics of quadratic polynomials.*
1.00 p.m. **LUNCH Grey College**
3.00 p.m. - 3.30 p.m. Tan Lei - *Boundary identifications of Fatou components.*
3.30 p.m. - 4.00 p.m. D. Ahmadi - *When a 'tuning' of a rational map is again a rational map.*
TEA - Room CM211
4.30 p.m. - 5.30 p.m. M. Urbanski - *Rational functions with no recurrent critical points.*
6.30 p.m. **Sherry Reception - JCR**
7.00 p.m. **DINNER Grey College**

PROGRAMME - TUESDAY 13th JULY

- 9.10 a.m. - 10.10 a.m. A. Eremenko - *On the spectrum of a Ruelle operator.*
10.15 a.m. - 11.15 a.m. C. McMullen - *Rigidity and infinite renormalization.*

COFFEE - Room CM211

- 11.40 a.m. - 12.40 p.m. G. Swiatek - *Generic hyperbolicity in the quadratic family I.*

1.00 p.m. **LUNCH Grey College**

- 2.00 p.m. **PHOTOGRAPH - Grey College steps.**

- 3.00 p.m. - 4.00 p.m. R. Devaney - *Limiting dynamics for the complex standard family.*

TEA - Room CM211

- 4.30 p.m. - 5.30 p.m. W. Bergweiler - *Iteration of transcendental meromorphic functions.*

7.00 p.m. **DINNER Grey College**

PROGRAMME - WEDNESDAY 14th JULY

- 9.10 a.m. - 10.10 a.m. F. Gehring - *A family of polynomials which arise in the study of discrete groups.*
10.15 a.m. - 10.45 a.m. G. Martin - *Rational semi-groups.*
10.45 a.m. - 11.15 a.m. B. Bowditch - *Quasi-fuchsian punctured-torus groups.*

COFFEE - Room CM211

- 11.40 a.m. - 12.40 p.m. C. McMullen - *Quotients of rational maps.*

1.00 p.m. **LUNCH Grey College**

- 3.00 p.m. - 3.30 p.m. H. Kriete - *Stability of Julia sets.*

- 3.30 p.m. - 4.00 p.m. S. Bullet - *The geometry and topology of iterated correspondences.*

TEA - Room CM211

- 4.30 p.m. - 5.30 p.m. C. Penrose - *Properties of forward and backward limit sets for certain classes of correspondences.*

7.00 p.m. **DINNER Grey College**

PROGRAMME - THURSDAY 15th JULY

9.10 a.m. - 10.10 a.m.

D. Hamilton - *Julia curves and the rigidity of Blaschke products.*

10.15 a.m. - 11.15 a.m.

G. Jones - *Fuchsian groups and Blaschke products.*

COFFEE - Room CM2 11

11.40 a.m. - 12.40 p.m.

M. Lyubich - *The structure of quasi-quadratic maps, and new points of local connectivity of the Mandelbrot set.*

1.00 p.m.

LUNCH Grey College

Afternoon:

Durham Cathedral - depart Grey College 2.00 p.m.

7.00 p.m.

DINNER Grey College

PROGRAMME - FRIDAY 16th JULY

9.10 a.m. - 10.10 a.m.

J. Kahn - *Holomorphic removability of Julia sets.*

10.15 a.m. - 11.15 a.m.

A. Davie - *Application of complex dynamics to the theory of area-preserving maps.*

COFFEE - Room CM2 11

11.40 a.m. - 12.40 p.m.

J-C. Yoccoz - *An Index Theorem for plane homeomorphisms of surfaces.*

1.00 p.m.

LUNCH Grey College

3.00 p.m. - 4.00 p.m.

M. Shishikura - *The renormalisation arising from the parabolic bifurcation.*

TEA - Room CM2 11

4.30 p.m. - 5.30 p.m.

G. Swiatek - *Generic hyperbolicity in the quadratic family II.*

7.00 p.m.

DINNER Grey College

PROGRAMME - SATURDAY 17th JULY

9.10 a.m. - 10.10 a.m.

N. Sibony - *Complex dynamics in higher dimensions.*

10.15 a.m. - 11.15 a.m.

J. Stimson - *Singularities of families of rational maps.*

COFFEE - Room CM2 11

11.40 a.m. - 12.40 p.m.

Yunping Jiang - *Local connectivity of infinitely renormalisable quadratic polynomials.*

1.00 p.m.

LUNCH Grey College

NO TALKS IN AFTERNOON

7.00 p.m.

DINNER Grey College

SUNDAY 18th JULY - All day trip to WHITBY and ROBIN HOOD'S BAY

(Departing Grey College approximately 9.00 a.m. and
arriving back at Grey approximately 6.15 p.m.)

PROGRAMME - MONDAY 19th JULY

- 9.10 a.m. - 10.10 a.m. N. Makarov - *Fine structure of harmonic measure.*
10.15 a.m. - 11.15 a.m. M. Shishikura - *The Lebesgue measure of a certain subset of the Mandelbrot set.*
COFFEE - Room CM2 11
11.40 a.m. - 12.40 p.m. G. Stallard - *Some aspects of the iteration of transcendental meromorphic functions.*
1.00 p.m. **LUNCH Grey College**
3.00 p.m. - 3.30 p.m. T. Ransford - *Variation of Hausdorff dimension of Julia sets.*
3.30 p.m. - 4.00 p.m. J. Kotus - *Lower bound for the Hausdorff dimension of Julia sets of meromorphic functions.*
TEA - Room CM2 11
4.30 p.m. - 5.30 p.m. F. Przytycki - *Accessible points.*
7.00 p.m. for 7.30 p.m. **SPECIAL DINNER Grey College**

PROGRAMME - TUESDAY 20th JULY

- 9.10 a.m. - 10.10 a.m. G. Levin - *On the Riemann map of the Mandelbrot set.*
10.15 a.m. - 11.15 a.m. A. Douady - *A compactification of C^2 compatible with Henon mappings.*
COFFEE - Room CM2 11
11.40 a.m. - 12.40 p.m. J. Smillie - *Dynamics in two complex variables.*
1.00 p.m. **LUNCH Grey College**
3.00 p.m. - 3.30 p.m. S. Ushiki - *Super-stable manifolds of super-saddle-type Julia sets in C^2 .*
3.30 p.m. - 4.00 p.m. P. Makienko - *Pinching and plumbing deformations of rational maps.*
TEA - Room CM2 11
7.00 p.m. **DINNER Grey College**

End of Programme.