



## Young Software Engineer of the Year Awards

### **Edinburgh student lifts coveted award!**

A talented student from the University of Edinburgh has been named Young Software Engineer of the Year. Michal Bartosik won first prize for his exceptional project which allowed humanoid robots to learn new skills by imitating the human motion which is obtained from an on-body wireless motion capture system.

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### **Reducing pilot error**

The second prize went to Liam McBrien, from the University of Strathclyde for his expert system developed to display a computer-generated visualisation of an aircraft's position in relation to its surroundings.

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Both the first and second prizes were for projects with practical applications in the fields of virtual navigation and robotics.

The third prize was awarded to Gerard O'Donnell of the University of Glasgow, and the special category, the Real Time Engineering award, was won by Craig Paul of St Andrews University.

Details of all these projects are given below. Photographs of the winners are available.

### **Background :**

Software is increasingly ubiquitous, lubricating the knowledge economy, and transforming industries and societies across the globe. Scotland's universities have a world class reputation for computing science so these young people are really exceptional.



The Young Software Engineer of the Year awards are given for the best undergraduate software projects, drawn from across all students studying computer science and software engineering in Scotland. Each university nominates the very best final year undergraduate software engineering project to be submitted for the awards.

The awards are organised by ScotlandIS, the trade body for software and ICT, and were presented at the [ScotSoft](#) 2009 dinner tonight, which accompanied the [10BigThings Global Forum](#).

### Criteria

This year's standard was very high with a wide range of projects. The judges use a number of criteria when scoring the projects including:

- Level of Innovation
- Quality of Engineering
- Planning & Organisation
- Quality of presentation
- Technical Difficulty
- Level of Knowledge & Previous Research
- Commercial and/or Social relevance

## Real Time Engineering Award –

**Craig Paul, St Andrews**

**Project: “NaviSim Dinghy Sailing Simulator”**

Craig Paul was awarded the **Real Time award**, a special award given to the project which in the judges' opinion most clearly embraces sound software engineering principles. Craig received a cheque for £750 donated by Glasgow based Real Time Engineering, leading specialist providers of expert business consultancy and IT solutions, and part of the Amor Group.

Craig's university, St Andrews receives the Real Time trophy, a cut glass rose bowl.



## Press Release

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Craig's project is a unique simulator for small single-handed sailboats, aimed as a training aid for beginner sailors. The simulator provides a safe environment with customisable variables, allowing the user to learn and practice in various scenarios and conditions.

Craig was born and lives in the Highlands, and has just graduated from St Andrews with a BSc (hons) in Computer Science. Introduced to sailing at a young age, he has competed at both Scottish and British level, captaining the university sailing team for his last two years.

### 3<sup>rd</sup> place –

**Gerard O' Donnell, University of Glasgow**  
**Project – [Emergency Ski Response System](#)**

Gerard O'Donnell won third prize, a cheque for £750 from Lumison, the UK's leading business internet provider. Gerard's project set out to reduce time taken by medics to respond to ski accidents on the slopes.

The system allows an emergency team coordinator to effectively position medics in a ski resort in order to minimize the time taken to reach any accident. This is significant because there are different constraints with the two main types of medics. Whilst a snowmobile medic can travel in any direction, it is hampered by difficult terrain and forested areas. A ski medic can only travel down or near ski runs, but can traverse significant distances and circumvent natural barriers using the ski lifts.

Gerard is 23, and was born in Glasgow and spent his school life in Northampton. He has just graduated from the University of Glasgow after achieving a First Class honours degree in Software Engineering.

### 2<sup>nd</sup> Place

**Liam McBrien, Strathclyde University**  
**Project – [Synthetic Vision System for Pilots](#)**

2<sup>nd</sup> prize was won by Liam McBrien for his Synthetic Vision System for Pilots. Liam picked up a cheque for £1000, donated by BCS, the professional body for the IT industry.



Liam's Synthetic Vision System creates a computer-generated visualisation of an aircraft's position in relation to its surroundings, intended for small aircraft. Implementations are available in commercial airliners and military aircraft, but are rare in civilian light aircraft which are typically equipped with more traditional flight instruments. Liam had examined the feasibility of producing a basic level Synthetic Vision System using a standard PC with a connected GPS device.

Liam is 23 and from Glasgow. He has recently graduated from the University of Strathclyde with a MEng in Computer Science. He works for Sun Microsystems, and his interests include hill walking, archery and pool.

### 1<sup>st</sup> Place

**Michal Bartosik, University of Edinburgh**

**Project - Classification of motion data from on-body Orient motion capture system for training a humanoid robot**

The winning project presents an approach which is both fast and inexpensive for teaching humanoid robots new behaviours. The idea is to acquire new skills by imitating the human motion, obtained from an on-body wireless motion capture system. This work has had an impact both in academia and industry; papers/video based on this work has been accepted for presentation at two international peer-reviewed conferences.

Michal Bartosik was nominated by the judges as Young Software Engineer of the Year. He collects a beautiful trophy, handmade by Scottish Borders Glass and donated by ScotlandIS, and a cheque for £1250 from Eric Hogg, MD of Sopra Group UK.

Michal is an international student from Poland. He has just graduated from the University of Edinburgh with a First Class Honours in Artificial Intelligence and Software Engineering. During his studies he worked on a part-time basis for the software development company Crocodile Clips Ltd, in the testing team.



As a result of his work there Michal was nominated for the student Employee of the Year award 2009, and managed to win the national finals in the category of the International Student.

Michal is also an enthusiast of martial arts and sports. He practises Aikido, is a frequent squash player and is a member a climbing club.

**End**

### **Notes to Editors**

- ScotlandIS is the representative organisation for Scotland's software, telecommunications and IT solutions companies.
- ScotlandIS members vary from internationally recognised exporters to very small start-ups and cover a wide range of skills and markets.
- Scotland's software, IT and communications businesses employ more than 105,000 people and currently generate approx. £5 billion: around 5% of Scotland's GDP.
- ScotlandIS promotes the industry and lobbies government and policy makers on issues of importance to the ICT sector.
- ScotlandIS stimulates networking and partnerships between member organisations, providing networking, training and best-practice exchange meetings, seminars and workshops.
- ScotlandIS provides practical support to help members trade, for example, by providing access to industry experts and disseminating market intelligence.
- ScotlandIS members also have access to cost-effective escrow services, which act as a guarantee to clients and underpin clients' confidence.
- ScotlandIS works in partnership with e-skills UK (the sector skills council for ICT), government and academia to create and retain the skills and infrastructure required to support the knowledge economy.



## Press Release

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