

CURRICULUM VITAE – HERBERT WIKLICKY

EDUCATION

Three Master's degrees (PHYSICS, MATHEMATICS, COMPUTER SCIENCE) and a PhD in COMPUTER SCIENCE at the University of Vienna (Universität Wien) and at the Vienna University of Technology (TU Wien).

1990 → 1992 "Doktorat" (PhD) in COMPUTER SCIENCE at the Vienna University of Technology and the University of Vienna, respectively.

PhD thesis on: "*Synthesis and Analysis of Neural Networks — On a Framework for Artificial Neural Networks*" with Prof. Robert Trappl and Doz.Dr. Georg Dorffner. Finished on 21 October 1992 ("mit Auszeichnung").

1982 → 1990 "Diplom" (MEng) in COMPUTER SCIENCE at the Vienna University of Technology and the University of Vienna, respectively.

Master thesis: "*Neuronale Strukturen: Möglichkeiten der Initialisierung und symbolisches Wissen*" (Neural Structures: Possibilities for Initialisation and Symbolic Knowledge) with Prof. Robert Trappl and Doz.Dr. Georg Dorffner. Finished on 18 June 1990.

1982 → 1989 "Diplom" (MSc) in MATHEMATICS at the University of Vienna.

Master's thesis: "*Group Representations, Geometric Quantization, and the Momentum Mapping*" with Prof. Peter Michor. Finished on 15 June 1989 ("mit Auszeichnung").

1981 → 1987 "Diplom" (MSc) in THEORETICAL PHYSICS at the University of Vienna.

Master's thesis: "*Über maßtheoretische und topologische Vermischungsbegriffe*" (On Measure-Theoretic and Topological Notions of Mixing) with Prof. Walter Thirring. Finished on 12 March 1987 ("mit Auszeichnung").

AFFILIATIONS

After the end of my studies in Vienna I had post-doc positions in The Netherlands, Japan, England and Germany before joining Imperial College London.

since 2001 first LECTURER, then 2005 SENIOR LECTURER, and since 2008 READER IN COMPUTER SCIENCE at the Department of Computing, Imperial College London.

1999 → 2001 Research Associate at the Department of Computing, Imperial College London with Prof. Chris Hankin. The three year EPSRC project was entitled: "Probabilistic Abstract Interpretation".

1998 → 1999 Researcher at the Lehrstuhl Praktische Informatik II, University of Mannheim, Germany with Prof. Mila Majster-Cederbaum.

1996 → 1998 Senior Research Fellow in the Department of Computer Science at City University London. The two year TMR/Marie Curie project was entitled: "Search and Optimization in Logic and Evolutionary Computing".

1996 Beginning of the year, three month research visitor at the Institute of Physical and Chemical Research (RIKEN), Frontier Research Program, Tokyo, Japan in the Group of Prof. Shun-Ichi Amari.

1993 → 1995 Two year research visit (Schrödinger Stipendium) at the Centrum voor Wiskunde en Informatica (CWI) in Amsterdam with the group of Prof. Jaco de Bakker. Project title "A Calculus of Neural Networks".

1990 → 1993 Affiliated with the Austrian Research Institute for Artificial Intelligence, Vienna and – as research assistant – with the Department for Medical Cybernetics and Artificial Intelligence at the University of Vienna. Besides PhD, participation in the Esprit Project NEUFODI (“Neural Networks for Forecasting and Diagnosis Applications”).

PROJECTS AND FUNDING

After finishing my PhD in 1992 all the research projects I was involved in as a post-doc were proposed by myself or co-authored. After my appointment as Lecturer a number I also was successful with a number of further proposals.

2010 → 2012 Royal Society Travel Grant on “Abstract Interpretation and Obfuscation” (with Prof C. Hankin and P. Cousot, ENS Paris)

2005 → 2007 EPSRC Project GR/T04724 “Program Analysis and the Typed π -Calculus: Foundations and Applications to Security” (Principal Investigator: Dr N. Yoshida, Co-Investigators: Prof C. Hankin and Dr H. Wiklicky)

2004 → 2007 EPSRC Project GR/S77066: “Quantitative Analysis of Computational Resources” (Principal Investigator: Dr H. Wiklicky , Co-Investigator: Prof C. Hankin, Co-Author: A. Di Pierro)

1999 → 2001 EPSRC Project GR/M58740: “*Probabilistic Abstract Interpretation*” (Principal Investigator: Prof C. Hankin, Co-Authors: A. Di Pierro and H. Wiklicky)

1996 → 1998 EU “Marie Curie Fellowship” at City University London on “Search and Optimization in Logic and Evolutionary Computing”.

1993 → 1995 Austrian “Schrödinger Stipendium” at the CWI in Amsterdam on “A Calculus of Neural Networks”.

TEACHING

Especially since my appointment as Lecturer at IMPERIAL COLLEGE LONDON but already as a PostDoc and Research Assistant I have been engaged in a number of teaching activities: Undergraduate supervision, (personal) tutorials, exam and coursework marking, undergraduate interviews, etc.

At the Department of Computing at Imperial College London I was teaching the following (undergraduate) courses:

2017/18 “*Information and Coding*” and “*Quantum Computation*” in Autumn Term and “*Probabilistic Model Checking and Analysis*” in the Spring Term.

2016/17 “*Information and Coding*” and “*Quantum Computation*” in Autumn Term and “*Architecture*” (Assembler Programming) in the Spring Term.

2015/16 “*Information and Coding*” in Autumn Term and “*Architecture*” (Assembler Programming) in the Spring Term.

2014/15 “*Program Analysis*” and “*Architecture*” (Assembler Programming) in the Spring Term.

2013/14 “*Quantum Computation*” and “*Architecture*” (Assembler Programming) in the Spring Term.

2009/10 → 2012/13 “*Quantum Computation*” and “*Program Analysis*” in Spring Term.

2006/07 “*Applied Semantics*” and “*Program Analysis*” in the Autumn Term.

2005/06 “*Program Analysis*” and “*Computational Techniques*” in the Spring Term.
2004/05 “*Assured Software*” and “*Program Analysis*” in the Spring Term.
2003/04 “*Operation Research*” in the Autumn Term and “*Assured Software*” in the Spring Term.
2001/02 → **2002/03** “*Program Analysis*” and “*Operation Research*” in the Autumn Term, and “*Computational Techniques*” in the Spring Term.
2000/01 “*Program Analysis*” in the Spring Term.

GUEST LECTURES

I also gave the following courses on graduate and undergraduate level at other institutions:

2016 “Probabilistic Program Analysis” (together with A. Di Pierro) at ESSLLI’16 in Bozen/Bolzano, Italy.
2014 “Probabilistic Semantics and Program Analysis” at the University of Verona, Italy.
2013 “*Advanced Compilers: Quantitative Program Analysis*” at the University of Verona, Italy.
2010 “*Classical and Quantitative Program Analysis*” at the University of Pisa, Italy (PhD course).
2008 “*Quantitative Program Analysis*” at the University of Verona, Italy.
2007 “*Quantitative Program Analysis*” at the University of Bologna, Italy.
2000 “*Introduction to Quantum Computation*” at the University of Udine, Italy (PhD course).
1998 “*Quantitative Computation*” at the University of Pisa, Italy (PhD course)
1997 “*Denotational Semantics*” at the City University London.

INTERNATIONAL & PHD STUDENTS

My involvement in the supervision of PhD students concerns the following:

Neil Datta started 2002, supervisor since 2003 (EPSRC funded) on “A Quantitative Combinatory Logic” finished successfully in October 2008 (submitted in December 2007, viva in June 2008).
Xiang Feng started 1998 (original supervisor: Dr M. Smyth, I became second supervisor in 2003, and since 2005 supervisor) on “Partial Matroids and Their Application to Geometric Computation”, finished successfully in September 2007.
Sebastian Nanz started 2003 (supervisor: Prof C. Hankin) on “Language Based Security”, finished successfully in 2006, where I acted as second supervisor.
Elham Kashefi informal supervisor since 2000 (I was unable to act as official supervisor as my appointment as lecturer took place only later) on “Complexity Analysis and Semantics for Quantum Computation” (supervisor: Dr S. van Bakkel) finished successfully in 2003.

I have also been supervising the following (graduate and undergraduate) research student and visitors:

Cyprien de Saint Guilhem (UROP from Mathematics, 2014).
Michael Monerau (Intern student from ENS Paris, 2009/10).
Pascal Sotin (Intern/PhD student from CNRS/IRISA Rennes, 2007).
Luca Bortolussi (PhD student from the University of Udine, 2005).
Aldric Degorre (UROP/Intern from ENS France, 2004).
Ashish Bhatt (UROP, 2004).

I have been PhD examiner for Pascal Sotin in Rennes in December 2008, Ivan Gazeau, Ecole Polytechnique Paris, October 2013 and Suliman Alsuhibany at Newcastle University, Newcastle upon Tyne in April 2014. I have also been external PhD reviewer for Sara Zuppiroli (Bologna, July 2014).

RESEARCH & ADMIN I am member of the ACADEMIC CENTRE OF EXCELLENCE IN CYBER SECURITY RESEARCH (ACE-CSR) at Imperial College since 2012.

Since 2015 I am Director of JMC (Joint Mathematics and Computing).

From 2008 to 2015 I was INTERNATIONAL & ERASMUS COORDINATOR (incl. exchange programs with Uni California and NTU Singapore) at the Department of Computing and as such responsible for incoming and outgoing visiting students. I was also member of the MSc Admissions team.

Between 2010 and 2012 I have been DEPUTY MSc ADMISSIONS TUTOR and in 2012 I was DEPUTY JMC (JOINT MATHEMATICS COMPUTING) COURSE DIRECTOR (between January and March 2013 acting JMC Director).

Previously, between 2002 and 2005 I had been FORTH YEAR COORDINATOR at the Department of Computing and from 2005 to 2007 I have been SEMINARS COORDINATOR. In 2007/08 I spent a sabbatical year at the University of Bologna, Italy.

I have been responsible for the following Research Associates (RAs):

Dr Igor Siveroni (project EPSRC GR/S77066)
Dr Benjamin Aziz (project EPSRC GR/S77066)
Dr Daniele Varacca (project EPSRC GR/T04724)