Lectures Proposed by the Board of the Faculty of Mathematics

MATHEMATICAL TRIPOS

Lectures proposed by the Board of the Faculty of Mathematics. Graduates of the University who are not reading for any University Examination may attend without payment any lectures proposed by the Faculty Board of Mathematics.

Part IA students are recommended to attend the induction session which will be held from 9.30 a.m. to 10.45 a.m. on Wednesday 3 October 2007, *in the Cockcroft Lecture Theatre.*

A meeting will be held for all Part IA students on Friday 2 May 2008 at 2.00 p.m. in *Mill Lane Room 3* to discuss examinations and examination techniques.

Note that the non-examinable courses on **Introduction to Mechanics**, **Concepts in Theoretical Physics** and **Topics in the History of Mathematics** will be of interest to all students reading the Mathematical Tripos. Full details are given below.

MICHAELMAS 2007 **LENT 2008** **EASTER 2008**

PART IA

Lectures for Part IA of the Mathematical Tripos will be held in the *Cockcroft Lecture Theatre* unless otherwise stated.

Differential Equations
PROF. F. QUEVEDO
M. W. F. 10

Groups
DR G. P. PATERNAIN
M. W. F. 11

Vectors and Matrices
DR S. J. COWLEY
Tu. Th. S. 10

Numbers and Sets
PROF. P. T. JOHNSTONE
Tu. Th. S. 11

Vector Calculus
PROF. E. J. HINCH
M. W. F. 10

Analysis I
PROF. A. G. THOMASON
M. W. F. 11

Probability
PROF. W. T. GOWERS
Tu. Th. S. 10

Dynamics
DR S. T. C. SIKLOS
Tu. Th. S. 11

Metric and Topological Spaces*
PROF. B. J. GREEN
M. W. F. 10, *Mill Lane Room 3* (Twelve lectures)

Optimization*
DR M. R. TEHRANCHI
M. W. F. 11, *Mill Lane Room 3* (Twelve lectures)

Numerical Analysis*
PROF. A. ISERLES
M. W. F. 12, *Mill Lane Room 3* (Twelve lectures)

Computational Projects
DR R. E. HUNT AND OTHERS
Tu. Th. 10, *Mill Lane Room 3* (Six lectures)

Special Relativity*
PROF. M. B. GREEN
Tu. Th. 11, *Mill Lane Room 3* (Eight lectures)

Concepts in Theoretical Physics
PROF. N. G. TUROK, DR D. TONG AND DR N. BERLOFF
Tu. Th. 12, *Mill Lane Room 3* (Eight lectures)

Non-Examinable Courses

Introduction to Mechanics
TBD
Tu. Th. 12, *Mill Lane Room 3* (Twelve lectures)

Topics in the History of Mathematics: Ancients to the Renaissance
DR P. BURSILL-HALL
W. F. 4, *Centre for Mathematical Sciences, Room 9*

Topics in the History of Mathematics: Renaissance to the 19th Century
DR P. BURSILL-HALL
W. F. 4, *Centre for Mathematical Sciences, Room 9*

Mathematics with Computer Science Option:

Students taking this option should attend Algebra and Geometry, Numbers and Sets, Differential Equations, Analysis I, Vector Calculus and Probability from Part IA of the Mathematical Tripos, together with the courses from the Computer Science Tripos listed below. Students should note that the programming exercises will be taken into account by the Examiners.

Registration.
DR F. H. KING AND MISS C. H. NORTHEAST Th. 12 (One lecture) *Arts School, Room A, Bene't Street*

Introduction to Computer Science.
PROF. A. HOPPER F. 12 (One lecture) *Arts School, Room A, Bene't Street*

Foundations of Computer Science.
PROF. L. C. PAULSON M. W. F. 12 (Fifteen lectures, beginning 8 Oct.) *Arts School, Room A, Bene't Street*

Operating Systems.
DR S. M. HAND M. W. F. 12 (Eight lectures, beginning 12 Nov.) *Arts School, Room A, Bene't Street*

Operating Systems continued.
DR S. M. HAND M. W. F. 12 (Eight lectures) *Arts School, Room A, Bene't Street*

Programming in Java.
DR A. C. NORMAN M. W. F. 12 (Sixteen lectures, beginning 6 Feb.) *Arts School, Room A, Bene't Street*

Algorithms I.
DR K. A. FRASER M. W. F. 12 *Arts School, Room A, Bene't Street* (non-examinable course)

* Examined in Part IB of the Tripos.

Faculty of Mathematics (continued)

MATHEMATICAL TRIPOS, PART IA (continued)

MICHAELMAS 2007

Practical ML under Windows.
DR F. H. KING, MISS C. H. NORTHEAST AND MR R. J. STIBBS Th. 2–5 (Two classes) *Lecture Theatre 1, William Gates Building*
Programming Practical Class.
PROF. L. C. PAULSON AND DR F. H. KING Th. 2–4 (Three fortnightly classes, beginning 18 Oct. *or* 25 Oct.) *Cockcroft Building, Floor 4*
Assessed Exercise Work. M. *or* W. *or* F. 2–4 *Cockcroft Building, Floor 4*
How to Study Computer Science.
DR N. A. DODGSON AND OTHERS Th. 5 (One lecture, 18 Oct.) *Arts School, Room A, Bene't Street*
Tick-Four Briefing.
DR F. H. KING Th. 5 (One lecture, 25 Oct.) *Hopkinson Lecture Room*
Help Sessions.
STAFF Th. 5 (Four classes, beginning 1 Nov.) *Hopkinson Lecture Room*

LENT 2008

Programming Practical Class.
DR A. C. NORMAN AND DR F. H. KING Th. 2–4 (Four fortnightly classes, beginning 17 Jan. *or* 24 Jan.) *Cockcroft Building, Floor 4*
Assessed Exercise Work.
M. *or* W. *or* F. 2–4 *Cockcroft Building, Floor 4*
How to Install Linux.
DR R. J. DOWLING Th. 5 (One lecture, 7 Feb.) *Cockcroft Lecture Theatre*
Revision Skills.
STAFF Th. 5 (One lecture, 6 Mar.) *Arts School, Room A, Bene't Street*

EASTER 2008

Programming Practical Class.
DR A. C. NORMAN AND DR F. H. KING Th. 1–4 (Two fortnightly classes, beginning 24 Apr. *or* 1 May) *Cockcroft Building, Floor 4*
Assessed Exercise Work.
M. *or* W. *or* F. 2–4 *Cockcroft Building, Floor 4*
Part IB Assessed Exercise Briefing.
DR A. C. NORMAN AND DR J. K. FAWCETT Th. 4.30 (One lecture, 15 May) *Arts School, Room A, Bene't Street*

Mathematics with Physics Option:

Students taking this third option should attend Vectors and Matrices, Groups, Differential Equations, Analysis I, Vector Calculus and Probability from Part IA of the Mathematical Tripos, together with the lectures listed below in Part IA of the Natural Sciences Tripos. They will be required to do Physics practical work, and are recommended to attend at least the first lecture of Course B of the Computing Course for Physical Scientists.

Principles of Relativity, Mechanics and Fields
DR P. J. DUFFETT-SMITH M. W. F. 9 (first nineteen lectures) *Chemical Laboratory, Lensfield Road*
Electromagnetism, Oscillations and Waves
DR G. A. C. JONES M. W. F. 9 (last three lectures, beginning 23 Nov.) *Chemical Laboratory, Lensfield Road*
Experimental Physics
DR D. A. GREEN Two lectures, W. 17 Oct. and W. 31 Oct. *Chemical Laboratory, Lensfield Road*

Electromagnetism, Oscillations and Waves
DR G. A. C. JONES M. W. F. 9 (first sixteen lectures) *Chemical Laboratory, Lensfield Road*
Quantum Mechanics and the Physics of Large Systems
PROF. C. G. SMITH M. W. F. 9 (last eight lectures, beginning 25 Feb.) *Chemical Laboratory, Lensfield Road*

Quantum Mechanics and the Physics of Large Systems
PROF. C. G. SMITH M. W. F. 9 (first ten lectures) *Chemical Laboratory, Lensfield Road*
Revision Lectures
DR P. J. DUFFETT-SMITH AND DR G. A. C. JONES Two lectures, M. 20 May and W. 22 May *Chemical Laboratory, Lensfield Road*

Laboratory Work takes place at the Cavendish Laboratory (West Cambridge). All students must attend an introductory talk and register for Laboratory Work at 11.30 a.m. on W. 3 Oct. at the Cavendish Laboratory. The Laboratory may be approached by the Madingley Road, or via the Coton cycle and footpath. For cyclists and pedestrians the latter is strongly recommended. Laboratory work is continuously assessed.

MATHEMATICAL TRIPOS, PART IB

Lectures for Part IB of the Mathematical Tripos will be held in *Mill Lane Lecture Rooms, Room 3* unless otherwise stated.

Analysis II
DR P. A. RUSSELL
M. W. F. 10
Linear Algebra
DR T. A. FISHER
M. W. F. 11
Methods
DR C. P. CAULFIELD
M. W. F. 12
Quantum Mechanics
PROF. N. DOREY
Tu. Th. 10
Markov Chains
PROF. F. P. KELLY
Tu. Th. 11 (Twelve lectures)

Non-Examinable Courses

Topics in the History of Mathematics: Ancients to the Renaissance
DR P. BURSILL-HALL
W. F. 4, *Centre for Mathematical Sciences, Room 9*

Complex Analysis
PROF. A. J. SCHOLL
M. W. 9
Groups, Rings and Modules
PROF. N. I. SHEPHERD-BARRON
M. W. F. 10
Electromagnetism
PROF. N. G. TUROK
M. W. F. 11 (first sixteen lectures)
Special Relativity
PROF. A. C. DAVIS
M. W. F. 11 (last eight lectures)
Complex Methods
PROF. G. W. GIBBONS
M. W. 12
Statistics
PROF. R. R. WEBER
Tu. Th. 10
Geometry
PROF. P. M. H. WILSON
Tu. Th. 11
Fluid Dynamics
PROF. H. HUPPERT
Tu. Th. 12

Topics in the History of Mathematics: Renaissance to the 19th Century
DR P. BURSILL-HALL
W. F. 4, *Centre for Mathematical Sciences, Room 9*

Metric and Topological Spaces
PROF. B. J. GREEN
M. W. F. 10 (Twelve lectures)
Optimization
DR M. R. TEHRANCHI
M. W. F. 11 (Twelve lectures)
Numerical Analysis
PROF. A. ISERLES
M. W. F. 12 (Twelve lectures)
Special Relativity
PROF. M. B. GREEN
Tu. Th. 11 (Eight lectures)

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Faculty of Mathematics (continued)

MATHEMATICAL TRIPOS PART II

Lectures will be held in the Meeting Rooms (MR) of the *Centre for Mathematical Sciences, Clarkson Road,* unless otherwise stated.

A meeting will be held on Wednesday, 11 June 2008 for finalists who may continue to Part III of the Tripos in 2008–09. The meeting will be held in *MR2 at the Centre for Mathematical Sciences* at 11.15 a.m.

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C COURSES

Number Theory
PROF. J. H. COATES
M. W. F. 10, *MR 3*
Further Complex Methods
DR S. T. C. SIKLOS
M. W. F. 11, *MR 2*
Computational Projects
DR R. E. HUNT AND OTHERS
M. W. F. 2, *MR2 (six lectures)*
Coding and Cryptography
DR T. K. CARNE
Tu. Th. S. 9, *MR 3*
Statistical Modelling
DR R. B. GRAMACY
Tu. Th. S. 10, *MR 3*
Classical Dynamics
PROF. J. C. B. PAPALOIZOU
Tu. Th. S. 11, *MR 2*
Dynamical Systems
PROF. J. R. LISTER
Tu. Th. S. 12, *MR 3*

Topics in Analysis
DR N. WICKRAMASEKERA
M. W. F. 10, *MR 3*
Cosmology
DR E. P. S. SHELLARD
M. W. F. 11, *MR 3*
Geometry and Groups
PROF. N. I. SHEPHERD-BARRON
M. W. F. 12, *MR 3*
Mathematical Biology
PROF. R. E. GOLDSTEIN
Tu. Th. S. 10, *MR 3*

D COURSES

Graph Theory
PROF. I. B. LEADER
M. W. F. 9, *MR 2*
General Relativity
PROF. H. OSBORN
M. W. 9, *MR 3*
Fluid Dynamics
PROF. M. R. E. PROCTOR
M. W. F. 10, *MR5*
Principles of Quantum Mechanics
DR J. M. EVANS
M. W. F. 12, *MR 2*
Applied Probability
PROF. Y. M. SUHOV
M. W. F. 12, *MR3*
Probability and Measure
PROF. L. C. G. ROGERS
M. W. F. 11, *MR 3*
Computational Projects
DR R. E. HUNT AND OTHERS
M. W. F. 2, *MR2 (six lectures)*
Partial Differential Equations
DR D. M. A. STUART
Tu. Th. S. 9, *MR 4*
Linear Analysis
PROF. T. W. KÖRNER
Tu. Th. S. 10, *MR 9*
Electrodynamics
DR J. M. STEWART
Tu. Th. 10, *MR 14*
Optimization and Control
PROF. J. R. NORRIS
Tu. Th. 11, *MR 3*
Riemann Surfaces
DR A. G. KOVALEV
Tu. Th. S. 11, *MR 13*
Galois Theory
PROF. I. GROJNOWSKI
Tu. Th. S. 12, *MR 2*

Stochastic Financial Models
DR P. K. FRIZ
M. W. F. 9, *MR 2*
Numerical Analysis
DR A. SHADRIN
M. W. F. 9, *MR 4*
Waves
PROF. J. M. RALLISON
M. W. F. 10, *MR 4*
Logic and Set Theory
PROF. J. M. E. HYLAND
M. W. F. 11, *MR 2*
Representation Theory
PROF. B. J. TOTARO
M. W. F. 11, *MR 4*
Principles of Statistics
PROF. A. P. DAWID
M. W. F. 12, *MR 2*
Applications of Quantum Mechanics
PROF. N. S. MANTON
Tu. Th. S. 9, *MR 2*
Differential Geometry
DR M. DAFERMOS
Tu. Th. S. 9, *MR4*
Algebraic Topology
DR C. BIRKAR
Tu. Th. S. 11, *MR 2*
Statistical Physics
DR M. WINGATE
Tu. Th. 11, *MR 9*
Asymptotic Methods
DR P. D. D'EATH
Tu. Th. 11, *MR 4*
Number Fields
DR M. STRAUCH
Tu. Th. 12, *MR 2*
Integrable Systems
DR M. DUNAJSKI
Tu. Th. 12, *MR 4*

Non-Examinable Courses

Topics in the History of Mathematics: Ancients to the Renaissance
DR P. BURSILL-HALL
W. F. 4 , *Centre for Mathematical Sciences, Room 9*

Topics in the History of Mathematics: Renaissance to the 19th Century
DR P. BURSILL-HALL
W. F. 4, *Centre for Mathematical Sciences, Room 9*

Faculty of Mathematics (continued)

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 2007 at 9.00 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, at 4.15 p.m. on the following topics:
9 October 2007: PhD applications to Cambridge and other universities
17 October 2007: Exams and lectures
24 October 2007: How to write a Part III essay
21 November 2007: Research opportunities in Cambridge

MICHAELMAS 2007

Introduction to Functional Analysis
DR D. J. H. GARLING
M. W. F. 9, *MR4*

Advanced Financial Models
DR M. TEHRANCHI
M. W. F. 9, *MR9*

Non-abelian Lubin-Tate Theory
DR T. YOSHIDA
M. W. F. 9, *MR11*

Fundamentals of Atmosphere–Ocean Dynamics
PROF. M. E. MCINTYRE
M. W. F. 9, *MR14*

General Relativity
DR J. M. STEWART
M. W. F. 10, *MR2*

Category Theory
PROF. P. T. JOHNSTONE
M. W. F. 10, *MR4*

Statistical Theory
DR R. J. SAMWORTH
M. W. F. 10, *MR12*

The Fluid Dynamics of Energy Production
DR C. P. CAULFIELD AND PROF. A. WOODS
M. W. F. 10, *MR13*

Brain Imaging Methods via Electro and Magneto Encephalography
PROF. A. S. FOKAS AND PROF. G. DASSOIS
M. W. 10, *MR14*

Commutative Algebra
DR M. STRAUCH
M. W. F. 11, *MR4*

Advanced Probability
PROF. G. R. GRIMMETT
M. W. F. 11, *MR5*

Symmetry and Particle Physics
DR J. B. GUTOWSKI
M. W. F. 11, *MR9*

Soft Matter
PROF. R. GOLDSTEIN
M. W. F. 11, *MR14*

Symmetric Dynamical Systems
DR J. H. P. DAWES
M. W. F. 11, *MR15*

Differential Geometry
PROF. P. M. H. WILSON
M. W. F. 12, *MR4*

Quantum Information, Entanglement and Nonlocality
DR A. P. A. KENT, DR B. GROISMAN AND DR J. OPPENHEIM
M. W. 12, *MR5*

Mathematics of Operational Research
PROF. R. R. WEBER
M. W. F. 12, *MR9*

LENT 2008

The Standard Model
DR B. ALLANACH
M. W. F. 9, *MR3*

Elliptic Curves
DR T. A. FISHER
M. W. F. 9, *MR5*

Monte Carlo Inference+
DR R. B .GRAMACY
M. W. F. 9, *MR 9* (first sixteen lectures)

Time Series+
DR S. M. PITTS
M. W. F. 9, *MR 9* (eight lectures)

Decision Problems in Group Theory
PROF. A. GLASS
M. W. F. 9, *MR14*

Stellar and Planetary Magnetic Fields
PROF. M. R. E. PROCTOR
M. W. F. 9, *MR15*

Physical Cosmology
PROF. M. PETTINI
M. W. F. 10, *MR5*

String Theory
PROF. M. B. GREEN
M. W. F. 10, *MR9*

Iwasawa Theory of Elliptic Curves and Complex Multiplications
PROF. J. H. COATES
M. W. F. 10, *MR11*

Applied Bayesian Statistics
PROF. D. SPIEGELHALTER
M. W. 10, *MR12 and CATAM room*

Ergodic Theory
PROF. B. J. GREEN
M. W. F. 10, *MR13*

Numerical Analysis of Partial Differential Equations
PROF. A. ISERLES
M. W. F. 10, *MR14*

Algebraic Cycles
PROF. B. J. TOTARO
M. W. F. 10, *MR15*

Complex Manifolds
DR A. G. KOVALEV
M. W. F. 11, *MR5*

Black Holes
DR H. S. REALL
M. W. F. 11, *MR9*

Mathematical Aspects of Quantum Information Theory
DR N. DATTA
M. W. F. 11, *MR11*

Stochastic Networks
PROF. F. P. KELLY
M. W. F. 11, *MR12*

Non-commutative Algebras
DR C. J. B. BROOKES
M. W. F. 11, *MR13*

EASTER 2008

Solitons and Instantons
DR D. M. A. STUART
M. Tu. Th. F. 9, *MR9*

Quantum Cosmology
DR P. D'EATH
M. Tu. Th. F. 10, *MR9*

Supergravity
PROF. A. C. DAVIS
M. Tu. Th. F. 11, *MR 9*

Twistor Theory
MISS I. BORZYM
M. Tu. Th. F. 12, *MR 9*

Applied Statistics
DR B. D. M. TOM
Tu. Th. 10, *MR12 (Four lectures and four classes)*

continued >

Faculty of Mathematics (continued)

MATHEMATICAL TRIPOS, PART III (continued)

MICHAELMAS 2007

Structure and Evolution of Stars
PROF. J. C .B. PAPALOIZOU
M. W. F. 12, *MR11*
Philosophy of Classical and Quantum Mechanics
PROF. J. BUTTERFIELD
M. 4.30–6, *MR14*
Quantum Field Theory
DR D. TONG
Tu. Th. S. 9, *MR2*
Local Fields
DR T. DOKCHITSER
Tu. Th. 9, *MR10*
Topics in Group Theory
DR J. BUTTON
Tu. Th. 9, *MR12*
Approximation Theory
DR A. SHADRIN
Tu. Th. S. 9, *MR13*
Cosmology
PROF. N. G. TUROK
Tu. Th. S. 10, *MR2*
Alb]geberic Number Theory
DR V. DOKCHITSER
Tu. Th. S. 10, *MR5*
Lie Algebras
DR M. B. BATCHELOR
Tu. Th. S. 10, *MR10*
Quantum Cryptography
DR M. CHRISTANDL
Tu. Th. 10, *MR13*
Combinatorics
PROF. A. G. THOMASON
Tu. Th. 11, *MR4*
Algebraic Geometry
DR C. BIRKAR
Tu. Th. S. 11, *MR5*
Astrophysical Fluid Dynamics
DR G. I. OGILVIE
Tu. Th. S. 11, *MR9*
Statistical Theory and Applications
PROF. R .R. HORGAN and DR M. WINGATE
Tu. Th. S. 11, *MR11*
Computer-aided Geometric Design
DR M. A. SABIN
Tu. Th. 11, *MR14*
Introduction to Quantum Computing
DR A. S. KAY
Tu. Th. 12, *MR4*
Algebraic Topology
DR I. SMITH
Tu. Th. S. 12, *MR5*
Algebraic Groups
PROF. N. I. SHEPHERD-BARRON
Tu. Th. S. 12, *MR9*
Arithmetic Combinatorics
PROF. W. T. GOWERS
Tu. Th. S. 12, *MR11*
Applied Statistics
DR S. M. PITTS
Tu. Th. 12, *MR12*
Pertubation and Stability Methods
PROF. J. M. RALLISON AND DR S. J. COWLEY
Tu. Th. S. 12, *MR13*
Partial Differential Equations
DR N. WICKRAMASEKERA
M. W. F. 9, *MR5*

LENT 2008

Waves in Fluids
PROF. N. PEAKE AND DR O. RATH-SPIVACK
M. W. F. 11, *MR14*
Introduction to Data Mining
PROF. D. L. BANKS
M. W. 11, *MR15*
Supersymmetry and Extra Dimensions
PROF. F. QUEVEDO
M. W. F. 12, *MR9*
Calculus and Algebra
PROF. I. GROJNOWSKI
M. W. F. 12, *MR11*
Spectral Geometry
DR D. BARDEN
M. W. F. 12, *MR13*
Partial Differential Equations in Modelling of Semiconductors
PROF. P. MARKOWICH
M. W. F. 12, *MR14*
Environmental Fluid Dynamics
DR S. DALZIEL
M. W. 12, *MR15*
Quantum Control
DR S. SCHIRMER
M. W. 2, *MR15*
Philosophy of Classical and Quantum Mechanics
PROF. J. BUTTERFIELD
M. 4.30–6, *MR14*
Statistics in Medical Practice ++
PROF. S. BIRD, PROF. D. SPIEGELHALTER, PROF. V. FAREWELL
W. 4–6 p.m., *MR13 (six hours)*
Sets
DR T. E. FORSTER
Tu. Th. S. 9, *MR5*
Advanced Cosmology
DR E. P. S. SHELLARD
Tu. Th. 9, *MR9*
Slow Viscous Flows
PROF. E. J. HINCH
Tu. Th. 9, *MR11*
Representation of Finite Groups of Lie Type
DR A. STASINSKI
Tu. Th. F. 9, *MR11*
Stochastic Loewner Evolutions
PROF. J. R. NORRIS
T. Th. 9, *MR13*
Modular Representation Theory
DR S. MARTIN
Tu. Th. S. 10, *MR4*
Application of Differential Geometry to Physics
PROF. G. W. GIBBONS
Tu. Th. S. 10, *MR9*
The X-ray Transform in Geometry and Dynamics
DR G. P. PATERNAIN
Tu. Th. S. 10, *MR11*
Optimal Investment
PROF. L. C. G. ROGERS
Tu. Th. 12, *MR12*
Accretion Discs
PROF. J. E. PRINGLE
Tu. Th. 10, *MR13*
Combinatorial Probability
PROF. B. BOLLOBAS
Tu. Th. 10, *MR14*
Advanced Quantum Field Theory
PROF. H. OSBORN
Tu. Th. S. 11, *MR3*
Fibre Bundles
DR K. FELDMAN
Tu. Th. 11, *MR5*
Actuarial Statistics
DR. S. M. PITTS
Tu. Th. 11, *MR11*
Modular and Automorphic Forms
PROF. A. J. SCHOLL
Tu. Th. 9, *MR12*

EASTER 2008

Faculty of Mathematics (continued)

MATHEMATICAL TRIPOS, PART III (continued)

MICHAELMAS 2007	LENT 2008	EASTER 2008
	Stochastic Calculus and Applications DR N. BERESTYCKI Tu. Th. S. 11, *MR12* **Turbulence** PROF. P. DAVIDSON Tu. Th. 11, *MR13* **Complex Differential Equations** DR T. K. CARNE Tu. Th. S. 11, *MR14* **Galaxies** PROF. R. C. KENNICUTT Tu. Th. S. 12, *MR5* **Survival Data ++** DR P. TREASURE Tu. Th. 10, *MR12 (ten hours)* **Macrophenomena from Microphysics** DR VIET-HO HUANG Tu. Th. 12, *MR13* **Topological Groups** PROF. T. W. KÖRNER Tu. Th. S. 12, *MR14*	

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

COURSES INTENDED FOR GRADUATES (NON-EXAMINABLE)

Demonstrations in Fluid Dynamics
DR S. DALZIEL
Th. 2, *Fluids Lab* (non-examinable)
Analysis on the Discrete Hypercube
DR D. J. H. GARLING
M. W. F. 12, *MR12*

Hypergraph Games
PROF. I. LEADER
M. W. F. 12, *MR4 (Eight lectures)*

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Faculty of Mathematics (continued)

M.PHIL. IN STATISTICAL SCIENCE

Lectures are held in the *Centre for Mathematical Sciences*, unless otherwise stated

MICHAELMAS 2007

Advanced Financial Models
DR M. TEHRANCHI
M. W. F. 9, *MR9*
***Statistical Theory**
DR R. J. SAMWORTH
M. W. F. 10, *MR9*
***Mathematics of Operational Research**
PROF. R. R. WEBER
M. W. F. 12, *MR9*
***Introduction to Probability**
DR N. BERESTYCKI
Tu. Th. 11, *MR12*
***Applied Statistics**
DR S. M. PITTS
Tu. Th. 12, *MR12*

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Monte Carlo Inteference+
DR R. B. GRAMACY
M. W. F. 9, *MR 9* (first sixteen lectures)
Time Series+
DR S .PITTS
M. W. F. 9, *MR 9* (last eight lectures)
Applied Bayesian Statistics
PROF. D. SPIEGELHALTER
M. W. 10, *MR12* and CATAM room
Introduction to Data Mining
PROF. D. L. BANKS
M. W. 11, *MR15*
Statistics in Medical Practice ++
PROF. S. BIRD, PROF. D. SPIEGELHALTER, PROF. V. FAREWELL
W. 4–6 p.m., *MR13* (six hours)
Actuarial Statistics
DR S. M. PITTS
Tu. Th. 11, *MR11*
Survival Data ++
DR P. TREASURE
Tu. Th. 10, *MR12*

EASTER 2008

Applied Statistics (continued)
DR B. D. M. TOM
Tu. Th. 10, *MR 12* (four lectures and four classes)

Candidates will be expected to have attended the basic courses (marked *) and an appropriate number of courses (and all will receive advice individually about this). Subject to the approval of the M.Phil. examiners, they may also offer for examination any Part III courses given by the Statistical Laboratory.
+These two courses constitute the twenty-four hour course in Time Series and Monte Carlo Inference
++These two courses constitute the sixteen hour course in Biostatistics

M.PHIL. IN COMPUTATIONAL BIOLOGY

Lectures are held in *the Centre for Mathematical Sciences,* unless otherwise stated

Disease Dynamics
DR J. GOG AND OTHERS
Tu. Th. 10, *MR 15*
Genome Informatics
DR L. SMINK
M. 9–11, *CATAM Lab.*
Functional Genomics
PROF. S. TAVARÉ AND OTHERS
M. W. 12–2, *MR15 and CATAM Lab*
Structural Biology
DR J. HUPPERT AND OTHERS
W. F. 10, *MR15*

Statistical Genetics
PROF. S. TAVARÉ AND DR V. PLAGNOL
W. F. 9, *MR12*
System Biology
DR G. VINNICOMBE AND DR J. PAULSSON
M. W. 2–4, *MR5*
Network Biology
PROF. L. WERNISCH AND DR A. TESCHENDORF
Tu. 10, *MR5* and F. 10 *MR12*
Computational Neuroscience
DR S. EGLEN
Tu. Th. 12, *MR15*

Methods and Models in Genomics
DR P. LIO
W. F. 11–1, *MR 15*