

# Curriculum Vitae

## Vlatko Vedral

### PROFESSIONAL HISTORY

- Professor of Quantum Information Science, University of Oxford & Governing Body fellow at Wolfson College (June 2009-).
- Principal Investigator at CQT, National University of Singapore, Singapore (Dec 2007-).
- Professor of Physics, Department of Physics, National University of Singapore (Dec 2007-)
- Centenary Professor of Quantum Information at Leeds University, (Oct 2004-May2009).
- 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.
- Elmsley 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 (first class) at Imperial College of Science, Technology and Medicine (Specialised in Theoretical Physics), October 1992 – June 1995.

### AWARDS AND VISITING PROFESSORSHIPS

- Chair Professorship, Tsinghua University Beijing, October 2015-July 2016
- Award "Srpski Krivak", Belgrade 2015
- "Marko Jaric Award" of Serbian Institute of Physics 2010.
- 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 at the International competition for young researchers in honour of John Archibald Wheeler, Princeton, USA, 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.

### PROFESSIONAL SERVICES

- Referee for 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 hiring, promotional, administrative and teaching decision-making.
- Member of IOPP Science Advice Committee (2009-2011)

## PUBLIC SERVICE

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

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 Interviews 2008/09
8. Straits Times (two articles in the science section) 2008/09
9. "Thru a Wormhole with Morgan Freeman" – interviewed for an episode 2011
10. BBC programme on "Maxwell's demon" presented by Jim Al-Khalili 2012
11. Nautilus (an invited article) 2013
12. The Times of Malta and Interavia Magazine (interview) 2014
13. Extensive coverage in the book by Michael Brooks "The Edge of Uncertainty" 2014
14. Presented a New Scientist Instant Expert public lectures – London 2015

## TEACHING

- **Undergraduate:** Quantum Mechanics, Relativity, Optics, Quantum Optics, Solid State, Mathematics, Thermodynamics, Statistical Mechanics, Analytical Mechanics and Electromagnetism at Oxford, Imperial College, Leeds and Singapore since 1998 (2 courses per year on average). Academic and personal tutor as well as project supervision.
- **Postgraduate lecture courses:** Quantum Computation & Optics, Solid State (Imperial College 2000-2003, Heidelberg 2003, Vienna 2004 & Vienna 2005, Singapore 2008-2010; Oxford 2009-).
- **Books:** "Modern Foundations of Quantum Optics" (Imperial College Press, March 2005), "Introductory Quantum Physics and Relativity" (Imperial College Press, August 2010), "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) – which has been translated into 7 languages.

## SUPERVISION AND LEADERSHIP

- 35 students have received PhDs under my supervision. I have supervised numerous undergraduate research projects in UK (12 in last 5 years at Oxford), US and Singapore (including students from the SURF Caltech exchange program as well as the Stanford University).
- **Leadership roles:** organisations of Major International meetings (Foundations of Physics, Leeds 2007, Theoretical Quantum Computation 2009, Singapore, Quantum biology workshop 2009, Quantum Discord international meeting 2011), committee, editorial boards (Annalen der Physik, JPhysA). I have also directed many international collaborations (recently leading a group of 15 Oxford based academics at the James Martin School in Oxford on "Bio-inspired quantum technologies").

## PUBLICATIONS AND TALKS

- I have published over 260 papers including 42 Phys. Rev. Letters, 11 Nature papers, an 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 16000 (h-index = 53).
- I have delivered over 250 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 notably at the international Café Scientifique, 2007).