AIP WOMEN IN PHYSICS NATIONAL LECTURE TOUR

Emerging optical fibres for applications beyond data transmission

Professor Tanya Monro
Chair of Photonics and Director, DSTO Cenre of Expertise in Photonics
University of Adelaide, South Australia

New classes of optical fibres are rapidly emerging that allow fibres to be used well beyond their established role in data transmission and into applications in a broad range of areas including sensing, biology, medicine, defence and optical data processing. These developments have been enabled by research in a diverse range of areas including physics, materials science, process engineering and fluid mechanics. Recent progress in a range of areas will be reviewed. In particular, the use of tiny air holes to modify the propagation of light will be described.

Professor Tanya Monro is Chair of Photonics and Director, DSTO Centre of Expertise in Photonics (CoEP), University of Adelaide. She has been the recipient of a number of awards, including the Bragg Gold medal for the best physics PhD thesis in Australia (1998), and the Cosmos magazine Bright Spark Award (2006). Her research focusses on the development of optical fibres in new materials (in particular soft glasses) and the application of new fibre concepts to a range of applications, in particular in defence and sensing. The Centre of Expertise in Photonics is world-class, and the first of its kind in Australia. Since its establishment in 2005, Professor Monro has built the centre into a team of 20 researchers.

BRISBANE VENUES: Friday 14th March 2008
Three different versions of the talk will be given at different locations on the same day.

Public talk: 10am to 11am, QUT Gardens Point campus, Z block, room Z406
(Contact - Dr Stephen Hughes, sw.hughes@qut.edu.au***, phone 3138 2328)***

Schools talk: 12 noon to 1pm, Lourdes Hill College Hawthorne, Duhig Hall
(Contact Mr Mark Young,m.young@aip.org.au***, phone 3896 6376)***

Research seminar: 4pm to 5pm, Univ. of Queensland St Lucia, building 7, room 222
(Contact Ms Aggie Branczyk,aggie@physics.uq.edu.au***, phone 3365 1873)***

These presentations are free. However, for the public and schools talks, bookings are required to be sent (preferably by email) to the above respective local contact person.

The Australian Institute of Physics International Women in Physics Lecture Series was instituted to celebrate the contribution of women to advances in physics. Under this scheme, a woman who has made a significant contribution in a field of physics will give a series of lectures around Australia, including a Public Lecture arranged by each participating branch of the AIP. The Lecture will be of interest to a non-specialist physics audience and is expected to increase awareness among students and their families of the possibilities offered by continuing to study physics.

Speaker profile

PROFESSOR TANYA MONRO

Chair of Photonics and
Director, DSTO Cenre of Expertise in Photonics (CoEP)
School of Chemistry and Physics
University of Adelaide
South Australia

Professor Tanya Monro completed her undergraduate degree (BSc (Hons)) and PhD within the School of Physics at the University of Sydney. Her PhD work on self-written waveguides was awarded the 1998 Bragg Gold Medal for the best PhD thesis by a student from an Australian University.

She then took up a postdoctoral research position at the Optoelectronics Research Centre (ORC) at the University of Southampton in the UK. In 2000, Tanya was awarded a Royal Society University Research Fellowship at the ORC, where she worked until the end of 2004 leading research in the areas of holey optical fibres and soft glasses.

A year later Tanya returned to Australia to take up the inaugural DSTO Centre of Expertise in Photonics (CoEP) Chair of Photonics and directorship within the School of Chemistry & Physics at the University of Adelaide. In two years she has built the centre into a team of 20 researchers.

She has published more than 200 papers and is a member of the SA Premier's Science and Research Council. In 2006 she was awarded the Cosmos Magazine inaugural "Bright Spark" award.

'Optoelectronics is an exciting field to work in. Many of the new and fundamental concepts you work on can be realized and tested within a university environment, and then tailored for real world applications' says Professor Monro.