

# MATHEMATICAL SCIENCES

## DIVISION OF MATHEMATICAL AND PHYSICAL SCIENCES

### Lecture List for Michaelmas Term 2023

There may be late changes and amendments to this Lecture List. For an up-to-date version, please check the Mathematical Institute Website: <https://www.maths.ox.ac.uk/members/students/lecture-lists>

This version updated 20/10/23

Events shown on this list are generally one hour long unless stated otherwise.

<i>Subject</i>	<i>Lecturer</i>	<i>Time*</i>	<i>Place</i>
<b>GRADUATE SEMINARS</b>			
Algebra Seminar	Prof. Dan Ciubotaru	Tu. 2 [L5] M. 3 (Week 7 only) [L6]	L5/L6, Mathematical Institute
Algebraic Geometry Seminar	Prof. Frances Kirwan	Tu. 3:30–5	C6, Mathematical Institute
Applied Topology Seminar		F. 3	L5, Mathematical Institute
Combinatorics Seminar	Prof. Alex Scott	T. 2-3:30	L3, Mathematical Institute
Computational Mathematics and Applications	Prof. Patrick Farrell, Prof. Yuji Nakatsukasa, Prof. Nick Trefethen	Th. 2	L3, Mathematical Institute
Fridays@4		F. 4	L1, Mathematical Institute
Functional Analysis	Prof. Stuart White	Tu. 4 (Week 1 in C3, Week 3 in C1)	C2, Mathematical Institute
Geometric Group Theory	Prof. Dawid Kielak	Tu. 3	L1, Mathematical Institute
Geometry and Analysis	Prof Frances Kirwan and Prof. Guillem Cazassus	M. 2–3.30	L4, Mathematical Institute
Industrial and Applied Mathematics		Th. 12	L1, Mathematical Institute
Junior Algebra & Representation Theory seminar	Jonas Antor, Mick Gielen	F. 12	N3.12, Mathematical Institute
Junior Combinatorics seminar	Jane Tan, Freddie Illingworth	F. 1-2:30 (Week 6 in C6, Week 7 in C5)	C4, Mathematical Institute
Junior Geometry Seminar	George Cooper, Andres Ibanez Nunez, Gilles Englebert	Th. 3 (even weeks)	L4, Mathematical Institute
Junior Topology and Group Seminar	Adele Jackson	W. 4	L6, Mathematical Institute
Logic	Prof. Jonathan Pila, Prof Ehud. Hrushovski, Prof. Jochen Koenigsmann	Th. 5	L3, Mathematical Institute
Mathematical and Computational Biology	Prof. Philip Maini, Dr Peter Minary	F. 2	L3, Mathematical Institute
Mathematical and Computational Finance Seminar	Prof. Rama Cont and Dr Anran Hu	Th. 4	L4, Mathematical Institute
Mathematical Geoscience	Prof Ian Hewitt	F. 2 (even weeks)	L4, Mathematical Institute
Networks Seminar	Erik Hormann	Tu. 2	C6, Mathematical Institute
Nonlinear PDE	Prof. Gui-Qiang Chen	Th. 3:15–5:45	C5, Mathematical Institute
Number Theory	Aleksander Horawa and Lasse Grimmelt	Th. 4	L5, Mathematical Institute
Numerical Analysis Internal Seminar	Prof. Patrick Farrell, Prof. Yuji Nakatsukasa, Prof. Nick Trefethen	Tu. 2 (even weeks)	L4, Mathematical Institute

Oxford Data Science Seminar	Prof. Melanie Weber	M. 2	L6, Mathematical Institute
Partial Differential Equations Seminar	Prof. Andrea Modino and Prof. Qian Wang	M. 4.30	L3, Mathematical Institute
OxPDE lunchtime seminar	Dr Ben Fehrman and Eliana Fausti	Th. 12	L3, Mathematical Institute
Probability	Prof. Christina Goldschmidt	M. 2	L5, Mathematical Institute
Quantum Field Theory/Relativity/Amplitudes	Prof. Lionel Mason and Prof. Chris Beem	F. 12–1:30	L3, Mathematical Institute
Random Matrix Theory Seminar	Prof Jon Keating	Tu. 4	L6, Mathematical Institute
Stochastic Analysis Internal Seminar	Prof. Massimiliano Gubinelli	Tu. 11	L4, Mathematical Institute
Stochastic Analysis and Mathematical Finance Seminar	Prof. Rama Cont and Prof. Massimiliano Gubinelli	M. 3:30	L3, Mathematical Institute
String Theory		T. 1	L1, Mathematical Institute
Topology Seminar	Prof. André Henriques and Prof. Panos Papazoglou	M. 3:30-5	L4, Mathematical Institute
Wolfson Centre for Mathematical Biology Journal Club	Prof. Philip Maini	M. 12	L6, Mathematical Institute
<b>GRADUATE WORKSHOPS</b>			
<b>WORKSHOPS</b>			
Industrial and Interdisciplinary Workshops	Prof. Chris Breward and Yixuan Sun	F.9.45-11.15	Mathematical Institute, L6
<b>ADVANCED CLASSES</b>			
Geometric Group Theory	Prof. Dawid Kielak	Tu. 3	L3, Mathematical Institute
Logic	Prof Ehud Hrushovski	Th. 11	C6, Mathematical Institute
Topology	Prof André Henriques and Dr. Lukas Brantner	M. 11-12:30 (Week 8 in C4)	C5, Mathematical Institute
<b>TAUGHT COURSE CENTRE</b>			
<p>The Taught Course Centre is a collaboration between the Mathematics Departments at the Universities of Bath, Bristol, Imperial, Oxford and Warwick. It aims to offer approximately 25 graduate level courses over the academic year. Access grid technology will be used so that audiences in all five universities can participate in the lectures. Graduate students should register in advance in order to attend the lectures. For more information about the Taught Course Centre, and for their lecture timetable, please see the website at <a href="https://www.maths.ox.ac.uk/groups/tcc">https://www.maths.ox.ac.uk/groups/tcc</a></p>			
<b>EPSRC CDT in MATHEMATICS OF RANDOM SYSTEMS</b>			
Simulation Methods	Prof Christoph Reisinger	T.2-4	Mathematical Institute, L6
Theories of Deep Learning	Prof. Jared Tanner	Tu. 11-1 (except Week 6) [L3] F. 1-3 (Week 5 only) [L2]	Mathematical Institute, L2/L3
CDT Faculty Talks		T. 4:15-5	Mathematical Institute, L2
<b>M.Sc IN MATHEMATICAL AND COMPUTATIONAL FINANCE</b>			
Financial Computing with C++	Dr Greg Gyurko	W. 2-4	Mathematical Institute, L3
Financial Derivatives	Prof. Sam Cohen	Tu. 9-11	Mathematical Institute, L3
Numerical Methods	Prof. Mike Giles	M. 11 [L3] Tu. 11 [L2]	Mathematical Institute, L2/L3

Statistics and Financial Data Analysis	Dr Anran Hu	Th. 10-12	Mathematical Institute, L3
Stochastic Calculus	Prof. Michael Monoyios	M. 9-11	Mathematical Institute, L3
<b>M.Sc IN MATHEMATICAL AND THEORETICAL PHYSICS</b>			
Advanced Quantum Theory	Prof. John Chalker	W. 2-4 (Weeks 2-8) Th. 3-5	Department of Physics, Lindemann
Algebraic Geometry	Prof. Damian Rössler	M. 9 [L4] Tu. 10 [L5]	Mathematical Institute, L4/L5
Algebraic Topology	Prof. André Henriques	Tu. 3 [L5] W. 3 [L4]	Mathematical Institute, L4/L5
Differentiable Manifolds	Prof. Dominic Joyce	W. 12 F. 12	Mathematical Institute, L4
General Relativity I	Prof. Chris Couzens	M. 4 [L2] Tu. 4 [L3]	Mathematical Institute, L2/L3
Groups and Representations	Prof. Andre Lukas	M. 3 (Weeks 4-6) T.10-12 (Weeks 1-2, 4-7) Th. 2 (Weeks 1-7) F. 2-4 (Week 2 only)	Department of Physics, Lindemann
Kinetic Theory	Prof. Paul Dellar, Prof. Alex Schekochihin, Dr Chris Hamilton	M.10-11.30 (Except Week 2) M. 3-5 (Weeks 1-3, 7-8) Tu. 12	Department of Physics, Lindemann
Networks	Prof. Peter Grindrod	Tu. 2 W. 2	Mathematical Institute, L2
Numerical Linear Algebra	Prof. Jared Tanner	W. 4 F. 4	Mathematical Institute, L3
Perturbation Methods	Prof. Ruth Baker	M. 10 [L5] (Except Week 5) M. 3 [L1] (Weeks 1 and 4 only) Tu. 11 [L5] (Except Week 5)	Mathematical Institute, L1/L5
Quantum Field Theory	Prof. John Wheeler	M.14 T.15 W.9	Department of Physics, Lindemann
Quantum Processes in Hot Plasma	Prof. Peter Norreys	T. 2-4	Department of Physics, DWB Fisher Room
Topics in Fluid Mechanics	Prof. Eamonn Gaffney	W. 12 Th. 12	Mathematical Institute, L5
An Introduction to Topological Phases of Matter	Prof. Shivaji Sondhi	F. 10-12	Department of Physics, DWB Fisher Room
<b>M.Sc IN MATHEMATICAL MODELLING AND SCIENTIFIC COMPUTING</b>			
<b>CORE</b>			
Supplementary Applied Mathematics	Prof. Helen Byrne	Th. 2-4 (Weeks 1-4)	Mathematical Institute, L5
Applied PDEs	Prof. Andreas Muench	F. 9-11	Mathematical Institute, L3
Numerical Solution of Partial Differential Equations	Dr Charles Parker	W. 11 [L2] Th. 10 [L5]	Mathematical Institute, L2/L5
Numerical Linear Algebra	Prof. Jared Tanner	W. 4	Mathematical Institute, L3

		F. 4	
Mathematical Modelling	Prof. Helen Byrne	M. 3 (Weeks 5-8) Th. 2-4 (Weeks 5-8)	Mathematical Institute, L5
Additional Skills	Dr Kathryn Gillow	M. 11-1	Mathematical Institute, L4
Practical Numerical Analysis	Dr Kathryn Gillow	W. 3 [L3] F. 12 [L5]	Mathematical Institute, L3/L5
<b>SPECIAL TOPICS</b>			
Further Mathematical Biology	Prof. Ruth Baker	M. 9 (except Week 5) [L5] Tu. 12 (except Week 5) [L5] M. 2 (Weeks 1 and 4 only) [L1]	Mathematical Institute, L1/L5
Integer Programming	Prof. Raphael Hauser	Tu. 5 [L3] (Except Week 6) [Week 2 in L1, Week 7 in L2] Th. 4 [L2] F. 5 (Week 6 only) [L3]	Mathematical Institute, L1/L2/L3
Mathematical Geoscience	Prof. Jon Chapman	M. 5 Tu. 5	Mathematical Institute, L4
Mathematical Physiology	Prof. Ian Griffiths	M. 4 [L6] Tu. 4 [L4]	Mathematical Institute, L4/L6
Networks	Prof. Peter Grindrod	Tu. 2 W. 2	Mathematical Institute, L2
Perturbation Methods	Prof. Ruth Baker	M. 10 [L5] (Except Week 5) M. 3 [L1] (Weeks 1 and 4 only) Tu. 11 [L5] (Except Week 5)	Mathematical Institute, L1/L5
Stochastic Differential Equations	Prof. Massimiliano Gubinelli	M. 9 [L2] Th. 9 [L5] (Except Week 1) Th. 10 [L4] (Week 1 only)	Mathematical Institute, L2/L4/L5
Theories of Deep Learning	Prof. Jared Tanner	Tu. 11-1 (except Week 6) [L3] F. 1-3 (Week 5 only) [L2]	Mathematical Institute, L2/L3
Topics in Fluid Mechanics	Prof. Eamonn Gaffney	W. 12 Th. 12	Mathematical Institute, L5
Viscous Flow	Prof. Chris Breward	M. 10 Tu. 10	Mathematical Institute, L4
<b>M.Sc IN MATHEMATICAL SCIENCES</b>			
The lectures below for MATHEMATICS Part C/OMMS all apply.			
<b>M.Sc IN MATHEMATICS AND THE FOUNDATIONS OF COMPUTER SCIENCE</b>			
An Introduction to LaTeX			Recorded videos available via <a href="https://courses.maths.ox.ac.uk/">https://courses.maths.ox.ac.uk/</a>
<b>Section A: Mathematical Foundations</b>			
<b>Schedule I</b>			
Algebraic Topology	Prof. André Henriques	Tu. 3 [L5] W. 3 [L4]	Mathematical Institute, L4/L5
Analytic Topology	Prof. Rolf Suabedissen	Tu. 9 F. 9	Mathematical Institute, L4
Category Theory	Prof. Dan Ciubotaru	M. 11 [L1] Tu. 12 [L2]	Mathematical Institute, L1/L2
Differentiable Manifolds	Prof. Dominic Joyce	W. 12	Mathematical Institute, L4

		F. 12	
Introduction to Representation Theory	Prof. Konstantin Ardakov	W. 2-4	Mathematical Institute, L5
Model Theory	Prof Jochen Koenigsmann	W. 9 Th. 9	Mathematical Institute, L4
Topology and Groups	Prof. Andras Juhasz	Tu. 3 Th. 2	Mathematical Institute, L2
<b>Schedule II</b>			
Algebraic Geometry	Prof. Damian Rössler	M. 9 [L4] Tu. 10 [L5]	Mathematical Institute, L4/L5
Homological Algebra	Prof. Kobi Kremnitzer	M. 2 Th. 4	Mathematical Institute, L3
Infinite Groups	Prof. Cornelia Drutu	Tu. 10 [L6] (Weeks 2-8) Th. 2 [L4] (Weeks 2-3 only) F. 10 [L5] (Weeks 2-8)	Mathematical Institute, L4/L5/L6
<b>Section B: Applicable Theories</b>			
<b>Schedule I</b>			
Quantum Processes and Computation	Prof. Aleks Kissinger	M.12 W.12 F.12	Department of Computer Science, Tony Hoare Room (RHB)
Graph Theory	Prof. Paul Balister	Th. 9 [L3] (Week 1 in L5) F. 11 [L3]	Mathematical Institute, L3/L5
Information Theory	Prof. Sam Cohen	Th. 11 F. 4	Mathematical Institute, L2
Integer Programming	Prof. Raphael Hauser	Tu. 5 [L3] (Except Week 6) [Week 2 in L1, Week 7 in L2] Th. 4 [L2] F. 5 (Week 6 only) [L3]	Mathematical Institute, L1/L2/L3
<b>Schedule II</b>			
Additive Combinatorics	Prof. Ben Green	M. 12 [L5] Th. 12 [L4]	Mathematical Institute, L4/L5
Combinatorics	Dr Gal Kronenberg	W. 4 [L1] F. 3 [L3]	Mathematical Institute, L1/L3
Computational Learning Theory	Prof. Varun Kanade	M. 4 T. 4 Th. 4	Department of Computer Science, LTA
Networks	Prof. Peter Grindrod	Tu. 2 W. 2	Mathematical Institute, L2
<b>MATHEMATICS</b>			
<b>Prelims</b>			
Introduction to University Mathematics	Prof. Ian Hewitt	M. 10 (Week 1) Tu. 10 (Week 1)	Mathematical Institute, L1
Introduction to Complex Numbers	Prof. Andy Wathen	Tu. 9 (Week 1) W. 9 (Week 1)	Mathematical Institute, L1
Linear Algebra I	Prof. Andy Wathen	Tu. 9 (Weeks 2-8) W. 9 (Weeks 2-8)	Mathematical Institute, L1
Geometry	Prof. Derek Moulton	M. 10 (Weeks 2-8)	Mathematical Institute, L1

		F. 10 (Weeks 1-8)	
Analysis I	Prof. Alexander Ritter	Th. 9 (Week 1) Th. 9-11 (Weeks 2-8, except Week 4) Tu. 11 (Weeks 4-5)	Mathematical Institute, L1
Introductory Calculus	Prof. Emmanuel Breuillard	Tu. 10 (Weeks 4-8) Tu. 11 (Weeks 1-2) W. 10 (Weeks 1-8, except Week 3) Th. 9-11 (Week 4 only)	Mathematical Institute, L1
Probability	Prof. Matthias Winkel	M. 9 (Weeks 1-8) F. 9 (Weeks 1-8)	Mathematical Institute, L1
Computational Mathematics	Prof. Patrick Farrell	Tu. 10 (Week 2) Th. 10 (Week 1)	Mathematical Institute, L1
Fridays@2		F. 2	Mathematical Institute, L1
<b>Part A</b>			
A0 Linear Algebra	Prof. Andrew Dancer	M. 9 Th. 9	Mathematical Institute, L2
A1 Differential Equations I	Prof. Melanie Rupflin	Tu. 9 F. 10	Mathematical Institute, L2
A2 Metric Spaces and Complex Analysis	Prof. Dmitry Belyaev & Prof. Panos Papazoglou	M. 10 T.10 W.10 Th.10	Mathematical Institute, L2
A8 Probability	Prof. James Martin	W. 11 Th. 11	Mathematical Institute, L1
A11 Quantum Theory	Dr Mark Mezei	M.11 F.11	Mathematical Institute, L2
Fridays@2		F.2	Mathematical Institute, L1
<b>Part B</b>			
B1.1 Logic	Prof. Martin Bays	Th. 3 F. 3	Mathematical Institute, L2
B2.1 Introduction to Representation Theory	Prof. Konstantin Ardakov	W. 2-4	Mathematical Institute, L5
B3.1 Galois Theory	Prof. Konstantin Ardakov	M. 2-4	Mathematical Institute, L2
B3.2 Geometry of Surfaces	Prof. Richard Earl	M. 11 Tu. 9	Mathematical Institute, L5
B3.5 Topology and Groups	Prof. Andras Juhasz	Tu. 3 Th. 2	Mathematical Institute, L2
B4.1 Functional Analysis I	Prof. Luc Nguyen	W. 12 [L3] F. 12 [L2]	Mathematical Institute, L2/L3
B4.3 Distribution Theory	Prof. Jan Kristensen	Tu. 4 W. 4	Mathematical Institute, L5
B5.2 Applied PDEs	Prof. Andreas Muench	F. 9-11	Mathematical Institute, L3
B5.3 Viscous Flow	Prof. Chris Breward	M. 10	Mathematical Institute, L4

		Tu. 10	
B5.5 Further Mathematical Biology	Prof. Ruth Baker	M. 9 (except Week 5) [L5] Tu. 12 (except Week 5) [L5] M. 2 (Weeks 1 and 4 only) [L1]	Mathematical Institute, L1/L5
B6.1 Numerical Solution of Partial Differential Equations	Dr Charles Parker	W. 11 [L2] Th. 10 [L5]	Mathematical Institute, L2/L5
B6.3 Integer Programming	Prof. Raphael Hauser	Tu. 5 [L3] (Except Week 6) [Week 2 in L1, Week 7 in L2] Th. 4 [L2] F. 5 (Week 6 only) [L3]	Mathematical Institute, L1/L2/L3
B7.1 Classical Mechanics	Prof. Lionel Mason	M. 5 Tu. 5	Mathematical Institute, L5
B8.1 Probability, Measure and Martingales	Prof. Jan Obloj	M. 12 W. 9	Mathematical Institute, L2
B8.4 Information Theory	Prof. Sam Cohen	Th. 11 F. 4	Mathematical Institute, L2
B8.5 Graph Theory	Prof. Paul Balister	Th. 9 [L3] (Week 1 in L5) F. 11 [L3]	Mathematical Institute, L3/L5
BO1.1 History of Mathematics	Dr Christopher Hollings	M. 10-12	Mathematical Institute, L6
BSP Structured Projects	Dr Cath Wilkins	M.4 (Week 1 only)	Mathematical Institute, L5
SB1.1 Applied Statistics	Dr Neil Laws & Prof. Frank Windmeijer	M. 3 (Weeks 1-7) Tu. 3 (Weeks 2-6) Th. 2 (Week 1 only) Practicals: W. 2-3:30 (Weeks 3, 5, 8)	Department of Statistics
SB2.1 Foundations of Statistical Inference	Prof George Deligiannidis	M. 2 W. 11	Department of Statistics
101 Early Modern Philosophy: Descartes	Prof. Paul Lodge	Tu. 10	Examination Schools (Room 7)
101 Early Modern Philosophy: Hume	Prof. Peter Kail	Th.10	Examination Schools (Room 6)
102 Knowledge and Reality: Epistemology	Prof. Bernhard Salow	M. 10	Examination Schools (North School except Week 1: Room 7)
122 Philosophy of Mathematics	Prof. Beau Mount	M. 10	Radcliffe Humanities Lecture Room
Fridays@2		F. 2	Mathematical Institute, L1
*An Introduction to LaTeX			Recorded videos available via <a href="https://courses.maths.ox.ac.uk/">https://courses.maths.ox.ac.uk/</a>
<b>Part C / OMMS</b>			
C1.1 Model Theory	Prof Jochen Koenigsmann	W. 9 Th. 9	Mathematical Institute, L4
C1.3 Analytic Topology	Prof. Rolf Suabedissen	Tu. 9 F. 9	Mathematical Institute, L4
C2.2 Homological Algebra	Prof. Kobi Kremnitzer	M. 2 Th. 4	Mathematical Institute, L3

C2.4 Infinite Groups	Prof. Cornelia Drutu	Tu. 10 [L6] (Weeks 2-8) Th. 2 [L4] (Weeks 2-3 only) F. 10 [L5] (Weeks 2-8)	Mathematical Institute, L4/L5/L6
C2.7 Category Theory	Prof. Dan Ciubotaru	M. 11 [L1] Tu. 12 [L2]	Mathematical Institute, L1/L2
C3.1 Algebraic Topology	Prof. André Henriques	Tu. 3 [L5] W. 3 [L4]	Mathematical Institute, L4/L5
C3.3 Differentiable Manifolds	Prof. Dominic Joyce	W. 12 F. 12	Mathematical Institute, L4
C3.4 Algebraic Geometry	Prof. Damian Rössler	M. 9 [L4] Tu. 10 [L5]	Mathematical Institute, L4/L5
C3.5 Lie Groups	Prof. Jason Lotay	M. 5 [L6] (Week 3 only) Tu. 5 [L6] (Week 3 only) W. 5 [L5] (Except Week 3) Th. [L5] (Except Week 3)	Mathematical Institute, L5/L6
C3.6 Modular Forms	Prof. Alan Lauder	W. 10 [L5] Th. 10 [L4]	Mathematical Institute, L4/L5
C3.10 Additive Combinatorics	Prof. Ben Green	M. 12 [L5] Th. 12 [L4]	Mathematical Institute, L4/L5
C4.1 Further Functional Analysis	Dr Daniel Drimbe	Th. 2-4	Mathematical Institute, L6
C4.3 Functional Analytic Methods for PDEs	Prof. Luc Nguyen	W. 11 F. 11	Mathematical Institute, L5
C5.2 Elasticity and Plasticity	Prof. Jim Oliver	Th. 11 F. 11	Mathematical Institute, L4
C5.4 Networks	Prof. Peter Grindrod	Tu. 2 W. 2	Mathematical Institute, L2
C5.5 Perturbation Methods	Prof. Ruth Baker	M. 10 [L5] (Except Week 5) M. 3 [L1] (Weeks 1 and 4 only) Tu. 11 [L5] (Except Week 5)	Mathematical Institute, L1/L5
C5.7 Topics in Fluid Mechanics	Prof. Eamonn Gaffney	W. 12 Th. 12	Mathematical Institute, L5
C5.11 Mathematical Geoscience	Prof. Jon Chapman	M. 5 Tu. 5	Mathematical Institute, L4
C5.12 Mathematical Physiology	Prof. Ian Griffiths	M. 4 [L6] Tu. 4 [L4]	Mathematical Institute, L4/L6
C6.1 Numerical Linear Algebra	Prof. Jared Tanner	W. 4 F. 4	Mathematical Institute, L3
C6.5 Theories of Deep Learning	Prof. Jared Tanner	Tu. 11-1 (except Week 6) [L3] F. 1-3 (Week 5 only) [L2]	Mathematical Institute, L2/L3
C7.5 General Relativity I	Prof. Chris Couzens	M. 4 [L2] Tu. 4 [L3]	Mathematical Institute, L2/L3
C8.1 Stochastic Differential Equations	Prof. Massimiliano Gubinelli	W. 9 [L3] Th. 9 [L5] (Except Week 1) Th. 10 [L4] (Week 1 only)	Mathematical Institute, L3/L4/L5
C8.3 Combinatorics	Dr Gal Kronenberg	W. 4 [L1]	Mathematical Institute, L1/L3

		F. 3 [L3]	
CCS2 Quantum Processes and Computation	Prof. Aleks Kissinger	M.12 W.12 F.12	Department of Computer Science, Tony Hoare Room (RHB)
SC1 Stochastic Models in Mathematical Genetics	Prof. Simon Myers	M. 12 W. 4	Department of Statistics
SC2 Probability and Statistics for Network Analysis	Prof. Gesine Reinert	W. 12 (Weeks 1-7) Th. 11 (Weeks 1-7) Practicals: F. 11-1 (Weeks 2 and 6)	Department of Statistics
SC6 Graphical Models	Prof. Robin Evans	M. 9 Tu. 4	Department of Statistics
SC9 Probability on Graphs and Lattices	Prof. Christina Goldschmidt/Dr Brett Kolesnik	Tu. 10 Th. 10	Department of Statistics
Fridays@2		F. 2	Mathematical Institute, L1
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\*These lectures will be useful to students offering an Extended Essay or Dissertation.

## COMPUTER SCIENCE

### Prelims

Functional Programming	Prof. Andrzej Murawski	W.10 F. 10	Department of Computer Science, LTB
Discrete Mathematics	Prof. Andreas Galanis	W. 11 F. 11	Department of Computer Science, LTB
Linear Algebra	Prof. Stefan Kiefer	T. 9 W. 9 (Weeks 1-4) Th. 9	Department of Computer Science, LTA
Probability	Prof. Matthias Winkel	M. 9 (Weeks 1-8) F. 9 (Weeks 1-8)	Mathematical Institute, L1

## MATHEMATICS AND COMPUTER SCIENCE

### Prelims

Functional Programming	Prof. Andrzej Murawski	W.10 F. 10	Department of Computer Science, LTB
Introduction to University Mathematics	Prof. Ian Hewitt	M. 10 (Week 1) Tu. 10 (Week 1)	Mathematical Institute, L1
Introduction to Complex Numbers	Prof. Andy Wathen	Tu. 9 (Week 1) W. 9 (Week 1)	Mathematical Institute, L1
Analysis I	Prof. Alexander Ritter	Th. 9 (Week 1) Th. 9-11 (Weeks 2-8, except Week 4) Tu. 11 (Weeks 4-5)	Mathematical Institute, L1
Linear Algebra I	Prof. Andy Wathen	Tu. 9 (Weeks 2-8) W. 9 (Weeks 2-8)	Mathematical Institute, L1
Probability	Prof. Matthias Winkel	M. 9 (Weeks 1-8) F. 9 (Weeks 1-8)	Mathematical Institute, L1

## COMPUTER SCIENCE

<b>Part A</b>			
<b>Core</b>			
Compilers	Prof. Mike Spivey	Tu. 12 Th. 12	Department of Computer Science, LTA
Models of Computation	Prof Christian Coester	M.12 W. 12	Department of Computer Science, LTA
<b>Part A / Part B</b>			
<b>Schedule S1</b>			
Combinatorial Optimisation	Prof. Standa Živný	Tu. 11 (Except Week 6) Th. 11 (Except Week 6)	Department of Computer Science, LTB
Computer Security	Prof. Michael Goldsmith	M. 10 (Except Weeks 3 and 8) Tu. 10 (Weeks 1-7) Th. 10 (Weeks 1-3)	Department of Computer Science, LTB
Geometric Modelling	Prof. Joe Pitt-Francis	M. 10 (Weeks 1-7) W. 10 (Weeks 1-7) F. 10 (Weeks 1-2)	Department of Computer Science, LTA
Machine Learning	Dr Atılım Güneş Baydin	Th. 4-6 (Weeks 1-4) Th. 4-5 (Weeks 5-8) F. 4 (Weeks 1-8)	Department of Computer Science, LTB
Principles of Programming Languages	Dr Sam Staton	M. 3 Tu. 3	Department of Computer Science, LTA
<b>Schedule S2</b>			
Lectures under Mathematics Part B: B8.4, B6.3 are applicable.			
<b>Part C</b>			
<b>Schedule C1</b>			
Combinatorial Optimisation	Prof. Standa Živný	Tu. 11 (Except Week 6) Th. 11 (Except Week 6)	Department of Computer Science, LTB
Computational Biology	Prof. Peter Minary	T. 9 Th. 9 F. 9 (Weeks 1-4)	Department of Computer Science, Tony Hoare Room (RHB)
Computational Learning Theory	Prof. Varun Kanade	M. 4 T. 4 Th. 4	Department of Computer Science, LTA
Concurrent Algorithms and Data Structures	Dr Hanno Nickau	M. 11 (Weeks 1-7) W. 11 (Weeks 1-7) F. 11 (Weeks 1-6)	Department of Computer Science, Tony Hoare Room (RHB)
Graph Representation Learning	Prof. Ismail Ceylon	M. 2 (Weeks 1-4) W. 2-4 Practicals: Th. 11-1 (Weeks 3-7) F. 4-6 (Weeks 3-7)	Department of Computer Science, LTB (lectures) and 60.05 Thom Lab (practicals)
Law and Computer Science	Prof. Rebecca Williams/Prof. Tom Melham	T. 11-13 Practicals: Th. 9-11 (Weeks 1,4, 6-8)	Department of Computer Science, Law Faculty

Probabilistic Model Checking	Prof. Alessandro Abate	Tu. 3 Th. 10-12 (Weeks 1-4) Th. 10-11 (Weeks 5-8)	Department of Computer Science, Tony Hoare Room (RHB)
Probability and Computing	Dr Mark Roth/Prof. Leslie Goldberg	M. 9 W. 9 F. 9 (Weeks 1-4)	Department of Computer Science, LTB
Quantum Processes and Computation	Prof. Aleks Kissinger	M.12 W.12 F.12	Department of Computer Science, Tony Hoare Room (RHB)
<b>MATHEMATICS &amp; COMPUTER SCIENCE</b>			
<b>Part A</b>			
<b>Core</b>			
Models of Computation	Prof Christian Coester	M.12 W. 12	Department of Computer Science, LTA
[In addition, the lectures under Mathematics Part A, except Differential Equations I, are applicable.]			
<b>Part A / Part B</b>			
<b>Schedule S1(M&amp;CS)</b>			
Combinatorial Optimisation	Prof. Standa Živný	Tu. 11 (Except Week 6) Th. 11 (Except Week 6)	Department of Computer Science, LTB
Compilers	Prof. Mike Spivey	Tu. 12 Th. 12	Department of Computer Science, LTA
Geometric Modelling	Prof. Joe Pitt-Francis	M. 10 (Weeks 1-7) W. 10 (Weeks 1-7) F. 10 (Weeks 1-2)	Department of Computer Science, LTA
Machine Learning	Dr Atılım Güneş Baydin	Th. 4-6 (Weeks 1-4) Th. 4-5 (Weeks 5-8) F. 4 (Weeks 1-8)	Department of Computer Science, LTB
Principles of Programming Languages	Dr Sam Staton	M. 3 Tu. 3	Department of Computer Science, LTA
<b>Schedule S2(M&amp;CS)</b>			
Lectures under Mathematics Part B: B1.1- B8.5, are applicable. In addition you may apply to take other topics from the full list of Mathematics Department courses			
<b>Part C</b>			
Schedule C1 applies. Mathematics Part C lectures all apply under Schedule C2. See the handbook for recommended Mathematics options.			
<b>MATHEMATICS AND PHILOSOPHY</b>			
<b>Prelims</b>			
<b>Mathematics:</b>			
Introduction to University Mathematics	Prof. Ian Hewitt	M. 10 (Week 1) Tu. 10 (Week 1)	Mathematical Institute, L1
Introduction to Complex Numbers	Prof. Andy Wathen	Tu. 9 (Week 1) W. 9 (Week 1)	Mathematical Institute, L1
Linear Algebra I	Prof. Andy Wathen	Tu. 9 (Weeks 2-8) W. 9 (Weeks 2-8)	Mathematical Institute, L1
Probability	Prof. Matthias Winkel	M. 9 (Weeks 1-8) F. 9 (Weeks 1-8)	Mathematical Institute, L1
Analysis I	Prof. Alexander Ritter	Th. 9 (Week 1)	Mathematical Institute, L1

		Th. 9-11 (Weeks 2-8, except Week 4) Tu. 11 (Weeks 4-5)	
Introductory Calculus	Prof. Emmanuel Breuillard	Tu. 10 (Weeks 4-8) Tu. 11 (Weeks 1-2) W. 10 (Weeks 1-8, except Week 3) Th. 9-11 (Week 4 only)	Mathematical Institute, L1
<b>Philosophy:</b>			
General Philosophy	Prof. Alex Kaiserman	W.12	Examination Schools (North School)
Introduction to Logic	Prof. Volker Halbach	M.12	Examination Schools (North School)
<b>Part A Mathematics:</b>			
Linear Algebra	Prof. Andrew Dancer	M. 9 Th. 9	Mathematical Institute, L2
Metric Spaces and Complex Analysis	Prof. Dmitry Belyaev & Prof. Panos Papazoglou	M. 10 T.10 W.10 Th.10	Mathematical Institute, L2
[These lectures are for compulsory subjects]			
<b>Part B Mathematics</b>			
B1.2 Set Theory	Prof. Martin Bays	Th. 3 F. 3	Mathematical Institute, L2
[These lectures are for the compulsory subject "Foundations". Other courses listed under mathematics Part B can be taken: see the Mathematics & Philosophy schedule of units.]			
<b>Part B Philosophy:</b>			
101 Early Modern Philosophy: Descartes	Prof. Paul Lodge	Tu. 10	Examination Schools (Room 7)
101 Early Modern Philosophy: Hume	Prof. Peter Kail	Th.10	Examination Schools (Room 6)
102 Knowledge and Reality: Epistemology	Prof. Bernhard Salow	M. 10	Examination Schools (North School except Week 1: Room 7)
122 Philosophy of Mathematics	Prof. Beau Mount	M. 10	Radcliffe Humanities Lecture Room
[For further Philosophy lectures, please consult the Philosophy lecture list]			
<b>Part C Mathematics: Logic</b>			
C1.1 Model Theory	Prof Jochen Koenigsmann	W. 9 Th. 9	Mathematical Institute, L4
C1.3 Analytic Topology	Prof. Rolf Suabedissen	Tu. 9 F. 9	Mathematical Institute, L4
[See Philosophy list for Philosophy subjects which may be offered.]			
<b>MATHEMATICS AND STATISTICS</b>			
<b>Prelims</b>			

The lectures above for MATHEMATICS Prelims all apply.			
<b>Part A</b>			
The lectures above for Mathematics Part A, on the compulsory subjects of Algebra, Analysis, and Differential Equations, all apply.			
<b>Part B</b>			
SB1.1 Applied Statistics	Dr Neil Laws & Prof. Frank Windmeijer	M. 3 (Weeks 1-7) Tu. 3 (Weeks 2-6) Th. 2 (Week 1 only) Practicals: W. 2-3:30 (Weeks 3, 5, 8)	Department of Statistics
SB2.1 Foundations of Statistical Inference	Prof George Deligiannidis	M. 2 W. 11	Department of Statistics
[Other courses listed under Mathematics Part B can be taken: B1, B2, B3, B4, B5, B6, B7, B8]			
<b>Part C</b>			
SC1 Stochastic Models in Mathematical Genetics	Prof. Simon Myers	M. 12 W. 4	Department of Statistics
SC2 Probability and Statistics for Network Analysis	Prof. Gesine Reinert	W. 12 (Weeks 1-7) Th. 11 (Weeks 1-7) Practicals: F. 11-1 (Weeks 2 and 6)	Department of Statistics
SC6 Graphical Models	Prof. Robin Evans	M. 9 Tu. 4	Department of Statistics
SC9 Probability on Graphs and Lattices	Prof. Christina Goldschmidt/Dr Brett Kolesnik	Tu. 10 Th. 10	Department of Statistics
[Other courses under Mathematics Part C can also be taken.]			