MATHEMATICAL TRIPOS PART III

All lectures are held at the *Centre for Mathematical Sciences, Clarkson Road* unless otherwise stated. There will be a meeting in *MR2* on Wednesday 3 October 2012 at 9.30 a.m. for all those who intend to offer courses in Part III.

There is a series of meetings for Part III students in MR2, Centre for Mathematical Sciences on Wednesdays at 4.15 p.m. Students are invited to refer to the Part III Handbook for more details.

MICHAELMAS 2012

Algebraic Geometry
DR C. BIRKAR
M. W. F. 9, *MR4*

Set Theory
DR O. KOLMAN
M. W. F. 9, *MR5*

Fluid Dynamics of the Environment
DR C. P. CAULFIELD AND DR J. A. NEUFELD
M. W. F. 9, *MR11*

Statistical Theory
DR R. J. SAMWORTH
M. W. 9, *MR13*

Commutative Algebra
PROF. N. I. SHEPHERD-BARRON
M. W. F. 10, *MR3*

Stochastic Networks
PROF. F. P. KELLY
M. W. F. 10, *MR5*

Numerical Solution of Differential Equations
PROF. A. ISERLES
M. W. F. 10, *MR11*

Kinetic Theory
DR A. EINAV AND DR C. W. KIM
M. W. F. 10, *MR13*

Astrophysical Fluid Dynamics
PROF. J. C. B. PAPALOIZOU
M. W. F. 10, *MR14*

LENT 2013

Supersymmetry
PROF. B. ALLANACH
M. W. F. 9, *MR2* (Sixteen lectures)

Extremal Graph Theory
PROF. A. G. THOMASON
M. W. F. 9, *MR9*

Contemporary Sampling Techniques and Compressed Sensing
DR A. C. HANSEN
M. W. F. 9, *MR12*

Representation Theory
DR S. MARTIN
M. W. F. 9, *MR13*

The Standard Model
DR M. B. WINGATE
M. W. F. 10, *MR2*

Aspects of Analysis
DR D. J. H. GARLING
M. W. F. 10, *MR5*

Elliptic Curves
DR T. A. FISHER
M. W. F. 10, *MR9*

Fluid Dynamics of Climate
PROF. P. F. LINDEN AND DR J. R. TAYLOR
M. W. F. 10, *MR12*

Applied Bayesian Statistics
PROF. D. SPIEGELHALTER
M. W. 10, *MR13*

EASTER 2013

Classical and Quantum Solitons
PROF. N. DOREY
M. Tu. Th. F. 10, *MR9*

General Relativity
DR H. S. REALL
M. W. F. 11, *MR2*

Advanced Financial Models
DR M. TEHRANCHI
M. W. F. 11, *MR5*

Additive Combinatorics
PROF. B. J. GREEN
M. W. F. 11, *MR9*

Slow Viscous Flow
PROF. J. R. LISTER
M. W. F. 11, *MR12*

Cosmology
DR D. D. BAUMANN
M. W. F. 12, *MR3*

Lie Algebras and their Representations
DR C. J. B. BROOKES
M. W. F. 12, *MR5*

Mathematics of Operational Research
DR F. A. FISCHER
M. W. F. 12, *MR13*

Biological Physics
PROF. R. E. GOLDSTEIN AND DR U. KEYSER
M. W. F. 12.10, *Small Lecture Theatre, Cavendish Laboratory*

Quantum Field Theory
PROF. A. C. DAVIS
Tu. Th. S. 9, *MR2*

Topics in Algebraic Number Theory
PROF. A. J. SCHOLL
Tu. Th. S. 9, *MR4*

Advanced Probability
DR A. SOLA
Tu. Th. S. 9, *MR9*

Approximation Theory
DR A. SHADRIN
Tu. Th. S. 9, *MR12*

Advanced Quantum Field Theory
PROF. H. OSBORN
M. W. F. 11, *MR2*

Stochastic Calculus
DR M. TEHRANCHI
M. W. F. 11, *MR9*

Fluid Dynamics of Energy
PROF. A. W. WOODS
M. W. 11, *MR12*

Topics in Analytic Number Theory
DR R. HOUGH
M. W. F. 11, *MR13*

Spectral Geometry
DR D. BARDEN
M. W. F. 11, *MR14*

Topics in Representation Theory
PROF. I. GROJNOWSKI
M. W. F. 12, *MR9*

Nonparametric Statistical Theory
DR A. D. BULL
M. W. 12, *MR11*

Quantum Foundations
DR B. GROISMAN
M. W. 12, *MR12*

Origin and Evolution of Galaxies
PROF. M. G. HAEHNELT
M. W. F. 12, *MR13*

The Kakeya Universe and Incidence Problems in R^n
DR M. BATEMAN
M. W. F. 12, *MR14*

Topics in Group Theory
DR R. I. LAWTHER
Tu. Th. S. 9, *MR9*

Sound Generation and Propagation
DR E. BRAMBLEY
Tu. Th. 9, *MR12*

Combinatorics
PROF. I. B. LEADER
Tu. Th. 10, *MR3*

Differential Geometry
PROF. M. DAFERMOS
Tu. Th. S. 10, *MR9*

Distribution Theory and Applications
DR A. ASHTON
Tu. Th. 10, *MR12*

Structure and Evolution of Stars
DR C. A. TOUT AND DR B. DAVIES
Tu. Th. 10, *MR13*

Applied Statistics
DR R. J. EVANS
Th. 10, *MR14* (Eight lectures), Tu. 2-4, *CATAM Room*
(Eight classes)

Symmetries, Fields and Particles
PROF. N. S. MANTON
Tu. Th. S. 11, *MR2*

Introduction to Fourier Analysis
PROF. T. W. KÖRNER
Tu. Th. S. 11, *MR5*

Algebraic Topology
DR J. RASMUSSEN
Tu. Th. S. 11, *MR9*

Time Series and Monte Carlo Inference (I) +
PROF. A. P. DAWID
Tu. Th. 11, *MR12* (Eight lectures)

Computational Complexity
DR A. MONTANARO
Tu. Th. 11, *MR13*

**Convex Optimisation with Applications in Image
Processing**
DR J. LELLMANN
Tu. Th. 11, *MR14*

Category Theory
DR J. GOEDECKE
Tu. Th. S. 12, *MR3*

Binary Stars
DR C. A. TOUT
Tu. Th. 9, *MR13*

Optimal Investment
PROF. L. C. G. ROGERS
Tu. Th. 9, *MR14*

String Theory
PROF. P. K. TOWNSEND
Tu. Th. S. 10, *MR2*

Percolation and Related Topics
PROF. G. R. GRIMMETT
Tu. Th. 10, *MR4*

Complex Manifolds
PROF. P. M. H. WILSON
Tu. Th. S. 10, *MR5*

Design of Experiments
PROF. R. A. BAILEY
Tu. Th. 10, *MR11*

Dynamics of Astrophysical Discs
DR S. PAARDEKOOPER
Tu. Th. 10, *MR13*

Black Holes
PROF. G. W. GIBBONS
Tu. Th. S. 11, *MR2*

Computability and Logic
DR T. E. FORSTER
Tu. Th. S. 11, *MR5*

Time Series and Monte Carlo Inference (II) +
PROF. A. P. DAWID
Tu. Th. 11, *MR9* (Eight lectures, weeks 1-4)

Applied Statistics
DR B. D. M. TOM
Tu. Th. 11, *MR9* (Four lectures and four classes, beginning
12 Feb.)

Solidification of Fluids
PROF. M. G. WORSTER
Tu. Th. 11, *MR11*

Perturbation Methods
PROF. N. PEAKE AND PROF. J. M. RALLISON
Tu. Th. S. 12, *MR5*

Actuarial Statistics
DR S. M. PITTS
Tu. Th. 12, *MR13*

Image Processing - Variational and PDE Methods
DR C. B. SCHOENLIEB
Tu. Th. 11, *MR12*

Applications of Differential Geometry
DR M. DUNAJSKI
Tu. Th. 12, *MR5*

Schramm-Loewner Evolutions
DR N. BERESTYCKI
Tu. Th. 12, *MR9*

Polar Oceans and Climate Change
PROF. P. WADHAMS
Tu. Th. S. 12, *MR12* (Sixteen lectures)

Biostatistics
DR P. TREASURE
Tu. Th. 12, *MR13* (Fourteen lectures)
PROF. S. BIRD ET AL.
 Th. 4-6, *MR13* (Five sessions, beginning 17 January)
Quantum Computation
PROF. R. JOZSA
Th. S. 9, *MR11*

The following course is non-examinable

Laboratory Demonstrations in Fluid Dynamics
DR S. B. DALZIEL
W. 2, *Fluids Laboratory*

+ These two courses constitute the sixteen-hour course in Time Series and Monte Carlo Inference