

MEDIA RELEASE
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A masterclass in musicality: SYO violinist performs with award-winning RoboFiddler

On Thursday 1 November a very unusual masterclass will take place at the University of NSW when Sydney Youth Orchestra (SYO) violinist Megan Lee leads the award-winning 'RoboFiddler' in performance. The robotic violin player is sponsored by NICTA (Australia's Information and Communications Technology Research Centre of Excellence) and created by University of Adelaide mechatronics engineering students.

While RoboFiddler will not be playing at the Royal Albert Hall any time soon, it won second place in the inaugural ARTEMIS Orchestra contest held in Berlin in June 2007. The competition is based on longstanding European traditions in music and challenges participants to create devices which play real musical instruments with the help of various embedded technologies.

NICTA Chief Executive Officer Dr David Skellern, who was present at the ARTEMIS Orchestra contest, said "NICTA is thrilled with the result the team achieved, especially given that the competition attracted entries from leading embedded systems teams across Europe. I think they were a crowd favourite!"

RoboFiddler was developed by University of Adelaide mechatronic engineering students Yee Chia, Boon Hong, Chin Lee and Beinly Lim. The team created a system that links a conventional laptop computer to a micro-controller controlling both the robotic 'bow arm' and a series of six metal 'fingers' to allow 28 notes to be played across the four strings.

"It is a complex system because the bow needs to be told not only which string to play, but at what angle and speed to play to ensure a clean sound," University of Adelaide Head of the School of Mechanical Engineering Professor Colin Hansen said. "The result is not up to orchestra standard, but it is an impressive piece of engineering."

17-year-old Megan Lee, SYO violinist, will lead RoboFiddler in playing the two pieces it performed at the ARTEMIS competition: a traditional piece called *Soldier's Joy*, and a study from German composer Hans Sitt's *100 Etudes*.

"I am interested to see what kind of sound RoboFiddler makes. But I think the emotion and responsiveness of a real-life musician mean that the finest performances will always be by flesh and blood!" Megan said.

No stranger to the natural overlap of science and art, Megan is currently completing her HSC Exams which include both Music Performance and Mathematics at Extension 2 level. However Megan will give away the maths when she auditions for a place at the Conservatorium of Music next year. After completing her degree there she hopes to make her way as a professional chamber music or orchestral performer.

Playing with other musicians as a member of the SYO is an important part of her musical experience.

While Megan has a long road to travel on her route to the top, NICTA Senior Research Engineer Dr John Judge said that the challenges for Robofiddler are even greater: "The award-winning robotics of RoboFiddler have a long way to go, and participating in a masterclass with a real performer is part of the next step to true musicality" Dr Judge said.

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Editor's Notes:

- NICTA thanks Mark Phillips of Automated Test Systems, who created embedded software to tailor the platform for the ARTEMIS contest.
- The Sydney Youth Orchestra, including violinist Megan Lee, will perform Mahler's Symphony No.5 at Verbruggen Hall on 8 and 9 December 2007.

About NICTA

National ICT Australia (NICTA) is a national research institute with a charter to build Australia's pre-eminent Centre of Excellence for information and communications technology (ICT). NICTA is building capabilities in ICT research, research training and commercialisation in the ICT sector for the generation of national benefit.

National ICT Australia is funded by the Australian Government as represented by the Department of Communications, Information Technology and the Arts and the Australian Research Council through *Backing Australia's Ability* and the ICT Centre of Excellence program

NICTA was established and is supported by its members: The Australian Capital Territory Government; The Australian National University; NSW Department of State and Regional Development; and The University of New South Wales. NICTA is also supported by its partners: the University of Sydney; University of Melbourne; the Victorian Government; the Queensland Government; Griffith University; Queensland University of Technology; and The University of Queensland.

About Sydney Youth Orchestras

The Sydney Youth Orchestras Association is Sydney's premier orchestral training ground. Since 1973 it has provided an international standard of orchestral training experience and Sydney Youth Orchestra alumni, including virtuoso violinist Richard Tognetti and best-selling flautist Jane Rutter, can be found throughout Australia's professional orchestras and overseas.

Sydney Youth Orchestras has a membership of over 350 musicians aged between 6 and 25 years, drawn from a wide range of backgrounds, and from all over New South Wales. Sydney Youth Orchestras is made up of eight different ensembles, each comprising players of a different age and ability: the Sydney Youth Orchestra (SYO), SYO Philharmonic, Symphonic Wind Orchestra, Peter Seymour Orchestra, Sinfonietta, Chamber Strings, Camerata and Speer Orchestra.

The *SYO in Concert* Series, based at City Recital Hall Angel Place in Sydney, showcases the energy and ability of the organisation's flagship orchestra in four high-profile concerts annually. Sydney Youth Orchestras also tours regularly, both internationally and also regionally each year, and its ensembles present over 30 concerts a year including Family Concerts, Toddlers Proms, commercial performances, and instrumental masterclasses.

For more information visit:

NICTA – www.nicta.com.au
Sydney Youth Orchestras – www.syo.com.au