Programme & Talk Details

Thursday 30 April	12 midday - 5pm	Base Camp open	4.40 - Mini Forum 2
	12 midday - 2pm	Registration open	Café area
	12 midday - 1pm	Exhibits of research	Atrium
	2 - 3pm	Entrepreneurship panel discussion	4.31 & 4.33
	3:30 - 4pm	PhD Career options registration	Atrium
	4 - 5:30pm	PhD Career options talks	G.07
	5:30 - 6:30pm	PhD Career options reception	Café area
Friday 1 May	10am - 6pm	Base Camp open	4.40 - Mini Forum 2
	9:30am - 12 midday	Registration	Café area
	10am – 12:30pm	CAD reunion	G.07A
	10 - 11am	InSpace – Jon Oberlander	4.31 & 4.33
	12am - 2pm	Forum tours	Meet in Atrium
	11 - 12 midday	Internet Infrastructure Innovations – Anne Johnson	4.31 & 4.33
	1:30 - 2:30pm	I-Room - Intelligent Virtual Collaborative Spaces – Austin Tate	4.31 & 4.33
	2:30pm - 3:30pm	The Future of Informatics – Dave Robertson	4.31 & 4.33
	3:30 - 4:00pm	The Lustre file system – Eric Barton	4.31 & 4.33
	6:30 - 10pm	Evening reception	Atrium & café area
Saturday 2 May	10am - 2pm	Base Camp open	4.40 - Mini Forum 2
	10am - 12 midday	Registration	Café area
	10am - 11am	Model-driven development, traceability and games – Perdita Stevens	G.03
	11am - 12 midday	Edinburgh Computing Before and Into the Early Michaelson-Michie Era: Some personal recollections – John Oldfield	G.03
	11am - 2pm	Forum tours 2	Meet in Atrium
	12 - 12:30	Talk by Head of School	TBC
	12:30 - 2pm	Saturday lunch	Atrium & café area

Talks

Entrepreneurial Panel Discussion

Thursday 2 – 3pm

Tom Griffiths - HubDub
Since graduating from the Informatics MSc course in 2004, Tom has started three companies: Insight Studios, a web design consultancy; Groopit, a web and mobile based social meetup tool; and (currently) Hubdub, a news prediction site.

Hubdub allows news junkies to compete at predicting the news, and has landed partnerships with some established names in the news industry including Reuters, The Independent and The Huffington Post. It raised a £800k Series A from Pentech in December 08 and currently serves around 200k users per month.

Richard Marshall – Rapid Mobile Media Ltd
Richard is Founder and CTO of Rapid Mobile Media Ltd, an Edinburgh-based company developing mobile Software development platforms.

Richard is passionate about inventing and building things that people will use. Rapid Mobile's ability quickly to design, develop and deploy innovative mobile software solutions is founded on Richard's ThinkPhone, Active Provisioning and Ad360 technologies.

Richard has written and marketed several software products, including DOORS, the market-leading requirements management solution now owned by IBM. He has a PhD in Computer Science from the University of Edinburgh.

During rare free time from work and family, Richard is passionate about photography, theatre lighting and motorcycling.

Read Richard's Blog at www.richard-marshall.com.

Sandy McKinnon – Pentech Ventures
Sandy has over 18 years experience in commercialising technology innovations, the last 7 of these as a partner with Pentech.

Prior to Pentech, he was Director of Knowledge Transfer & Technology and Research Services at Heriot-Watt University where he helped in mentoring and fund raising of twelve spin-out companies.

Prior to this, he was a freelance technical and marketing consultant, and with Scientific Generics in Cambridge he helped develop and ran their Advance Technology Group. Experienced in protecting and licensing his and his groups' own IP, Sandy has also provided deep technical and market due-diligence services in many sectors for a variety of blue-chip companies and VCs.

Sandy had a Research Fellowship at Cambridge University, working for 6 years in Nanotechnology with many of the pioneers in the field - his Ph.D. is for work on Amorphous Semiconductors and he has a B.Sc. (first) in Physics from the University of Dundee.

He was on the board of Sonaptic (sold to Wolfson) and SeeWhy and is currently on the Boards of Velocix, OmniPerception, Rapid Mobile, and Metaforic.

Andrew Mitchell – Informatics Ventures
Andrew joined the School of Informatics 'Prospekt' commercialisation team in July 2007, coming to the university from a business incubator in Queensland, Australia, where he introduced and developed entrepreneurship programmes for a diverse audience ranging from students to CEOs of high-tech start ups. Prior to this Andrew worked for the University of Cambridge's Centre for Entrepreneurial Learning where he raised and managed (from the

commercial, public and higher education sectors) in excess of £2M to design, build and deliver educational programmes on behalf of the Cambridge-MIT Institute Limited (CMI).

Andrew's interests and objectives are to help evolve the entrepreneurial culture in and around the University of Edinburgh and support world-class spin-outs from the School of Informatics.

Edinburgh CAD Project Retrospective (1966-77)

Friday 10.00am – 12.30pm

The Edinburgh CAD project, established and directed initially by John Oldfield, and later led by John Gray, carried out pioneering research on the application of interactive graphics to the computer-aided solution of a range of design problems in electronic and electrical engineering, including printed circuit board layout and later the design of integrated circuits. The original graphics system was a DEC PDP-7 with a Type 340 vector drawing display. This was connected by a high-speed link designed and built by the project to an Elliott 4120 mainframe in Donald Michie's Experimental Programming Unit, also located in Hope Park Square.

Later the CAD Project in collaboration with Aart Bijl's Computer-Aided Architecture Design group acquired its own DecSystem-10 (PDP-10) to which the PDP-7 was also connected by a locally designed and built serial link, the whole constituting an early example of a client/server system.

As well as carrying out innovative research on applications in electrical engineering, shipbuilding (in collaboration with the Burntisland Shipbuilding Company), and architecture (in collaboration among others with the Scottish Special Housing Association) the PDP-7/340 display system was the basis for experiments in the use of stop-frame animation techniques for research, education and entertainment. For this a slave display was added, along with a Vinten computer-controlled 16 mm camera, connected to the PDP-7 via a custom built interface. It is hoped to show extracts from some of the films produced in this way during the meeting.

The second phase of the project took advantage of the advent of much less expensive graphics terminals such as Tektronix storage tubes – the ones with a pronounced green flash – and a powerful general purpose system was developed for the interactive design and layout of integrated circuits. This led to a variety of effective early technology transfer initiatives.

There will be two one-hour sessions.

10.00 – 11.00 Research on Graphics, Animation and the Computer Aided Design of Printed Circuit Boards, 1966-1973
Speakers: John Oldfield, John Dow, Russell Cowe, Alistair Kilgour

11.30 – 12.30 Computer Aided Design of Integrated Circuits & Technology Transfer Initiatives.
Speakers: John Gray, John Eades, Alex Tweedly, Peter Robertson

InSpace – Jon Oberlander

Friday 10 - 11am

InSpace is a living lab. It will be the School of Informatics public facing space; part gallery, part lab. It will make research visible because knowledge is beautiful!

Through InSpace the School aims to increase public awareness and understanding of the role of computation in modern biology, security, learning and other areas of life and provide a focal point for visitors, researchers and the general public to learn more about research in Informatics and the many practical uses of this research. We will also communicate concepts developed from research and interactions between Informatics and other disciplines from the arts to the life sciences.

Speaker Biography
Jon Oberlander is Professor of Epistemics in the School of Informatics at the University of Edinburgh. He received his PhD in Cognitive Science from Edinburgh in 1987, and has been an EPSRC Advanced Fellow at the ESRC Human Communication Research Centre. His interests are in cognition and interaction, and focus on modelling the ways in which differing people produce fluent multimodal discourse: such modeling informs the design of computer systems, tailoring information to individuals' needs and interests. As well as directing the Inspace programme, Jon is Director of the new Scottish Informatics and Computer Science Alliance.

Internet Infrastructure Innovations – Anne Johnson

Friday 11am - 12 midday

This talk highlights recent developments in physical infrastructure underlying the Internet, from international fibre to processor architecture, with illustrations of the consequences.

Enterprises can transmit hundreds of gigabits of bandwidth continuously, given access to dark fiber, connecting clusters of inexpensive servers as well as high volume sources like the LHSC. Organizations like Google and Microsoft build data centres with many thousands of servers; the replaceable service unit can be a 12m container. There's a new architecture for the computing cloud, including virtual switches in each server. High value applications for simulation; of trading strategies, for oil drilling, for vehicle crash outcomes are about to go through testing and potential redesign as new processor architectures become available.

Each of these innovations changes what is possible, in terms of the services and experiences offered to end users.

Speaker Biography
Anne Johnson is based in Edinburgh for the next few months, doing technical business development work for the European market for Arista Networks (Menlo Park, CA) and XKL LLC (Redmond, WA) from the USA. She worked for Cisco Systems in San Jose for 10 years, for HP Labs in Bristol, and for 3 startup companies. She went to school at Banff Academy, did her first degree in Economics at Aberdeen, and took a MSc course taught jointly by the Artificial Intelligence, Computer Science, and Electrical Engineering departments at Edinburgh.

I-Room - Intelligent Virtual Collaborative Spaces – Austin Tate

Friday 1:30 - 2:30pm

Our long term aim is to contribute to a future "Helpful Environment" by supporting the creation and use of task-centric virtual organisations involving people, government and non-governmental organisations, automated systems, grid and web services working alongside intelligent robotic, vehicle, building and environmental systems to respond to very dynamic events on scales from local to global.

Our "I-X" platform and its "<I-N-C-A>" conceptual model provide the basis for knowledge about objectives, capabilities, tasks, activities, plans and behaviour to be shared in a mixed-initiative environment involving teams of people, computing services and robot/sensor equipment. The technology is rooted in flexible knowledge-rich artificial intelligence planning methods and has contributed to the development of standards for shared plan and process representations.

The focus of the current work is on an "intelligent room" or "knowledgeable room" to act as a knowledge aid to support collaborative teleconferences and meetings initially but later to provide a knowledge assistant in any location a user wishes via whatever presentation and communications methods are appropriate. The project is a base for a range of collaborative developments, plug-ins, and projects. Initial work is focused on the creation of a Virtual Collaboration Centre in a virtual world environment such as Second Life.

Speaker Biography
Home Page: http://www.aiai.ed.ac.uk/~bat/
Project Page: http://www.aiai.ed.ac.uk/project/plan/

Austin Tate is Director of the Artificial Intelligence Applications Institute (AIAI) and holds the Personal Chair of Knowledge-Based Systems at the University of Edinburgh. He is a Fellow of the Royal Society of Edinburgh (Scotland's National Academy), Fellow of the Association for the Advancement of AI, Fellow of the British Computer Society, and a member of the editorial board of a number of AI journals. His internationally sponsored research work is focused on emergency response and involves advanced knowledge and planning technologies, and collaborative systems especially using virtual worlds.

The Future of Informatics – Dave Robertson

Friday 2:30 - 3:30pm

One of the things that makes Informatics at Edinburgh special is our view that informatics can attain coherence as a single scientific discipline, on a par with the traditional sciences. This aspiration is not as vague as it might seem. It has had a remarkable impact already on the way we conduct research and the way we teach our subject while challenges appearing over the horizon will demand the sort of integrated, broad view we promote at Edinburgh. I shall describe what I think the impact has been and highlight some examples of challenges visible from my own (limited) perspective.

Speaker Biography
Dave Robertson currently is the Director of the Centre for Intelligent Systems and their Applications, part of the School of Informatics at the University of Edinburgh. In August 2009 he will take over from Michael Fourman as Head of School of Informatics. His current research is on formal methods for coordination and knowledge sharing in distributed, open systems - the long term goal being to develop theories, languages and tools that out-perform conventional software engineering approaches in these arenas.

He was coordinator of the OpenKnowledge project (www.openk.org) and was a principal investigator on the Advanced Knowledge Technologies research consortium (www.aktors.org), which are major EU and UK projects in this area. His earlier work was primarily on program synthesis and on the high level specification of programs, where he built some of the earliest systems for automating the construction of large programs from domain-specific requirements. He has contributed to the methodology of the field by developing the use of "lightweight" formal methods - traditional formal methods made much simpler to use in an engineering context by tailoring them to a specific type of task.

As an undergraduate he trained as a biologist and continues to prefer biology-related applications of his research, although methods from his group have been applied to other areas such as astronomy, simulation of consumer behaviour and emergency response.

The Lustre file system – Eric Barton

Friday 3:30 - 4:00pm

Model-driven development, traceability and games – Perdita Stevens

Saturday 10 - 11am

Model-driven development (MDD) is an approach to software engineering which emphasises the role of models, written for example in the Unified Modeling Language, UML. The approach has had some remarkable successes, but has still not become mainstream. I will introduce MDD and discuss what I see as its strengths and remaining weaknesses. One key element of MDD is its use of model transformations, which allow changes in one model to be propagated to related models, keeping a set of models for one system consistent. Model transformations have themselves to be designed, and the languages in which to write them, and the

properties they should obey, are only now attracting the attention they deserve. I will briefly discuss some recent research which captures the consistency of models using a formal two-player game rather like those used in concurrency theory.

Speaker Biography
Perdita Stevens is a Reader in Software Engineering in the School of Informatics. Initially trained as a mathematician, she worked as a software engineer for BT and then moved into Edinburgh's Department of Computer Science, where she helped to develop new courses on Software Engineering with Objects and Components. With colleague Rob Pooley, she wrote the first student textbook on the Unified Modeling Language, "Using UML". In recent years her research has centred on model-driven development, especially the semantic basis of bidirectional model transformations.

Edinburgh Computing before and into the early Michaelson-Michie Era: some personal recollections – John Oldfield

Saturday 11am – 12 midday

Michelson-Morley, Case-Western 1887: most-famous failed experiment in physics. Showed that luminiferous ether concept wasn't needed, by finding no evidence of an ether wind.

Michaelson-Michie, Edinburgh University from about 1963. Showed that friction between conflicting personalities could result in great strides for the University.

In 1960 Edinburgh didn't even have a digital computer; a decade later, under Sidney Michaelson's leadership, it was in the forefront of UK Universities. Donald Michie, an Immunologist in the Medical School, gathered a unique set of individuals from around the UK to found the Experimental Programming Unit. From this came the Pop-II language, early robotics - Freddy - and Artificial Intelligence concepts. The talk will cover the state of (numerical) computing before Sidney arrived, a stimulating tour of the US with him in the spring of 1963, and some strange incidents!

Speaker Biography
John Oldfield is a computer engineer who first joined the University in January 1960. He was probably responsible for the first computing course for engineering students, based on the Ferranti Pegasus Computer in 1961. Programs had to be run on the Newcastle University Pegasus. In 1963, he accompanied Sid Michaelson on a wide scale tour of US universities; the highlight was seeing "Sketchpad," man-machine communication with a CRT display and light pen at MIT Lincoln Laboratory.

After a visiting appointment as an Assistant Professor at MIT in 1964-65, he founded the Edinburgh CAD Project in 1966. This relied on an Eliot 4120 computer in the Donald Michie's Experimental Programming Unit (later AI), but the change of language from Algol to Pop-II was unhelpful for CAD applications. The CAD group was fortunate to be awarded a major grant (over £300,000) by the then Science Research Council.

In 1974, he handed over responsibility for CAD Group leadership to John Gray, and took up a Professorship at University College Swansea. In 1978 he moved to a much more stimulating environment at Syracuse University in Upstate New York, where he has lived ever since.