

**BRIEF CURRICULUM VITAE**

NAME: John William O'Byrne  
 POSITIONS: Associate Professor  
 Associate Dean (Student Life), Faculty of Science  
 The University of Sydney  
 Secretary, Astronomical Society of Australia

**ACADEMIC QUALIFICATIONS**

- B.Sc. (Honours - First Class), Sydney 1981
- Ph.D. in Physics, Sydney 1987
- Graduate Certificate in Educational Studies (Higher Education) 2004
- Company Directors Course Diploma, Australian Institute of Company Directors 2007

**AWARDS**

- Honorary Fellow, Astronomical Society of Australia 2003
- Faculty of Science Excellence in Teaching Award 2005
- Harry Messel Award for Excellence 2006
- Faculty of Science Citation for Excellence in Teaching 2008
- ALTC Team Citation for Outstanding Contributions to Student Learning 2008
- V-C Award for Excellence in the Outstanding Educational Engagement and Innovation 2018

**EMPLOYMENT HISTORY**

- **ARGS Research Associate** University of Sydney 1986-1987
- **Research Associate** Johns Hopkins University 1988-1990
- **Lecturer** University of Sydney 1990-1996
- **Senior Lecturer** University of Sydney 1997-2009
- **Associate Professor** University of Sydney 2010-present

**A SAMPLE OF SUCCESSFUL GRANT APPLICATIONS**

**(a mix of large external astronomical instrumentation grants and small internal Educational grants)**

- Fundamental Stellar Studies with the Sydney University Stellar Interferometer (SUSI)
- New Generation Interference Filters for Wide-field Astronomical Imaging.
- Adaptive Optics for Australian Astronomy, Medicine, Industry and Defence
- Interactive learning with a classroom communication system
- Identifying and helping Junior Science students 'at risk'
- Integrating on-line problems and assignment questions into a Junior Physics unit
- New directions in physics education in Australian universities
- GNOSIS: a new window into the distant universe enabled by photonic technology
- GNOSIS-J: completing the revolutionary OH suppression spectrograph
- Modern physics and quantum photonic equipment for Senior Lab

**PUBLICATIONS**

- Author of 50 refereed scientific papers and conference publications, plus 3 book chapters.
- O'Byrne, J. and Mendez, A. (2009) *Forging New Directions in Physics Education in Australian Universities – Graduates in the Workforce*, Australian Learning and Teaching Council, Sydney
- Author of Stage 6 HSC Physics High School text *In2Physics*, Pearson Education Australia
- Contributing Author to 3 books for the general public.
- Consultant or consultant editor for numerous books for the general public.

**Selection of recent refereed Journal papers**

- Bland-Hawthorn, Joss; Kos, Janez; Betters, Christopher H.; De Silva, Gayandhi; O'Byrne, John; Patterson, Rob; Leon-Saval, Sergio (2017) Mapping the aberrations of a wide-field spectrograph using a photonic comb, *Optics Express*, vol. 25, issue 14, p. 1561

- Hill, M., Sharma, M., O'Byrne, J and Airy, J. (2014) Developing and Evaluating a Survey for Representational Fluency in Science, accepted to the International Journal for Innovation in Science and Mathematics Education, IJISME, 22, 22-42.
- Trinh, C.Q. et al. (2013) GNOSIS: The First Instrument to Use Fibre Bragg Gratings for OH Suppression, AJ, 145, 51.
- Ellis, S. C. et al. (2012) Suppression of the near-infrared OH night sky lines with fibre Bragg gratings – first results, MNRAS, 425 (3), 1682-1695.
- Charles, N. et al. (2012) Design of Optically Path Length Matched, Three-Dimensional Waveguide Circuits Consisting of Unique Routes, Appl. Opt., 51, 6489–6497.
- Bryant, J. J.; O'Byrne, J. W.; Bland-Hawthorn, J. and Leon-Saval, S. G. (2011) Characterization of hexabundles: Initial results, MNRAS 415 (3), 2173-2181.
- Sánchez-Gil, M.C. et al. (2011) Age patterns in a sample of nearby spiral galaxies, MNRAS, 415 (1), 753-772.
- Bland-Hawthorn, J. et al. (2011) Hexabundles: imaging fiber arrays for low-light astronomical applications, Opt. Exp., 19 (3), 2649-2661.
- O'Byrne, J., Britton, S., George, A., Franklin, S. and Frey, A. (2009), Using academic predictors to identify first year science students at risk of failing, CAL-laborate International, 17(1), 15-25
- Sharma, M.D., Swan, G., Mills, D., Pollard, P., Mendez, A. and O'Byrne, J. (2009), Physics Learning and Teaching in Australian Universities, CAL-laborate International, 17(1), 26-40.
- North, J.R., Davis, J., Robertson, J.G., Bedding, T.R., Bruntt, H. , Ireland, M.J. , Jacob, A.P., Lacour, S., O'Byrne, J.W., Owens, S.M., Stello, D., Tango W.J. and Tuthill, P.G. (2009) The radius and other fundamental parameters of the F9 V star  $\beta$  Virginis, MNRAS, 393 (1), 245-252.

### **Selection of Popular books**

- O'Byrne, J.W. (Consultant) (2013), *Reader's Digest World Atlas*, Readers Digest (Australia).
- O'Byrne, J.W. (Consulting eds) (2011) *Discovery Education Series*, Discovery Communications, produced by Weldon Owen Pty Ltd, Sydney.
- Levy, D. and O'Byrne, J.W. (Consulting eds) (2011) *The Practical Skywatchers Handbook of the Universe*, J.W.O'Byrne (Consultant Editor), Weldon Owen Publishing/The Five Mile Press.
- Garlick, M (2006) *The Illustrated Atlas of the Universe*, J.W.O'Byrne (Astronomy Consultant), Weldon Owen Publishing/Fog City Press.
- O'Byrne, J. (ed.) *Skywatching* (1994, 2007), *Advanced Skywatching* (1997) and *Practical Skywatching* (2001), The Nature Company, California.

### **TEACHING EXPERIENCE**

- Undergraduate lecturing and tutoring in Physics 1, 2 and 3 and Medical Radiation Physics
- Lecturing Astronomy in University Continuing Education Program (over 25 years!)
- Course Coordinator of Physics 1 Astronomy, Sports Mechanics, Medical Radiation Physics units
- Director of First Year Studies, School of Physics
- Associate Head (Teaching & Learning), School of Physics
- Associate Dean (Standards), Faculty of Science
- Associate Dean (Education), Faculty of Science
- Associate Dean (Student Life), Faculty of Science
- Supervision of Physics TSP, Honours and PhD students
- Member, Physics Programme Review at Victoria U of Wellington 2015
- Member, Swinburne University Bachelor of Science Course Advisory Committee 2015

### **MEMBERSHIP OF PROFESSIONAL SOCIETIES & RELATED ACTIVITIES**

- Astronomical Society of Australia (ASA) - Honorary Fellow; Secretary
- Australian Optical Society (AOS)
- Australian Institute of Physics (AIP); Physics Education Group
- International Astronomical Union (IAU), National Organising Committee & Chair Finance sub-committee for IAU General Assembly XXV (Sydney 2003)