MATHEMATICAL SCIENCES
DIVISION OF MATHEMATICAL AND PHYSICAL LIFE SCIENCES
Lecture List for Trinity Term 2022

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 **28 April 2022**
Events shown on this list are generally one hour long unless stated otherwise.

Subject	*Lecturer*	*Time**	*Place*
GRADUATE SEMINARS			
Algebra Seminar	Prof. Dan Ciubotaru	Tu. 2 L6 wks 1-4, 6-8 L5 wk 5	Mathematical Institute
Algebraic Geometry Seminar	Prof. Frances Kirwan, and Prof Balazs Szendroi	Tu. 3.30–5 L3 wks 1-5, 7, 8 L1 wk 6	Mathematical Institute,
Applied Topology Seminar		F. 3	Mathematical Institute, L6 wks 1-8
Arithmetic encoded in Galois groups	Prof Jochen Koenigsmann	Th. 9.30-11	Mathematical Institute, L6 wks 1-8
Combinatorics seminar	Prof. Alex Scott	T. 2-3:15 L4 wk 1-4, 6-8 L3 wk 5	Mathematical Institute
Computational Mathematics and Applications	Prof. Patrick Farrell, Prof. Yuji Nakatsukasa and Prof. Nick Trefethen	Th. 2 L1 wks 1-6 L6 wk 7-8	Mathematical Institute
Fridays@4	Prof. Ian Hewitt	F.4 L1 wks 1, 5 L2 wk 3	Mathematical Institute
Functional Analysis	Prof Stuart White	Tu. 4 C1 wks 1-6 C3 wks 7-8	Mathematical Institute
Geometry and Analysis	Frances Kirwan and Guillem Cazassus	M.2.–3:30	Mathematical Institute L5 wks 1-8
Junior Geometry Seminar	George Cooper, Andres Ibanez Nunez, Gilles Englebert	Th. 3 even weeks L1 wk 2, 4, 6 L2 wk 8	Mathematical Institute
Junior Topology and Group Theory seminar	Adele Jackson	W. 4 L6 wk 1 L5 wks 2-8	Mathematical Institute
Logic	Hrushovski, Pila, Koenigsmann	Th.11.30	Mathematical Institute, L6 wks 1-8
Mathematical and Computational Biology	Prof Philip Maini and Peter Minary	F.2	Mathematical Institute, L6 wks 1-8
Mathematical Geoscience	Prof Ian Hewitt	(even weeks up to week 8) F. 2	Mathematical Institute, L4
Network seminar	Erik Horman	Tu. 2	Mathematical Institute, C6 (wks 0-9)
Nonlinear PDE	Prof. Gui-Qiang G. Chen	Th. 3:30-5:30 L3 wks 1-7 L5 wk 8	Mathematical Institute,

Number Theory	Akshat Mudgal and Otto Viktor Overkamp	Th.4	Mathematical Institute, L5 wks 1-8
Numerical Analysis Internal Seminar	Patrick Farrell, Yuji Nakatsukasa, Nick Trefethen	T.2 L1 wks 1, 3-8 L3 wk 2	Mathematical Institute
Oxford Data Science Seminar	Melanie Weber	M. 2 L1 wks 1-7 L2 wk 8	Mathematical Institute,
Partial Differential Equations Seminar	Prof Luc Nguyen, Prof Andrea Mondino, Prof Qian Wang	M.4.30	Mathematical Institute, L5 wks 1-8
PDE CDT Lunchtime Seminar	Dr Ben Fehrman and Eliana Fausti	Th. 12:00 L5 wks 1-6, 8 L3 wk 7	Mathematical Institute,
Quantum Field Theory/Relativity	Dr Keith Hannabuss, Dr Florence Tsou	Odd weeks up to week 7 T.12–1:30	Mathematical Institute, L3
Random Matrix Theory Seminar	Prof. Jon Keating	Tu. 3.30 L6 wks 1-4, 6-8 L5 wk 5	Mathematical Institute
Regularity theory of spaces with lower Ricci Curvature bounds	Prof. Daniele Semola	Tu.10-12	Mathematical Institute, L3 wks 1-8
Stochastic Analysis and Mathematical Finance Seminars	Prof. Rama Cont and Prof. Terry Lyons	M. 3.30	Mathematical Institute, L2 wks 1-8
Topology seminar	Prof. Andre Henriques, Prof. Dawid Kielak, and Prof. Andras Juhasz	M. 3:30 L4 wk 1 L5 Wks 2-8	Mathematical Institute
Wolfson Centre for Mathematical Biology Journal Club	Prof. Philip Maini	M. 12	Mathematical Institute, L6 wks 1-4, 6-7
GRADUATE WORKSHOPS			
WORKSHOPS			
Industrial and Interdisciplinary Workshops	Prof. Chris Breward and Yixuan Sun	F. 10 L4 wks 1-2, 4-8 L2 wk 3	Mathematical Institute
ADVANCED CLASSES			
Generalized Global Symmetries in QFT	Dr. Lakshya Bhardwaj	(weeks 5-6) M. 4-6 W. 4-6 F. 4-6	Mathematical Institute, L3, except Wed. wk 6, L4
Geometric Group Theory	Prof. Dawid Kielak	F. 11	Mathematical Institute, C3 wks 1-8
Logic	Prof Hrushovski	Th. 2.30 L4 wks 1-6 C3 wks 7-8	Mathematical Institute,
Topology	Prof André Henriques	M. 11	Mathematical Institute, C3 wks 1-8
GRADUATE LECTURES			
TAUGHT COURSE CENTRE			
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 https://www.maths.ox.ac.uk/groups/tcc			
M.Sc. in MATHEMATICAL AND COMPUTATIONAL FINANCE			
M.Sc in MATHEMATICAL AND THEORETICAL PHYSICS			
Advanced Topics in Plasma Physics	Prof Alex Schekochihin	(weeks 1-4) M. 5 Tu. 5 W. 5	Department of Physics, Live on Zoom
Collisional Plasma Physics	Prof Sarah Newton	M.11-1 (weeks 1-8)	Department of Physics, Live on Teams
Collisionless Plasma Physics	Prof Alex Schekochihin	M. 5 wks 1, 2, 4 W. 5 wks 1-4 F. 5 wks 2-4	Department of Physics, Lindenman
Conformal Field Theory	Prof. Fernando Alday	(weeks 1-3) M. 2-4 W. 2-4 F. 2-4	Mathematical Institute, L3
Renormalisation Group	Prof Sakura Schafer-Nameki	(weeks 1, 3, 4) M. 4-6 W. 4-6 F. 4-6	Mathematical Institute, L3
Quantum Field Theory in Curved Space-Time	Prof. Lionel Mason	(weeks 1-4) M. 10-12 W. 11-1	Mathematical Institute, L3
String Theory II	Prof Sakura Schafer-Nameki	(weeks 1, 3, 4) W. 9-11 Th. 9-11 F. 9-11	Mathematical Institute, L3
The Standard Model and Beyond	Prof. John March-Russell	(weeks 1-8) Tu. 11-1 Th. 11-1	Department of Physics, Fisher room
Quantum Matter	Prof. Steve Simon	(weeks 1-5) M. 9-11 W. 9-11	Department of Physics, Fisher room Lectures posted to YouTube, classes live on Zoom
M.Sc in MATHEMATICAL MODELLING AND SCIENTIFIC COMPUTING			
SPECIAL TOPICS			
C++ for Scientific Computing		TBD	Department of Computer Science
Python in Scientific Computing	Prof. Patrick Farrell	TBD	Mathematical Institute
M.Sc in MATHEMATICAL SCIENCES			
The lectures below for MATHEMATICS Part C/OMMS all apply.			
M.Sc in MATHEMATICS AND THE FOUNDATIONS OF COMPUTER SCIENCE			
Section A: Mathematical Foundations			
Schedule I			
Schedule II			
Topological Groups	Prof. Tom Sanders	M. 11, L5	Mathematical Institute

		Tu. 11, wks 1-4, 6-8 L6 wk 5 L5 Th. 11. Wk 7 S0.29 F. 11 wk 7 S0.29	
Section B: Applicable Theories			
Schedule I			
Concurrency	Bill Roscoe	Th. 10-12 F. 10-12	Computer science, lecture room A wks 1,2,4,5
Schedule II			
Applied Category Theory	C Constantine	M. 10 wks 1-5 S0.22 Wks 6&8 S0.29	Mathematical Institute
Cryptography	C Petit and S Jacque	W. 10-12 Even weeks S0.29	Mathematical Institute
MATHEMATICS			
Prelims			
I: Groups and Group Actions	Prof Nikolay Nikolov	Weeks 1–4 M.10 Tu.10	Mathematical Institute, L1
II: Analysis III: Integration	Prof. Prof Marc Lackenby	Weeks 1–4 Th.9 F.9	Mathematical Institute, L1
III: Statistics and Data Analysis	Prof Christl Donnelly and Prof. Dino Sejdinovic	Weeks 1–4 M.9 Tu.9 W.11 Th.11	Mathematical Institute, L1
IV: Constructive Mathematics	Prof Patrick Farrell	Weeks 1–4 W.10 Th.10	Mathematical Institute, L1
Fridays@2	Various	F.2 (weeks TBD)	Mathematical Institute, L1
Part A			
Number Theory	Prof Kobi Kremnitzer	M.2 (weeks 1-3) Tu.2 (weeks 1-3) W.11 (weeks 1-2)	Mathematical Institute, L2
Group Theory	Prof Andrew Dancer	W.12 (weeks 1-2) Th.9 (weeks 1-3) F.9 (weeks 1-3)	Mathematical Institute, L2
Projective Geometry	Prof. Balazs Szendroi	M.10 (week 1-2) Th.12 (weeks 1-3) F.12 (weeks 1-3)	Mathematical Institute, L2
Multidimensional Analysis and Geometry	Prof. Kevin McGerty	M.12 (weeks 1-3) Tu.12 (week 1-3) W. 2 (weeks 1-2)	Mathematical Institute, L2
Calculus of Variations	Prof. James Maynard	Tu.10 (weeks 2-3) Th.11 (weeks 1-3) F.11 (weeks 1-3)	Mathematical Institute, L2
Graph Theory	Prof Marc Lackenby	M.11 (week 1-3) Tu.11 (weeks 1-3)	Mathematical Institute, L2

		Th. 2 (weeks 1-2)	
Special Relativity	Prof Qian Wang	M.9 (weeks 1-3) Tu.9 (weeks 1-3) W.9 (weeks 1-2)	Mathematical Institute, L2
Mathematical Modelling in Biology	Prof Philip Maini	W.10 (weeks 1-3) Th.10 (weeks 1-3) F.10 (weeks 1-2)	Mathematical Institute, L2
Fridays@2	Various	F.2 (weeks TBD)	Mathematical Institute, L1
Part B			
Fridays@2	Various	F.2 (weeks TBD)	Mathematical Institute, L1
Part C / OMMS			
Fridays@2	Various	F.2 (weeks TBD)	Mathematical Institute, L1
COMPUTER SCIENCE			
Prelims			
Digital Systems		TBD	Department of Computer Science
Imperative Programming III		TBD	Department of Computer Science
Introduction to Formal Proof		TBD	Department of Computer Science
Part A			
The COMPUTER SCIENCE Schedule S1 options below all apply			
Part B			
Schedule S1			
Computer Networks			Department of Computer Science
Concurrency			Department of Computer Science
Logic and Proof			Department of Computer Science
Part C			
Schedule C1			
Requirements			Department of Computer Science
MATHEMATICS AND COMPUTER SCIENCE			
Prelims			
Imperative Programming III			Department of Computer Science

I: Groups and Group Actions	Prof Nikolay Nikolov	Weeks 1–4 M.10 Tu.10	Mathematical Institute, L1
II: Analysis III: Integration	Prof. Prof Marc Lackenby	Weeks 1–4 Th.9 F.9	Mathematical Institute, L1
Part A			
See Part A MATHEMATICS lectures above and the Schedule S1(M&CS) lectures below			
Part B			
Schedule S1(M&CS)			
Computer Networks		TBD	Department of Computer Science
Concurrency		TBD	Department of Computer Science
Logic and Proof		TBD	Department of Computer Science
Part C			
The COMPUTER SCIENCE Part C Schedule C1 options all apply.			
MATHEMATICS AND PHILOSOPHY			
Prelims			
Mathematics:			
I: Groups and Group Actions	Prof Nikolay Nikolov	Weeks 1–4 M.10 Tu.10	Mathematical Institute, L1
II: Analysis III: Integration	Prof. Prof Marc Lackenby	Weeks 1–4 Th.9 F.9	Mathematical Institute, L1
Philosophy:			
Frege		TBD	Department of Philosophy
Part A Mathematics:			
The short option lectures above for MATHEMATICS Part A all apply.			
Part B			
Mathematics: No lectures. See MATHEMATICS above for further details.			
Philosophy: For further Philosophy lectures, please consult the Philosophy lecture list.			
Part C			
Mathematics: No lectures. See MATHEMATICS above for further details.			
Philosophy: For further Philosophy lectures, please consult the Philosophy lecture list.			
MATHEMATICS AND STATISTICS			
Prelims			

The lectures above for MATHEMATICS Prelims all apply.
Part A
The lectures above for MATHEMATICS Part A all apply.
Part B
No lectures. See MATHEMATICS above for further details.
Part C
No lectures. See MATHEMATICS above for further details.

FOOTNOTE REFERENCES

* Lectures begin on the first day possible after the beginning of Full Term (**Sunday, 24 April),** unless otherwise stated in this column. Events take place every Week of Full Term (Weeks 1–8) unless otherwise stated.