Professor Benjamin J. Eggleton

Current appointment:

Director, University of Sydney Nano Institute (Sydney Nano) (appointed in 2018); Tenured and full Professor (appointed in 2003), Co-Director, NSW Smart Sensing Network (NSSN) (2016-).

Qualifications:

B. Sc. (Hons 1), Physics, 1992, PhD, Physics, University of Sydney, 1996.

Previous employment:

Postdoctoral Member of Technical Staff, Bell Laboratories, Lucent Technologies (1996–1998); Member of Technical Staff, (1998–2000); Technical Manager – Fiber gratings and photonic devices group, (2000–2001); Research Director, Specialty Fiber Devices business with Lucent Technologies (Jan. 2001–Nov. 2001); Director of Photonic Devices Research, OFS Laboratories & OFS – Specialty Photonics Division (Nov. 2001–Dec. 2002). ARC Federation Fellow, University of Sydney (2003-2012); ARC Laureate Fellow (2003-2017); Director, Institute of Photonics and Optical Science (IPOS) (2003-1018); Director, CUDOS ARC Centre of Excellence (2003-2018);

Editorial duties:

Editor-in-Chief for APL Photonics (AIP Publishing), Editor-in-Chief of *Optics Communications* (2007–present), Associate Editor for IEEE Photonic Technology Letters (2003–2007).

Membership of professional societies:

- 2016 Fellow of the Australian Academy of Science
- 2009 Fellow of the Australian Academy of Technological Sciences and Engineering.
- 2009 Fellow of the IEEE Photonics Society; limited to 3% of membership.
- 2008 Fellow of the Australian Institute of Physics.
- 2003 Fellow of the Optical Society of America
- 2003 Member of the Australian Optical Society (President 2008-10)

Awards:

- 2017 VICE CHANCELLORS AWARD FOR OUTSTANDING RESEARCH.
- 2011 WALTER BOAS MEDAL from the Australian Institute of Physics
- 2011 EUREKA PRIZE FOR LEADERSHIP IN SCIENCE
- 2010 SCOPUS YOUNG RESEARCHER OF THE YEAR in the physical sciences
- 2008 NSW SCIENTIST OF THE YEAR Award for Physics and Astronomy
- 2007 THE PAWSEY MEDAL from the Australian Academy of Science
- 2007 COSMOS BRIGHT SPARK. *Australia's Top Ten Scientific Minds under 40*
- 2004 MALCOLM MCINTOSH PRIZE – AUSTRALIAN PHYSICAL SCIENTIST OF THE YEAR,
- 2003 ICO PRIZE, International Commission for Optics
- 2002 R&D100 AWARD for inventing and developing the dynamic dispersion compensator.
- 2002 IEEE/LEOS DISTINGUISHED LECTURER AWARD (2002–03)
- 1998 ADOLPH LOMB MEDAL, Optical Society of America,

Career publications: 480 journal papers (2 edited books, 14 Chapters, 35 patents). Career citations > 19,000, h-index = 67 (Web of Science). Google scholar =87

Ten most significant publications relevant to the proposal:

1. M. Merklein et al., "Enhancing and inhibiting stimulated Brillouin scattering in photonic integrated circuits," **Nature Communications** 6, 6396, doi:10.1038/ncomms7396 (2015) [20 citations]
2. A. Blanco-Redondo, et al., "Observation of soliton compression in silicon photonic crystals," **Nature Communications** 5, 3160, doi:10.1038/ncomms4160 (2014) [40 citations]
3. M.J. Collins et al., "Integrated spatial multiplexing of heralded single-photon sources" **Nature Communications** 4, 2582; doi:10.1038/ncomms3582 (2013) [85 citations]
4. R. Pant et al., "On-chip stimulated Brillouin scattering," **Optics Express** 19, 8285-8290 (2011). [130 citations]
5. B. J. Eggleton et al., "Chalcogenide Photonics," **Nature Photonics** 5, 141–148 (2011). [556 citations]
6. B. Corcoran et al., "Green light emission in silicon through slow-light enhanced third-harmonic generation in photonic-crystal waveguides," **Nature Photonics** 3, 206–210 (2009). [266citations]

7. M. Pelusi et al.," **Nature Photonics** 3, 139–143 (2009). [130 citations]
8. C. Monat et al., "Integrated optofluidics: A new river of light," **Nature Photonics** 1, 106–114 (2007). [670 citations]
9. J.T. Mok et al., "Dispersionless slow light using gap solitons," **Nature Physics** 2, 775–780 (2006). [200 citations]
10. B. J. Eggleton et al., "Bragg grating solitons," **Physical Review Letters** 76, 1627–1630 (1996). [500 citations]

Recent competitive Grants:

Since 2005 I have secured more than $50M in competitive research funding. I was the founding Director of CUDOS, funded initially from 2003–10 and CUDOS II, funded for 2011–17. I am also founding Co-Director of the NSW Smart Sensing Network (NSSN). I was awarded a second Federation Fellowship in 2007 and an ARC Laureate Fellowship in 2012. I have secured six ARC Discovery grants, four Linkage projects (three as lead CI) and three funded projects from the US Air-force Office. Fifteen members of my group have gained ARC Fellowships: one ARC Research Fellowship, five ARC Postdoctoral Fellowships, two Future Fellowships, one Linkage Postdoctoral Fellowship, and seven ARC DECRAs. I have been successful with 12 LIEF grants, on six of which I was the lead investigator. I also secured six major equipment grants from the University of Sydney.