

**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**

- 2025 Visitor, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK.
- 2021, 2015 Visitor, Hausdorff Research Institute for Mathematics, Bonn, Germany.
- 2016 Visiting Scientist, Simons Institute for the Theory of Computing, UC Berkeley, USA.
- 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 new 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>1</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.
- 2025 Dagstuhl Seminar [25211](#): The CSP: Complexity and Approximability.
- 2023–2026 American Institute of Mathematics (AIM) SQuARE: Relaxations for Promise CSPs.
- 2020–2024 London Mathematical Society Computer Science Colloquium.
- 2022 Dagstuhl Seminar [22201](#): The CSP: Complexity and Approximability.
- 2021 Early Career Researchers Workshop, European Computer Science Summit.
- 2018 Dagstuhl Seminar [18321](#): The CSP: Complexity and Approximability.

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<sup>1</sup>Awarded as an ERC Consolidator Grant in March 2022 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.  
10 selected publications:

- (1) *Pliability and approximating Max-CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with M. Romero and M. Wrochna), **JACM** 70(6), Article No. 41, 2023.
- (2) *Topology and adjunction in promise constraint satisfaction* [\[doi\]](#) [\[arXiv\]](#)  
(with A. Krokhin, J. Opršal, and M. Wrochna), **SICOMP** 52(1), pp. 38–79, 2023.
- (3) *CLAP: A new algorithm for promise CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with L. Ciardo), **SICOMP** 52(1), pp. 1–37, 2023.
- (4) *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.
- (5) *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.
- (6) *The power of Sherali-Adams relaxations for general-valued CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with J. Thapper), **SICOMP** 46(4), pp. 1241–1279, 2017.
- (7) *The complexity of finite-valued CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with J. Thapper), **JACM** 63(4), Article No. 37, 2016.
- (8) *The power of linear programming for general-valued CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with V. Kolmogorov and J. Thapper), **SICOMP** 44(1), pp. 1–36, 2015.
- (9) *The complexity of conservative valued CSPs* [\[doi\]](#) [\[arXiv\]](#)  
(with V. Kolmogorov), **JACM** 60(2), Article No. 10, 2013.
- (10) *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, 2024; LMS Computer Science, chair since 2023 (member 2019–2023); 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; ACP Doctoral Research Award, 2018.

**PhD committees:** 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*: CSL 2025, STOC 2024, WG 2024, ITCS 2022, MFCS 2020, 2018; STACS 2020; ISAAC 2019; ESA 2019; ICALP (A) 2018. *AI*: AAAI 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:** *Journals:* ACM TALG, ACM ToCT, Acta Informatica, AMAI, AIJ, CC, Chicago JTCS, Constraints, CPC, DAM, DMTCS, DO, EJC, I&C, IPL, JACM, JAIR, JoCO, JCSS, JSL, MP, MSCS, OMaS, SICOMP, SIDMA, TCS, TheoretiCS, ToC, ToCS. *Grants:* CRM, EPSRC, ERC StG, ERC CoG, ERC SyG, Royal Society, Czech Science Foundation, Polish National Science Centre, Swiss National Science Foundation, Charles University Grant Agency.

## INSTITUTIONAL RESPONSIBILITIES

**Roles:** *Department:* Deputy Head of Department (Teaching), since 2023; Director of Teaching, 2021–2023; 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:* Associate Professorship/Professorship with a Tutorial Fellowship at 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, 2024, 2021, 2019. *College:* Merton ECR, 2024; Merton Lectureship, 2022; Jesus Lectureship, 2023, 2021, 2020, 2019.

**Committees:** *Department:* IT, chair since 2023; Professional Masters Programme Supervisory, since 2023; MSc Supervisory, since 2021; Education, since 2021 (chair since 2023); Senior Management Team, since 2021; Undergraduate Supervisory, since 2020 (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:* Academic, 2019–2024; Equality, Diversity, and Inclusion, 2018–2024; Governing Body, since 2016. *Other:* Divisional Education, since 2023, 2021; Divisional Education Audit, 2021–2024; Mathematical Institute Teaching, 2021–2023.

**Examining and assessment:** Final Honours School Examiner (Parts A and B), 2019–2021; Undergraduate Project Assessor, 2018–2019, since 2021; Mathematics and Foundations of Computer Science Assessor, since 2017. *Transfer/confirmation vivas:* Hanlin Ren, MT 2024; Levente Bodnár, MT 2023; Paulína Smolárová, MT 2023; Hanlin Ren, HT 2023; Andrés Herrera-Poyatos, TT 2022; Réka Kovács, MT 2021; Levente Bodnár, MT 2021; James Stewart, TT 2021; Edwin Lock, MT 2020; Andrés Herrera-Poyatos, MT 2020; Haozhe Zhang, TT 2020; Alexandros Hollender, TT 2020; Ninad Rajgopal, MT 2019; James Stewart, MT 2019; Edwin Lock, MT 2018; Kuan Yang, MT 2018; Alexandros Hollender, MT 2018; Matthias Gerstgrasser, TT 2017; Kuan Yang, TT 2017; Andreas Göbel, TT 2015; Matthias Gerstgrasser, MT 2014.

## TEACHING

**Courses:** Combinatorial Optimisation (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:** George Osipov, since 2025; Karolina Okrasa, since 2024; Alberto Larrauri, since 2023; Silvia Butti, since 2023; Lorenzo Ciardo, since 2020; 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); Báalazs 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, since 2021; 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:** Jack Li, since 2024; Yihe Gao, since 2024; Jonathan Uy, since 2024; 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, MSc 2022; Costin Onescu, MCompSci 2022; Jáchym Solecký, MMathCompSci 2021; Costin Onescu, BSc 2021; Eden Pelleg, MSc 2020; Yunus Ayidin, BSc 2020; David Klaumbauer, MSc 2019; Silvia Butti, MSc 2018; Gregor Matl, MSc 2018; Ragnar Groot Koerkamp, MSc 2017; Andrius Vaicenavičius, MMath 2014.

*All but one supervised dissertations were awarded a distinction, one was awarded a merit, two received a prize, most contained publishable results, and several led to publications.*

**College lecturers:** Mahsa Shirmohammadi, 2025; 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