

Lectures Proposed by the Board of the Faculty of Computer Science and Technology

For particulars of the University Composition Fee and of the fees payable for attendance at separate courses of lectures see p. 2. Graduates of the University who are not reading for any University examination may attend without payment any lecture proposed by the Faculty Board.

COMPUTER SCIENCE TRIPOS

MICHAELMAS 2009

LENT 2010

EASTER 2010

PART IA

Year 1 Coordinator: Dr F. H. King (email fhk1@cam.ac.uk)

Lectures will be delivered in the *Arts School Room A, Bene't Street*, unless otherwise stated

Candidates taking Part IA of the Computer Science Tripos under Regulation 10(a) are also required to offer Papers 1 and 2 set for Part IA of the Mathematical Tripos.

Candidates taking Part IA of the Computer Science Tripos under Regulation 10(b) are also required to offer the papers set for the subject Mathematics in Part IA of the Natural Sciences Tripos and *either* Paper 3 set for Part I the Politics, Psychology and Sociology Tripos *or* the papers, and practical examination if any, set for one of the following subjects in Part IA of the Natural Sciences Tripos¹: Chemistry, Evolution and Behaviour², Geology, Physics, and Physiology of Organisms.

DR F. H. KING AND MISS C. H. NORTHEAST

Registration. Th. 11 (One lecture) *or* Th. 12 (One lecture, for those unable to attend at 11)

PROF. A. HOPPER

Introduction to Computer Science. F. 10 (One lecture)

PROF. L. C. PAULSON

Foundations of Computer Science. M. W. F. 10 (Fifteen lectures, beginning 12 Oct.)

DR P. M. SEWELL

Discrete Mathematics I. M. W. F. 10 (Eight lectures, beginning 16 Nov.)

DR I. J. WASSELL

Digital Electronics. M. W. F. 12 (Eleven lectures, *Hopkinson Lecture Room*)

DR S. M. HAND

Operating Systems. M. W. F. 12 (Thirteen lectures, beginning 4 Nov.) *Hopkinson Lecture Room*

Practical work and afternoon classes

MR R. J. STIBBS, DR F. H. KING AND MISS C. H. NORTHEAST

Practical ML under Windows. Th. 2–5 (Two classes) *Lecture Theatre 1, William Gates Building*

PROF. L. C. PAULSON AND DR F. H. KING

Programming Practical Class. Th. 2–4 (Three fortnightly classes, beginning 22 Oct. *or* 29 Oct.) *Cockcroft Building, Floor 4*

Assessed Exercise Work. M. W. F. 11, M. *or* W. *or* F. 2–4 *Cockcroft Building, Floor 4*

DR I. J. WASSELL AND OTHERS

Hardware Practical Class³. Th. 10–1 *or* 2–5 (Three fortnightly classes, beginning 22 Oct. *or* 29 Oct.) *Cockcroft Building, Floor 4*

PROF. L. C. PAULSON

How to Study Computer Science. Th. 5 (One lecture, 22 Oct.)

DR F. H. KING

Tick-Four Briefing. Th. 5 (One lecture, 29 Oct.) *Hopkinson Lecture Room*

DR T. TUERK

Help Sessions. Th. 5 (Three classes, beginning 5 Nov.) *Hopkinson Lecture Room*

DR R. J. DOWLING

How to Install Linux. Th. 5 (One lecture, 26 Nov.) *Hopkinson Lecture Room*

DR R. K. HARLE AND DR A. F. BLACKWELL

Object-Oriented Programming. M. W. F. 10 (Nine lectures)

DR A. F. BLACKWELL

Software Design. M. W. F. 10 (Seven lectures, beginning 5 Feb.), W. 10 (One lecture 24 Feb.)

DR D. R. MCAULEY

Floating-Point Computation. M. F. 10 (Five lectures, beginning 22 Feb.)

DR R. C. JENNINGS

Professional Practice and Ethics. F. 12 *Hopkinson Lecture Room*

DR S. M. HAND

Operating Systems continued. M. W. 12 (Four lectures) *Hopkinson Lecture Room*

PROF. G. WINSKEL

Discrete Mathematics II. M. W. 12 (Twelve lectures, beginning 1 Feb.) *Hopkinson Lecture Room*

DR A. R. BERESFORD AND DR A. C. RICE

Programming in Java. Th. 2–4 *or* 4–6. *Intel Laboratory, William Gates Building*

DR I. J. WASSELL AND OTHERS

Hardware Practical Class. Th. 10.30–1 *or* 1.30–4 (Four fortnightly classes, beginning 14 Jan. *or* 21 Jan.) *Intel Laboratory, William Gates Building*

DR R. K. HARLE

Algorithms I. M. W. F. 10

DR F. H. KING

Examination Briefing. W. 11 (One lecture, 19 May) *Hopkinson Lecture Room*

PROF. J. G. DAUGMAN

Probability. M. W. F. 12 (Six lectures) *Hopkinson Lecture Room*

PROF. A. M. PITTS

Regular Languages and Finite Automata. M. W. F. 12 (Six lectures, beginning 7 May) *Hopkinson Lecture Room*

DR F. H. KING AND OTHERS

Practical Class. Th. 1–4. *Intel Laboratory, William Gates Building*

DR A. R. BERESFORD

Part IB Assessed Exercise Briefing. Th. 4.30 (One lecture, 13 May) *Lecture Theatre 1, William Gates Building*

¹ It is particularly important that students register for the practical classes for their appropriate Natural Sciences bench subject.

² It is not possible for those reading Evolution and Behaviour to attend the Michaelmas Term Computing Techniques and Applications course which is associated with subject Mathematics in the Natural Sciences Tripos. Alternative arrangements will be explained in the first lecture on Practical ML under Windows at 2 p.m. on 8 October.

³ Those reading Physics normally attend the Thursday morning Hardware Practical Classes. Those reading other bench subjects should attend the Thursday afternoon Hardware Practical Classes.

The above timetable also means that it is essential *not* to arrange Supervisions, Natural Sciences Tripos practical classes, or any other activities, on Thursday afternoons.

Faculty of Computer Science and Technology (continued)

COMPUTER SCIENCE TRIPOS PART 1B

MICHAELMAS 2009

LENT 2010

EASTER 2010

Year 2 Coordinator: Dr A. F. Blackwell (email afb21@cam.ac.uk)

Lectures will be delivered in *Lecture Theatre 1, William Gates Building*, unless otherwise stated

DR M. G. KUHN

Unix Tools. Tu. Th. 10 (Ten lectures)

PROF. J. M. BACON AND DR J. K. M. MOODY

Concurrent and Distributed Systems. M. W. F. 10 (Eight lectures)

PROF. P. ROBINSON

Mathematical Methods for Computer Science. Tu. Th. 10 (Six lectures, beginning 12 Nov.)

DR D. M. EYERS

Prolog. M. W. F. 10 (Six lectures, beginning 16 Nov.)

PROF. R. J. ANDERSON

Software Engineering. Tu. Th. 11 (Six lectures.)

DR S. STATON

Semantics of Programming Languages. M. W. F. 11 (Six lectures, beginning 16 Oct.), M. W. F. 11 (Six lectures, beginning 2 Nov.)

DR T. G. GRIFFIN

Algorithms II. Tu. Th. 11 (Ten lectures, beginning 29 Oct.)

DR A. W. MOORE

Programming in C and C++. M. W. F. 11 (Eight lectures, beginning 16 Nov.)

PROF. L. C. PAULSON

Logic and Proof. Tu. Th. 12 (Twelve lectures)

DR S. W. MOORE

Computer Design. M. W. F. 12 (Eighteen lectures)

DR A. F. BLACKWELL

Group Project Briefing. Th. 12 (One lecture, 19 Nov.)

Practical work and afternoon classes

DR S. W. MOORE AND DR R. D. MULLINS

ECAD (on-line learning component). Tu. or F. 2–5 (One class, 9 Oct. or 13 Oct.) *Intel Laboratory*ECAD and Architecture Laboratory. Tu. or F. 2–5 (Seven classes, beginning 16 Oct. or 20 Oct.) *Intel Laboratory*

DR A. R. BERESFORD AND DR A. C. RICE

Further Java. M. 2–4 or 4–6 (Five classes, beginning 2 Nov.) *Intel Laboratory*

DR A. W. MOORE

Digital Communication I. M. W. F. 10 (Sixteen lectures)

PROF. J. M. BACON AND DR J. K. M. MOODY

Concurrent and Distributed Systems continued. M. W. F. 10 (Eight lectures, beginning 22 Feb.)

DR N. A. DODGSON

Mathematical Methods for Computer Science continued. Th. 11 (One lecture), Tu. Th. 11 (Five lectures, beginning 26 Jan.)

PROF. A. M. PITTS

Computation Theory. M. W. F. 11 (Twelve lectures)

DR T. G. GRIFFIN

Databases. M. W. F. 11 (Twelve lectures, beginning 12 Feb.)

PROF. P. ROBINSON

Computer Graphics and Image Processing. Tu. Th. 12

DR D. J. GREAVES

Compiler Construction. M. W. F. 12 (Sixteen lectures)

DR M. P. FIORE

Concepts in Programming Languages. M. W. F. 12 (Eight lectures, beginning 22 Feb.)

DR A. F. BLACKWELL

Group Project Inaugural Meeting. Th. 2 (One class)

DR A. R. BERESFORD AND A. C. RICE

Further Java. M. 2–4 or 4–6 (One class) *Intel Laboratory*

DR A. F. BLACKWELL AND OTHERS

Group Project Syndicate Meetings. W. or Th. or F. 2 or 3 or 4 or 5 (Three fortnightly meetings of one hour, beginning 27 Jan. or 28 Jan. or 29 Jan.) *William Gates Building, various rooms*

Group Project Intel Laboratory Work. M. Tu. W. F. 2–4

DR A. F. BLACKWELL

How (not) to give a Presentation. Tu. 2 (One lecture, 2 Feb.)

DR A. F. BLACKWELL AND OTHERS

Group Project Demonstrations. W. 2–4 (One session, 3 Mar.) *Intel Laboratory*

Group Project Presentations. W. 4.15 (One session, 3 Mar.)

PROF. M. J. C. GORDON

Project Briefing I. Tu. 10 (One lecture, 18 May)

PROF. R. J. ANDERSON AND MR N. D. F. BOHM

Economics and Law. Tu. Th. 11

PROF. A. DAWAR

Complexity Theory. M. W. F. 11

DR S. J. MURDOCH

Introduction to Security. Tu. Th. 12

DR S. B. HOLDEN

Artificial Intelligence I. M. W. F. 12

Faculty of Computer Science and Technology (continued)

COMPUTER SCIENCE TRIPOS PART II

MICHAELMAS 2009

LENT 2010

EASTER 2010

Year 3 Coordinator: Dr D. J. Greaves (email djt11@cl.cam.ac.uk)

Lectures will be delivered in *Lecture Theatre 2, William Gates Building*, unless otherwise stated

DR D. J. GREAVES
Project Briefing II. Th. 9 (One lecture)

PROF. A. M. PITTS
Types. Tu. Th. 9 (Eight lectures, beginning 13 Oct.)

DR M. P. FIORE
Denotational Semantics continued Tu. Th. 9 (Two lectures, beginning 10 Nov.)

DR M. P. FIORE
Denotational Semantics. Tu. Th. 10 (Eight lectures)

PROF. J. G. DAUGMAN
Information Theory and Coding. M. W. F. 10 (Twelve lectures)

MR J. A. LANG
Business Studies. Tu. Th. 10 (Eight lectures, beginning 5 Nov.)

DR M. G. KUHN
Digital Signal Processing. M. W. F. 10 (Twelve lectures, beginning 6 Nov.)

DR A. F. BLACKWELL
Human-Computer Interaction. Tu. Th. 11 (Eight lectures)

DR A. A. COPESTAKE
Natural Language Processing. M. W. F. 11 (Eight lectures)

PROF. R. J. ANDERSON
Security. M. W. F. 11 (Sixteen lectures, beginning 28 Oct.)

DR S. CLARK
Information Retrieval. Tu. Th. 11 (Eight lectures, beginning 5 Nov.)

DR A. C. NORMAN
Optimising Compilers. Tu. Th. 12

PROF. J. A. CROWCROFT
Digital Communication II. M. W. F. 12

DR N. A. DODGSON
How to Write a Dissertation. Th. 9 (One lecture, 11 Feb.)

DR R. D. MULLINS
Comparative Architectures. Tu. Th. 10

PROF. A. DAWAR
Quantum Computing. M. W. F. 10 (Eight lectures)

DR S. B. HOLDEN
Artificial Intelligence II. M. W. F. 10 (Sixteen lectures, beginning 3 Feb.)

DR C. MASCOLO AND OTHERS
Advanced Systems Topics. Tu. Th. 11

DR P. LIÒ
Bioinformatics. M. W. F. 11 (Twelve lectures)

DR N. A. DODGSON AND DR P. A. BENTON
Advanced Graphics. M. W. F. 11 (Twelve lectures, beginning 12 Feb.)

PROF. J. G. DAUGMAN
Computer Vision. Tu. Th. 12

PROF. M. J. C. GORDON
Specification and Verification I. M. W. F. 12 (Twelve lectures)

PROF. M. J. C. GORDON
Specification and Verification II. M. W. F. 12 (Twelve lectures, beginning 12 Feb.)

MR J. A. LANG AND OTHERS
Business Studies Seminars. Tu. Th. 10

PROF. G. WINSKEL
Topics in Concurrency. M. W. F. 10

DR D. EVANS
Distributed Systems. Tu. Th. 11

DR D. J. GREAVES
System-on-Chip Design. M. W. F. 11

MR J. A. LANG AND OTHERS
E-Commerce. Tu. Th. 12

PROF. A. HOPPER AND OTHERS
Additional Topics. M. W. F. 12

Afternoon classes

STAFF

Progress Reports. Th. or F. or M. or Tu. 2
(One session, 4 Feb. or 5 Feb. or 8 Feb. or 9 Feb.) *William Gates Building, various rooms*

Faculty of Computer Science and Technology (continued)

M. PHIL. IN ADVANCED COMPUTER SCIENCE

Contact: Ms L. M. Gough (email: lmg30@cl.cam.ac.uk)

Most lectures take place in SW01 and SS03 and practical classes in SW02 and the Intel Teaching Laboratory, William Gates Building.

MICHAELMAS 2009

LENT 2010

EASTER 2010

<p>Course Director: DR S. M. HAND DR T. FORSTER Introductory logic Th. Tu. 9 (weeks 5–8) DR S. M. HAND Advanced Topics in Computer Science Th. 10–12 PROF. J. A. CROWCROFT Network Architecture Tu. Th. 12 DR T. G. GRIFFIN An Algebraic Approach to Internet Routing Th. Tu. 2 DR M. G. KUHN Topics in Secents: Forensic Signal Analysis Th. 3–5 DR I. J. WASSSELL Low Power Embedded Systems F. 9–11 DR B. KLIN Category Theory for Computer Science M. F. 12 DR N. A. DODGSON Research Skills F. W. 2 DR P. SEWELL Advanced Topics in Programming Languages M. 3 DR R. D. MULLINS Chip Multiprocessors Reading Club M. 10–12 DR M. P. FIORE Basic Rewriting Theory W. 12 PROF. G. WINSKEL Set Theory for Computer Science M. 4–6 (weeks 2–5) DR A. W. MOORE Building an Internet Router Tu. 9 (week 1) Tu. 10–12 PROF. P. ROBINSON Innovative User Interfaces Reading Group Tu. 4–6</p>	<p>DR A. W. MOORE BIR Project presentations W. 10–12 (week 1) DR M. JAMNIK Automated Reasoning Th. Tu. 10 DR A. DAWAR Topics in Logic and Complexity Tu. Th. 11 DR M. P. FIORE Advanced Category Theory Th. Tu. 12 DR P. M. SEWELL Advanced Topics in Programming Languages Th. 2–4 (weeks 3–6) PROF. A. M. PITTS Semantics of HOT Languages Th. Tu. 4 DR S. W. MOORE Advanced Computer Design F. 10–1 DR M. J. PARKINSON Software Verification M. 2, W. 12 DR S. STATON Categorical Logic F. 3 M. 12 DR D. J. GREAVES System on Chip Design M. W. 10 PROF. L. C. PAULSON Interactive Formal Verification M. 3 W. 11</p>	<p>PROF. G. WINSKEL Advanced Topics in Concurrency Th. 2–4 (weeks 1–4) VARIOUS Research lectures various times Projects</p>
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Further details and timetable amendments will be published on the course web pages <http://www.cl.cam.ac.uk/teaching/0910/acs.html>

Faculty of Computer Science and Technology (continued)

M.PHIL. IN COMPUTER SPEECH, TEXT AND INTERNET TECHNOLOGY

Contact: Ms L. M. Gough (email: lmg30@cl.cam.ac.uk)

All lectures take place in SW01 and practical classes in SW02, William Gates Building.

MICHAELMAS 2009

LENT 2010

EASTER 2010

MICHAELMAS 2009	LENT 2010	EASTER 2010
<p>Course Director: PROF. E. J. BRISCOE</p> <p>DR M. J. F. GALES Module 1A (weeks 1-4) Th. 11 (weeks 2-4) F. 11</p> <p>DR W. J. BYRNE Module 1A (weeks 1-6) Th. F. 10 (week 1) F. 11</p> <p>DR A. DE GISPERT Module 1A (weeks 5-8) Th. F. 11</p> <p>DR P. A. TAYLOR Module 1A (weeks 7, 8) Th. F. 10</p> <p>DR P. GOSLING, DR A. DE GISPERT AND DR W. J. BYRNE Practicals. (weeks 1-8) Th. F. 2-5</p> <p>PROF. E. J. BRISCOE Module 1B M. Tu. 10 (week 1) Tu. 11</p> <p>DR A. A. COPESTAKE Module 1B (weeks 4-7) M. 11 (weeks 6-8) Tu. 11</p> <p>DR S. CLARK Module 1B (weeks 1-3) M. 11 (weeks 2-5) Tu. 11</p> <p>DR A. A. COPESTAKE Practicals. (weeks 1-8) M. Tu. 2-5</p> <p>VARIOUS (weeks 5-8) Tutorials W. 10-1 (weeks 1-8) NLIP Seminars F. 12 (weeks 1-8) CUED Seminars Tu. 12</p>	<p>DR A. DE GISPERT Module 2A (weeks 1-4) F. 10</p> <p>MR B. R. M. THOMPSON Module 2A (weeks 1-4) F. 11</p> <p>DR M. J. F. GALES Module 2A (weeks 1-4) Th. 10</p> <p>DR W. J. BYRNE Module 2S Speech Reading Club. (weeks 5-8) Th. 10-12</p> <p>DR W. J. BYRNE Module 2A (weeks 1-4) Th. 11</p> <p>DR M. J. F. GALES Module 2A Practical (weeks 1-8) Th. F. 2-5</p> <p>DR S. CLARK Module 2B (weeks 1-3) M. Tu. 11 (weeks 1-4) Tu. 11</p> <p>DR A. A. COPESTAKE Module 2B (weeks 1-2) M. Tu. 10</p> <p>PROF. E. J. BRISCOE Module 2B (weeks 3-4) M. Tu. 10</p> <p>DR S. CLARK AND OTHERS Module 2L Language Reading Club (weeks 5-8) M. 11-1</p> <p>DR S. CLARK AND OTHERS Practicals (weeks 1-8) M. Tu. 2-5</p> <p>VARIOUS Project Work-plan Preparation (weeks 5, 6) Tu. F. 10-1</p> <p>Project Preparation (weeks 7, 8) Tu. F. 10-1</p> <p>VARIOUS (weeks 1-8) Tutorials W. 10-1 (weeks 1-8) NLIP Seminars F. 12 (weeks 1-8) CUED Seminars Tu. 12</p>	<p>Projects</p>

Please see <http://www.cstit.cl.cam.ac.uk/b/current/homepages/student.html> for further details and timetable amendments.