Curriculum Vitae

Ranko Lazić

January 2012

1 Employment and education

1.1 Employment

From 01/'01 Academic staff member, Department of Computer Science, University of Warwick. Current rank: *Associate Professor*.

10/'97–12/'00 Junior Research Fellow, Christ Church, Oxford University.

1.2 Professional courses

2001–2005 Warwick Teaching Certificate.

Autumn Term 2003 EPSRC Workshop on Intellectual Property.

Autumn Term 2001 The Role of Personal Tutor workshop.

Autumn Term 2001 Induction Course.

Before 2001 Development courses at Oxford University: Supervising DPhil Students, Small-Group Teaching, Tutorial Teaching.

1.3 Education

10/'94–09/'99 DPhil, Computing Laboratory, Oxford University.

Thesis title: *A Semantic Study of Data Independence with Applications to Model Checking*.

Supervisor: Bill Roscoe.

Examiners: Luke Ong (Oxford) and Antti Valmari (Tampere, Finland).

10/'92–06/'94 BA in Mathematics and Computation, I class, University College, Oxford University.

09/'90–06/'92 Secondary School 'Matematička gimnazija', Belgrade.

1.4 Prizes, awards and scholarships

1997 Senior Mathematical Prize and Jonsson University Prize.

Dissertation title: *A Semantic Study of Data-independence with Applications to Mechanical Verification of Concurrent Systems*.

1995–1997 Domus and Harmsworth Senior Scholar, Merton College, Oxford University.

1994–1997 Overseas Research Student Award.

1994 British Telecom Prize. (Best results in computing in final examinations.)

1993 Addison-Wesley Prize. (Best results in first-year examinations.)

1992–1995 Scholarship from Hajrija & Boris Vukobrat and Copechim France SA.

1991 Gold Medal, 3rd International Olympiad in Informatics, Athens.

2 Research

2.1 Research grants

- **Source of funds** Engineering and Physical Sciences Research Council
  Title of project Scalable Software Model Checking Based on Game Semantics
  Duration 01/11/03–31/10/06
  Total value 73,372 GBP
  Principal investigator Ranko Lazić
  PhD student Aleksandar Dimovski
  Final evaluation Tending to Outstanding

- **Source of funds** Intel Corporation, USA
  Title of project Parameterised System Model Checking
  Duration 13/05/02–12/05/07
  Total value 10,000 USD
  Investigator Ranko Lazić

- **Source of funds** Engineering and Physical Sciences Research Council
  Title of project Exploiting Data Independence
  Duration 01/09/99–28/02/03
  Total value 180,345 GBP
  Principal investigator Bill Roscoe
  Co-investigator Ranko Lazić
  Post-doctoral researcher David Nowak, Xu Wang
  DPhil student Tom Newcomb
  Final evaluation Outstanding

2.2 Publications

Refereed journal papers

- M. Rutkowski, R. Lazić and M. Jurdziński, *Average-Price-per-Reward Games on Hybrid Automata with Strong Resets*, International Journal on Software Tools for Technology Transfer 13(6): 553-569, Springer, 2011.

- M. Jurdziński and R. Lazić, *Alternating automata on data trees and XPath satisfiability*, Transactions on Computational Logic 12(3), ACM, 2011.

- R. Lazić, *Safety alternating automata on data words*, Transactions on Computational Logic 12(2), ACM, 2011.

- R. Lazić, *The reachability problem for branching vector addition systems requires doubly-exponential space*, Information Processing Letters 110(17): 740–745, Elsevier, 2010.

- A. Bakewell, A. Dimovski, D.R. Ghica and R. Lazić, *Data-abstraction refinement: a game semantic approach*, International Journal on Software Tools for Technology Transfer 12(5): 373–389, Springer, 2010.

- S. Demri, R. Lazić and A. Sangnier, *Model checking memoryful linear-time logics over one-counter automata*, Theoretical Computer Science 411(22–24): 2298–2316, Elsevier, 2010.

- S. Demri and R. Lazić, *LTL with the Freeze Quantifier and Register Automata*, Transactions on Computational Logic 10(3), ACM, 2009.

- R. Lazić, T. Newcomb, J. Ouaknine, A.W. Roscoe and J. Worrell, *Nets with tokens which carry data*, Fundamenta Informaticae 88(3): 251–274, IOS Press, 2008.
- S. Demri, R. Lazić and D. Nowak, *On the freeze quantifier in Constraint LTL: decidability and complexity*, Information and Computation 205(1): 2–24, Elsevier, 2007.
- A. Dimovski and R. Lazić, *Compositional software verification based on game semantics and process algebra*, International Journal on Software Tools for Technology Transfer 9(1): 37–51, Springer, 2007.
- R.S. Lazić, T.C. Newcomb and A.W. Roscoe, *On model checking data-independent systems with arrays without reset*, Theory and Practice of Logic Programming 4 (5 & 6): 659–693, Cambridge University Press, 2004.

Refereed conference papers

- S. Demri, M. Jurdziński, O. Lachish and R. Lazić, *The covering and boundedness problems for branching vector addition systems*, Proceedings of the 29th Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS), LIPIcs 4: 181–192, Schloss Dagstuhl, December 2009.
- M. Jurdzinski, R. Lazic and M. Rutkowski, *Average-Price-per-Reward Games on Hybrid Automata with Strong Resets*, Proceedings of the 10th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI), Lecture Notes in Computer Science 5403: 167–181, Springer, January 2009.
- P. Bouyer, T. Brihaye, M. Jurdziński, R. Lazić and M. Rutkowski, *Average-price and reachability-price games on hybrid automata with strong resets*, Proceedings of the 6th International Conference on Formal Modelling and Analysis of Timed Systems (FORMATS), Lecture Notes in Computer Science 5215: 63–77, Springer, September 2008.
- S. Demri, R. Lazić and A. Sangnier, *Model checking freeze LTL over one-counter automata*, Proceedings of the 11th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS), Lecture Notes in Computer Science 4962: 490–504, Springer, March 2008.
- M. Jurdziński and R. Lazić, *Alternation-free modal mu-calculus for data trees*, Proceedings of the 22nd Annual Symposium on Logic in Computer Science (LICS), 131–140, IEEE Computer Society Press, July 2007.
- R. Lazić, T. Newcomb, J. Ouaknine, A.W. Roscoe and J. Worrell, *Nets with tokens which carry data*, Proceedings of the 28th International Conference on Application and Theory of Petri Nets and Other Models of Concurrency (ICATPN), Lecture Notes in Computer Science 4546: 301–320, Springer, June 2007.
- R. Lazić, *Safely Freezing LTL*, Proceedings of the 26th Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS), Lecture Notes in Computer Science 4337: 381–392, Springer, December 2006.
- A. Dimovski and R. Lazić, *Assume-Guarantee Software Verification Based on Game Semantics*, Proceedings of the 8th International Conference on Formal Engineering Methods (ICFEM), Lecture Notes in Computer Science 4260: 529–548, Springer, November 2006.
- S. Demri and R. Lazić, *LTL with the Freeze Quantifier and Register Automata*, Proceedings of the 21st Annual Symposium on Logic in Computer Science (LICS), 17–26, IEEE Computer Society Press, August 2006.
- A.S. Dimovski, D.R. Ghica and R. Lazić, *A Counterexample-Guided Refinement Tool for Open Procedural Programs*, Proceedings of the 13th International SPIN Workshop on Model Checking of Software (SPIN), Lecture Notes in Computer Science 3925: 288–292, Springer, March 2006.

- A.S. Dimovski, D.R. Ghica and R. Lazić, *Data-Abstraction Refinement: A Game Semantic Approach*, Proceedings of the 12th International Static Analysis Symposium (SAS), Lecture Notes in Computer Science 3672: 102–117, Springer, September 2005.
- S. Demri, R. Lazić and D. Nowak, *On the freeze quantifier in Constraint LTL: decidability and complexity*, Proceedings of the 12th International Symposium on Temporal Representation and Reasoning (time), 113–121, IEEE Computer Society Press, June 2005.
- A. Dimovski and R. Lazić, *Software Model Checking Based on Game Semantics and CSP*, Proceedings of the 4th International Workshop on Automated Verification of Critical Systems (AVoCS '04), Electronic Notes in Theoretical Computer Science 128(6): 105–125, Elsevier, May 2005.
- A. Dimovski and R. Lazić, *CSP Representation of Game Semantics for Second-order Idealized Algol*, Proceedings of the 6th International Conference on Formal Engineering Methods (ICFEM), Lecture Notes in Computer Science 3308: 146–161, Springer, November 2004.
- R.S. Lazić, T.C. Newcomb and A.W. Roscoe, *Polymorphic Systems with Arrays, 2-Counter Machines and Multiset Rewriting*, Proceedings of the 6th International Workshop on Verification of Infinite-State Systems (Infinity '04), Electronic Notes in Theoretical Computer Science 138(3): 61–86, December 2005.
- R.S. Lazić, T.C. Newcomb and A.W. Roscoe, *On model checking data-independent systems with arrays with whole-array operations*, Proceedings of 25 Years of CSP, July 2004, Lecture Notes in Computer Science 3525: 275–291, Springer.
- X. Wang, A.W. Roscoe and R.S. Lazić, *Relating Data Independent Trace Checks in CSP with UNITY Reachability under a Normality Assumption*, Proceedings of the 4th International Conference on Integrated Formal Methods (IFM), Lecture Notes in Computer Science 2999, 247–266, Springer, April 2004.
- R. Lazić and D. Nowak, *On a Semantic Definition of Data Independence*, Proceedings of the 6th International Conference on Typed Lambda Calculi and Applications (TLCA), Lecture Notes in Computer Science 2701, 226–240, Springer, June 2003.
- R.S. Lazić, T.C. Newcomb and A.W. Roscoe, *On model checking data-independent systems with arrays without reset (abstract)*, Proceedings of the 2nd International Workshop on Verification and Computational Logic (VCL), Technical Report DSSE-TR-2001-3, pages 1–3, Declarative Systems and Software Engineering Research Group, Department of Electronics and Computer Science, University of Southampton, September 2001.
- A.W. Roscoe and R.S. Lazić, *What can you decide about resetable arrays?*, Proceedings of the 2nd International Workshop on Verification and Computational Logic (VCL), Technical Report DSSE-TR-2001-3, pages 5–23, Declarative Systems and Software Engineering Research Group, Department of Electronics and Computer Science, University of Southampton, September 2001.
- R. Lazić and D. Nowak, *A Unifying Approach to Data-Independence*, Proceedings of the 11th International Conference on Concurrency Theory (CONCUR), Lecture Notes in Computer Science 1877, 581–595, Springer, August 2000.
- R.S. Lazić and A.W. Roscoe, *On Transition Systems and Non-well-founded Sets*, Papers on General Topology and Applications: 11th Summer Conference at the University of Southern Maine (August 1995), Annals of the New York Academy of Sciences 806, 238–264, December 1996.

Invited conference papers

- R. Lazić, *Decidability of Reachability for Polymorphic Systems with Arrays: A Complete Classification*, Proceedings of the 6th International Workshop on Verification of Infinite-State Systems (Infinity '04), Electronic Notes in Theoretical Computer Science 138(3): 3–19, December 2005.
- R.S. Lazić and A.W. Roscoe, *Data Independence with Generalised Predicate Symbols*, Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA), Volume I, 319–325, CSREA Press, June 1999.

Unrefereed conference papers

- R.S. Lazić and A.W. Roscoe, *Verifying Determinism of Concurrent Systems Which Use Unbounded Arrays*, Proceedings of the 3rd International Workshop on Verification of Infinite State Systems (INFINITY '98), Report TUM-I9825, pages 2–8, Technical University of Munich, July 1998.

Research reports

- S. Demri, R. Lazić and A. Sangnier, *Model checking freeze LTL over one-counter automata*, Research Report LSV-08-11, 23 pages, Laboratoire Spécification et Vérification, Ecole Normale Supérieure de Cachan, France, March 2008.
- S. Demri, R. Lazić and D. Nowak, *On the freeze quantifier in Constraint LTL: decidability and complexity*, Research Report LSV-05-03, 13 pages, Laboratoire Spécification et Vérification, Ecole Normale Supérieure de Cachan, France, April 2005.
- A. Dimovski and R. Lazić, *Software Model Checking Based on Game Semantics and CSP*, Research Report CS-RR-403, 20 pages, Department of Computer Science, University of Warwick, August 2004.
- A. Dimovski and R. Lazić, *CSP Representation of Game Semantics for Second-order Idealized Algol*, Research Report CS-RR-400, 20 pages, Department of Computer Science, University of Warwick, May 2004.
- R.S. Lazić, T.C. Newcomb and A.W. Roscoe, *Polymorphic Systems with Arrays: Decidability and Undecidability*, Research Report CS-RR-399, 21 pages, Department of Computer Science, University of Warwick, April 2004.
- R.S. Lazić, T.C. Newcomb and A.W. Roscoe, *On model checking data-independent systems with arrays with whole-array operations*, Research Report CS-RR-395, 17 pages, Department of Computer Science, University of Warwick, October 2003.
- X. Wang, A.W. Roscoe and R.S. Lazić, *Translating CSP trace refinement to Unity unreachability: a study in data independence*, Programming Research Group Research Report RR-03-08, 26 pages, Oxford University Computing Laboratory, April 2003.
- R. Lazić and D. Nowak, *On a Semantic Definition of Data Independence*, Research Report CS-RR-392, Department of Computer Science, University of Warwick, March 2003.
- R.S. Lazić, T.C. Newcomb and A.W. Roscoe, *On model checking data-independent systems with arrays without reset*, Programming Research Group Research Report RR-02-02, 31 pages, Oxford University Computing Laboratory, January 2002.
- R. Lazić and D. Nowak, *A Unifying Approach to Data-Independence*, Programming Research Group Technical Report TR-4-00, 30 pages, Oxford University Computing Laboratory, June 2000.
- R.S. Lazić and A.W. Roscoe, *Verifying Determinism of Concurrent Systems Which Use Unbounded Arrays*, Programming Research Group Technical Report TR-2-98, 21 pages, Oxford University Computing Laboratory, April 1998.

Editorial work

- R. Lazić and R. Nagarajan, *Guest Editorial*, Formal Aspects of Computing 19(3): 275, Springer, August 2007. (Special issue for AVoCS 2005.)
- R. Lazić and R. Nagarajan, *Preface*, Electronic Notes in Theoretical Computer Science 145: 1–2, Elsevier, January 2006. (Proceedings of the 5th International Workshop on Automated Verification of Critical Systems, AVoCS 2005.)
- R. Lazić and L. Ong (editors), *Abstracts for the PRG Student Conference 2000*, Programming Research Group Technical Report PRG-TR-15-00, 28 pages, Oxford University Computing Laboratory, December 2000.

- R. Lazić and J.M. Spivey (editors), *Abstracts for the 1998 Sun PRG Student Conference*, Programming Research Group Technical Report PRG-TR-8-98, Oxford University Computing Laboratory, 1998.

2.3 Conference talks

- Nominal Sets Meet Automata Theory Workshop, Warsaw, Poland, February 2012.
- 2nd Belgium-UK Workshop on Timed and Infinite Systems, Warwick, UK, March 2010.
- 2nd GASICS Meeting, Aachen, Germany, October 2009.
- UK-Israel Bi-National Workshop on Verification of Infinite-State Systems, Tel Aviv, Israel, May 2009.
- Automata and Verification Workshop, University of Mons-Hainaut, Belgium, August 2008.
- 28th International Conference on Applications and Theory of Petri Nets and Other Models of Concurrency (ICATPN), Siedlce, Poland, June 2007.
- 26th Conference on Foundations of Software Technology and Theoretical Computer Science (FST-TCS), Kolkata, India, December 2006.
- 21st Annual IEEE Symposium on Logic in Computer Science (LICS), Seattle, Washington, USA, August 2006.
- Games for Logic and Programming Languages II (GaLoP), Seattle, Washington, USA, August 2006.
- Conference in Topology and Theoretical Computer Science (in honour of Peter Collins and Mike Reed), Oxford, UK, August 2006.
- GAMES Network Annual Meeting, Newton Institute, Cambridge, UK, July 2006.
- 22nd British Colloquium for Theoretical Computer Science (BCTCS), University of Wales, Swansea, UK, April 2006.
- GAMES Network Annual Meeting, Paris, France, September 2005.
- Algebraic Process Calculi: The First Twenty Five Years and Beyond, Bertinoro, Italy, August 2005.
- Games in Design and Verification Workshop (GDV), Edinburgh, UK, July 2005.
- 12th International Symposium on Temporal Representation and Reasoning (time), Burlington, Vermont, USA, June 2005.
- 6th International Workshop on Verification of Infinite-State Systems (Infinity), Royal Society, London, UK, September 2004. (Invited talk.)
- 25 Years of CSP, London South Bank University, UK, July 2004. (Invited talk, poster.)
- 20th International Workshop on Mathematical Foundations of Programming Semantics (MFPS), Carnegie Mellon University, Pittsburgh, USA, May 2004.
- 1st South-East European Workshop on Formal Methods (SEEFM), Thessaloniki, Greece, November 2003.
- 6th International Conference on Typed Lambda Calculi and Applications (TLCA), Valencia, Spain, June 2003.
- 18th British Colloquium for Theoretical Computer Science (BCTCS), Hewlett Packard Laboratories, Bristol, UK, April 2002.

- 18th International Workshop on Mathematical Foundations of Programming Semantics (MFPS), Tulane University, New Orleans, USA, March 2002.
- 11th International Conference on Concurrency Theory (CONCUR), Pennsylvania State University, USA, August 2000.
- International Workshop on Verification and Computational Logic (VCL), Imperial College, London, UK, July 2000.
- Workshop on Model Checking and Verification, Oxford, UK, June 2000.
- 16th International Workshop on Mathematical Foundations of Programming Semantics (MFPS), Stevens Institute of Technology, Hoboken, New Jersey, USA, April 2000.
- Foundations of Secure Computation, International Summer School, Marktoberdorf, Germany, August 1999.
- Workshop on Modelling and Verification of Large and Unbounded Systems, Oxford, UK, July 1999.
- International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA), Las Vegas, USA, June 1999.
- 3rd International Workshop on Verification of Infinite State Systems (INFINITY '98), Aalborg, Denmark, July 1998.
- 14th International Workshop on Mathematical Foundations of Programming Semantics (MFPS), Queen Mary and Westfield College, London, UK, May 1998.
- Workshop on Modelling the Unbounded by the Finite, Oxford, UK, March 1998.
- Refinement Day, Imperial College, London, UK, April 1997.
- 13th British Colloquium for Theoretical Computer Science (BCTCS), Sheffield University, UK, March 1997. (Two talks.)
- International Workshop on Automated Formal Methods, Oxford, UK, June 1996.

2.4 Seminars

- Birmingham University, UK, February 2012.
- Leicester University, UK, December 2010.
- Centre Fédéré en Vérification, Université Libre de Bruxelles, Belgium, May 2009.
- LSV, ENS Cachan, France, May 2008. (Two talks.)
- EPFL, Switzerland, April 2008.
- York University, UK, November 2007.
- Bath University, UK, October 2007.
- Warwick University, UK, May 2007.
- Novi Sad University, Serbia, December 2006.
- Oxford University, UK, October 2006.
- Warwick University, UK, October 2006.
- LSV, ENS Cachan, France, September 2006.
- Oxford University, UK, March 2006.

- Warwick University, UK, March 2006.
- Oxford University, UK, January 2006.
- LSV, ENS Cachan, France, September 2005.
- Oxford University, UK, January 2005.
- University of Edinburgh, UK, December 2004.
- University of Newcastle upon Tyne, UK, October 2004.
- Oxford University, UK, June 2004. (Two talks.)
- LSV, ENS Cachan, France, April 2004.
- University of Wales at Swansea, UK, December 2003.
- Belgrade University, Serbia and Montenegro, August 2003.
- Oregon Graduate Institute, USA, November 2001.
- Strategic CAD Laboratories, Intel Corporation, Oregon, USA, October 2001. (Four talks.)
- Warwick University, UK, November 2000.
- Carnegie Mellon University, USA, July 2000. (Two talks.)
- Bristol University, UK, June 2000.
- Oxford University, UK, May 2000.
- University of Kent at Canterbury, UK, May 2000.
- Massachusetts Institute of Technology, USA, April 2000.
- Helsinki University, Finland, March 2000.
- Tampere University of Technology, Finland, March 2000.
- Oxford University, UK, February 2000.
- Birmingham University, UK, February 1999.
- Leicester University, UK, February 1999.
- Belgrade University, Yugoslavia, September 1997. (Three talks.)
- Oxford University, UK, August 1997. (Four talks.)
- Cambridge University, UK, February 1997.
- Oxford University, UK, February 1997.
- Carnegie Mellon University, USA, August 1996. (Two talks.)
- Oxford University, UK, October 1995.

2.5 Membership of programme committees

- 33rd International Conference on Application and Theory of Petri Nets and Concurrency (Petri Nets '12).
- Annual meeting of the Games for Design and Verification ESF Research Networking Programme (GAMES '11).
- 18th International Symposium on Temporal Representation and Reasoning (TIME '11).
- 13th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS '10).
- 17th International Symposium on Temporal Representation and Reasoning (TIME '10).
- 15th International Symposium on Temporal Representation and Reasoning (TIME '08).
- 7th International Workshop on Automated Verification of Critical Systems (AVoCS '07).
- 6th International Workshop on Automated Verification of Critical Systems (AVoCS '06).
- 5th International Workshop on Automated Verification of Critical Systems (AVoCS '05). (Co-chair.)
- 2nd International Workshop on Verification and Computational Logic (VCL '01).

2.6 Reviewing and examining

Journals Computer (2), FAC (5), Inf. and Comp., JCSS, JLC, LMCS (2), MSCS, STTT, TCAD (2), TCS.

Conferences ACSD '09, AVoCS '04, AVoCS '07 (2), CAV '00 (3), CAV '03, CAV '04, CAV '05, CONCUR '07, CONCUR '11, CSR '09, EXPRESS '10, FM '06, FORTE '06, FoSSaCS '04, FoSSaCS '08, FoSSaCS '09 (3), FoSSaCS '10 (10), FSTTCS '02, FSTTCS '10, FSTTCS '11 (2), ICALP '08, ICDT '10, LICS '09, LICS '10 (2), LICS '11, LPAR '07, MFCS '07 (2), MFCS '09, MFCS '10, PODS '10, PODS '12, RP '11, STACS '09, STACS '12, TACAS '03, TACAS '04, TACAS '06 (2), TACAS '08, TACAS '12, TIME '08 (3), TIME '10 (4), TIME '11 (4), VCL '01 (2), VMCAI '03.

Research grants EPSRC (4), ISF, Leverhulme Trust.

MSc theses Robert Quill (Warwick, UK, 2009).

PhD theses Ashutosh Trivedi (Warwick, UK, 2009), T.T. Anh Dinh (Birmingham, UK, 2010), John Fearnley (Warwick, UK, 2010), Diego Figueira (ENS Cachan, France, 2010), Tomasz Mazur (Oxford, UK, 2010), Antti Siirtola (Oulu, Finland, 2010), Richard Warburton (Warwick, UK, 2010), Clemens Ley (Oxford, UK, 2011).

2.7 Formal visits and consultancies

- Invited Professor at the Laboratory for Specification and Verification, ENS Cachan, France, one month within 2005/06.
- Invited Professor at the Laboratory for Specification and Verification, ENS Cachan, France, one month within 2004/05.
- Consultancy to Strategic CAD Laboratories, Intel Corporation, Oregon, USA, October 2001.

3 Teaching

3.1 Postgraduate supervision

From 10/'09 Ebrahim Ardeshir, PhD student, Warwick University.

Joint supervision with Rajagopal Nagarajan from 10/'10.

10/'06–02/'11 Michał Rutkowski, PhD student, Warwick University.

Joint supervision with Marcin Jurdziński.

Examiners: Rajagopal Nagarajan (Warwick) and Gethin Norman (Glasgow).

10/'03–07/'07 Aleksandar Dimovski, PhD student, Warwick University.

Obtained an Overseas Research Student Award.

Examiners: Jane Sinclair (Warwick) and Michael Huth (Imperial College, London).

10/'99–12/'01 Tom Newcomb, DPhil student, Oxford University.

Joint supervision with Bill Roscoe.

Completed in 06/'03. Examiners: Gavin Lowe (Oxford) and Michael Huth (Imperial College, London).

3.2 Lectures and seminars

2011–2012 Formal Specification and Verification, 2nd year, 15 lectures, approximately 75 students.

2011–2012 Programming Language Design and Semantics, 3rd/4th year, 15 lectures, approximately 40 students.

2011–2012 Current Uses of Computers in Business and Industry, 3rd/4th year, 10 lectures by external speakers, approximately 70 students.

2009 Mathematics for Computer Scientists 1, 1st year, 30 lectures, approximately 75 students.

2009 Automata and Formal Languages, Further Automata and Formal Languages, 2nd year, 30 lectures, approximately 70 students.

2008 Discrete Mathematics and its Applications 1, 1st year, 15 lectures, approximately 25 students.

2002–2006 Formal Specification and Verification, 2nd year, 20 lectures, approximately 100 students.

2002–2007, 2010 Programming Language Design and Semantics, 3rd/4th year, 30 lectures, approximately 40 students.

2002–2005 Logic for Computer Scientists, 2nd year, 20 lectures, approximately 175 students.

2002–2003 Professional Aspects of Computing, 1st year, 5 seminars, approximately 30 students.

2001 Efficient Parallel Algorithms, 3rd year, 14 lectures, approximately 30 students.

Before 2001 Concurrency (2nd year, MSc): seminars, project supervision. Distributed Systems (2nd year, MSc): seminars. Topology, Set Theory (2nd year): tutorials. Domain Theory (3rd year, MSc): lectures, seminars. Semantics of Programming Languages (3rd year, MSc): seminars.

3.3 Student projects

- MSc projects:

	'08/09	'09/10	'10/11	'11/12
supervising			2	1
assessing	2	4	2	

- Group projects, 4th year:

	'05/06	'11/12
supervising	1	1
assessing	1	

- Individual projects, 3rd year:

	'00/01	'01/02	'02/03	'03/04	'04/05	'05/06	'06/07	'08/09	'09/10
supervising		4	7	7	11	5	8	1	1
assessing	11	3	3	13	12	8	6	7	7

	'10/11	'11/12
supervising	8	8
assessing		

3.4 Personal tutor

	'00/01	'01/02	'02/03	'03/04	'04/05	'05/06	'06/07	'08/09	'09/10
tutees	18	28	33	34	31	23	17	14	13

	'10/11	'11/12
tutees	20	25

3.5 Demonstrations at Open Days

- 4 for University-wide Open Days
- 6 for Departmental Open Days

4 Administration

From 2010 Co-organiser of Departmental seminars.

2009–2011 External examiner, MSc in Mathematics and Foundations of Computer Science, Oxford University.

2006–2010 Coordinator of the Formal Methods research group.

From 2008 Computer and Business Studies degree course manager.

2006–2007 Computer Science degree course manager.

From 2002 Member of the Undergraduate Studies Committee.

2002–2006 Coordinator for Intercalated Year Degrees.

2001/02 3rd-year Examination Secretary.

1997–2000 Organiser of postgraduate seminars.