

# Curriculum Vitae

## Vlatko Vedral

Prof. Vlatko Vedral, PhD, DIC, MA

NATIONALITY: British

DATE OF BIRTH: 19<sup>th</sup> August 1971

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### PROFESSIONAL HISTORY

- Professor of Quantum Information Science, University of Oxford & Governing Body fellow of Wolfson College (June 2009-).
- Principal Investigator at CQT, Singapore and Professor of Physics, NUS (Dec 2007-).
- Centenary Professor of Quantum Information at Leeds University, (Oct 2004-May 2009).
- Reader in Quantum Physics at Imperial College, Oct. 2003 – Oct. 2004.
- Governor's lecturer (permanent position) at Imperial College, Oct. 2000 – Oct. 2003.
- Senior College Lecturer at Keble College, Oxford, Oct. 2001 – Oct. 2003.
- Junior research fellow at Merton College, Oxford, Oct. 1998 – Oct. 2000.
- Elsag-Bailey post-doctoral research fellow in Oxford, April 1998 – Oct. 1998.

### EDUCATION HISTORY

- PhD in physics at Imperial College of Science, Technology and Medicine (Title: "*Quantum Information Theory of Entanglement*", supervised by Prof. Sir Peter L. Knight, FRS), October 1995 - March 1998. Most of my thesis work is presented in my review article (V. Vedral, "The Role of Relative Entropy in Quantum Information Theory", *Rev. Mod. Phys.* 74, 197 (2002)).
- BSc in physics at Imperial College of Science, Technology and Medicine (Specialised in Theoretical Physics), 1992 - 1995.

### AWARDS AND VISITING PROFESSORSHIPS

- Marko V Jaric Award 2010, Institute of Physics in Serbia, 2011.
- The World Scientific (Physics Research) Medal and Prize, Singapore IOP, 2009.
- Royal Society Wolfson Research Merit Award, March 2007 – June 2009.
- Visiting Research Professor, University of Singapore, 2005-2007.
- Visiting Professor, University of Vienna, Sept 2004 – July 2005.
- Senior Scientist, Schrödinger Institute, Vienna, Sept. – Dec. 2004.
- Finalist, International competition in honour of John Archibald Wheeler, Princeton, March 2002.
- The Abdus Salam Award (Imperial College), June 1997.
- Overseas Research Student Award, Imperial College, Oct. 1995 – Oct. 1998.
- University of London Scholarship Award: The Knight Trust (London), 1996 - 1998.

### RESEARCH SUPPORT

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| • EC EQUIP (2000-2003) and TOPQIP (2003-2006)                | £201,000 |
| • EPSRC Quantum Computation (2000-2003;2006-2009)            | £300,000 |
| • Elsag spa and Hewlett Packard PhD studentships (1999-2003) | £70,000  |
| • QUIPROCONE & ESF & QUIPRO. Collaborations (2000-2003)      | £30,000  |
| • EPSRC Quantum Information UK based Network (2003-2006)     | £60,000  |
| • QIPIRC EPSRC quantum computation network (2003-2006)       | £160,000 |
| • SCALA EU network (2006-2009)                               | £80,000  |
| • Leverhulme and Templeton Grants (2011-2014)                | £200,000 |

## PROFESSIONAL SERVICES

- Referee for all major journals (including Nature, Phys. Rev., Proc. Roy. Soc., J. Mod. Opt.).
- Referee for EPSRC, Royal Society, Austrian Science Foundation and other international bodies.
- Regular examiner for PhD thesis and Junior Research Fellowships.
- Organizer of five international and two UK conferences.
- Coordinator of EPSRC funded UK network "Quantum Interference" (2003-6).
- Advisory Panel Board Member for J. Phys A (2005-); advisor for Research assessment in UK
- I regularly review books for Nature, Contemp. Phys. and Prog. Q. Elect. & review book proposals for the Oxford University Press and Imperial College Press.
- Member of EPSRC and Canadian College of Reviewers (2005-) and Lifeboat Foundation advisory board (2006-).
- I have served on many University committees regarding all aspects of decision-making.
- Member of IOPP Science Advice Committee (2009-)
- Editorial board of Annalen der Physik, Int. J. Comp. Math and Computability

## PUBLIC SERVICE

I have participated in many public events, among which are:

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|---|----------|
| 1. BBC radio: many interviews (and a 2 hour weekly show on science) | 2006 -   |
| 2. Financial Times: Interview on the current state of QC            | 1998     |
| 3. Science Now: 2 Interviews about entanglement                     | 1999/00  |
| 4. German Radio: Interview on my views on Quantum Mechanics         | 2003     |
| 5. New Scientist and Scientific American: Various invited articles  | 2002 -   |
| 6. "Unlimited" theatre: Theatre plays based on my consultations     | 2006/07- |
| 7. Discovery Channel Interview                                      | 2008/09  |
| 8. Straits Times (two articles in the science section)              | 2008/09  |

## TEACHING

- **Undergraduate courses:** Quantum Mechanics, Relativity, Optics, Quantum Optics, Solid State, Mathematics, Thermodynamics, Statistical Mechanics, Analytical Mechanics and Electro-magnetism at Oxford, Imperial College, Leeds and Singapore since 1998 (2 courses per year on average). Academic and personal tutor as well as project supervisor.
- **Postgraduate courses:** Quantum Computation & Optics, Solid State (Imperial College 2000-2003, Heidelberg 2003, Vienna 2004 & Vienna 2005, Singapore 2008-2010).
- **Books:** "Modern Foundations of Quantum Optics" (Imperial College Press, March 2005) and "Introduction to Quantum Information Science" (Oxford University Press, October 2006). (I have contributed to 4 other books on quantum information and computation). Popular book: "Decoding Reality: The Universe as Quantum Information" (OUP, February 2010) has been translated into 4 languages.

## SUPERVISION

- 25 students have received PhDs under my supervision. I have supervised numerous undergraduate research projects in UK, Singapore and US (including students from the SURF Caltech exchange program as well as the Stanford University).

## PUBLICATIONS AND TALKS

- I have published over 190 papers including 36 Phys. Rev. Letters, 6 Nature papers, 3 invited "News and Views", "Essays" and Insights" for Nature, and six invited reviews on quantum information, including 4 Reviews of Modern Physics. Total citation number over 10000 (h factor = 45).
- I have delivered over 200 invited lectures (plenary talks at various conferences, annual meetings of physical societies, tutorial and technical lectures at the leading universities and research centres in Europe, North America and Asia); I have been invited to give many public lectures (most recently and notably at the international Café Scientifique, 2007).