The Mensa Robotics Day

Staffordshire University
Saturday 12th June 2010
10.00am to 5.00pm

Robotics is the engineering science and technology of robots and covers their design, manufacture, application and structural disposition. The Robotics Day offers an introduction to these various areas with plenty of hands-on activities with robots. No previous programming experience is required. The event will take place at the university campus in Stafford and be led by the senior lecturer in robotics.

The cost is £34.00 per person. This includes exclusive use of the university building, all activities and use of robots, tea/coffee upon arrival and buffet lunch. Families and guests are most welcome. The number of robots available means that places are limited to 40 participants. Booking deadline is 4th June 2010.

The Robotics Day programme.....

10.00am-10.30am
Arrival and registration. Tea/coffee and biscuits.

10.30am-11.00am
A short history of mobile robots from the ancient to present day. What inspired robot research and where are we now?

11.00am-11.15am
Introduction to graphical programming and how to use it. 'Labview' has a strong foundation in industry and is a new approach to programming using pre-written code appearing as icons that are dragged onto a screen and connected with lines.

11.15am-12.30pm
Hands-on programming of the Lego NXT robot. With 2 or 3 people per robot you will use 'Lego Edu' software to download programmes to the robots. A fun introduction to sensors and motor control. Tasks will include line following and playing golf.

12.30pm-1.00pm
Subsumption architecture and biologically inspired robots. A method of organising the execution of many small programmes in a robot in order for it to learn to explore, survive and recharge itself.

1.00pm-1.05pm
Demonstration of 'Roomba', a successful vacuum cleaning robot, that uses the above method.

1.05pm-2.00pm
Buffet lunch of an assortment of filled baguettes (including vegetarian options), fresh fruit, cakes, juice and water.

2.00pm-2.30pm
Simple path planning, navigation and kinematics. A software demonstration of how a robot can solve the route in a map to arrive at a desired location.

2.30pm-2.45pm
Introduction to C programming and firmware. C is the de-facto programming language in robotics. This shows how to control a robot from the very beginnings.

2.45pm-3.45pm
Hands-on C programming using the Lego robots.

3.45pm-4.00pm
A summary of robot use in industry and chance to meet the other laboratory robots.

4.00pm-5.00pm
Time to play with the research robots and robot arms.

This event is being organised exclusively for British Mensa by **Maruba Events**

Robotics Day Booking Form

Name

Address

Phone

Email

Mem No.   or tick if guest ☐

Others in party

I'd like _____ places @ £34.00

Total £ _____

I wish to pay by

☐ Cheque payable to British Mensa Ltd

☐ Credit/debit card:

☐ Visa   ☐ Mastercard   ☐ Delta

☐ Maestro   ☐ Solo   ☐ Switch

☐ Visa Electron

Card number

Name on card

Valid from

Expiry date

Issue no
debit cards only

CSC

the 3 digit code at the end of your signature strip

Signature

Please send to: Robotics Day, British Mensa, St John's House, St John's Square, Wolverhampton, WV2 4AH.

Directions and accommodation options will be sent out with your booking confirmation.