

# Chief Investigator Profiles

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## Benjamin J Eggleton - Director

Benjamin Eggleton is currently an ARC Federation Fellow and Professor of Physics at the University of Sydney. He is founding Director of the Centre for Ultrahigh bandwidth Devices for Optical Systems (CUDOS), an ARC Centre of Excellence. He is also the founding Director for the Sydney University Institute of Photonics and Optical Science. He studied at the University of Sydney, obtaining his BSc (Hons 1) in 1992 and his PhD in Physics in 1996. After graduation, he went to the United States to join the world's leading research institute in his field, Bell Laboratories, as a Postdoctoral Fellow in the Optical Physics Department. Soon after this, he became the Research Director of the Specialty Photonics Business Division of Bell Lab's parent company, Lucent Technologies where he drove Lucent's research program in optical fibre devices.

### Key Areas of Research Contribution and 2011 Achievements

As the CUDOS Director, Professor Eggleton is responsible for setting the vision and focus for the research program and establishing and directing the research collaborations. He oversees the six current CUDOS Flagship research projects and drives strong interactions with CUDOS Partner Investigators and end-users. He also heads the University of Sydney CUDOS node and leads the Sydney experimental programs, in close collaboration with Professors de Sterke, McPhedran and Dr Kuhlmeier, which will be reported here. He contributes to the Terabit per second Optical Communications project, Quantum Integrated Photonics and Mid-infrared Photonics project and collaborates closely with the Hybrid Integration project. In 2011 Eggleton's group's achievements spanned across the Terabit per second Optical Communications project with postdeadline presentations at major international conferences, the Quantum Integrated Photonics project with 1 postdeadline and the Mid-infrared Photonics project.

### Recognition

Eggleton has co-authored more than 320 journal papers, with more than 8000 citations, presented more than 100 invited and plenary presentations at international conferences, and has filed 35 patents. He has received several significant awards. Most notably in 2011 he received the Eureka Prize for Leadership in Science, in 2007 he received the Pawsey Medal from the Australian Academy of Science, in 2004 he received the Prime Minister's Malcolm McIntosh Science Prize for Physical Scientist of the Year, in 2003 the ICO Prize (International Commission for Optics), and in 1998 was awarded the Adolph Lomb Medal from the Optical Society of America. Other achievements include the award of the Distinguished Lecturer award from the IEEE/LEOS, an R&D100 award, and being made a Fellow of OSA, IEEE and ATSE. He was an Associate Editor for IEEE Photonic Technology Letters from 2003-2007, and is currently Editor for Optics Communications. Professor Eggleton was the President of the Australian Optical Society from 2008-2010.

