

## MATHEMATICAL TRIPOS PART III

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

There will be a meeting in *MR2* on Wednesday 9 October 2019 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.

For a personalised version of the timetable, which you can import into your own electronic calendar, please see <http://www.timetable.cam.ac.uk>.

### MICHAELMAS 2019

#### Cosmology

DR B. D. SHERWIN  
M. W. F. 9, *MR2*

#### Category Theory

PROF. P. T. JOHNSTONE  
M. W. F. 9, *MR5*

#### Analysis of Partial Differential Equations

DR C. WARNICK  
M. W. F. 9, *MR11*

#### Fluid Dynamics of the Solid Earth

DR J. A. NEUFELD, PROF. M. G. WORSTER  
M. W. F. 9, *MR12*

#### Mixing Times of Markov Chains

DR P. SOUSI  
M. W. 9, *MR13*

#### Algebraic Number Theory

DR J. A. THORNE  
M. W. F. 9, *MR14*

#### Statistical Field Theory

DR M. P. MCCULLOUGH  
M. W. F. 10, *MR3* (Sixteen lectures)

### LENT 2020

#### Metric Embeddings

DR A. ZSAK  
M. W. F. 9, *MR4*

#### Stochastic Calculus and Applications

DR R. BAUIERSCHMIDT  
M. W. F. 9, *MR5*

#### Applications of Differential Geometry to Physics

DR M. DUNAJSKI  
M. W. 9, *MR9*  
No lecture on Wed 12 Feb  
Additional lecture on Fri 13 March

#### Aeroacoustics

PROF. N. PEAKE  
M. W. 9, *MR12*

#### Hybrid Photonics Computing

PROF. N. G. BERLOFF  
W. F. 9, *MR13*

#### Field Theory in Cosmology

DR T. BALDAUF, DR E. PAJER  
M. W. F. 10, *MR4*

#### Quantum Information Theory

DR S. STRELCHUK  
M. W. F. 10, *MR5*

### EASTER 2020

#### Gauge/Gravity Duality

DR A. WALL  
M. Tu. Th. F. 10

#### Classical and Quantum Solitons

PROF. N. S. MANTON  
M. Tu. Th. F. **11:15**

**Algebraic Geometry**

PROF. M. GROSS

M. W. F. 10, *MR5***Advanced Probability**

DR S. ANDRES

M. W. F. 10, *MR9***Formation of Galaxies**

PROF. N. W. EVANS

M. W. F. 10, *MR11***Slow Viscous Flow**

PROF. J. R. LISTER

M. W. F. 10, *MR12***Algebraic Topology**

PROF. J. RASMUSSEN

M. W. F. 11, *MR3***Advanced Financial Models**

DR M. R. TEHRANCHI

M. W. F. 11, *MR9***Astrophysical Fluid Dynamics**

DR R. RAFIKOV

M. W. F. 11, *MR12***General Relativity**

PROF. D. TONG

M. W. F. 12, *MR2***Modern Statistical Methods**

DR S. BACALLADO

M. W. F. 12, *MR4***Combinatorics**

PROF. B. BOLLOBÁS

M. W. F. 12, *MR5* (Sixteen lectures)**Structure and Evolution of Stars**

DR A. N. ZYTKOW

M. W. F. 12, *MR11***Statistical Learning in Practice**

DR A. J. COCA

M. W. F. 10, *MR9* (Twelve lectures) and *CATAM Room* (Twelve practicals)**Random Planar Geometry**

PROF. J. MILLER

M. W. 10, *MR11***Fluid Dynamics of Climate**

PROF. P. H. HAYNES, DR J. R. TAYLOR

M. W. F. 10, *MR12***Elliptic Partial Differential Equations**

PROF. N. WICKRAMASEKERA

M. W. F. 10, *MR13***Complex Dynamics**

DR H. KRIEGER

M. W. F. 10, *MR14***String Theory**

DR R. REID-EDWARDS

M. W. F. 11, *MR2*

No lecture on Friday 17 Jan

**Symplectic Topology**

DR A. KEATING

M. W. F. 11, *MR5***Topics in Statistical Theory**

DR Y. ZEMEL

M. W. 11, *MR9***Infinite Games**

PROF. B. LÖWE

M. W. F. 11, *MR13***Introduction to Geometric Measure Theory**

DR S. BECKER-KAHN

M. W. F. 11, *MR14***Extrasolar Planets**

DR N. MADHUSUDHAN

M. W. F. 11, *MR15*

**Introduction to Non-Linear Analysis**

PROF. P. RAPHAEL  
M. W. F. 12, *MR13*

**Elliptic Curves**

DR T. A. FISHER  
M. W. F. 12, *MR14*

**Algebra**

DR C. J. B. BROOKES  
Tu. Th. S. 9, *MR4*

**Differential Geometry**

DR A. G. KOVALEV  
Tu. Th. S. 9, *MR9*

**Non-Newtonian Fluid Mechanics**

PROF. E. LAUGA  
Tu. Th. 9, *MR12*

**Quantum Computation**

PROF. R. JOZSA  
Tu. Th. 9, *MR13*

**Symmetries, Fields and Particles**

PROF. N. DOREY  
Tu. Th. S. 10, *MR2*  
No lecture on Saturday 26 October

**Percolation and Related Topics**

PROF. G. R. GRIMMETT  
Tu. Th. 10, *MR5*

**Toric Geometry**

DR D. RANGANATHAN  
Tu. Th. S. 10, *MR9*

**Distribution Theory and Applications**

DR A. ASHTON  
Tu. Th. 10, *MR12*

**Topics in Convex Optimisation**

DR H. FAWZI  
Tu. Th. 10, *MR13*

**Black Holes**

PROF. H. S. REALL  
M. W. F. 12, *MR3*

**Astrostatistics**

DR K. MANDEL  
M. W. F. 12, *MR5*

**Theoretical Physics of Soft Condensed Matter**

DR R. ADHIKARI, PROF. M. E. CATES, DR R. L. JACK  
M. W. F. 12, *MR12*

**Model Theory**

DR S. BARBINA  
M. F. 12, *MR13*

**Complex Manifolds**

DR R. DERVAN  
M. W. F. 12, *MR14*

**The Standard Model**

PROF. F. QUEVEDO  
Tu. Th. S. 9, *MR2* (starting Saturday 18 Jan)

**Modular Representation Theory**

DR S. MARTIN  
Tu. Th. S. 9, *MR5*

**Extremal Graph Theory**

PROF. A. G. THOMASON  
Tu. Th. 9, *MR9*

**The Life and Death of Galaxies**

DR V. BELOKUROV  
Tu. W. Th. 9, *MR14*

**Advanced Quantum Field Theory**

DR M. B. WINGATE  
Tu. Th. S. 10, *MR2* (starting Saturday 18 Jan)

**Topics in Discrete Fourier Analysis**

PROF. W. T. GOWERS  
Tu. Th. 10, *MR9*

**Statistics in Medical Practice +**  
DR C. JACKSON AND COLLEAGUES  
Tu. Th. 11, *MR5* (Twelve lectures)  
no lecture on Thursday 7 November

**Lie Algebras and their Representations**  
PROF. I. GROJNOWSKI  
Tu. Th. S. 11, *MR9*, beginning Th. 17<sup>th</sup> October

**Quantum Field Theory**  
PROF. B. ALLANACH  
Tu. Th. S. 12, *MR2*

**Ramsey Theory**  
PROF. I. B. LEADER  
Tu. Th. 12, *MR5*

**Modular Forms and L-Functions**  
PROF. A. J. SCHOLL  
Tu. Th. S. 12, *MR9*

**Mapping Class Groups**  
DR H. WILTON  
Tu. Th. 12, *MR11*

**Perturbation Methods**  
DR S. J. COWLEY  
Tu. Th. 12, *MR12*

**Inverse Problems in Imaging**  
DR H. KEKKONEN, DR Y. KOROLEV  
Tu. Th. S. 12, *MR13*

**Causal Inference**  
DR Q. ZHAO  
Tu. Th. 12, *MR14*

**Hydrodynamic Stability**  
PROF. R. R. KERSWELL  
Tu. Th. 10, *MR12*  
No lecture on Thursday 16 Jan  
Additional lecture on Thursday 12 March

**Supersymmetry**  
DR D. B. SKINNER  
Tu. Th. 11, *MR3*

**Numerical Solution of Differential Equations**  
PROF. A. ISERLES  
Tu. Th. S. 11, *MR5*

**Analytic Number Theory**  
DR T. BLOOM  
Tu. Th. S. 11, *MR9*

**Analysis of Survival Data +**  
DR P. TREASURE  
Tu. Th. 11, *MR12* (Twelve lectures)

**Binary Stars**  
PROF. C. A. TOUT  
Tu. Th. 11, *MR13*

**Profinite Groups**  
DR G. WILKES  
Tu. Th. S. 12, *MR5*

**Dynamics of Astrophysical Discs**  
PROF. G. I. OGILVIE  
Tu. Th. 12, *MR9*

**Random Walks and Uniform Spanning Trees**  
DR T. M. HUTCHCROFT  
Tu. Th. 12, *MR13*

*The following courses are non-examinable*

**Laboratory Demonstrations**  
DR J. A. NEUFELD  
W. 2-3:30, *Fluids Laboratory*

+ These two courses constitute the 24 lecture course in Statistics in Medicine