

**EDUCATION**

- 2006–2009 PhD, University of Oxford, UK. EPSRC Studentship.
- 2006–2006 Visiting student at the University of Turku, Finland. Erasmus Scholarship.
- 2004–2005 MSc (cum laude), VU University, Netherlands. Student Fellowship.
- 1999–2006 Mgr (summa cum laude) & RNDr, Charles University, Czechia. Merit Scholarship.

**CURRENT POSITIONS**

- since 2024 Fellow and Tutor, Merton College, University of Oxford, UK.
- since 2021 Full Professor of Computer Science, University of Oxford, UK.

**PREVIOUS POSITIONS**

- 2017–2024 Fellow and Tutor, Jesus College, University of Oxford, UK.
- 2017–2021 Associate Professor of Computer Science, University of Oxford, UK.
- 2014–2017 Research Fellow and Tutor, Keble College, University of Oxford, UK.
- 2013–2017 Research Lecturer, Department of Computer Science, University of Oxford, UK.
- 2012–2013 Senior Research Fellow, DIMAP, University of Warwick, UK.
- 2009–2012 Junior Research Fellow, University College, University of Oxford, UK.

**VISITING POSITIONS**

- 2016, 2027 Visiting Scientist, Simons Institute for the Theory of Computing, UC Berkeley, USA.
- 2025 Visitor, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK.
- 2015, 2021 Visitor, Hausdorff Research Institute for Mathematics, Bonn, Germany.
- 2011 Visitor, Fields Institute for Research in Mathematical Sciences, Toronto, Canada.
- 2010 Research Intern, Microsoft Research, Cambridge, UK.

**AWARDS AND PRIZES**

- 2023 Title of Professor, awarded by the president of the Czech republic.
- 2023 Departmental Teaching Commendation for the course “Combinatorial Optimisation”.
- 2011 Association for Constraint Programming (ACP) Doctoral Research Award.
- 2009 EPSRC Doctoral Prize / PhD+ Fellowship.

**FELLOWSHIPS**

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|-----------|--|-------|
| 2022–2027 | ERC Consolidator Grant. <sup>†</sup> PI.                               | €2.0M |
| 2017–2022 | ERC Starting Grant. PI.  | €1.4M |
| 2018–2021 | Royal Society University Research Fellowship. PI.                      | £380K |
| 2013–2018 | Royal Society University Research Fellowship. PI.                      | £500K |
| 2012–2013 | Pacific Institute for the Mathematical Sciences (PIMS) Fellowship. PI. | \$40K |

**ORGANISATION OF SCIENTIFIC MEETINGS**

- 2027 Simons [Programme](#) “Symmetry in Efficient Computation with Local Constraints”, UC Berkeley.
- 2023–2026 American Institute of Mathematics ([AIM](#)) SQuARE “Relaxations for Promise CSPs”.
- 2018–2025 Dagstuhl Seminars [18321](#), [22201](#), [25211](#) “The CSP: Complexity and Approximability”.
- since 2020 London Mathematical Society (LMS) Computer Science [Colloquium](#).
- 2025 Isaac Newton Institute [Workshop](#) “Geom. and Comb. Methods in the Found. of CS and AI”.
- 2021 Early Career Researchers [Workshop](#), European Computer Science Summit.

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<sup>†</sup> Awarded as an ERC Consolidator Grant in March 2021 as the only ERC CoG awarded to the University of Oxford across all disciplines and the only ERC CoG awarded in Computer Science and Informatics (PE6 panel) in the UK in the 2021 round. Due to the non-association of the UK to the ERC, this grant was transformed into an equivalent UKRI ERC Guarantee Grant.

**PUBLICATIONS**

2 books, 5 book chapters, over 50 journal publications, over 60 conference publications.  
12 selected publications:

- (1) *Approximate graph colouring and the crystal with a hollow shadow* [\[doi\]](#) [\[arXiv\]](#)  
(with L. Ciardo), **SICOMP** 54(4), pp. 1138–1192, 2025.
- (2) *Semidefinite programming and linear equations vs. homomorphism problems* [\[doi\]](#) [\[arXiv\]](#)  
(with L. Ciardo), **SICOMP** 54(3), pp. 545–584, 2025.
- (3) *Pliability and approximating Max-CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with M. Romero and M. Wrochna), **JACM** 70(6), Article No. 41, 2023.
- (4) *Topology and adjunction in promise constraint satisfaction* [\[doi\]](#) [\[arXiv\]](#)  
(with A. Krokhin, J. Opršal, and M. Wrochna), **SICOMP** 52(1), pp. 38–79, 2023.
- (5) *CLAP: A new algorithm for promise CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with L. Ciardo), **SICOMP** 52(1), pp. 1–37, 2023.
- (6) *The complexity of general-valued CSPs seen from the other side* [\[doi\]](#) [\[arXiv\]](#)  
(with C. Carbonnel and M. Romero), **SICOMP** 51(1), pp. 19–69, 2022.
- (7) *The power of the combined LP and affine relaxation for promise CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with J. Brakensiek, V. Guruswami, and M. Wrochna), **SICOMP** 49(6), pp. 1232–1248, 2020.
- (8) *The power of Sherali-Adams relaxations for general-valued CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with J. Thapper), **SICOMP** 46(4), pp. 1241–1279, 2017.
- (9) *The complexity of finite-valued CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with J. Thapper), **JACM** 63(4), Article No. 37, 2016.
- (10) *The power of linear programming for general-valued CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with V. Kolmogorov and J. Thapper), **SICOMP** 44(1), pp. 1–36, 2015.
- (11) *The complexity of conservative valued CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with V. Kolmogorov), **JACM** 60(2), Article No. 10, 2013.
- (12) *An algebraic theory of complexity for discrete optimisation* [\[doi\]](#) [\[arXiv\]](#)  
(with D. Cohen, M. Cooper, P. Creed, and P. Jeavons), **SICOMP** 42(5), pp. 1915–1939, 2013.

**COMMISSION OF TRUST**

**Editor-in-Chief** SIAM Journal on Discrete Mathematics (since 2022, associate editor 2017–2022).

**Editorial boards** Proceedings of the Royal Society A, since 2025; Philosophical Transactions of the Royal Society A, 2019–2024; Constraints, 2019–2023.

**Committees/panels** Royal Society Research Grants (Physical Sciences), since 2025; EATCS Distinguished Dissertation Award, 2026 (chair), 2025 (chair), 2024; ACP Doctoral Research Award, 2025, 2018; LMS Computer Science, since 2019 (chair since 2023); Czech Summer School on Discrete Mathematics, since 2021; EPSRC Peer Review College, since 2018; Royal Society International Exchanges, 2015–2020; Informatics Europe, 2021–2022; EurAI PhD Dissertation Award, 2018.

**PhD committees** Hanlin Ren (University of Oxford, 2025); Levente Bodnár (University of Oxford, 2024); Kristina Asimi (Charles University, 2023); Tomáš Dlask (Czech Technical University in Prague, 2022); Edwin Lock (University of Oxford, 2021); Ninad Rajgopal (University of Oxford, 2020); Kuan Yang (University of Oxford, 2020); Ekaterina Arafailova (Institute Mines-Telecom Atlantique, 2018); Radomír Černoch (Czech Technical University in Prague, 2018); Samuli Leppänen (USI Lugano, 2018); Clément Carbonnel (University of Toulouse, 2016); Andreas Göbel (University of Oxford, 2016); Robert Powell (Durham University, 2015); Hannes Uppman (Linköping University, 2015).

**Conference programme committees**

- *TCS*: STOC 2026, 2024; STACS 2026(B), 2020; MFCS 2026, 2020, 2018; CSL 2025; WG 2024; ITCS 2022; ISAAC 2019; ESA 2019; ICALP 2018(A); SOFSEM 2012.
- *AI*: AAI 2021, 2020, 2018, 2017, 2012, 2011, 2010; IJCAI 2021 (SPC), 2020, 2019, 2015, 2013, 2011; CP 2025 (SPC), 2021 (SPC), 2017, 2016, 2014, 2013, 2012, 2011, 2010.

**Reviewing**

- *Conferences*: AAI, ANALCO, APPROX, CCC, CP, CPAIOR, COCOON, CSL, CSR, ECAI, ESA, FOCS, FSTTCS, ICALP(A), ICALP(B), IJCAI, IPCO, IPEC, ISAAC, ITCS, LICS, MFCS, PODS, RANDOM, SoCG, SODA, SOFSEM, STACS, STACS(B), STOC, WALCOM, WG, WoLLIC.
- *Journals*: ACM TALG, ACM ToCT, Acta Informatica, AMAI, AIJ, CC, Chicago JTCS, Constraints, CPC, DAM, DMTCS, DO, EJC, I&C, InGT, IPL, JACM, JAIR, JoCO, JCSS, JLMS, JSL, MP, MSCS, OMaS, SICOMP, SIDMA, TCS, TheoretCS, ToC, ToCS.
- *Grants*: Charles University Grant Agency, CRM, Czech Academy of Sciences, Czech Science Foundation, EPSRC, ERC StG, ERC CoG, ERC SyG, Polish National Science Centre, Royal Society, Swiss National Science Foundation, UKRI.

**INSTITUTIONAL RESPONSIBILITIES****Roles**

- *Department*: Acting Head of the Algorithms and Complexity Theory Theme, 2025–2026; Deputy Head of Department (Teaching), 2023–2025; Director of Teaching, 2020–2023; Member of Departmental REF panel, 2018–2021; Algorithms and Complexity Theory Seminar Organiser, 2016–2019.
- *College*: Director of Studies for Computer Science, since 2024; Director of Studies for Mathematics and Computer Science, since 2024; Director of Studies for Computer Science and Philosophy, since 2024; Coordinator for the Computer Science and Philosophy Joint School, 2020–2024; Coordinator for the Mathematics and Computer Science Joint School, 2018–2024; IT Fellow, 2018–2024.

**Appointment panels**

- *Department*: Faculty Longlisting, 2026 (chair), 2025; Associate Professorship/Professorship with a Tutorial Fellowship at Brasenose (2026, chair), Mansfield (2025, chair), St Hilda's (2023), St Anne's (2022), Jesus (2021), Hertford (2020), Jesus (2020), Jesus (2018); Glasstone Fellowship, 2025 (chair), 2022; Head of Department, 2024; Review (MPR) and Reappointment (IPO) panels, since 2021; Departmental Lectureship, 2025 (chair), 2025 (chair), 2024 (chair), 2021, 2019.
- *College*: Merton ECR in Mathematics and Computer Science, 2026, 2024; Merton Lectureship in Computer Science, 2024, 2022; Jesus Lectureship in Computer Science, 2023, 2021, 2020, 2019.
- *External*: Panels for promotions/hiring faculty members at Charles University, Czechia; Linköping University, Sweden; TU Hamburg, Germany; TU Kaiserslautern, Germany.

**Committees**

- *Department*: Research, 2025–2026; IT, 2023–2025 (chair); Professional Masters Programme Supervisory, 2023–2025; MSc Supervisory, 2021–2025; Education, 2021–2025 (chair 2023–2025); Senior Management Team, 2021–2025; Undergraduate Supervisory, 2020–2025 (chair 2021–2023); Mathematics and Computer Science Supervisory, 2021–2023; Computer Science and Philosophy Supervisory, 2021–2023 (chair 2022–2023); Access and Admissions, 2021–2023; PhD Scholarship, 2019–2022; Inspired Research, 2019–2021.
- *College*: Library & Archives, since 2025; Suspension of Status and Fitness to Study, since 2025; Appeals, since 2025; Visiting Research Fellowship, 2025; Graduate Prize Scholarships, 2025; Warden & Tutors, since 2024; Academic, 2019–2024; Equality, Diversity, and Inclusion, 2018–2024; Governing Body, since 2016.
- *Other*: Divisional Education, 2023–2025, 2021; Divisional Education Audit, 2021–2024; Mathematical Institute Teaching, 2021–2023.

**Examining and assessment**

- Final Honours School Examiner (Parts A and B), 2019–2021; UG Project Assessor, since 2018; Mathematics and Foundations of Computer Science Assessor, since 2018; Computer Science Assessor, since 2018. 21 transfer/confirmation vivas since 2014.

**TEACHING**

**Courses** Combinatorial Optimisation (MT 2025, MT 2024, MT 2023, MT 2022), Probability and Computing (with S. Kiefer, MT 2015, MT 2014, MT 2013), Complexity of Valued CSPs (2016), Algorithms for CSPs (2013), Mathematics for Computer Scientists II (with M. Liakata, 2013).

**Classes and tutorials** Advanced Data Structures and Algorithms, Algorithms and Data Structures, Automata and Formal Languages, Computational Complexity, Concurrency, Continuous Mathematics, Data Structures and Algorithms, Design and Analysis of Algorithms, Digital Systems, Discrete Mathematics, Functional Programming, Introduction to Formal Proof, Introduction to Programming, Introduction to Proof Systems, Imperative Programming, Linear Algebra, Logic and Proof, Models of Computation, Object Oriented Programming, Probability and Computing, Randomised Algorithms, Theory of Data and Knowledge Bases.

**SUPERVISION AND MENTORING**

**Postdocs** Paolo Marimon, since 2026; Gianluca Tasinato, since 2026; Amirhossein Kazeminia, since 2025; Ioannis Eleftheriadis, since 2025; Karolina Okrasa, since 2024; George Osipov, 2025 (VR postdoctoral fellowship); Silvia Butti, 2023–2025 (→ faculty at King’s College London, UK); Alberto Larrauri, 2023–2025 (→ faculty at University of Zaragoza, Spain); Lorenzo Ciardo, 2020–2025; (→ faculty at TU Graz, Austria); Caterina Viola, 2020–2022 (→ faculty at University of Catania, Italy); Jakub Opršal, 2021–2022 (→ faculty at University of Birmingham, UK); Shuai Shao, 2020–2021 (→ faculty at USTC, China); Michael Kompatscher, 2020–2021 (→ faculty at Charles University, Czechia); Bálazs Mezei, 2020–2021 (→ finance); Marcin Wrochna, 2018–2020 (→ faculty at University of Warsaw, Poland); Miguel Romero, 2017–2019 (→ faculty at PUC, Chile); Clément Carbonnel, 2017–2018 (→ CNRS, France).

**PhD students** Zephyr Verwimp, since 2024; Raymond Chang (with C. Coester), since 2024; Tamio-Vesa Nakajima, PhD 2025 (→ Marburg, Germany); Tom Orton (with V. Kanade and R. Santhanam), PhD 2023 (→ finance); Alex Brandts, PhD 2022 (→ finance); Jacob Focke, PhD 2020 (with L. Goldberg) (→ CISPA, Germany); Peter Fulla, PhD 2018 (→ faculty at Chuo University, Japan); Andrius Vaicenavičius, 2014–2017 (with P. Jeavons and C. McDiarmid), transferred to pursue a PhD in AI.

**BSc/MSc students** Liam Devine, since 2025; Křešimir Nežmah, MFoCS 2025; Jack Li, MSc 2025; Yihe Gao, BSc 2025; Jonathan Uy, MCompSci 2025; Leon Balan-Tribus, MMathCompSci 2024; Ruxandra-Laura Nanu, BSc 2024; Hong Zhang, MSc 2023; Serban-Ion Cercelescu, BSc 2023; Yichen Huang, BSc 2023; Jannik Kudla, MFoCS 2022; Costin Onescu, MCompSci 2022; Jáchym Solecý, MMathCompSci 2021; Costin Onescu, BSc 2021; Eden Pelleg, MFoCS 2020; Yunus Ayidin, BSc 2020; David Klaumbauer, MFoCS 2019; Silvia Butti, MFoCS 2018; Gregor Matl, MFoCS 2018; Ragnar Groot Koerkamp, MFoCS 2017; Andrius Vaicenavičius, MMath 2014.

**College lecturers** Mahsa Shirmohammadi, 2025–2026; Maximilian Doré, 2024–2026; Zev Shirazi, 2023–2024; Ross Gales, 2023–2024; Gunes Baydin, 2021–2024; Matthias Lanzinger, 2021–2023; Cristina Matache, 2020–2021; Swaraj Dash, 2019–2021; Matthew Katzman, 2019–2021; Reino Niskanen, 2019–2020.

**Research interns** Piotr Mitosek, 2020; Joanna Ochremiak, 2015; Andrius Vaicenavičius, 2013.

**SMALLER GRANTS**

2017–2022	Royal Society Enhancement Award. PI.	£85K
2014–2017	Royal Society Research Grant. PI.	£75K
2014–2017	EPSRC Grant EP/L021226/1. Co-I.	£114K
2007–2010	EPSRC Grant EP/F01161X/1. PhD student.	£125K