



Computer Science Newsletter

News from the Computer Science Department at UCT – Autumn 05

Research News

Current Grants

The department has many research projects funded by both government and the private sector. Combined, these projects represent an annual income to the Department of 1,7m Rand:

- Flexible Digital Libraries
- Interfaces to Museum Collections
- The Complex Adaptive Enterprise
- Data and Knowledge Sharing
- Service Oriented Architecture
- Voice Over Internet Protocol
- Open Source Development

Recent Publications

To date this year, all our publications have been in international journals and conferences. The list includes:

- Computational chemistry
- Telecommunications policy
- Voice-over-Internet
- Computer graphics
- Digital Libraries
- Computer Network Performance
- Mobile Computing

Further Information

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Scholarships for IT Programme Students

Based on their university or matric results in 2003, as many as 60 students held scholarships in the IT programme in 2004. The total value of these scholarships was over R400 000.00. Scholarships are awarded by UCT if the student meets the criteria set down by their Faculty, so there is no need to apply. The scholarships are renewed each year that these criteria are met, and individual awards range from R5 000 to R15 000 per year.

New Bioinformatics Degree

In 2005 UCT joins a handful of universities across the world who are now offering Bioinformatics degrees at the Bachelor level. There is a worldwide demand for specialists able to solve biological problems by computational means. Yet most universities provide only post-graduate training in this field, without a programme to specifically prepare graduates with the necessary knowledge and skills in biochemistry/biology as well as computing. Our new Bioinformatics curriculum was designed with the help of experts from the National Bioinformatics Network. The Western Cape is particularly strong in this field, and UCT is very well placed to offer this new specialisation.

Postgraduate Student Focus – *Marshini Chetty*

2005 has already been a landmark year for Marshini. She has just submitted her MSc thesis which was focused on creating an ICT based referral system for rural clinics in the Eastern Cape. Now that her thesis is complete, Marshini has joined the Department as a lecturer. Sadly, we won't benefit from her input for much longer as she has been awarded a Fulbright scholarship and will shortly be starting her PhD at Georgia Tech., one of the top IT universities in the United States. We look forward to welcoming Dr. Chetty back to South Africa in five years' time.



UCT Team win Standard Bank Programming Challenge



On the 7th April, four Computer Science students from UCT took part in, and won, the 2005 Standard Bank IT Challenge, held in Johannesburg. The competition saw teams of four from five universities, and three teams of Standard Bank employees, demonstrate their problem-solving, programming and teamwork skills in a tough competition. For their efforts, the team was awarded a laptop for each team member, as well as R100 000 for the Department.

Shuttleworth Foundation Donates R1m to Open Source at UCT

The Shuttleworth Foundation and its chairman Mark Shuttleworth, an alumnus of UCT, has donated R1m to fund an Open Source laboratory at UCT. This laboratory which will be housed in the ground floor of the Computer Science Building will be available to all students at UCT, to expose them to Open Source. Initially it will be used by Science students, particularly in Mathematics, Statistics and Computer Science for their projects and exercises. Subsequently they will take this knowledge of the use of Open Source software with them into industry and commerce. Open Source software is one of the new technologies sweeping the world. It is making major inroads into developing countries, particularly, which cannot afford the large foreign exchange payments for software license fees.

Remarkable Success in the ACM Programming Competition

Every year, the Association for Computing Machinery (the oldest and largest society of ICT professionals) invites the best computer science students from all over the world to compete in a programming competition. This year a team of three students from the Department not only won the right to represent South Africa, but were classified as the overall winners in the African and Middle East region. Besides this success, the team also went on to win the 'soccer challenge.' For this challenge the team had to write a program which would play a form of virtual soccer against the programs written by all the other teams. Unlike their Bafana-Bafana counterparts, our team beat all of the other 77 entrants!



IBM Gives Generous Donation to Computer Science Department

IBM, in conjunction with SAP and Novell, has established a Linux Centre of Competence at UCT in conjunction with ICT Innovations. The Competence Centre will be used to show the potential of Linux, the Open Source operating system, for commercial applications. IBM are providing the latest hardware and software which will be available to the staff and students of UCT for research and advanced teaching. Among the projects using this hardware will be Grid Computing, parallel programming and High Performance Computing, distributed databases and digital libraries. IBM and its partners will use the expertise of the members of the Computer Science Department and the students of ICT Innovations to develop prototypes for commerce and show how they can be efficiently deployed in mission critical application for the benefit of the South African industry.
