Christian Konrad - Curriculum Vitae

CONTACT INFORMATION	University of Bristol School of Computer Science Bristol BS8 1UB United Kingdom	Mobile: (+44) (0)7397190778 E-mail: christian.konrad AT bristol.ac.uk Web: http://www.christiankonrad.de

RESEARCH INTERESTS

Design and analysis of algorithms, in particular, streaming algorithms, distributed computing, and communication complexity

POSITION

University of Bristol, School of Computer Science, UK — since Aug. 2025
Reader/Associate Professor in Computer Science

DEGREES

LIAFA (now IRIF), University Paris Diderot, Paris, France — Sep. 2009 - Aug. 2013
PhD in Computer Science, Advisor: Frédéric Magniez
Thesis: "Computations on Massive Data Sets: Streaming Algorithms
and Two-Party Communication" (awarded by University Paris-Sud)

Technical University of Munich, Garching, Germany — Oct. 2003 - Jun. 2008
Diplom-Informatiker Univ. (equivalent to an MSc) in
Computer Science with Mathematics as a minor

PREVIOUS EMPLOYMENT AND INTERNSHIPS

University of Bristol, Dept. of Computer Science, Bristol — Aug. 2022 - Jul. 2025
Senior Lecturer in Computer Science

University of Bristol, Dept. of Computer Science, Bristol — Apr. 2018 - Jul. 2022
Lecturer in Computer Science

University of Warwick, Computer Science Dept., Coventry — Sep. 2016 - Mar. 2018
Research Fellow, working with Artur Czumaj and Graham Cormode

Reykjavik University, Computer Science Dept., Iceland — Sep. 2013 - Aug. 2016
Postdoc in the group of Magnús M. Halldórsson

LRI, University Paris-Sud, France — May - Jul. 2009
Internship, working with Frédéric Magniez

INRIA, NACHOS team, Sophia Antipolis, France — Jun. 2008 - Apr. 2009
Research Engineer

INRIA, NACHOS team, Sophia Antipolis, France — Sep. 2007 - Jun. 2008
Internship, working on diploma thesis in scientific computing

Siemens Corporate Research, Princeton, NJ, USA — Feb. - Jun. 2007
Internship, working in medical imaging

KTH Stockholm, Sweden — Aug. 2005 - Jan. 2006
Exchange student, Erasmus program

AWARDS

Best Newcomer Paper Award at ICDT 2012

Excellence PhD award "Jean-Pierre Aguilar", provided — $\sim 80,000 \, €$
by the Fondation CFM pour la recherche

Contrat Doctoral from University Paris-Sud (declined) — $\sim 60,000 \, €$

LANGUAGES

German (native language), English (fluent), French (fluent)

TEACHING EXPERIENCE	**University of Bristol, Bristol, United Kingdom**	
	COMS10018 Algorithms 1, Unit Director	2024/2025
	COMS10017 Algorithms 1, Unit Director	2023/2024
	COMS10017 Algorithms 1, Unit Director	2022/2023
	COMS10017 Algorithms 1, Unit Director	2021/2022
	COMSM0068 Advanced topics in theoretical computer science, responsibilities shared with Dr. Raphaël Clifford	2021/2022
	COMS10017 Algorithms, Unit Director	2020/2021
	COMSM0068 Advanced topics in theoretical computer science, responsibilities shared with Dr. Raphaël Clifford	2020/2021
	COMS10007 Algorithms, Unit Director	2019/2020
	COMS31900 Advanced algorithms, responsibilities shared with Dr. Raphaël Clifford	2019/2020
	COMS10007 Algorithms, Unit Director	2018/2019
	Reykjavik University, Reykjavik, Iceland	
	Graph theory, Lecturer	Jan. 2015 - May 2015
	University Paris Diderot, Paris, France	
	Teaching Assistant (French: demi-ATER), 96 hours per year Advanced object oriented programming, C++ programming, Finite automata, Software engineering	Sep. 2012 - Jul. 2013
	LRI, University Paris-Sud, Orsay, France	
	Teaching Assistant (French: Moniteur), 64 hours per year	Sep. 2009 - Jul. 2012
	Algorithms/C, Compilers and virtual machines	2011 - 2012
	Algorithms/C, Object-oriented programming	2010 - 2011
	Imperative programming, Compilers and virtual machines	2009 - 2010

PHD STUDENTS	Conor O'Sullivan	2024 - 2028
	Archie Walton	2024 - 2028
	Adithya Diddapur	2022 - 2026
	Cezar-Mihail Alexandru (graduated)	2021 - 2025
	Kheeran Naidu (graduated)	2020 - 2024

SUMMER INTERNSHIPS	Conor O'Sullivan	3rd year Theoretical Physics student	2023
	Imran Zamin Ali	2nd year CS student	2022
	Ollie Mamuda	1st year math/CS student	2022
	Lidiya binti Khalil	2nd year Math/CS student	2019

FUNDED PROJECTS	03/2021 - 02/2024	**EPSRC New Investigator Award (EP/V010611/1)** "StreamDG: Streaming Processing of Massive Dynamic Graphs" (PI)	£248,776
	01/2021 - 12/2023	**General Research Fund, Hong Kong** "Algorithmic Foundations of Distributed Large-Scale Graph Processing" (Co-I)	$\sim$ £80,000

THESES SUPERVISION	**2024-2025**

2024-2025

"Asymmetric Palette Sparsification for $(\Delta + 1)$-Colouring in the Streaming Model", Omnia Ali, MSc CS Conversion

"An Evaluation of a State-of-the-Art Semi-Streaming Algorithm for Approximate Maximum Matchings in General Graphs", Phillip Daniel, BSc CS

"Finding Hard Instances for Robust Matching in the One-Way Two-Party Communication Model", Gabriel Cipriani Huete, BSc Math/CS

"Iterative Flow-Augmented Matching – A Novel Maximum Matching Algorithm for Bipartite Graphs", Eric Wang, BSc Math/CS

"Weighted Sum Optimisation for Identifying Optimal Matchings in UK Kidney Exchanges", Lamb Chen, BSc CS

2022-2023

"Maximum Independent Set via Maximal Independent Queries", Victor Traistaru, MEng CS

2021-2022

"Branch-and-Bound Approach for Set Cover", Ben Bancroft, MEng Math/CS

"Evaluation of One-Pass Edge-Arrival Algorithms for Minimum Dominating Set and Set Cover", Alex Carpenter, MEng Math/CS

"Streaming Algorithms for Maximum Independent Sets", Samuel Chimbwandira, BSc Math/CS

"Edge-Degree-Constraint-Subgraphs And Their Applications", Aidan Hancock, BSc Math/CS

"Auction Algorithm for Bipartite Graph Matching Problem", Ivan Qin, MEng Math/CS

"Construction of Large Matchings via an Edge-Query Oracle", Arun Steward, MEng Math/CS

2020-2021

"Dist. Algorithms for Bounded Tree-length Graphs", Adithya Diddapur, MEng Math/CS

"Streaming Graph Colouring in Practice", Emil Centiu, BSc CS

"Beyond Greedy: Set Cover Approximations in Practice", Razvan David, BSc CS **2019-2020**

"Constructing Large Matchings by Querying Maximal Matchings", Lidiya binti Khalil, BSc Math/CS

"Streaming Set-cover Algorithms", Michael Barlow, MEng CS

"Streaming Algorithms for l_0-sampling", Omar Barman, MEng Math/CS

"Star Detection in Data Streams", Dom Hutchinson, 3rd year MEng Math/CS

2018-2019

"Algorithms for Online Checkpointing", Michael Sheehan, MEng Math/CS

"Implementation and Evaluation of an LP-based multi-pass Streaming Algorithm for the Maximum Matching Problem", Aatina Punjabi, MEng CS

"The Set-cover Problem in the Semi-streaming Model", Charana Nandasena, MEng CS

"How Many of Your Friends Are Friends With Each Other?", Kaijie Wang, MSc Adv. Comp.

"Super Fast Algorithms For Massive Graphs", Amar Hussain, MSc CS

ADMINSTRATIVE ROLES IN BRISTOL		
Programme Director, joint honours Mathematics and Computer Science	2023 - ongoing
Head of year 4	2019 - 2023

SERVICE	2026	Programme Committee Member: 20th Scandinavian Symposium on Algorithm Theory (SWAT) ACM Symposium on Theory of Computing (STOC)
	2025	Grant Proposal Reviewer Israel Science Foundation (ISF)
	2024	Grant proposal reviewer Leverhulme trust (UK)
		PhD defence committee member Zach Langley (Rutgers, US)
		External Promotion Candidate Reviewer Academia Sinica, Taiwan
		External Promotion Candidate Reviewer San Diego State University
	2023	Grant proposal reviewer Agence nationale de la recherche (ANR, France)
	2020	Programme Committee Member 37th Int. Symposium on Theoretical Aspects of Computer Science (STACS) 47th Int. Colloq. on Automata, Languages and Programming (ICALP), Track A
	2019	Communication Chair 38th ACM Symposium on Principles of Distributed Computing (PODC)
		Grant proposal reviewer Israel Science Foundation (ISF)
	2016	Conference Organization Committee 15th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT)
PEER REVIEW ACTIVITIES	2026	SODA, ITCS
	2025	SODA , ICALP (4x)
	2024	APPROX, ESA, ITCS, STOC, Theoretical Computer Science (journal), Transactions on Algorithms (TALG, journal)
	2023	SODA, SEA
	2022	ITCS, STACS, IPCO, ESA (2x), Theoretical Computer Science (journal)
	2021	SODA (2x), SOSA, CPM, PODC, ICALP, Theory of Computing Systems (journal), MFCS, DISC (2x), OPODIS
	2020	SODA, ITCS, SoCG, STACS (2x), Journal for the ACM (journal), ICALP (3x), APPROX, ESA, DISC, FSTTCS
	2019	SODA (2x), SoCG, ICALP, FOCS, ESA (3x), DISC (2x)
	2018	SODA (3x), PODC, ICALP, SIROCCO, The Computer Journal (journal), Theory of Computing Systems (journal)
	2017	SODA, STOC (2x), Algorithmica (journal), ICALP (2x), PODC (2x), FOCS, ISAAC, Trans. on Parallel Computing (journal), Trans. on Alg. (journal)
	2016	Elec. J. of Combinatorics (journal), Acta Cybernetica (journal), SODA (3x), SPAA (4x), APPROX, ESA (2x), SIROCCO
	2015	Acta Cybernetica (journal), Algorithmica (journal), ICALP (3x), TAMC, ESA
	2014	SICOMP (journal), SIDMA (journal), SODA, STOC, STACS, SWAT (2x)
	2013	ICALP, PODS, SODA, STACS
	2012	ICALP, STACS

INVITED WORKSHOP TALKS	"Streaming Algorithms, Communication Complexity, and Maximum Matching", *London Mathematical Society Computer Science Colloquium*, London, UK, December, 2024
	"Streaming, Communication Complexity, Matchings and MIS", *Algorithms for Massive Graphs (AMG) Workshop at DISC'24*, virtual talk, November, 2024
	"Settling the Pass Complexity of Approximate Matchings in Dynamic Graph Streams", *Algorithms & Complexity Workshop*, Warwick, UK, September, 2024
	"Maximal Matching in Bounded-Deletion Streams", *Sublinear Graph Simplification Workshop*, Berkeley, CA, US, August, 2024
	"Set Cover and Maximum Matching in Data Streams", *Liverpool Algorithms Days*, Liverpool, June, 2023.
	"Algorithmic Theory for Big Data", *Software Technologies Workshop*, Clevedon Hall, Clevedon, July, 2022.
	"Randomized Greedy Matching in the Age of Massive Data Sets", *AlgoUK*, invited speaker, University of Warwick, UK, September 2019.
	"Distributed Minimum Vertex Coloring Approximation", *Workshop on Data Summarization*, University of Warwick, UK, March 2018.
	"Streaming Algorithms for Independent Sets", *Shonan Workshop on Processing Big Data Streams*, Shonan Village, Japan, June 2017.
	"Streaming XML", *Nexus of Information and Computation Theories: Inference Problems Theme*, Paris, France, March 2016.
	"On the Order of Graph Streams", *International Symposium on Mathematical Programming*, Berlin, Germany, August 2012.
	"Matching in randomly ordered Streams", *TU Dortmund Workshop on Algorithms for Data Streams*, Dortmund, Germany, July 2012.
	"Language and Graph Problems in the Streaming Model", *French - Israeli Workshop on Foundations of Computer Science*, Paris, France, May 2012.

OUTREACH ACTIVITIES	Mathematical Society (Matrix) Bristol	April 2021
	Talk: "Algorithmic Theory for Big Data"	

WORKSHOP TALKS WITH SELECTION	"Budget Error Correcting under Earth-Mover-Distance", *French Complexity and Algorithms Workgroup (groupe de travail CoA)*, Paris, France, November 2012.
	"Semi-Streaming Algorithms for Maximum Bipartite Matching with Few Passes", *French Graphs and Algorithms Workgroup (groupe de travail graphes)*, Lyon, France, Nov. 2011.

RESEARCH VISITS	**University of Birmingham, UK** (2 days)	Nov 2024
	Hosted by Sagnik Mukhopadhyay	
	University of Pennsylvania (UPenn), US (1 week)	June 2024
	Hosted by Sanjeev Khanna	
	University of Paris Cité, France (1 week)	Mar. 2024
	Hosted by Adi Rosen and Claire Mathieu	
	University of Pennsylvania (UPenn), US (1 week)	Nov. 2023
	Hosted by Sanjeev Khanna	
	University of Massachussetts (UMass), US (1 week)	Nov. 2023
	Hosted by Andrew McGregor	
	University of Pennsylvania (UPenn), US (1 week)	Nov. 2022
	Hosted by Sanjeev Khanna	
	Durham University, Durham, United Kingdom (1 week)	Jan. 2018
	Hosted by Victor Zamaraev	

Team Coati, Inria Sophia Antipolis, France (1 week)   Mar. 2016
Hosted by David Coudert

Université Pierre et Marie Curie, Paris, France (2 weeks)   Nov. 2015
Hosted by Christoph Dürr

Université Pierre et Marie Curie, Paris, France (2 weeks)   Dec. 2014
Hosted by Christoph Dürr

Padova University, Padova, Italy (1 week)   Sep. 2014
Hosted by Francesco Silvestri

Madalgo and CTIC, Aarhus University, Denmark (2 weeks)   May 2012
Hosted by Qin Zhang and Wei Yu

University of Waterloo, Waterloo, ON, Canada (3 months)   Feb., Mar., May 2011
Visiting PhD Student working with Ashwin Nayak

Brown University, Providence, RI, USA (1 month)   Apr. 2011
Hosted by Claire Mathieu

CONFERENCE
TALKS

"Streaming Maximal Matching with Bounded Deletions", *ICALP*, Aarhus, Denmark, May'25.

"Optimal Bounds for Dominating Set in Graph Streams", *ITCS*, virtual conference, Jan.'22.

"Frequent Elements with Witnesses in Data Streams", *PODS*, virtual conference, June '21.

"Constructing Large Matchings via Query Access to a Maximal Matching Oracle", *FSTTCS*, virtual conference, December 2020.

"The Complexity of Symmetry Breaking in Massive Graphs", *DISC*, Budapest, Hungary, October 2019.

"Distributed Minimum Vertex Coloring and Maximum Independent Set in Chodal Graphs", *MFCS*, Aachen, Germany, August 2019.

"Detecting cliques in CONGEST networks", *DISC*, New Orleans, USA, October 2018.

"A Simple Augmentation Method for Matchings with Applications to Streaming Algorithms", *MFCS*, Liverpool, UK, August 2018.

"Brief Announcement: Distributed Minimum Vertex Coloring and Maximum Independent Set in Chodal Graphs", *PODC*, Egham, UK, July 2018.

"Preemptively Guessing the Center", *ISCO*, Marrakesh, Morocco, April 2018.

"Improved Distributed Algorithms for Coloring Interval Graphs with Application to Multicoloring Trees", *SIROCCO*, Porquerolles, France, June 2017.

"On the Power of Advice and Randomization for Online Bipartite Matching", *ESA*, Aarhus, Denmark, August 2016.

"Streaming Partitioning of Sequences and Trees", *ICDT*, Bordeaux, France, March 2016.

"Distributed Large Independent Sets on Bounded-independence Graphs", *DISC*, Tokyo, Japan, October 2015.

"Radio Aggregation Scheduling", *ALGOSENSORS*, Patras, Greece, September 2015.

"Maximum Matching in Turnstile Streams", *ESA*, Patras, Greece, September 2015.

"Distributed Algorithms for Coloring Interval Graphs", *DISC*, Austin, USA, October 2014.

"Robust Set Reconciliation", *SIGMOD*, Snowbird, Utah, USA, June 2014.

"Approximating Semi-matchings in Streaming and in Two-party Communication", *ICALP*, University of Latvia, Riga, Latvia, July 2013.

"Maximum Matching in Semi-Streaming with Few Passes", *APPROX/RANDOM*, MIT, Cambridge, USA, August 2012.

"The Streaming Complexity of Validating XML Documents", *ICDT*, Berlin, Germany, March 2012.

GROUP SEMINAR TALKS	2024	Theory of Computation Group Seminar, University of Birmingham, UK
	2024	IRIF, Paris Cité, Algorithms seminar
	2023	Sheffield, Algorithms group seminar
		UMass (University of Massachussetts, MA, USA), theory seminar
	2022	Joint Durham Liverpool Theory Seminar, virtual seminar
	2021	IRIF, Université Paris Diderot theory seminar, France, virtual seminar
	2020	Rutgers/DIMACS theory seminar, NJ, USA, virtual seminar
	2019	Group seminar, Bristol University, Bristol, UK
	2018	Algorithms and Complexity group, Durham University, Durham, UK
		Combinatorics Seminar, Bristol University, Bristol, UK
		Algorithms and Complexity Theory Seminar, Oxford University, Oxford, UK
	2016	DIMAP, University of Warwick, Coventry, UK
		ICE-TCS, Reykjavik University, Reykjavik, Iceland
		IRIF, Université Paris Diderot, Paris, France
		Coati, Inria Sophia Antipolis, Sophia Antipolis, France
	2015	ICE-TCS, Reykjavik University, Reykjavik, Iceland
	2014	ICE-TCS, Reykjavik University, Reykjavik, Iceland
		University of Padova, Padova, Italy
	2012	Lab for Foundations of CS, University of Edinburgh, Edinburgh, Scotland
		MADALGO, Aarhus University, Aarhus, Denmark
	2011	Brown University, Providence, RI, USA
		University of Waterloo, Waterloo, ON, Canada
		Dahu, ENS Cachan, Cachan, France
		LIAFA, University Paris Diderot, Paris, France

CONFERENCE PUBLICATIONS

[C42] "Constructing Long Paths in Graph Streams" (with Chhaya Trehan), *Proceedings of the 33rd European Symposium on Algorithms* (ESA'25).

[C41] "Streaming Maximal Matching with Bounded Deletions" (with Sanjeev Khanna, Jacques Dark), *Proceedings of the 52nd International Colloquium on Automata, Languages and Programming* (ICALP'25).

[C40] "Graph Reconstruction via MIS Queries" (with Conor O'Sullivan, Victor Traistaru), *16th Innovations in Theoretical Computer Science Conference* (ITCS'25).

[C39] "Settling the Pass Complexity of Approximate Matchings in Dynamic Graph Streams" (with Sepehr Assadi, Soheil Behnezhad Kheeran Naidu, Janani Sundaresan), *Proceedings of the 2025 ACM-SIAM Symposium on Discrete Algorithms* (SODA'25).

[C38] "Matchings in Low-Arboricity Graphs in the Dynamic Graph Stream Model" (with Andrew McGregor, Rik Sengupta and Cuong Than), *44th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science* (FSTTCS'24).

[C37] "Interval Selection in Sliding Windows" (with Cezar-Mihail Alexandru), *Proceedings of the 32nd European Symposium on Algorithms* (ESA'24).

[C36] "$O(\log \log n)$ Passes is Optimal for Semi-Streaming Maximal Independent Set" (with Sepehr Assadi, Kheeran Naidu, Janani Sundaresan), *Proceedings of the 56th ACM Symposium on Theory of Computing* (STOC'24).

[C35] "An Unconditional Lower Bound for Two-Pass Streaming Algorithms for Maximum Matching Approximation" (with Kheeran Naidu), *Proceedings of the 2024 ACM-SIAM Symposium on Discrete Algorithms* (SODA'24).

[C34] "Interval Selection in Data Streams: Weighted Intervals and the Insertion-deletion Setting" (with Jacques Dark, Adithya Diddapur), *43rd IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science* (FSTTCS'23).

[C33] "Set Cover in the One-pass Edge-arrival Streaming Model" (with Sanjeev Khanna, Cezar Alexandru), *42nd ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems* (PODS 2023).

[C32] "Improved Weighted Matching in the Sliding Window Model" (with Cezar Alexandru, Pavel Dvorak, Kheeran Naidu), *40th International Symposium on Theoretical Aspects of Computer Science* (STACS 2023).

[C31] "Maximum Matching via Maximal Matching Queries" (with Kheeran Naidu, Arun Steward), *40th International Symposium on Theoretical Aspects of Computer Science* (STACS 2023).

[C30] "Optimal Bounds for Dominating Set in Graph Streams" (with Sanjeev Khanna), *13th Innovations in Theoretical Computer Science Conference* (ITCS 2022).

[C29] "On Two-pass Streaming Algorithms for Maximum Bipartite Matching" (with Kheeran Naidu), *Proceedings of the 24th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems* (APPROX 2021).

[C28] "Frequent Elements with Witnesses in Data Streams", *40th ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems* (PODS 2021).

[C27] "Streaming Set Cover in Practice" (with Michael Barlow, Charana Nandasena), *Symposium on Algorithm Engineering and Experiments* (ALENEX 2021).

[C26] " Constructing Large Matchings via Query Access to a Maximal Matching Oracle" (with Lidiya Binti Khalil), *40th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science* (FSTTCS 2020).

[C25] " Optimal Lower Bounds for Matching and Vertex Cover in Dynamic Graph Streams" (with Jacques Dark), *35th Computational Complexity Conference* (CCC 2020).

[C24] "The Complexity of Symmetry Breaking in Massive Graphs" (with Sriram Pemmaraju, Talal Riaz, Peter Robinson), *Proceedings of the 33rd International Conference on Distributed Computing* (DISC 2019).

[C23] "Distributed Minimum Vertex Coloring and Maximum Independent Set in Chodal Graphs" (with Victor Zamaraev), *44th International Symposium on Mathematical Foundations of Computer Science* (MFCS 2019).

[C22] "Independent Sets in Vertex-Arrival Streams" (with Graham Cormode, Jacques Dark), *Proceedings of the 46th International Colloquium on Automata, Languages and Programming* (ICALP 2019).

[C21] "Detecting cliques in CONGEST networks" (with Artur Czumaj), *Proceedings of the 32nd International Conference on Distributed Computing* (DISC 2018).

[C20] "A Simple Augmentation Method for Matchings with Applications to Streaming Algorithms", *43rd International Symposium on Mathematical Foundations of Computer Science* (MFCS 2018).

[C19] "Improved Massively Parallel Computation Algorithms for MIS, Matching, and Vertex Cover" (with Mohsen Ghaffari, Themis Gouleakis, Slobodan Mitrovic, Ronnit Rubinfeld), *Symposium on Principles of Distributed Computing* (PODC 2018).

[C18] "Brief Announcement: Distributed Minimum Vertex Coloring and Maximum Independent Set in Chodal Graphs" (with Victor Zamaraev), *Symposium on Principles of Distributed Computing* (PODC 2018). [C17] "Approximating the Caro-Wei Bound for Independent Sets in Graph Streams" (with Graham Cormode, Jacques Dark), *5th International Symposium on Combinatorial Optimization* (ISCO 2018).

[C16] "Preemptively Guessing the Center" (with Tigran Tonoyan), *5th International Symposium on Combinatorial Optimization* (ISCO 2018).

[C15] "Improved Distributed Algorithms for Coloring Interval Graphs with Application to Multicoloring Trees" (with Magnús M. Halldórsson), *Proceedings of the 24th International Colloquium on Structural Information and Communication Complexity* (SIROCCO 2017).
Invited to TCS special issue

[C14] "The Densest k-Subhypergraph Problem" (with Eden Chlamtàč, Michael Dinitz, Guy Kortsarz, George Rabanca), *Proceedings of the 19th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems* (APPROX 2016).

[C13] "On the Power of Advice and Randomization for Online Bipartite Matching" (with Christoph Dürr, Marc Renault), *Proceedings of the 24th European Symposium on Algorithms* (ESA 2016).

[C12] "Streaming Algorithms for Partitioning Sequences and Trees", *Proceedings of the 19th International Conference on Database Theory* (ICDT 2016).

[C11] "Brief Announcement: Local Independent Set Approximation" (with Marijke H. L. Bodlaender, Magnús M. Halldórsson, Fabian Kuhn), *Proceedings of the 2016 ACM Symposium on Principles of Distributed Computing*, (PODC 2016).

[C10] "Distributed Large Independent Sets on Bounded-independence Graphs" (with Magnús M. Halldórsson), *Proceedings of the 29th International Conference on Distributed Computing* (DISC 2015).

[C9] "Radio Aggregation Scheduling" (with Rajiv Gandhi, Magnús M. Halldórsson, Hoon Oh, Guy Kortsarz), *11th International Symposium on Algorithms and Experiments for Wireless Sensor Networks* (ALGOSENSORS 2015).
Invited to TCS special issue

[C8] "Limitations of Current Wireless Scheduling Algorithms" (with Magnús M. Halldórsson, Tigran Tonoyan), *11th International Symposium on Algorithms and Experiments for Wireless Sensor Networks* (ALGOSENSORS 2015).
Invited to TCS special issue

[C7] "Maximum Matching in Turnstile Streams", *Proceedings of the 23rd European Symposium on Algorithms* (ESA 2015).

[C6] "The Minimum Vulnerability Problem on Graphs" (with Yusuke Aoki, Bjarni V. Halldórsson, Magnús M. Halldórsson, Takehiro Ito, Xiao Zhou), *Combinatorial Optimization and Applications - 8th International Conference* (COCOA 2014).
Invited to JOCO special issue

[C5] "Distributed Algorithms for Coloring Interval Graphs" (with Magnús M. Halldórsson), *Proceedings of the 28th International Conference on Distributed Computing* (DISC 2014).

[C4] "Robust Set Reconciliation" (with Di Chen, Ke Yi, Wei Yu, Qin Zhang), *Proceedings of the 2014 ACM SIGMOD International Conference on Management of Data* (SIGMOD 2014).

[C3] "Approximating Semi-Matchings in Streaming and in Two-Party Communication" (with Adi Rosén), *Proceedings of the 40th International Colloquium on Automata, Languages and Programming* (ICALP 2013).

[C2] "Maximum Matching in Semi-Streaming with Few Passes" (with Frédéric Magniez and Claire Mathieu), *Proceedings of the 15th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems* (APPROX 2012).

[C1] "Validating XML Documents in the Streaming Model with External Memory" (with Frédéric Magniez), *Proceedings of the 15th International Conference on Database Theory* (ICDT 2012).
Invited to TODS special issue, Best Newcomer Paper Award

JOURNAL
PUBLICATIONS

[J13] "Distributed Minimum Vertex Coloring and Maximum Independent Set in Chordal Graphs" (with Victor Zamaraev), *Theoretical Computer Science*, 2022.

[J12] "Guessing Fractions of Online Sequences" (with Tigran Tonoyan), *Discrete Applied Mathematics*, 2022.

[J11] "Detecting cliques in CONGEST networks" (with Artur Czumaj), *Distributed Computing*, 2020.

[J10] "Radio Aggregation Scheduling" (with Rajiv Gandhi, Magnús M. Halldórsson, Hoon Oh, Guy Kortsarz), *Theoretical Computer Science* (TCS), 2020.

[J9] "Limitations of Current Wireless Scheduling Algorithms" (with Magnús M. Halldórsson, Tigran Tonoyan), *Theoretical Computer Science* (TCS), 2020.

[J8] "Improved Distributed Algorithms for Coloring Interval Graphs with Application to Multicoloring Trees" (with Magnús M. Halldórsson), *Theoretical Computer Science* (TCS), 2020.

[J7] "The Densest k-Subhypergraph Problem" (with Eden Chlamtǎč, Michael Dinitz, Guy Kortsarz, George Rabanca), *SIAM Journal of Discrete Mathematics (SIDMA)*, 2018.

[J6] "The triangle scheduling problem" (with Christoph Dürr, Zdeněk Hanzálek, Yasmina Seddik, René Sitters, Óscar C. Vásquez and Gerhard Woeginger), *Journal of Scheduling*, 2018.

[J5] "Computing Large Independent Sets in a Single Round" (with Magnús M. Halldórsson), *Distributed Computing*, 2018.

[J4] "Approximating Semi-Matchings in Streaming and in Two-Party Communication" (with Adi Rosén), *ACM Transactions on Algorithms* (TALG), 2016.

[J3] "The Minimum Vulnerability Problem on Specific Graph Classes" (with Yusuke Aoki, Bjarni V. Halldórsson, Magnús M. Halldórsson, Takehiro Ito, Xiao Zhou), *Journal of Combinatorial Optimization*, 2016.

[J2] "Validating XML Documents in the Streaming Model with External Memory" (with Frédéric Magniez), *ACM Transactions on Database Systems* (TODS), 2013. (special issue for invited papers from ICDT 2012)

[J1] "Two-constraint domain decomposition with Space Filling Curves", *Parallel Computing*, 2011.

MANUSCRIPTS

[M2] "Robust Lower Bounds for Graph Problems in the Blackboard Model of Communication" (with Peter Robinson, Viktor Zamaraev).

[M1] "MIS in the Congested Clique Model in $O(\log \log \Delta)$ Rounds".

POSTERS

[P1] "Distributed Maximum Independent Set and Minimum Vertex Coloring Approximation" (with Magnús M. Halldórsson, Marijke H. L. Bodlaender), *29th International Conference on Distributed Computing*, (DISC 2015).

REFERENCES   Available upon request