

MPhil in Scientific Computing

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Course website: <http://www.csc.cam.ac.uk/academic/MPhil%20SciComp>

All lectures will take place in the Rayleigh Seminar Room in the Maxwell Building, except on 9th October, when they will be in the Rutherford Seminar Room B in the Rutherford Building.

PROFESSOR E. ARTACHO

Introduction to Quantum Mechanics

6 lectures (2 hours each – 6 lectures & 6 practicals) - 12

TuTh 9-11, starting 5th October for 6 lectures

PROFESSOR E. ARTACHO

Electronic Structure (Theory of Condensed Matter)

10 hours lectures + 4 2-hour practicals: Total 18 hours

Lectures: TuTh 10-11 starting 26th October

Practicals: TuTh 3-5 starting 16th November

DR P.M. BLAKELY

GPUs for Scientific Computing

12 lectures (12 hours total of lectures & practicals)

MWF 3-5, starting 17th November.

DR P.M. BLAKELY

Scientific Programming in C++

12 lectures (2 hours each – 12 lectures & 12 practicals) – Total 24 hours

MWF 3-5, starting 6th October.

DR P.M. BLAKELY

Introduction to Linux

5 lectures

MWF 9-10, starting 6th October.

DR A. FAUL

NA Fundamentals, Non-linear Systems & Interpolation

16 lectures

TuTh 11-12 (all term)

DR A. FAUL

Numerical Integration and ODEs.

16 lectures

W 11-12, F 10-11 all term

DR A. FAUL

Linear Systems.

16 lectures

TuTh, 12-1, starting 6th October

DR A. FAUL

Numerical Differentiation & PDEs

16 lectures

MW 10-11 all term

DR L. MICHAEL

Numerical Solution of Hyperbolic Partial Differential Equations

12 lectures

MTuWThF 9-10 starting 16th November (10 lectures)

Plus: Friday 17th November and Monday 20th November, 12-1

DR M. RUTTER

Computational Hardware

7 lectures

2017: MF 2-3 starting 6th October

N. MACLAREN

Software Design

4 lectures

TuTh 9-10, starting 2nd November

DR M. RUTTER

Message Passing Interface (MPI)

9 lectures and 6 practicals: Total 15 hours

TuTh 3-5, starting 19th October, for 8 lectures

N. MACLAREN

OpenMP

6 lectures (2 hours each – 6 lectures & 6 practicals) – Total 12 hours

2016: MWF 3-5, starting 3rd November

PROF. J. ELLIOTT

Atomistic Modelling of Materials

12 lectures plus 6 hours practicals – Total 18 hours

MWF 9-10, starting 20th October, for 12 lectures.

Practicals: M 1-3, starting 13th October, for 3 sessions

DR C. DORAN

Geometric Algebra

8 lectures

MW 12-1, starting 9th October, missing 25th October, so finishing on Monday 6th November

DR K. BENKRID

Programming for power-efficient computing

8 lectures

TuF 2-3, starting 3rd November

DR A. FAUL, G. PILIKOS

Machine Learning

16 lectures

MF 11-12, starting 6th October