

Welcome to the Animation14 Inspirational Computer Science Day – 11 July 2014

## Afternoon activities – computer science for everyone!

Talk – Cosmo Theatre @ 13:15 (pink) and 14:30 (purple)

### ➔ “Computers and Music”

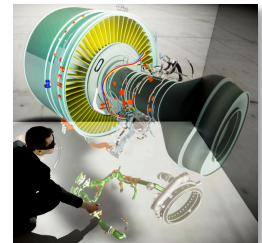
The way we create and listen to music would be impossible without computers. In this 45-minute interactive talk The University of Manchester’s [Sean Bechhofer](#), computer scientist and musician, explains some of the fascinating computer science ideas and technologies behind today’s music.



## Hands-on activities in John Thaw Theatre, 13:15 – 16:15

### ➔ Go virtual with EON Reality

EON Reality is a world-leading supplier of virtual reality and 3D software. Join [Alexandra Painter](#) and experience the incredible feeling of immersive 3D virtual reality with interactive demos of virtual reality techniques for engineering, anatomy and more — you’ve never seen anything like this before!



### ➔ IT’s rock ‘n’ roll

Computer science graduates [Peter Sutton](#) and [Lloyd Henning](#) have combined their interactive computer programs with rock’n’roll. It’s entertainment from the future for an audience of the present. Rock out with a Godzilla singing lyrics texted in by the audience. Play as a punctuation mark on our projector screen, avoiding falling zeroes using your smartphone as a controller.



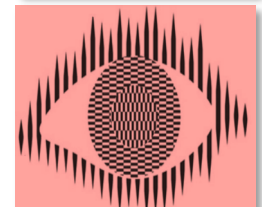
### ➔ Meet the NAO robots

The robots are coming! Join [John Pinkney](#) and [Colin Talbot](#) ([www.splashofcreativity.co.uk](http://www.splashofcreativity.co.uk)) and their NAO humanoid robots. NAO ([www.aldebaran.com](http://www.aldebaran.com)) is a 58-cm tall humanoid. He moves, recognises you, hears you and even talks to you! Come along and dance, walk or play games with him! Thanks to its many capabilities, intuitive software and dedicated hands-on exercises, NAO is the ideal platform to get to grips with programming.



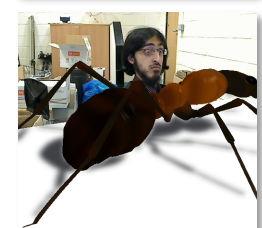
### ➔ cs4fn magic and illusions

Computer Science For Fun ([www.cs4fn.org](http://www.cs4fn.org)) is the UK’s biggest free initiative enthusing students and the public about computer science. Through magic tricks, and optical illusions, [Paul Curzon](#) from Queen Mary University of London will explain some of the principles that make computers work.



### ➔ Augmented reality

More and more applications are now combining CGI and video in real-time, to make the world around us appear to include computer-generated objects. We’re “augmenting” – adding to – the world around us. Computer science student [Hamza Mahmud](#) will demonstrate experimental work from The University of Manchester School of Computer Science.

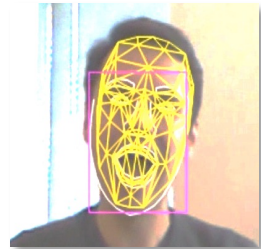


More over the page! ➔

## Hands-on activities in Room G16, 13:15 – 16:15

### → Face to face

The Kinect is a popular controller that enables computer games software to “see” the world, and react to the images it receives. This miracle of engineering and ingenuity costs about £100, and has revolutionised not only gaming, but research into computer vision. In this demonstration you’ll see how we can use the Kinect to “see” facial expressions, and control the faces of CG characters in real-time.



### → Bullet-time

What happens when you strap 48 Raspberry Pi cameras together with nearly half a kilometre of network cables? You get your own bullet time capture rig. Computer scientists **Andrew Robinson**, **Tom Macpherson-Pope** and **Tom Preston** will explain how it works and what it does. You’ll be amazed!



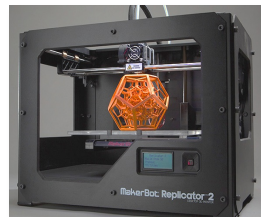
### → 3D computer modelling

How can we use a computer to change the shape of 3D objects? It’s hard, because we almost always have to work in 2D – with a mouse and keyboard and a flat screen. Now we can do it easily and intuitively in real-time using special software on an iPad.



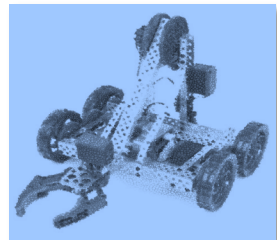
### → The amazing 3D printer

Did you know that you can print 3D objects? Using a machine called a “3D printer” and special software it’s possible to create 3D shapes out of plastic. The trick is to build up the object from many thin layers. Come and meet the GoPrint3D team, who will demonstrate this amazing technology.



### → Meet the Vex robots

Vex is a robotics kit system designed for introducing robotics to the classroom. Snap together robots from a kit of parts and build amazing machines! **Steve Taylor** from Manchester Communication Academy will show you these amazing robots. Find out more at [www.vexrobotics.com](http://www.vexrobotics.com).



## Programming workshop (Room F20) – pre-booked guests only

### → iPad Game Programming 13:00 13:45 14:30 15:15

The BBC’s **Jon Howard** invites you to be one of the first to try out the new prototype CBBC game making system. A touch screen interface that allows games to be made almost at the speed of thought. This is a quickfire 30-minute hands-on class where you’ll walk through the making of games, create your own and challenge others to play it.



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