

## Meeting Report Tue 14th April 2009

Contributed by RichardJones  
Wednesday, 15 April 2009  
Last Updated Friday, 24 April 2009

The evening was very well attended. We were pleased to welcome Kate Coleman with parents and youngsters from <http://cagcy.org.nz> as well as many of our regular attendees. The gold coin collection raised \$82 for Science Alive which was very much appreciated. Thanks to all who came, especially our speakers John Wynyard and Charles Manning who put so much energy and preparation into their presentations. Meetings are now held on 3rd Tuesday of even numbered months. Next meeting will be on Tuesday June 16th 2009 in the Science Alive Seminar Room. Offers of presentations and topics for our next session most welcome. For those who were not able to make it, here is a record of what we did (do let me know if it needs updating) ...

John Wynyard from Science Alive gave us an introduction to Robocup Junior Rescue, Soccer, Dance and Theatre categories with live demonstrations of robots performing rescue and soccer challenges. The Robocup web site is due to be updated soon with new rules, application forms and venues. See: <http://www.robocupjunior.org.nz> for more details. John has an .avi movie on DVD available with scenes from the National Competition, this gives an idea of the standard required to get to national level. Our regional competition will be held at Selwyn House School on 9th August 2009. Stuart Whelan has offered to coordinate individuals, not associated with a school entry, into teams providing a venue, space, and technical assistance. Stuart may be contacted by email here: [robocup@somepointinthefuture.co.nz](mailto:robocup@somepointinthefuture.co.nz)

Alex brought along a new NXT sumo robot that had a very neat spiked roller to catch and pull the opponent off its wheels. It gave a very convincing demo of pushing my robot, Gnasher, out of the Sumo ring. Thanks Alex for bringing the robot and your Dad.

Peter showed more robots from the Robokits range including a tiny robot from Polulu with very smooth line following action. Peter has a huge range of NXT sensors in stock. See the whole lot at <http://www.robokits.co.nz/>

Matthew showed us an ingenious way to create a free running ball castor from a ball bearing held captive in a wooden frame with a nut and bolt to run in.

Timothy showed a line following robot made from Tamaya gearbox and wheels, avr micro and light sensors with discrete H bridges. Timothy has plans to get his robot maze solving, maybe it will be maze solving before mine.

Phil told us about creative/project/hacker/maker space in Christchurch where you can meet like minded folks to discuss and make things. Sessions are currently on Sunday afternoons and Wednesday evenings at the Canterbury Innovation Incubator, 200 Armagh Street, Christchurch. see: <http://chchspace.nztech.org/>

Charles Manning delivered a very practical introduction to making your own sensors for Lego NXT. Everything from how to cope with crimping the strange connectors, some really simple switch, and opto interfaces through to active blocks to more than double the NXT sensor capability. You find Charles slideshow here: <http://embeddedjanitor.blogspot.com/> Charles recommended a book that parallels much of his work: <http://www.extremenxt.com/books.htm>

After the meeting Timothy asked me how my micromouse maze solving simulation colour character display is implemented. The complete code can be found here:

<http://homepages.ihug.co.nz/~rjtp/Micromouse/Simulations/LinuxMouseSim.tar.gz>

the display function is in file navigator.c Navigator\_ShowMaze( ). Documentation on escape sequences can be found here: [http://en.wikipedia.org/wiki/ANSI\\_escape\\_code](http://en.wikipedia.org/wiki/ANSI_escape_code)