

## CURRICULUM VITAE – KISHAN DHOLAKIA

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Date of Birth: 28<sup>th</sup> December 1966

Research Website: <http://opticalmanipulationgroup.wp.st-andrews.ac.uk>

### EDUCATION

1990-1993 Imperial College, London, PhD in Laser Physics (laser cooling and trapping of ions)

1989-1990 Imperial College, London, M.Sc. (with distinction) in Applied Optics

1985-1988 Churchill College, Cambridge University, B.A. (Natural Sciences, Physics)

### EMPLOYMENT

2003- Professor of Physics at St Andrews

2000 - 2003 Lecturer/Reader in School of Physics and Astronomy, St Andrews

1997 - 2000 Royal Society of Edinburgh Research Fellow, University of St Andrews

1994 - 1997 Postdoctoral Research Assistant, St Andrews and Imperial College, London

### INTERNATIONAL AWARDS/HIGHLIGHTS/MEMBERSHIPS (inc OSA SERVICE)

2018 Recipient of the SPIE Dennis Gabor Award

2017 Recipient of the Institute of Physics Thomas Young Medal and Prize

2017 Distinguished Professor IIT Madras, Chennai, India

2016 Recipient of The Optical Society (OSA) R.W. Wood Prize

2016 Recipient of Inst Advanced Studies, Distinguished Visiting Fellowship at the University of Western Australia, Perth, Australia

2015 Christmas Lecture for the Royal College of Surgeons, Edinburgh

2015 International Year of Light Lecture, Tate Modern, London

2015 Guinness Book of Records citation: "fastest man-made rotation"

2015 Royal Society Leverhulme Trust Senior Fellowship

2014 Elected OSA "Member at Large"

2013 Finalist for IET A.F. Harvey Prize (last three)

2013 Chair of OSA Fellows Committee

2013 Korean Government International Advisor for new \$100M IBS Initiative

2012 Visiting Professor at Chiba University, Japan (extended until 2018)

2013 Elected to OSA International Council

2012 OSA Outstanding Reviewer Award

2011- 2015 Nature Publishing Group, "Exceptional" Reviewer

2010 Elected as NSERC International member (Canada)

2008 Royal Society Wolfson Merit Award

2008 Elected Fellow of the Optical Society of America

2009 Elected Fellow of SPIE

2007 Fellow of the Royal Society of Edinburgh

2005 UK EPSRC Anniversary Newline 2005: *Selected Highlight Researcher* (Biophotonics). EPSRC looked at last decade of scientific work *across every discipline*: picked only 15 UK persons

2005 Honorary Adjunct Professor at the Center for Optical Sciences, University of Arizona, USA

2005 Finalist for the International Koerber Prize (in the last three)

2004 Fellow of the Institute of Physics, UK.

2003 Winner of European Optics Prize for work on optical micromanipulation.

2004 Awarded the International Tan Chin Tuan Visiting Fellowship at NTU, Singapore

## PRESENT FUNDING TRACK RECORD

***I have been awarded over £30M in Research Funding since 2000. (Since 2017 I have raised > £8M as Principal Investigator) Current examples:***

EPSRC Programme Grant: Challenging the Limits of Photonics: structured light (2012-2017), £4,406,673; EU FP7 ICT Functional anatomical molecular optical screening (FAMOS) (2012-2017) €654,516; EPSRC Platform Grant: Shaping light at the interface (2014-2019) £1,183, 629; EPSRC Programme Grant: Resonant and Shaped Photonics (2017-2022) £5,023,462; EPSRC Prosperity Partnership (2017-2022) £1,434,010.

**INVITED/PLENARY/KEYNOTE TALKS.** I have had >200 Invited/Plenary/Keynote talks. Since 2008, I average 10+ invited talks and 3-4 Plenary talks/year. I have had Visiting Fellow positions in the USA, Australia, Singapore and Mexico. I have also been an Invited Lecturer at fifteen International Summer Schools in Photonics and Biophysics (incl. Mexico, Denmark, Sweden (**Hven Biophotonics School**), Bath, UNESCO, ICTP, Switzerland, Italy, Australia, India. Invited Lecturer at the **OSA Siegman School in 2018**. I was selected as the International Researcher/Lecturer for the “Erudite” Programme in Cochin, India (restricted solely Nobel Prize Winners and World Recognised Researchers)

**JOURNAL PUBLICATIONS** I have > 300 journal publications including over twenty in Nature/Science family journals. My career citations/statistics are below (02/10/18).

	Google Scholar	ISI Web of Knowledge	Scopus
h-index	80	69	72
citations	25,195	17250	19841

**CONTRIBUTIONS TO TEACHING AND CAREER DEVELOPMENT** I have successfully supervised **43 students** to PhD level since 1999 (over 2/3 as sole supervisor). Student Susan Skelton won the UK Best Physics “SET” student Prize in 2009. **Fifteen members of my team** have progressed to permanent academic positions worldwide (three at full Professor level). I have a strong teaching programme in the department and have instigated new final year courses on “Biophotonics” and “Applications of Quantum Physics”

**INDUSTRIAL ACTIVITIES AND GRANTED PATENTS** I commercialized the World’s first portable compact suite of optical trapping systems for biophysics (through Elliot Scientific Ltd). This product won the Photonics Circle of Excellence Award (USA, Jan 2005) and sales in excess of £3M have been achieved to date. Twenty-seven main patent families (approx. 110 individual patents) of which twenty-three families are licensed. More than 54 individual patents awarded worldwide in areas of beam shaping, manipulation, Raman and imaging. In 2015 a £2.2M licence deal with transferred the 23 patent families (Biophotonics Portfolio) to **M Squared Lasers**. In 2016 commercialised Airy beam Light Sheet Technology with subsidiary **M Squared Life**. Currently sales made in UK, USA Europe and South Africa under an Alpha Programme. A further ten new patents are filed since Jan 2015.