

BRIEF CURRICULUM VITAE

NAME: John William O'Byrne
CURRENT AGE: 51
NATIONALITY: Australian
POSITIONS: Associate Professor
 Chair of Academic Programs, School of Physics
 Sub-Dean, 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

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

- 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

PUBLICATIONS

- Author of over 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 (<http://www.physics.usyd.edu.au/super/ALTC/documents/Graduates-Report.pdf>).
- Contributing Author to 3 books for the general public.
- Author of Stage 6 HSC Physics text *In2Physics*, Pearson Education Australia
- Consultant or consultant editor for numerous books for the general public, many for children.

Selection of recent refereed Journal/Conference papers

- Clark, P., Bissonauth, N., O'Byrne, J., Dunlop, C.N., Gregory, T., Morris, T.J., Myers, R.M., Saunter, C.D. and Wilson, R.W. (2003), Rayleigh AO Demonstrator for the 4.2m William Herschel Telescope, in "Adaptive Optical System Technologies II", ed. P.L. Wizinowich and D. Bonaccini, Proc. SPIE 4839, 516-523
- Cianci, S., Bland-Hawthorn, J. and O'Byrne, J.W. (2004), Designing ultra-narrowband interference filters, in "Optical Fabrication, Metrology, and Material Advancements for Telescopes", Glasgow June 2004, ed. Eli Atad-Ettedgui, Philippe Dierickx, SPIE Proceedings, 5494, 520-528.
- O'Byrne, J. & Thompson, R. (2005), The tutorial benefits of on-line assignments: MasteringPhysics in first year physics at the University of Sydney, in Proceedings of Symposium 'Blended Learning in Science Teaching and Learning', UniServe Science, Sydney 2005, 81-86.
- Sharma, M.D., Mendez A. and O'Byrne, J.W. (2005), The relationship between attendance in student-centred physics tutorials and performance in university examinations, International Journal of Science Education, 27 (11), 1375-1389.
- Sharma, M.D., Khachan, J., Chan, B. and O'Byrne, J.W. (2005), An investigation of the effectiveness of electronic classroom communication systems in large lecture classes, Australasian Journal of Educational Technology, 21 (2), 137-154.
- Davis, J. Mendez, A., Seneta, E.B., Tango, W.J., Booth, A.J. and O'Byrne, J.W., Thorvaldson, E.D., Ausseloos, M., Aerts, C. and Uytterhoeven, K. (2005), Orbital parameters, masses and distance to Beta Centauri determined with the Sydney University Stellar Interferometer and high resolution spectroscopy, Mon. Not. R. Astron. Soc., 356 (4), 1362-1370.
- Sharma, M., Pollard, J., Mendez, A., Mills, D., O'Byrne, J., Scott, D., Hagon, S., Gribble, J., Kirkup, L., Livett, M., Low, D., Merchant, A., Rayner, A., Swan, G., Zadnik M., and Zealey W. (2008), What does a physics undergraduate education give you? A perspective from Australian physics, Eur. J. Phys., 29, 59-72. (<http://www.iop.org/EJ/abstract/0143-0807/29/1/006/>)
- 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 β Virginis, Mon. Not. R. Astron. Soc., 393 (1), 245-252.
- 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 (<http://science.uniserve.edu.au/images/content/CALlaborate/obyrne.pdf>)

Selection of recent Popular books

- O'Byrne, J. (ed.) *Skywatching* (1994, 2007), *Advanced Skywatching* (1997) and *Practical Skywatching* (2001), The Nature Company, California.
- Garlick, M (2006) *The Illustrated Atlas of the Universe*, J.W.O'Byrne (Astronomy Consultant), Weldon Owen Publishing/Fog City Press.
- Garlick, M (2007) *The Children's Atlas of the Universe*, J.W.O'Byrne (Consultant Editor), Weldon Owen Publishing/The Five Mile Press.

TEACHING EXPERIENCE

- Undergraduate lecturing and tutoring in Physics 1, 2 and 3
- 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 in Physics
- Chair of Academic Programs, School of Physics
- Supervision of Physics TSP, Honours and PhD students

CURRENT MEMBERSHIP OF PROFESSIONAL SOCIETIES & RELATED ACTIVITIES

- Astronomical Society of Australia (ASA) - Honorary Fellow; Secretary; Education committee
- 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)