

## News and Events

# Meet Mr Roboto: the answer to teenage untidiness

28 April 2009

Question: how do you get teenagers hyped up about house-cleaning?  
Answer: ask them to design a robot that does all the boring tasks they're always being nagged to do! It might seem a dream to most of us but the time when a robot will wash the dishes and do the laundry may not be far away.



Thinking about what kind of tasks people might want robots to do in a domestic setting, what they might look like, and how they might be programmed and controlled was just one of the activities that a group of 18 pupils from Thomas Deacon Academy in Peterborough took part in last Friday at Cambridge University's Computer Laboratory.

Called "Meeting Mr Roboto: A Hands-On Exploration of Robots in Society", the day was organised through Aimhigher Cambridgeshire and Peterborough - the regional arm of a national aspiration-raising initiative. The activities were planned and led by two post-graduate researchers at the Computer Laboratory, Cecily Morrison and Laurel Riek, both of whom are keen to reach out to schools and to interest more teenagers in computer science.

The programme started with a tour of the Computer Laboratory with the chance to see novel technologies such as mind-reading machines, smart cars, humanoid robots and paperless desks.

"The best thing was being able to see the tabletop computer in the Rainbow Room," said Thomas Deacon pupil, Paarvan Gandhi, 14. The tabletop system uses six overlapping projectors to create a virtual desk that enables people to work together on electronic documents just as they would on paper ones.

In the afternoon the pupils got a chance to try some hands-on programming of robots using a system called TERN, which is a tangible programming language. The system was developed for educational purposes in the USA by Michael Horn. Pupils connect a series of bricks into a string of commands which are then fed to the robot via a camera. This introduces them to the basics of programming and teaches them some of the fundamental concepts of computer science and problem solving.

"I like working with computers and thinking about how things work but I'd never really thought about robots and what they could do for us before. I'd like a career

### Useful links

**Aim Higher** ([http://www.direct.gov.uk/en/EducationAndLearning/UniversityAndHigherEducation/DG\\_073697](http://www.direct.gov.uk/en/EducationAndLearning/UniversityAndHigherEducation/DG_073697))

**Comuter Sciences for fun**  
(<http://www.cs4fn.org/>)

**Cambridge University Computer Laboratory** (<http://www.cl.cam.ac.uk/>)

### University sources

**Newsletter** ([/univ/newsletter/](http://univ/newsletter/))

**Research Horizons magazine**  
(<http://www.research-horizons.cam.ac.uk/>)

**Reporter** (<http://www.admin.cam.ac.uk/reporter/>)

**Events@cam** (<http://www.cusu.cam.ac.uk/events/>)

**University Newsgroups**  
(<http://www.cam.ac.uk/staffstudents/annevng.html>)

### Audio/video

**Vice-Chancellor's annual address: watch and listen** ([/offices/v-c/speeches/20081001.html](http://www.cam.ac.uk/offices/v-c/speeches/20081001.html))

### External sources

**BBC News** (<http://news.bbc.co.uk/>)

**The Guardian**  
(<http://www.guardianunlimited.co.uk/guardian/>)

**The Times** (<http://www.the-times.co.uk/>)

**Daily Telegraph**  
(<http://www.telegraph.co.uk/>)

**The Independent**  
(<http://www.independent.co.uk/>)

**Financial Times** (<http://www.ft.com/>)

**The Observer**  
(<http://www.newsunlimited.co.uk/observer/>)

with computers" said Abbie Browning, 14 (pictured centre). She and her friend Shannon Smith, 13, (left) are adamant that computer science isn't "just for boys" - a message that Laurel and Cecily are keen to push.

In a design session, the pupils are encouraged to look at what people might want a robot to do in a home situation and come up with a design to meet that need. Parvaan and his friends Ellis Donovan, 14, and Levi Crisp, 13, might not enjoy housework themselves but it takes them less than five minutes to sketch a robot that will clean a bathroom at the touch of a button. It's circular and has re-fillable cartridges for cleaning fluid. They even have a name for their design - the Bathroom-All-in-One or BAIO.

Thomas Deacon ICT teacher Zia Deeks, one of the two members of staff accompanying the group, said: "At this age pupils use technology all the time and they're amazingly adept with computers and mobile phones - but they don't necessarily think about what goes on to develop these things - the incredible research behind them. Today they've had a chance to see some really cutting edge technology and it will have challenged their ideas of what computer science is."

Laurel Riek emphasised the importance of developing fun, hands-on activities to help pupils think about serious concepts such as how computers shape our everyday lives: "We follow the philosophy of Computer Science For Fun ([cs4fn.org](http://www.cs4fn.org)) (<http://www.cs4fn.org/>) ) which encourages students to explore the creative and social side of computing."

[Email this article to a friend](#) (</news/sendmail.cgi?art=2009042801>)

---

**Sunday Times** (<http://www.sunday-times.co.uk/>)

---

**Herald** (<http://www.theherald.co.uk/>)

---

**Scotsman** (<http://www.scotsman.com/>)

---

**International Herald Tribune**  
(<http://www.iht.com/>)

---