

Anil Maheshwari
School of Computer Science
Carleton University
1125 Colonel By Drive
Ottawa, ON K1S 5B6, Canada
Email: anil@scs.carleton.ca
<http://www.scs.carleton.ca/~anil>

Education

Ph.D. in Computer Science (1993)
Tata Institute of Fundamental Research
Mumbai (Bombay), India.

Dual degrees in
M.Sc. Mathematics and
B.E. Electrical and Electronics Engineering (1987)
Birla Institute of Technology and Sciences, Pilani, India.

Work Experience

Professor	2006-	Carleton University
Associate Director	2016-20	Ottawa-Carleton Institute of Computer Science
Director	2013-16	Ottawa-Carleton Institute of Computer Science
Associate Professor	2001-06	Carleton University
Assistant Professor	1996-01	Carleton University
Postdoctoral Fellow	1994-96	Carleton University
Postdoctoral Fellow	1993-94	Max-Planck Institute für Informatik
Visiting Fellow	1993-96	Tata Institute of Fundamental Research
Research Scholar	1987-93	Tata Institute of Fundamental Research

Adjunct Professor

- Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), Gandhinagar, since March 2023.
- Indian Statistical Institute, Kolkata, India, since August 2021.
- Department of Computer Science of Ramakrishna Mission Vivekananda Educational and Research Institute, Belur Math, India, since February 2021.

Research Interests Design and analysis of algorithms for problems in computational geometry, graphs, data science, and discrete mathematics.

Research Grants

Source	Amount (\$)	Duration	Type
Carleton	7,000	2022	Course Transformation Fund
NSERC	275,000	2021-26	Discovery Grant
Carleton	5,000	2021-22	HyFlex Development Initiative
NSERC	180,000	2016-21	Discovery Grant
Carleton	20,000	2014	Carty-India Scholar Visit
DFAIT	70,000	2010-13	Commonwealth Scholarship for Students
NSERC	145,000	2011-15	Discovery Grant
MITACS	7,500	2011	MITACS Globalink Scholarship
NSERC	140,000	2006-10	Discovery Grant
NSERC	133,135	2001-05	Discovery Grant
GEOIDE	300,000	1999-01	National Centre of Excellence
NSERC	98,900	1997-00	Discovery Grant
Total	1,381,535		

Teaching

Course #	Title	Term/Year
COMP 1002	Systems Programming	W99, F97
COMP 1805	Discrete Structures I	W04, W99
COMP 2804	Discrete Structures II	W16
COMP 2805	Theory of Computation	F05, W05
COMP 3000	Operating Systems	F98-99, W98
COMP 3801	Algorithms for Modern Data Sets	F16-18, F20, F22, F23
COMP 3804	Design and Analysis of Algorithms	F06-08, W09, F09, W10, F10, F11, F18, F21, F22
COMP 4009	Parallel Algorithms	F98-00, F04-07
COMP 4109	Applied Cryptography	W11-12
COMP 4804	Advanced Algorithms	F00, W14-15, F17
COMP 5008	Computational Geometry	W99, F97, W97
COMP 5112	Algorithms for Data Science	F20, W22, W23, F23
COMP 5703	Advanced Algorithms	F00, F04-11, F13-16
COMP 5704	Parallel Algorithms	W99

Supervision of Highly Qualified Personnel

	Duration		Currently @
L. Aleksandrov	1999-05	RA	Faculty@Bulgarian Academy of Sciences
<i>Postdocs:</i>			
A. Madani	2025-	PDF	
L. Theocharous	2025-	PDF	
B. Miraftab	2023-	PDF	
H. Akitaya	2019-20	PDF	Faculty@U. Mass Lowell (USA)
S. Mehrabi	2017-20	PDF	Faculty@U. Mass Lowell (USA)
A. Biniiaz	2017	PDF	Faculty@Windsor (Canada)
S. Verdonschot	2015-18	PDF	Software Developer, Shopify (Canada)
J-L. De Carufel	2010-15	PDF	Faculty@U. Ottawa (Canada)
C. Wulf-Nielson	2010-11	PDF	Faculty@U. Copenhagen (Denmark)
H. Zarrabi-Zadeh	2009-11	PDF	Faculty@Sharif U. (Iran)
M. He	2007-08	PDF	Faculty@Dalhousie (Canada)
M. Farshi	2007-09	PDF	Faculty@Yazd (Iran)
P. Carmi	2006-09	PDF	Faculty@Ben-Gurion (Israel)
K. Douieb	2008-10	PDF	SEng/Statistician, Telemetry (UK)
D. Wood	2001-04	PDF	Faculty@Monash U. (Australia)
<i>Doctoral Students:</i>			
M. Talarico	2025-	PhD	
K. Hiripitiyage	2024-	PhD	ECCC
K. Murali	2022-25	PhD	PDF@SFU/Univ. Ljubljana
T. Tytle	2020-	PhD	
A. Madani	2021-25	PhD	MITACS PDF@Bluewave-ai
G. Esteban	2020-24	PhD	Universidad de Alcalá
J.S. Challa	2014-19	PhD	PDF@Northwestern, Faculty@BITS
S. Eihab	2014-20	PhD	Faculty@Saudi Arabia
F. Chanchary	2013-19	PhD	Lab Coordinator/Instructor@Carleton
A. Nouri	2013-19	PhD	UBER@San Francisco
A. Biniiaz	2013-16	PhD	Faculty@Windsor
C. Grimm	2012-17	PhD	Hi-Tech in Germany
M. Nikseresht	2007-12	PhD	Innovapost (Ottawa)
K. Shahbaz	2007-13	PhD	Amazon
C. Dillabaugh	2005-13	PhD	Solana Networks (Ottawa)
N. Zeh	1999-02	PhD	CRC-Chair@Dalhousie
M. Lanthier	1996-99	PhD	Faculty@Carleton
D. Hutchinson	1996-99	PhD	Principal@Pteran
<i>Masters Students:</i>			
A. Iwoh	2024-	MCS	
A. Arevalo	2021-24	MCS	

S. Patel	2022-23	MCS	Citi
M. Vicuna	2021-24	MCS	Mathematica
Y. Wang	2020-21	MCS	Amazon
A. DhakshinaMuthy	2019-21	MCS	HiTech
D. Robichaud	2019-	MCS	Google
N. Vrushali	2019-20	MCS	Ericsson (Ottawa)
G. Kaur	2019-20	MCS	
S. Misra	2019	MCS	UX Designer
K. Cerqueira	2018-19	MCS	Transferred to PhD@U. Ottawa
A. Narayanan	2015-17	MCS	Micro Focus (Ottawa)
K. Crosbie	2014-17	MCS	ADGA (Ottawa)
R. Althunyan	2015-16	MCS	Saudi Arabia
G. Bint	2013-14	MCS	JSI Telecom (Ottawa)
M. Vasanth	2012-15	MCS	Ciena (Ottawa)
M. Eastman	2011-14	MCS	Google
D. Robillard	2007-09	MCS	HiTech + Linux Audio (Berlin)
D. Jansens	2008-10	MCS	Google
R. Taylor	2005	MCS	Math@Carleton
P. Toopana	2005	MCS	StatsCan (Ottawa)
S. Wuhler	2005-06	MCS	INRIA (Grenoble)
M. Nikseresht	2005-07	MCS	Innovapost (Ottawa)
J. Yi	2004-04	MCS	Transport Canada (Ottawa)
H. Guo	2000-02	MCS	CRA (Ottawa)
D. Saraswat	2000-02	MCS	Hi-Tech (Montreal)
L. Farrag	1998	MCS	Hi-Tech

BCS Students:

M. Yuen	2025	Honors Project	
A. Sandhu	2024	Honors Project	Siena
Y. Sabry	2023	Honors Project	Amazon
L. Sharafeldin	2022	DSRI	BCS@Carleton
Mingyi Wu	2022	Honors Project	MCS@SFU
C. Stewart	2020-21	Honors Thesis	PhD@Waterloo
V. Chiarelli	2019-20	Honors Thesis	M.Cog.Sci@Carleton
T. Alhajj	2019	Honors Project	SunLife Financial
E. Kaya	2018	Honors Project	Renewity, Ottawa
G. Bint	2012	NSERC-USRA	MCS@Carleton
S. Pratt	2012	NSERC-USRA	MCS@Waterloo
E. Kaya	2015	DSRI	BCS@Carleton
A. Sadr	2015	Honors Project	
J. Mendek	2013	Honors Project	MCS@Carleton
P. Raubic	2012	Honors Project	
Q. Liu	2012	Honors Project	Hi-Tech
M. Eastman	2011	Honors Project	Google
B. Azymbek	2011	Honors Project	EPAM

G. Bint	2010	NSERC-USRA	MCS@Carleton
M. Eastman	2010	NSERC-USRA	Google
S. Ahuja	2010	Honors Project	Research In Motion (Ottawa)
P. Dao	2006	Honors Project	PhD@Simon Fraser University
L. Dai	2005	Honors Project	

Exchange Students:

A. Nandy	2012-13	Commonwealth Sch. (PhD)	Faculty@NIIT Neemrana
D. Pattanayak	2013	Commonwealth Sch. (MCS)	CMI, Madras
J. Babu	2012	Commonwealth Sch. (PhD)	Faculty@IIT Kerala
S. Kumari	2012	Commonwealth Sch. (PhD)	Bosch, Bangalore
B. Roy	2012	Commonwealth Sch. (PhD)	Faculty@IIT Kharagpur
A. Banik	2012	Commonwealth Sch. (PhD)	Faculty@NISER Bhubneswar
M. De	2011	Commonwealth Sch. (PhD)	Faculty@IIT Delhi
C. Grimm	2010-11	Exchange(PhD)	Magdeburg U.(Germany)
M. Nouri	2010-11	Exchange(PhD)	Shiraz University (Iran)

Examiner of (partial list)

Year	Name	Type
2025	Yan Garito	Comprehensive Exam Committee (Carleton)
2024	Zoltan K.	Comprehensive Exam Committee (Carleton)
2024	R. Raman	External Examiner Ph.D. Thesis (NIT Calicut)
2023	Tyler Tuttle	Ph.D. Thesis Proposal (Carleton)
2023	Saman Bazargani	PhD Thesis Examiner (U. Ottawa)
2023	Gopika Sharma	PhD Thesis Examiner (IIT Ropar)
2023	Mehrnoosh Javarsineh	Thesis Proposal (Carleton)
2023	Camille La Rose	External MCS Thesis Examiner (U. Ottawa)
2023	Zoltan Kalnay	Internal Examiner of MCS Thesis (Carleton)
2022	Milutin Brankovic	PhD Thesis Examiner (U. Sydney)
2021	Parth Shah	MSc Thesis Committee (Sprott Business School, Carleton)
2021	Francois-Xavier Corriveau	MCS Thesis Committee (Carleton)
2020	Md Zamilur Rahman	External Examiner on PhD (U. Windsor)
2020	Tanvir Kaykobad	External Examiner on MCS (U. Ottawa)
2020	Dibyayan Chakraborty	Examiner on PhD (Indian Stat. Institute)
2020	Anthony D'Angelo	PhD Proposal Committee (Carleton)
2019	Sampson Wong	Examiner on Masters (U. Sydney)
2017	Hamideh Vosoughpour Yazdchi	External Examiner on PhD (U. Waterloo)
2016	Bahram Kouhestani	External Examiner on PhD (Queens University)
2015	Alexis Beingessner	MCS Thesis Committee (Carleton)
2015	Darryl Hill	Internal Examiner on MCS (Carleton)
2014	Satish Chandra Panigrahi	External Examiner on PhD (U. Windsor)
2012	Luis Barba	Comprehensive Exam Committee (Carleton)
2012	Rogers Mathew	External Examiner on PhD (Indian Inst. Sciences)

Contribution to Profession

- Presentations & Invited Lecture (partial list)
 - (2025) Invited Talk, RKMVERI, India
 - (2024) Invited Talk, RKMVERI, India
 - (2024) Invited Talk, Geometry: Computational and Combinatorial Workshop at ISI Kolkata, India
 - (2024) Invited Talks, DA-IICT, India
 - (2023) Invited Talk, RKMVERI, India
 - (2023) Invited Talk, Research Day at CS Department, BITS Pilani, India
 - (2021) Invited Talk, 4th Iranian Conference on Computational Geometry, Yazd University, Iran
 - (2021) Google Invited Talk, 7th Conference on Algorithms and Discrete Applied Mathematics, IIT Ropar, India
 - (2019) Ben-Gurion University, Beersheba, Israel
 - (2019) Indo-Italian Pre-Conference School on Algorithms and Combinatorics, Kharagpur
 - (2019) Recent Trends in Algorithms, Bhubaneswar
 - (2019) Panelist at 90th Anniversary of Maheshwari Vidya Pracharak Mandal, Pune
 - (2018) Ram Krishna Mission University, Belur
 - (2018) 125th Birth Anniversary Year of P.C. Mahalanobis, Indian Statistical Institute, Kolkata
 - (2017) pre-CALDAM Indo-German Workshop on Geometry and Graph Algorithms, Goa
 - (2016) Keynote at RLINS & SLCS, Madurai
 - (2015) 27th Canadian Conference in Computational Geometry, Kingston
 - (2013) pre-WALCOM School on Graph and Geometric Algorithms, Kolkata
 - (2012) Birla Institute of Technology and Sciences, Pilani
 - (2009) GTAANS - Seminar on Graph Theory, Algorithms and Networks, Kanchipuram
 - (2009) Dr. Homi J Bhabha Birth Centenary Workshop in Graph and Geometric Algorithms, Bangalore
 - (2008) TIFR-CRCE Workshop on Introduction to Geometric Algorithms, Mumbai
 - (2008) Jai Hind College, Mumbai
 - (2003) Canadian Conference on Computational Geometry, Lethbridge
 - (2000) Symposium on Theory of Computation, Portland
 - (1999) 10th ACM-SIAM Symposium on Discrete Algorithms, Baltimore
 - (1999) ISAAC 99, Madras
 - (1995) 7th Canadian Conference in Computational Geometry, Quebec City
 - (1993) STACS 93, Wuzburg
 - (1993) ALTEC-III Workshop, Hungary
 - (1993) Max-Planck Institut für Informatik, Saarbrücken
 - (1992) Second Scandinavian Workshop on Algorithmic Theory, Finland
 - (1992) Carleton University, Ottawa
 - (1992) University of Ottawa, Ottawa
 - (1992) Lund University, Lund
 - (1992) Humboldt University, Berlin
 - (1991) Institute of Mathematical Science, Madras

- (1990) University of Saskatchewan, Saskatoon
- (1990) Purdue University, USA
- (1990) Cornell University, Ithaca, USA
- (1989) University of Pisa, Pisa
- (1990) Second Canadian Conference in Computational Geometry, Ottawa
- (1990) Indian Institute of Sciences, Bangalore, India;
- Teaching on Volunteer Basis
 - (2022) Graduate course on Algorithms for Data Science at RKMVERI, India
 - (2021) Online Graduate course on Algorithms for Data Science at RKMVERI, India
- Refereed research articles for (partial list)
 - SIAM Journal Computing
 - Discrete and Computational Geometry
 - Journal of Computational Geometry
 - Computational Geometry: Theory and Applications
 - International Journal of Computational Geometry and Applications
 - Algorithmica
 - Information Processing Letters
 - IEEE Transactions
 - Sadhana
 - ACM Journal of Experimental Algorithms
 - GeoInformatica
 - Discrete Applied Mathematics
 - ACM Journal on Spatial Analysis
 - ACM-SIAM Symposium on Discrete Algorithms
 - ALLENEX
 - Canadian Conference on Computational Geometry
 - Symposium of Computational Geometry
 - European Symposium on Algorithms
 - TAPAS
 - Mathematical Foundations of Computer Science
 - Foundations of Software Techniques and Theoretical Computer Science
 - Workshop on Algorithms and Data Structures
 - Scandinavian Workshop on Algorithmic Theory
 - International Parallel Processing Symposium
 - International Symposium on Algorithms and Computation
 - Workshop on Algorithms and Computation
 - Conference on Algorithms and Discrete Applied Mathematics
 - Graph Drawing
 - Cambridge University Press
- Reviewed Research Grants for
 - Natural Sciences and Engineering Research Council of Canada
 - MITACS
 - Research Grant Council of Hong Kong
 - DFG
 - Israel Science Foundation

Dutch Granting Council
Czech Republic Granting Council.

- Editorial Activities

- Special Issue of the Discrete Applied Mathematics Journal for CALDAM 2024 (in works).
- Proceedings of Conference on Algorithms and Discrete Applied Mathematics 2024 in Lecture Notes in Computer Science published by Springer as Volume 14508.
- Special Issue of the Discrete Applied Mathematics Journal (Vol. 280, 2020) for CALDAM 2017.
- Proceedings of Conference on Algorithms and Discrete Applied Mathematics 2017 in Lecture Notes in Computer Science published by Springer as Volume 9602.

- Event Administration of

2019 Indo-Italian School on Algorithms and Combinatorics (IIT Kharagpur)
2017 Canadian Conference on Computational Geometry (Ottawa)
2017 Fields Institute Workshop on Discrete and Computational Geometry (Ottawa)
2012 Fields Institute Workshop on Discrete and Computational Geometry (Ottawa)
2010 Fields Institute Workshop on Discrete and Computational Geometry (Ottawa)
2009 Fields Institute Workshop on Discrete and Computational Geometry (Ottawa)
Joint Coordinator, Carleton Discrete Mathematics Day, Winter 1998
Joint Coordinator, Carleton Algorithmic Theory Symposium, Fall 1997-98.

- Steering Committee Member of

2026 Conference on Algorithms and Discrete Applied Mathematics (IIT Dharwad)

- PC Member of

2025 Conference on Algorithms and Discrete Applied Mathematics (PSG Coimbatore)
2024 Canadian Conference in Computational Geometry (Brock University)
2024 Scandinavian Symposium and Workshops on Algorithm Theory (Helsinki)
2024 Conference on Algorithms and Discrete Applied Mathematics (Co-Chair) (IIT Bhi-lai)
2023 Canadian Conference in Computational Geometry (Montreal)
2023 Conference on Algorithms and Discrete Applied Mathematics (DAICT University)
2022 International Symposium on Algorithms and Applications (South Korea)
2022 Canadian Conference in Computational Geometry (Toronto)
2022 Scandinavian Symposium and Workshop on Algorithmic Theory (Faroe Islands)
2022 Conference on Algorithms and Discrete Applied Mathematics (Pondicherry Uni-versity)
2021 Conference on Algorithms and Discrete Applied Mathematics (IIT Ropar)
2020 Conference on Algorithms and Discrete Applied Mathematics (IIT Hyderabad)
2019 Canadian Conference in Computational Geometry (Edmonton)
2019 Conference on Algorithms and Discrete Applied Mathematics (IIT Kharagpur)
2018 Conference on Algorithms and Discrete Applied Mathematics (IIT Gauhwati)
2017 Symposium on Computational Geometry (SoCG) (Brisbane Australia)
2017 Conference on Algorithms and Discrete Applied Mathematics (BITS Goa)
2016 Conference on Algorithms and Discrete Applied Mathematics (University of Ker-ala)

- 2015 Conference on Algorithms and Discrete Applied Mathematics (IIT Kanpur)
- 2015 Canadian Conference in Computational Geometry (Kingston)
- 2013 Canadian Conference in Computational Geometry (Waterloo)
- 2013 Workshop on Algorithms and Computation (Kharagpur, India)
- 2012 Canadian Conference in Computational Geometry (PEI)
- 2012 International Conference on Interactive Systems (Goa, India)
- 2010 Canadian Conference in Computational Geometry (Winnipeg)
- 2010 International Conference on Frontier of Computer Science and Technology (Changchun, China)
- 2009 Workshop on Introduction to Graphs and Geometric Algorithms, jointly organized by BITS (Pilani, India) and TIFR (Mumbai, India) on the Birth Centenary of Dr. Homi J. Bhabha
- 2009 Workshop on Algorithms and Computation (Calcutta, India)
- 2008 International Conference on Emerging Technologies and Applications in Engineering, Technology and Sciences, (Rajkot, India)
- 2007 Canadian Conference in Computational Geometry (Ottawa)
- 2005 Canadian Conference in Computational Geometry (Windsor)
- 2005 ALENEX (Vancouver)
- 1999 Workshop on Algorithms and Data Structures (Ottawa)
- 1996 Canadian Conference in Computational Geometry (Ottawa).
- Facilitator for the session on “Joint Research” for the first-ever Canada-India Education Summit of Vice-Chancellors and University Presidents (June 2011),
 - Collaborated with over 185 researchers including H. Akitaya (Tufts, USA), L. Aleksandrov (Bulgarian Academy of Sciences, Bulgaria), S. Arikati (Max-Planck Institut für Informatik), R. Atanassov (Carleton, Canada), J. Augustine (IIT Madras, India), S. Banerjee (ISI, Kolkata), S. Bandyopadhyay (USA), J. Babu (IIT Palakkad, India), A. Banik (NISER, India), J. Bhadury (New Brunswick, Canada), B. Bhattacharya (ISI, Kolkata), B. Bhattacharya (SFU, Canada), F. Bauernöppel (Humboldt, Germany), A. Biniarz (Windsor, Canada), T. Biedl (Waterloo, Canada), G. Bint (JSI Telecom, Canada), P. Bose (Carleton, Canada), S. Cabello (Slovenia), P. Carmi (Ben-Gurion, Israel), T. Chandrasekaran (Univ. of Texas, USA), S. Collette (Brussels, Belgium), M. Couture (Carleton, Canada), V. Chandru (IISc, India), J. Czyzowicz (Univ. Quebec at Hull), M. Damian (USA), A. Das (ISI, India), S. Das (ISI, India), A. Datta (Univ. Western Australia), M. De (IIT Delhi, India), F. Dehne (Carleton, Canada), A. Dessmark (Lund, Sweden), W. Dittrich (Bosch Telecom, Germany), H. Djidjev (Los Alamos Labs, USA), K. Douieb (Carleton, Canada), M. Eastman (Google, USA), David Eppstein (UCI, USA), M. Farshi (Iran), R. Flatland (USA), A. Gheibi (Carleton, Canada), M. Ghodsi (Sharif, Iran), S.K. Ghosh (TIFR, India), S. Govindrajan (Duke, USA), P. Goswami (Univ. Calcutta, India), N. Goyal (BITS Pilani, India), P. Goyal (BITS Pilani, India), C. Grimm (Magdeburg, Germany), H. Guo (Carleton, Canada), D. Hutchinson (Pteran, Canada), A. Karim Abu-Affash (Ben-Gurion, Israel), A. Karmarkar (ISI, Kolkata), M. Katz (Ben-Gurion, Israel), J.M. Keil (Saskatoon, Canada), E. Kranakis (Carleton, Canada), M. van Kreveld (Utrecht, Holland), D. Krizanc (Wesleyan, USA), S. Kumari (BITS Pilani, India), L. Kuttner (Carleton, Canada), S. Langerman (Brussels), M. Lanthier (Carleton, Canada), S. Lazard (INRIA, France), A. Lingas (Lund,

Sweden), A. Lubiw (Waterloo, Canada), T. Lukovski (Univ. Paderborn, Germany), C.E. Veni Madhavan (IISc, India), S. Mehrabi (Memorial), N. Misra (IIT Gandhinagar), J.S.B.M Mitchell (Stony Brook), P. Morin (Carleton, Canada), J. Morrison (U. Winnipeg, Canada), W. Mulzer (Berlin), I. Munro (Waterloo, Canada), G. Narasimhan (Miami, USA), S. Nandy (ISI Calcutta, India), M. Noy (Barcelona, Spain), A. Nouri (UBER, USA), M. Nouri (Sharif, Iran), D. Nussbaum (Carleton, Canada), S.P. Pal (IIT Kharagpur, India), M. Paquette (Carleton, Canada), V.T. Rajan (IBM, USA), S. Roy (TRDCC, India), D. Roytenberg (Carleton, Canada), J.-R. Sack (Carleton, Canada), S. Smorodinsky (Ben-Gurion, Israel) Swami Sarvattomananda (Vivekanand University, India), S. Saluja (TIFR, India), C. Scheffer (Dortmund, Germany), A. Somayaji (Carleton, Canada), C. Shu (NRC, Canada), M. Smid (Carleton, Canada), S. Suri (UCSB, USA), Y. Tang (Carleton, Canada), R. Taylor (Carleton, Canada), J. Urrutia (UNAM, Mexico), K. Varadarajan (Iowa, USA), J. Vahrenhold (Dortmund, Germany), J. Yi (Carleton, Canada) C. Zaroliagis (Patras, Greece), N. Zeh (Dalhousie, Canada).

Administrative duties at Carleton

Member of SCAP-G Committee, 2024-.

Adjudication Committee for CU Development Grants – NSERC stream, 2024.

Graduate Director of the Data Science, Analytics, and Artificial Intelligence Program, 2023-

Member of the Senate Quality Assurance and Planning Committee, 2021-22.

Member of the Senate Executive Committee, 2018-19.

Member of Carleton’s Senate from the School of Computer Science, 2016 -19.

Science Representative of Senate Academic Program Committee (SAPC), 2010-19.

Graduate Director of the School of Computer Science, since 2013-20.

Associate Director of Ottawa-Carleton Institute of Computer Science, 2016-20.

Director of Ottawa-Carleton Institute of Computer Science, 2013-16.

Member of the Canada-India Center for Excellence in Science, Technology, Trade and Policy at Carleton, since 2010.

Member of the Universities Graduate Programs and Planning Committee, 2003-09.

Member of the University Scholarship Committee, 2010 -12.

Member of OGS Scholarship Committee for the Province of Ontario, 2008-9.

Carleton representative for the C3.ca initiative, 1998.

CFI/ORDCF Application for the Eastern Ontario Initiative for High-Performance Infrastructure. This led to the creation of the HPCVL infrastructure.

Co-Principal Investigator for the Parallel and Distributed Geomatics Network within the GEOIDE NCE Network.

School committees including Curriculum Reinvention, OCICS Board of Management, Hiring for CRC Tier Chair II, Promotion and Tenure, Algorithms ORU, Laboratories, Representative of the Library Committee, and Graduate Students Seminar.

Volunteer Positions

2021-22 Senior Mentor, Coding Innovation Lab, BITS-Pilani.
2012-14 Secretary of Mahatma Gandhi Peace Council of Ottawa.
2011 Assistant Coach of Nepean Pirates 4-on-4 Summer Hockey.
2007 Assistant Coach of OSU Boys Soccer U9 Team.

List of Publications

Currently Under Review

1. A. Biniiaz, P. Bose, C. Chung, J.-Lou De Carufel, J. Iacono, A. Maheshwari, S. Odak, M. Smid, C. D. Tóth, Tight Bounds on the Number of Closest Pairs in Vertical Slabs, submitted January 2026.
Preliminary version in WADS 2025, LIPIcs 349:8:1–8:14.
<https://drops.dagstuhl.de/entities/document/10.4230/LIPIcs.WADS.2025.8>
2. A. Biniiaz, K. Buchin, J.-L. De Carufel, A. Kalb, A. Maheshwari, S. Odak, C. Rehs, and M. Smid, Oriented Spanners with Dilation Less Than Two, submitted December 2025.
3. C. Chung, A. Maheshwari and M. Smid, Linear-Time $(1 + \varepsilon)$ -Approximation Algorithms for Two-Line-Center Problems, submitted December 2025.
<https://arxiv.org/abs/2601.03516>
4. K. Buchin, A. Kalb, A. Maheshwari, S. Odak, C. Rehs, M. Smid, and S. Wong, Computing Oriented Spanners and their Dilation, submitted November 2025. Preliminary version in SoCG 2025.
5. A. Madani, A. Maheshwari, B. Miraftab, and P. Zylinski, Triangle-Covered Graphs: Algorithms, Complexity, and Structure, submitted September 2025. <https://arxiv.org/abs/2509.11448>
6. A. Banik, S. Das, A. Maheshwari, B. Manna, S. C. Nandy, Krishna Priya K M, B. Roy, S. Roy and A. Sahu, Minimum Consistent Subset in Trees and Interval Graphs, submitted September 2025. Preliminary version in FSTTCS, Leibniz International Proceedings in Informatics LIPIcs 323: 7:1-7:15, 2024. <https://arxiv.org/abs/2404.15487>
7. P. Bose, A. Madani, A. Maheshwari, and B. Miraftab, On Shortest Path, BFS- and DFS-Tree Graphs, submitted June 2025.
8. H. Rajkumar, L.S. Sulochana, and A. Maheshwari, Characterizing winning strategies in the two player pebbling game, submitted December 2025.
9. A. Biniiaz, J.-L. De Carufel, A. Maheshwari, M. Smid, S. Smorodinsky, M. Stojakovic, Polychromatic Coloring of Tuples in Hypergraphs, submitted October 2025 (preliminary version to appear in SoCG 2025).
10. M. Dutta, A. Maheshwari, S. C. Nandy and B. Roy, Partial Domination in Some Geometric Intersection Graphs and Some Complexity Results, submitted May 2025 (preliminary version in CALDAM 2025).
11. J.-L De Carufel, A. Maheshwari, B. Roy, S. Odak, M. Smid, M. Vicuna, Deciding if a DAG is Interesting is Hard, submitted March 2025.
<https://arxiv.org/abs/2503.13398>

12. F. Dehne, A. Maheshwari and R. Taylor, An improved algorithm for Hausdorff Voronoi Diagram for non-crossing sets, submitted in May 2006 (preliminary version appeared in ICPP 2006).

In Journals

1. S. Bazargani, T. Biedl, P. Bose, A. Maheshwari, B. Miraftab, The basis number of 1-planar graphs, *Annals of Combinatorics*, 2026.
<https://doi.org/10.1007/s00026-025-00804-8>
2. A. Madani, A. Maheshwari, B. Miraftab, B. Roy, Algorithms and Hardness Results for the (k, ℓ) -Cover Problem, *Journal of Computer and System Science* 156: 103727, 2026.
<https://arxiv.org/abs/2502.02572>
3. A. Biniiaz, P. Bose, J.-L De Carufel, A. Maheshwari, B. Miraftab, S. Odak, M. Smid, S. Smorodinsky and Y. Yuditsky, On Separating Path and Tree Systems in Graphs, *Discrete Mathematics and Theoretical Computer Science* 27(2), 2025.
<https://arxiv.org/abs/2312.14295>
4. P. Bose, J.-L De Carufel, G. Esteban and A. Maheshwari, Computing shortest paths amid non-overlapping weighted disks, *Results in Mathematics* 80(5), Article 163, 2025.
<https://arxiv.org/abs/2409.08869>
5. A. Biniiaz, J.-L De Carufel, A. Maheshwari, and M. Smid, Metric and Geometric Spanners that are Resilient to Degree-Bounded Edge Faults, *Journal of Computational Geometry* 16(1): 737–764, 2025.
<https://jocg.org/index.php/jocg/article/view/4847/4053>
6. D. Chakraborti, A. Madani, A. Maheshwari and B. Miraftab, Sparse graphs with local covering conditions on edges, accepted in *Journal of Graph Theory*.
<https://arxiv.org/abs/2409.11216>
7. G. Aloupis, A. Biniiaz, P. Bose, D. Eppstein, A. Maheshwari, S. Odak, M. Smid, C. Tóth and P. Valtr, Non-crossing Longest Paths, *Graphs and Combinatorics* 41, 122 (2025).
<https://doi.org/10.1007/s00373-025-02985-8>
8. P. Bose, J.-L De Carufel, A. Maheshwari, and K. Murali, On 1-Planar Graphs with Bounded Cop-number, *Theoretical Computer Science* 1037: 115160, 2025.
9. A. Biniiaz, A. Maheshwari and M. Smid, Euclidean maximum matchings in the plane—local to global, *Algorithmica* 87(1): 132-147, 2025. Preliminary version in 17th WADS, LNCS 12808: 186-199, Springer, 2021.
10. M. De, A. Maheshwari and R. Mandal, Online class cover problem, *Computational Geometry: Theory and Applications* 123: 102120, 2024.
11. S. Dey, A. Maheshwari, and S. C. Nandy, Minimum Consistent Subset of Trees, to appear in *Journal of Combinatorial Optimization* (Preliminary version in FCT, 2021.)
12. P. Bose, G. Esteban and A. Maheshwari, A Steiner-point-based algorithm for approximate shortest paths in weighted equilateral-triangle meshes, *Theoretical Computer Science* 1001: 114583, 2024.
13. A. Madani and A. Maheshwari, Distance-Preserving Graph Compression Techniques, *Journal of Graph Algorithms and Applications* 28(1), 2024.

14. S. Jana, A. Maheshwari, S. Mehrabi, and S. Roy, Maximum Bipartite Subgraphs of Geometric Intersection Graphs, *International Journal of Computational Geometry and Applications*, 33 (3-4): 133 - 157, 2023.
15. J.-L. De Carufel, D. Hill, A. Maheshwari, S. Roy, and L.F.S.X. da Silveira, Constant delay lattice train schedules, *Discrete Applied Mathematics* 339: 1-10, 2023.
16. S. Dey, A. Maheshwari, and S. C. Nandy, Minimum Consistent Subset of Simple Graph Classes, submitted July 2021. (Preliminary version in 7th CALDAM, LNCS 12601: 471–484, 2021.), *Discrete Applied Mathematics* 338: 255-277, 2023.
17. V. Tripathi, A. Pandey and A. Maheshwari, A linear-time algorithm for semitotal domination in strongly chordal graphs, accepted for publications in *Discrete Applied Mathematics* 338: 77-88, 2023.
18. H. Akitaya, A. Biniiaz, P. Bose, J-L. De Carufel, A. Maheshwari, L.F.S.X Da Silveira and M. Smid, The Minimum Moving Spanning Tree Problem, *Journal of Graph Algorithms and Applications* 27(1): 1-18, 2023 (preliminary version in 17th WADS 2021).
19. R. Seth, A. Maheshwari, and S.C. Nandy, An Acrophobic Guard Watchtower Problem on Terrains, *Computational Geometry: Theory and Applications* 109: 101918, 2023 (preliminary version in CCCG 2021).
20. A. Biniiaz, A. Maheshwari and M. Smid, Approximating bottleneck spanning trees on partitioned tuples of points, *Computing in Geometry and Topology*, 1(1): 3.1-3.18, 2022.
21. F. Bauernöppel, A. Maheshwari and J.-R. Sack, An $\Omega(n^d)$ Lower Bound on the Number of Cell Crossings for Weighted Shortest Paths in d-dimensional Polyhedral Structures, *Computational Geometry: Theory and Applications* 107: 101897, 2022 (preliminary version in LATIN 2020, LNCS 12118:235-246).
22. P. Bose, P. Carmi, M. J. Keil, A. Maheshwari, S. Mehrabi, D. Mondal and M. Smid,, Computing Maximum Independent Set on Outerstring Graphs and Their Relatives, *Computational Geometry: Theory and Applications* 103: 101852, 2022 (preliminary version in WADS 2019).
23. A. Biniiaz, P. Bose, A. Lubiw, and A. Maheshwari, Bounded-Angle Minimum Spanning Trees, *Algorithmica* 84(1): 150-175, 2022 (preliminary version in SWAT 2020).
24. K. Abu-Affash, P. Carmi, A. Maheshwari, P. Morin, Michiel Smid and Shakhar Smorodinsky,, Approximating Maximum Diameter-Bounded Subgraph in Unit Disk Graphs, *Discrete and Computational Geometry* 66(4): 1401-1414, 2021, (preliminary version in SoCG 2018).
25. S. Jana, A. Maheshwari and S. Roy, Linear Size Planar Manhattan Network for Convex Point Sets, *Computational Geometry: Theory and Applications* 100:101819, 2022.
26. A. Banik, A. K. Das, S. Das, A. Maheshwari, and Swami Sarvottamananda, Voronoi Game on Polygons, *Theoretical Computer Science* 882:125-142, 2021 (special issue of COCOA 2020).
27. A. Acharyya, A. Maheshwari and S. C. Nandy, Color Spanning Localized Query, *Theoretical Computer Science*, Vol. 861: 85-101, 2021 (preliminary version in 5th CALDAM 2019, LNCS 11394: 150–160, 2019).

28. F. Chanchary, A. Maheshwari, and M. Smid, Window Queries for Intersecting Objects, Maximal Points and Approximations using Coresets, *Discrete Applied Mathematics* 305: 295-310, 2021 (for the special issue of 4th CALDAM 2018).
29. A. Biniiaz, S. Cabello, P. Carmi, J.-L. De Carufel, A. Maheshwari, S. Mehrabi and M. Smid, On the Minimum Consistent Subset Problem, *Algorithmica* 83(7): 2273-2302, 2021 (preliminary version in WADS 2019).
30. A. Maheshwari, W. Mulzer and M. Smid, A Simple Randomized $O(n \log n)$ -Time Closest-Pair Algorithm in Doubling Metrics, *Journal of Computational Geometry* 11(1): 507-524, 2020.
31. A. Maheshwari, A. Nouri, and J.-R. Sack, Shortest Paths Among Transient Obstacles, accepted for publication in *Journal of Combinatorial Optimization* (special issue of 12th COCOA, LNCS 11346: 19–34, 2018).
32. A. Biniiaz, P. Bose, P. Carmi, A. Maheshwari, I. Munro and M. Smid, Faster Algorithms for some Optimization Problems on Collinear Points, *Journal of Computational Geometry* 11(1): 418-432, 2020 (Preliminary version in SoCG 2018).
33. S. Govindarajan and A. Maheshwari (Editors), Preface: CALDAM 2016, *Discrete Applied Mathematics* 280, 2020.
34. A. Biniiaz, E. Kranakis, A. Maheshwari, and M. Smid, Plane and Planarity Thresholds for Random Geometric Graphs, *Discrete Mathematics Algorithms and Applications* 12(1), 2020 (preliminary version in ALGOSENSORS 2015).
35. J.-L. De Carufel, C. Grimm, A. Maheshwari, S. Schirra, and M. Smid, Minimizing the Continuous Diameter when Augmenting a Geometric Tree with a Shortcut, *Computational Geometry: Theory and Applications* 89, 2020 (special issue of WADS 2017).
36. P. Carmi, F. Chanchary, A. Maheshwari and M. Smid, The Most Likely Object to be Seen Through a Window, *International Journal of Computational Geometry and Applications* 29: 269-287, 2019.
37. F. Chanchary, A. Maheshwari, and M. Smid, Querying Relational Event Graphs using Colored Range Searching Data Structures, *Discrete Applied Mathematics* 286:51-61, 2020 (special issues of CALDAM 2017).
38. P. Carmi, A. Maheshwari, S. Mehrabi, L. F. S. X. da Silveira, Approximability of Covering Cells with Line Segments, *Theoretical Computer Science* 784:133-141, 2019 (preliminary version in COCOA 2018).
39. S. Bandyapadhyay, A. Maheshwari, S. Mehrabi, and S. Suri, Approximating Dominating Set on Intersection Graphs of rectangles and L-frames, *Computational Geometry: Theory and Applications* 82: 32-44, 2019 (preliminary version in 43rd MFCS, LIPIcs 117: 37:1–37:15, 2018).
40. A. Biniiaz, A. Maheshwari, and M. Smid, Bottleneck Matchings and Hamiltonian Cycles in Higher-Order Gabriel Graphs, *Information Processing Letters* 153, 2020.
41. A. Banik, S. Das, A. Maheshwari and M. Smid, The Discrete Voronoi Game in a Simple Polygon, *Theoretical Computer Science* 793: 28–35, 2019 (preliminary version in COCOON 2013).

42. A. Gheibi, A. Maheshwari and J.-R. Sack, Weighted Minimum Backward Frechet Distance, *Theoretical Computer Science* 783: 9-21, 2019 (preliminary version in CCCG 2015).
43. T. Biedl, A. Biniiaz, A. Maheshwari, and S. Mehrabi, Packing Boundary-Anchored Rectangles, *Computational Geometry: Theory and Applications* 88, 2020 (special issue of CCCG 2017)
44. S. Sadhu, S. Roy, S. Nandi, A. Maheshwari, and S. C. Nandy, Two-center of the Convex Hull of a Point Set: Dynamic Model, and Restricted Streaming Model, *Fundamenta Informaticae* 164 (1) 119–138, 2019.
45. G. Bint, A. Maheshwari, S.C. Nandy, and M. Smid, Partial enclosure range searching, *International Journal of Computational Geometry and Applications* 29(1): 73-93, 2019.
46. F. Chanchary and A. Maheshwari, Time Windowed Data Structures for Graphs, *Journal of Graph Algorithms and Applications* 23(2): 191-226, 2019.
47. A. Biniiaz, A. Maheshwari, M. Smid, Flip Distance to some Plane Configurations, *Computational Geometry: Theory and Applications* 81:12-21, 2019 (preliminary version in SWAT 2018).
48. A. Biniiaz, P. Bose, K. Crosbie, J.-L. De Carufel, D. Eppstein, A. Maheshwari, and M. Smid, Maximum plane trees in multipartite geometric graphs, *Algorithmica* 81(4): 1512-34, 2019 (preliminary version in WADS 2017).
49. A. Biniiaz, P. Bose, D. Eppstein, A. Maheshwari, P. Morin, and M. Smid, Spanning trees in multipartite geometric graphs, *Algorithmica* 80(11): 3177-3191, 2018.
50. A. Gheibi, A. Maheshwari, J.-R. Sack and C. Scheffer, Path refinement in weighted regions, *Algorithmica* 80(12): 3766-3802 , 2018
51. A. Maheshwari, J.-R. Sack, and C. Scheffer, Approximating the integral Frechet distance, *Computational Geometry: Theory and Applications* 70-71: 13-30, 2018 (preliminary version in SWAT 2016).
52. A. Biniiaz, A. Maheshwari, and M. Smid, Strong matching of points with geometric shapes, *Computational Geometry: Theory and Applications* 68: 186-205, 2018. Special issue in the memory of Ferran Hurtado.
53. A. Maheshwari, S.C. Nandy, D. Pattanayak, S. Roy, M. Smid, Geometric Path Problems with Violations. *Algorithmica* 80(2): 448–471, 2018.
54. A. Biniiaz, P. Bose, J.-L. De Carufel, C. Gavoille, A. Maheshwari, G. Rote, and M. Smid, Towards plane spanners of degree 3, *Journal of Computational Geometry*, 8(1): 11–31, 2017. (preliminary version in ISAAC 2016: 19:1-19:14, December 2016.)
55. A. Biniiaz, A. Maheshwari, S.C. Nandy and M. Smid, An optimal algorithm for plane matchings in multipartite geometric graphs, *Computational Geometry: Theory and Applications*, 63: 1–9, 2017.
56. A. Biniiaz, P. Bose, A. Maheshwari, and M. Smid, Plane Bichromatic Trees of Low Degree, *Discrete & Computational Geometry* 59(4): 864-885, 2018.
57. A. Biniiaz, P. Bose, I. van Duijn, A. Maheshwari, and M. Smid, Faster Algorithms for the Minimum Red-Blue-Purple Spanning Graph Problem, *Journal of Graph Algorithms and Applications* 21(4): 527–546, 2017.

58. C. Dillabaugh, M. He, A. Maheshwari and N. Zeh, I/O-Efficient path traversal in succinct planar graphs, *Algorithmica* 77(3): 714–755, 2017.
59. M. Amani, A. Biniiaz, P. Bose, J.-L. De Carufel, A. Maheshwari, and M. Smid, A Plane 1.88-Spanner for Points in Convex Position, *Journal of Computational Geometry*, 7(1): 520–539, 2016. (Preliminary version in SWAT 2016.)
60. P. Bose, P. Carmi, M. Damian, J.-L. De Carufel, D. Hill, A. Maheshwari, Y. Liu, M. Smid, On the Stretch Factor of Convex Polyhedra whose Vertices are (Almost) on a Sphere, *Journal of Computational Geometry* 7(1): 444-472, 2016.
61. A. Biniiaz, P. Liu, A. Maheshwari, and M. Smid, Approximation algorithms for the unit disk cover problem in 2D and 3D, *Computational Geometry: Theory and Applications* 60: 8-18, 2017 (in the special issue of CCCG 2015).
62. B. Bhattacharya, M. De, A. Maheshwari, S. C. Nandy and S. Roy, Rectilinear path problems in restricted memory setup, *Discrete & Applied Mathematics* 228: 80-87, 2017 (Special issue of CALDAM 2015: 69–80, LNCS, February 2015).
63. A. Biniiaz, P. Bose, A. Maheshwari, M. Smid, Plane Geodesic Spanning Trees, Hamiltonian Cycles, and Perfect Matchings in a Simple Polygon, *Computational Geometry: Theory and Applications* 57: 27-39, 2016.
64. P. Kamousi, S. Lazard, A. Maheshwari and S. Wuhrer, Analysis of Farthest Point Sampling for Approximating Geodesics in a Graph, *Computational Geometry: Theory and Applications* 57: 1-7, 2016.
65. A. Banik, J-L De Carufel, A. Maheshwari and M. Smid, Discrete Voronoi games and ϵ -nets, in two and three dimensions, *Computational Geometry: Theory and Applications* 55: 41-58, 2016.
66. A. Biniiaz, P. Bose, A. Maheshwari, and M. Smid, Packing plane perfect matchings into a point set, *Discrete Mathematics & Theoretical Computer Science* 17(2): 119-142 (2015).
67. A. Biniiaz, A. Maheshwari, M. Smid: On full Steiner trees in unit disk graphs. *Comput. Geom.* 48(6): 453-458 (2015).
68. A. Biniiaz, A. Maheshwari and M. Smid, Higher-Order Triangular-Distance Delaunay Graphs: Graph-Theoretical Properties, *Computational Geometry: Theory and Applications* 48(9): 646-660, 2015.
69. A. Biniiaz, A. Maheshwari and M. Smid, Matching in Higher-Order Gabriel Graphs, *Theoretical Computer Science* 596: 67-98, 2015.
70. A. Biniiaz, A. Maheshwari and M. Smid, On the hardness of full-Steiner tree problems, *Journal of Discrete Algorithms* 34: 118-127, 2015.
71. A. Karim Abu-Affash, A. Biniiaz, P. Carmi, A. Maheshwari and M. Smid, Approximating the bottleneck plane perfect matching of a point set, *Computational Geometry: Theory and Applications* 48(9): 718-731, 2015.
72. A. Biniiaz, A. Maheshwari and M. Smid, On full Steiner trees in unit disk graphs, *Computational Geometry: Theory and Applications* 48(6): 453–458, 2015.
73. P. Bose, J.-L. De Carufel, C. Grimm, A. Maheshwari and M. Smid, Optimal data structures for farthest-point queries in cactus networks, *Journal of Graph Algorithms and Applications* 19(1): 11–41, 2015.

74. J. Babu, A. Biniiaz, A. Maheshwari, M. Smid, Fixed-Orientation Equilateral Triangle Matching of Point Sets, *Theoretical Computer Science* 555: 55-70, 2014 (as an invited article for the special issue on the WALCOM 2013 conference).
75. J.-L. De Carufel, A. Gheibi, A. Maheshwari, J.-R. Sack and C. Scheffer, Similarity of polygonal curves in the presence of outliers, *Computational Geometry: Theory and Applications* 47(5): 625-641, 2014.
76. J.-L. De Carufel, C. Grimm, A. Maheshwari. M. Owen and M. Smid, A note on the unsolvability of the weighted region shortest path problem, *Computational Geometry: Theory and Applications* 47(7): 724-727, 2014 (preliminary version in EuroCG 2012).
77. A. Biniiaz, A. Maheshwari and M. Smid, An optimal algorithm for the Euclidean bottleneck full Steiner tree problem, *Computational Geometry: Theory and Applications* 47(3): 377-380, 2014.
78. M. Ghodsi, A. Maheshwari, M. Nouri, J.-R. Sack and H. Zarrabi-Zadeh, α -visibility, *Computational Geometry: Theory and Applications* 47(3): 435-446, 2014 (preliminary version in SWAT 2012, LNCS: 7357:1-12, July 2012).
79. P. Bose, P. Carmi, M. Damian, R. Flatland, M. Katz, and A. Maheshwari, Switching to directional antennas with constant increase in radius and hop distance, *Algorithmica* 69(2): 397-409, 2014 (preliminary version in WADS 2011).
80. A. Maheshwari, J.-R. Sack, K. Shahbaz and H. Zarrabi-Zadeh, Improved algorithms for partial curve matching, *Algorithmica* 69(3): 641-657, 2014 (preliminary version in ESA 2011).
81. L. Aleksandrov, H. Djidjev, A. Maheshwari and J.-R. Sack, An approximation algorithm for computing shortest paths in weighted 3-D domains, *Discrete and Computational Geometry* 50(1): 124-184, 2013.
82. S. Banerjee, B. B. Bhattacharya, S. Das, A. Karmakar, A. Maheshwari and S. Roy, On the Construction of a Generalized Voronoi Inverse of a Rectangular Tessellation, *Transactions on Computational Science* 20: 22-38, 2013 (preliminary version in International Symposium on Voronoi Diagrams, pp. 132-137, IEEE, June 2012).
83. P. Bose, J.-L. De Carufel, K. Dannies, C. Doell, C. Grimm, A. Maheshwari, S. Schirra and M. Smid, Network Farthest-Point Diagrams, *Journal of Computational Geometry* 4(1): 182-211, 2013 (preliminary version in CCCG 2012, Charlottetown, PEI).
84. M. De, A. Maheshwari, S.C. Nandy and M. Smid, An in-place priority search tree, *Computational Geometry: Theory and Applications* 46(3): 310-327, 2013 (preliminary version appeared in CCCG 2011)
85. J. Augustine, S. Das, A. Maheshwari, S. C. Nandy, S. Roy and Swami Sarvattomananda, Localized geometric query problems, *Computational Geometry: Theory and Applications* 46(3): 340-357, 2013.
86. S. Ghosh, P. Goswami, A. Maheshwari, S. Nandy, S. P. Pal and Swami Sarvattomananda, Algorithms for computing diffuse reflection paths in polygons, *The Visual Computer* 28(12): 1229-37, 2012 (preliminary version appeared in WALCOM 2009).
87. C. Dillabaugh, M. He and A. Maheshwari, Succinct and I/O efficient data structures for traversal in trees, *Algorithmica* 63(1-2): 201-223, 2012 (preliminary version appeared in ISAAC 2008).

88. P. Bose, E.Y. Chen, M. He, A. Maheshwari and P. Morin, Succinct geometric indexes supporting point location queries, *ACM Transaction on Algorithms* 8(2), 2012 (preliminary version appeared in 20th ACM-SIAM SODA 2009: 635–644).
89. A. Maheshwari, M. Smid and N. Zeh, Low-Interference Networks in Metric Spaces of Bounded Doubling Dimension, *Information Processing Letters* 111, 2011: 1120–23.
90. P. Bose, A. Maheshwari, C. Shu and S. Wuhler, A survey of geodesic paths on 3D surfaces, *Computational Geometry: Theory and Applications* 44(9): 486–498, 2011.
91. M. Ahmed, A. Maheshwari, S. Nandy and S. Roy, On the number of shortest descent paths on the surface of a convex terrain, *Journal of Discrete Algorithms* 9(2): 182–189, 2011.
92. A. Maheshwari, J.-R. Sack, K. Shahbaz and H. Zarrabi-Zadeh, Frechet distance with speed limits, *Computational Geometry: Theory and Applications* 44(2): 110–120, 2011 (preliminary version appeared in CCCG 2009).
93. G. Hickey, M. Blanchette, P. Carmi, A. Maheshwari and N. Zeh, NAPX: A polynomial time approximation scheme for the Noah’s ark problem, *IEEE/ACM Transaction on Computational Biology and Bioinformatics* 8(2): 551–556, 2011 (preliminary version appeared in 8th International Workshop on Algorithms in Bioinformatics (WABI), LNCS 5252: 76–86, Germany, September 2008).
94. L. Aleksandrov, H. Djidjev, H. Guo, A. Maheshwari, D. Nussbaum and J.-R. Sack, Approximate shortest path queries on weighted polyhedral surfaces, *Discrete and Computational Geometry* 44(4): 762–801, 2010 (preliminary version appeared in 31st MFCS, Stara Lesna, Slovakia, August 2006).
95. M. Ahmed, S. Das, S. Lodha, A. Lubiw, A. Maheshwari and S. Roy, Approximation algorithms for shortest descending paths, *Journal of Discrete Algorithms* 8(2): 214–230, 2010 (preliminary version appeared in CCCG 2007 + WALCOM 2009).
96. P. Bose, P. Carmi, M. Farshi, A. Maheshwari and M. Smid, Computing the greedy spanner in near-quadratic time, *Algorithmica* 58(3): 711–729, 2010 (preliminary version appeared in 11th SWAT, LNCS, July 2008).
97. P. Bose, S. Collette, S. Langerman, A. Maheshwari, P. Morin, M. Smid, Sigma-Local Graphs, *Journal of Discrete Algorithms* 8(1): 15–23, 2010.
98. P. Bose, P. Carmi, M. Couture, A. Maheshwari, P. Morin and M. Smid, Spanners of Complete k-Partite Geometric Graphs, *SIAM Journal of Computing* 38 (5): 1803–1820, 2009 (preliminary version appeared in LATIN 2008).
99. P. Bose, P. Carmi, M. Couture, A. Maheshwari, M. Smid and N. Zeh, Geometric Spanners With Small Chromatic Number, *Computational Geometry: Theory and Applications* 42(2): 134–146, 2009 (preliminary version appeared in WAOA 2007).
100. T. Asano, P. Bose, P. Carmi, A. Maheshwari, C. Shu, M. Smid and S. Wuhler, Linear space algorithms for distance preserving embedding, *Computational Geometry: Theory and Applications* 42(4): 289–304, 2009 (preliminary version appeared in 19th Canadian Conference on Computational Geometry, Ottawa, 2007).
101. R. Atanassov, P. Bose, M. Couture, A. Maheshwari, P. Morin, M. Paquette, M. Smid, S. Wuhler, Algorithms for optimal outlier removal, *Journal of Discrete Algorithms* 7(2): 239–248, 2009.

102. A. Maheshwari and N. Zeh, I/O-Efficient Algorithms for Graphs of Bounded Treewidth, *Algorithmica* 54 (3): 413–469, 2009 (preliminary version appeared in 12th ACM-SIAM SODA 2001).
103. P. Bose, H. Guo, E. Kranakis, A. Maheshwari, P. Morin, J. Morrison, M. Smid, and Y. Tang. On the false-positive rate of Bloom filters. *Information Processing Letters* 108(4): 210–213, 2008.
104. A. Maheshwari and N. Zeh, I/O-Efficient Algorithms for Planar Separators, *SIAM Journal on Computing* 38(3): 767-801, 2008 (preliminary version appeared in 13th ACM-SIAM SODA 2002).
105. A. Maheshwari, M. Smid, and N. Zeh, I/O-Efficient Algorithms for Computing Planar Geometric Spanners, *Computational Geometry: Theory and Applications* 40(3): 252-271, 2008 (preliminary version appeared in WADS 2001).
106. P. Bose, A. Maheshwari, P. Morin, J. Morrison, M. Smid, and J. Vahrenhold, Space-efficient geometric divide-and-conquer algorithms, *Computational Geometry: Theory and Applications* 37(3): 209-227, 2007.
107. L. Aleksandrov, H. Djidjev, H. Guo and A. Maheshwari, Partitioning planar graphs with costs and weights, *ACM Journal of Experimental Algorithms* 11, 2006 (preliminary version appeared in 4th ALENEX 2002).
108. S. Govindarajan, T. Lukovszki, A. Maheshwari, and N. Zeh, I/O-Efficient Well-Separated Pair Decomposition and its Applications, *Algorithmica*, 45 (4): 585–614, 2006 (preliminary version appeared in ESA 2000).
109. A. Maheshwari and M. Smid, A Dynamic Dictionary for Priced Information with Application, *Algorithmica*, 44 (2): 151-165, 2006 (Special issue on 14th ISAAC).
110. L. Aleksandrov, A. Maheshwari and J.-R. Sack, Determining Approximate Shortest Paths on Weighted Polyhedral Surfaces, *Journal of ACM*, 52 (1): 25-53, 2005 (preliminary version appeared in 32nd ACM-STOC, 2000).
111. A. Maheshwari and N. Zeh, I/O-Optimal Algorithms for Outerplanar Graphs, *Journal of Graph Algorithms and Applications*, 8: 47-87, 2004 (preliminary version appeared in 10th ISAAC, 1999).
112. P. Bose, A. Maheshwari, G. Narasimhan, M. Smid, and N. Zeh, Approximating Geometric Bottleneck Shortest Paths, *Computational Geometry: Theory and Applications*, 29:233–249, 2004 (preliminary version appeared in 20th STACS).
113. P. Bose, M. van Kreveld, A. Maheshwari, J. Morrison and P. Morin, Translating a regular grid over a point set, *Computational Geometry: Theory and Applications*, 25(1/2): 21-34, May 2003 (special issue on the 17th Euro-CG, 2001).
114. P. Bose, A. Maheshwari and P. Morin, Fast approximations for sums of distances, clustering and the Fermat-Weber problem, *Computational Geometry: Theory and Applications*, 24(3): 135-146, April 2003.
115. D. Hutchinson, A. Maheshwari and N. Zeh, An external-memory data structure for shortest path queries, *Discrete and Applied Mathematics*, 126(1): 55-82, March 2003 (special issue on the 5th ACM-SIAM COCOON Conference).

116. F. Dehne, W. Dittrich, D. Hutchinson and A. Maheshwari, Bulk-synchronous parallel algorithms as External Memory Algorithms, *Theory of Computing Systems*, 35: 567-597, 2002 (preliminary version appeared in IPPS 1999, 10th ACM-SIAM SODA 1999)
117. P. Bose, J. Czyzowicz, E. Kranakis, D. Krizanc and A. Maheshwari, Cutting circles and squares into equal area pieces, *Geoinformatics*, 11 (1): 13-20, July 2001.
118. W. Dittrich, D. Hutchinson and A. Maheshwari, Blocking in Parallel Multisearch Problems, *Theory of Computing Systems (Mathematical Systems Theory)* 34(2): 145-189, 2001 (special issue on ACM-SPAA 1998).
119. M. Lanthier, A. Maheshwari and J.-R. Sack, Approximating Weighted Shortest Paths on Polyhedral Surfaces, *Algorithmica*, 30 (4): 527-562, 2001 (Special issue on Algorithmic Engineering).
120. E. Kranakis, D. Krizanc, A. Maheshwari, J.-R. Sack, J. Urrutia, Ray shooting from convex ranges, *Discrete and Applied Mathematics*, 108(3): 259-267, March 2001.
121. A. Maheshwari and J.-R. Sack, Simple optimal algorithms for rectilinear link path and polygon separation problems, *Parallel Processing Letters* 9(1): 31-42, 1999.
122. S. Arikati, A. Maheshwari and C.D. Zaroliagis, Efficient computation of compact representation of sparse graphs, *Discrete Applied Mathematics* 78(3): 1-16, October 1997.
123. F. Bauernoppel, E. Kranakis, D. Krizanc, A. Maheshwari, J.-R. Sack, J. Urrutia, Planar Stage Graphs: Characterizations and Applications, *Theoretical Computer Science* 175(2): 239-255, April 1997.
124. E. Kranakis, D. Krizanc, A. Maheshwari, M. NOY, J.-R. Sack, J. Urrutia, Stage Graph Representations, *Discrete Applied Mathematics*, 75: 71-80, May 1997.
125. J. Bhadury, V. Chandru, A. Maheshwari and R. Chandrasekhran, Art Gallery Problems for Convex Nested Polygons, *INFORMS Journal on Computing* 9(1): 100-110, Winter 1997.
126. A. Lingas and A. Maheshwari, A simple optimal parallel algorithm for reporting paths in a tree, *Parallel Processing Letters* 7(1):3-11, 1997.
127. S. Arikati and A. Maheshwari, Realizing Degree Sequences in Parallel, *SIAM Journal on Discrete Mathematics* 9(2): 317-338, 1996.
128. A. Datta, A. Maheshwari and J.-R. Sack, Optimal parallel algorithms for direct dominance problems, *Nordic Journal of Computing* 3(1): 72-88, Spring 1996.
129. V. Chandru, S. K. Ghosh, A. Maheshwari, V. T. RAJAN and S. Saluja, NC-Algorithms for minimum link path and related problems, *Journal of Algorithms* 9(4): 507-537, December 1995.
130. A. Lingas, A. Maheshwari and J.-R. Sack, Optimal parallel algorithms for rectilinear link distance problems, *Algorithmica* 14(3): 261-289, September 1995.
131. A. Dessmark, A. Lingas, A. Maheshwari, Multi list layering : Complexity and Applications, *Theoretical Computer Science* 141(1-2): 337-350, 17 April 1995.
132. S. K. Ghosh, A. Maheshwari, S. P. Pal and C. E. Veni Madhavan, An algorithm for recognizing palm polygons, *Special Issue on Computational Geometry*, ed. G. Toussaint, *The Visual Computer* 10(8):443-451, 1994.

133. S. K. Ghosh, A. Maheshwari, S. P. Pal, S. Saluja and C. E. Veni Madhavan, Characterizing and recognizing weak visibility polygons, *Computational Geometry: Theory and Applications* 3(4): 213-233, 1993.
134. S. K. Ghosh and A. Maheshwari, An optimal algorithm for computing a minimum nested nonconvex polygon, *Information Processing Letters* 44(3): 155-160, 30 November 1992.
135. S. K. Ghosh, A. Maheshwari, An optimal parallel algorithm for computing furthest neighbors in a tree, *Information Processing Letters* 36(6): 277-280, 15 December 1990.

In Books

136. S. Kalyanasundaram and A. Maheshwari, Editors, Special Issue of the Discrete Applied Mathematics for the 10th Conference on Algorithms and Discrete Applied Mathematics (CALDAM), 2026 (in print).
137. S. Kalyanasundaram and A. Maheshwari, Proceedings of the 10th Conference on Algorithms and Discrete Applied Mathematics (CALDAM), LNCS 14508, 2024 (Springer-Verlag).
138. S. Govindarajan and A. Maheshwari, Editors, Special Issue of Discrete Applied Mathematics for the 2nd Conference on Algorithms and Discrete Applied Mathematics (CALDAM), Volume 280, 2020.
139. S. Govindarajan and A. Maheshwari, Proceedings of the 2nd Conference on Algorithms and Discrete Applied Mathematics (CALDAM), LNCS 9602, 2016 (Springer-Verlag).
140. A. Maheshwari and M. Smid, Introduction to Theory of Computation. A free textbook available online, 2013.
141. A. Maheshwari and N. Zeh, A Survey of Techniques for Designing I/O-Efficient Algorithms, *Algorithms for Memory Hierarchies*, eds. U. Meyer, P. Sanders, J. Sibeyn, LNCS 2625: 36-61, 2003 (Springer-Verlag).
142. A. Maheshwari, J.R. Sack and H. Djidjev, Link Distance Problems, *Handbook on Computational Geometry*, 2000 Elsevier Science B.V., pp. 519–558.

In Refereed Conference Proceedings

143. A. Biniaz, P. Bose, C. Chung, J.-Lou De Carufel, J. Iacono, A. Maheshwari, S. Odak, M. Smid, C. D. Tóth, Tight Bounds on the Number of Closest Pairs in Vertical Slabs, *WADS 2025*, *LIPIcs* 349:8:1–8:14 <https://drops.dagstuhl.de/entities/document/10.4230/LIPIcs.WADS.2025.8>
144. A. Biniaz, A. Maheshwari, M. C. R. Merrild, J. Mitchell, S. Odak, V. Polishchuk, E.W. Robson, C. Rysgaard, J.K.R. Schou, T. Shermer, R. Svenning, J. Spalding-Jamieson, D.W. Zheng, Polynomial-Time Algorithms for Contiguous Art Gallery and Related Problems, *SoCG 2025*, *LIPIcs* 332: 20:1–20:21 <https://arxiv.org/abs/2412.15053>
145. A. Biniaz, J.-L. De Carufel, A. Maheshwari, M. Smid, S. Smorodinsky, M. Stojakovic, Polychromatic Coloring of Tuples in Hypergraphs, *SoCG 2025*, *LIPIcs* 332: 19:1–19:17 <https://arxiv.org/abs/2412.15053>

146. A. Kalb, K. Buchin, A. Maheshwari, S. Odak, C. Rehs, M. Smid, S. Wong, Computing Oriented Spanners and their Dilation, SoCG 2025, LIPIcs 332: 27:1–27:17
<https://arxiv.org/abs/2412.08165>
147. A. Madani, A. Maheshwari, B. Miraftab, and B. Roy, Algorithms and hardness results for the (3, 1)-cover problem, LNCS 15536: 185-196, CALDAM 2025.
148. M. Dutta, A. Maheshwari and S. Nandy, Partial Domination for Trees and Interval Graphs, LNCS 15536: 121-133, CALDAM 2025.
149. A. Banik, S. Das, A. Maheshwari, B. Manna, S. C. Nandy, Krishna Priya K M, B. Roy, S. Roy and A. Sahu, Minimum Consistent Subset in Trees and Interval Graphs, FSTTCS, Leibniz International Proceedings in Informatics LIPIcs 323: 7:1-7:15, 2024.
150. G. Aloupis, A. Biniaz, P. Bose, D. Eppstein, A. Maheshwari, S. Odak, M. Smid, C. Tóth and P. Valtr, Non-crossing Longest Paths, Workshop in Graph Drawing, Leibniz International Proceedings in Informatics LIPIcs 320: 36:1-36:17, 2024.
151. S. Bandyapadhyay, A. Maheshwari, S. Roy, M. Smid, and K. Varadarajan, Geometric Covering via Extraction Theorem, 15th Innovations in Theoretical Computer Science, Berkley, CA, Leibniz International Proceedings in Informatics LIPIcs 287: 7:1-7:20, 2024.
152. A.K. Das, S. Das, A. Maheshwari and Sarvottamananda, Rectilinear Voronoi Games with a Simple Rectilinear Obstacle in Plane, CALDAM, LNCS 13947: 89-100, 2023.
153. N. Duraisamy, H.M. Hillberg, R. K. Jallu, E. Krohn, A. Maheshwari, S.C. Nandy and A. Pahlow, Half-Guarding Weakly-Visible Polygons and Terrains, FSTTCS, Leibniz International Proceedings in Informatics LIPIcs 250: 18:1 - 18:17, 2022.
154. A.K. Das, S. Das, A. Maheshwari and Sarvottamananda, Voronoi Games using Geodesics, CALDAM, LNCS 13179: 195-207, 2022.
155. S. Bandyapadhyay, A. Maheshwari and M. Smid, Exact and Approximation Algorithms for Many-To-Many Point Matching in the Plane, ISAAC, LIPIcs 212: 44:1 - 44:14, 2021.
156. S. Dey, A. Maheshwari and S.C. Nandy, Minimum consistent subset of trees, Foundations of Computation Theory, LNCS 12867: 204-216, 2021.
157. A. Biniaz, A. Maheshwari and M. Smid, Euclidean maximum matchings in the plane—local to global, 17th WADS, LNCS 12808: 186-199, Springer, 2021.
158. H. Akitaya, A. Biniaz, P. Bose, J-L. De Carufel, A. Maheshwari, L.F.S.X Da Silveira and M. Smid, The Minimum Moving Spanning Tree Problem, 17th WADS, LNCS 12808:15-28 , Springer, 2021.
159. F. Bauernöppel, A. Maheshwari and J.-R. Sack, An $\Omega(n^3)$ Lower Bound on the Number of Cell Crossings for Weighted Shortest Paths in 3-dimensional Polyhedral Structures, LATIN 2020, LNCS 12118:235-246.
160. S. Dey, A. Maheshwari, and S. C. Nandy, Minimum Consistent Subset of Simple Graph Classes, 7th CALDAM, LNCS 12601: 471–484, 2021.
161. A. Banik, A. K. Das, S. Das, A. Maheshwari, Swami Sarvottamananda, Optimal strategies in Single Round Voronoi Game on Convex Polygons with Constraints, 14th COCOA, LNCS 12577: 515-529, 2020
162. A. Biniaz, P. Bose, A. Lubiw and A. Maheshwari, Bounded-Angle Minimum Spanning Trees, 17th SWAT 2020: 14:1-14:22, 2020.

163. S. Jana, A. Maheshwari, S. Mehrabi, S. Roy, Maximum Bipartite Subgraph of Geometric Intersection Graphs, 14th WALCOM, LNCS 12049: 158-169, 2020.
164. P. Bose, P. Carmi, M. J. Keil, A. Maheshwari, S. Mehrabi, D. Mondal and M. Smid, Computing Maximum Independent Set on Outerstring Graphs and Their Relatives, 16th WADS, LNCS 11646: 211-224, 2019.
165. A. Biniiaz, S. Cabello, P. Carmi, J.-L. De Carufel, A. Maheshwari, S. Mehrabi and M. Smid, On the Minimum Consistent Subset Problem, 16th WADS, LNCS 11646: 155-167, 2019.
166. A. Acharyya, A. Maheshwari and S. C. Nandy, Localized Query: Color Spanning Variations, 5th CALDAM 2019, LNCS 11394: 150-160, 2019.
167. P. Carmi, A. Maheshwari, S. Mehrabi and L. Silveira, Approximability of Covering Cells with Line Segments, 12th COCOA, LNCS 11346: 436-448, 2018.
168. A. Nouri, A. Maheshwari and J.-R. Sack, Rectilinear Shortest Paths Among Transient Obstacles, 12th COCOA, LNCS 11346: 19-34, 2018.
169. S. Bandyapadhyay, A. Maheshwari, S. Mehrabi, and S. Suri, Approximating Dominating Set on Intersection Graphs of L-frames, 43rd MFCS, LIPIcs 117: 37:1-37:15, 2018.
170. A. Biniiaz, A. Maheshwari, M. Smid, Flip Distance to some Plane Configurations, 16th SWAT, LIPIcs 101: 11:1-14, 2018.
171. Karim Abu-Affash, P. Carmi, A. Maheshwari, P. Morin, M. Smid and S. Smorodinsky, Approximating Maximum Diameter-Bounded Subgraph in Unit Disk Graphs, 34th International Symposium on Computational Geometry (SoCG), LIPIcs 99: 2:1-2:12, 2018.
172. A. Biniiaz, P. Bose, P. Carmi, A. Maheshwari, I. Munro and M. Smid, Faster Algorithms for some Optimization Problems on Collinear Points, 34th International Symposium on Computational Geometry (SoCG), LIPIcs 99: 8:1-14, 2018.
173. F. Chanchary, A. Maheshwari, M. Smid, Window Queries for Problems on Intersecting Objects and Maximal Points. 4th CALDAM, LNCS 10743: 199-213, 2018.
174. F. Chanchary, A. Maheshwari, and M. Smid, Querying Relational Event Graphs Using Colored Range Searching Data Structures. 3rd CALDAM, LNCS 10156: 83-95, 2017.
175. A. Biniiaz, P. Bose, K. Crosbie, J.-L. De Carufel, D. Eppstein, A. Maheshwari, and M. Smid, Maximum plane trees in multipartite geometric graphs, WADS 2017, LNCS 10389: 193-204, 2017.
176. A. Biniiaz, P. Bose, J.-L. De Carufel, C. Gavoille, A. Maheshwari, G. Rote, and M. Smid, Towards plane spanners of degree 3, ISAAC 2016: 19:1-19:14, December 2016.
177. A. Biniiaz, P. Bose, A. Maheshwari, and M. Smid, Plane Bichromatic Trees of Low Degree, IWOCA, LNCS 9843: 68-80, 2016.
178. M. Amani, A. Biniiaz, P. Bose, J.-L. De Carufel, A. Maheshwari, and M. Smid, A Plane 1.88-Spanner for Points in Convex Position, SWAT 2016: 25:1-25:14, June 2016.
179. A. Maheshwari, J.-R. Sack, and C. Scheffer, Approximating the integral Frechet distance, SWAT 2016: 26:1-26:14, June 2016.

180. J-L De Carufel1, C. Grimm, A. Maheshwari, and M. Smid, Minimizing the Continuous Diameter when Augmenting Paths and Cycles with Shortcuts, SWAT 2016: 27:1–27:14, 2016.
181. F. Chanchary and A. Maheshwari, Counting Subgraphs in Relational Event Graphs, 10th WALCOM, LNCS 9626:194-206, Kathmandu, March 2016.
182. A. Biniiaz, E. Kranakis, A. Maheshwari, and M. Smid, Plane and Planarity Thresholds for Random Geometric Graphs, ALGOSENSORS, LNCS 9536: 1-12, Patras, August 2015.
183. A. Biniiaz, P. Bose, A. Maheshwari, and M. Smid, Plane Geodesic Spanning Trees, Hamiltonian Cycles, and Perfect Matchings in a Simple Polygon, Topics in Theoretical Computer Science, LNCS 9541: 56-71, Tehran, August 2015.
184. A. Gheibi, A. Maheshwari and J.-R. Sack, Minimizing walking length in map matching, to appear in Topics in Theoretical Computer Science, LNCS 9541: 105-120, Tehran, August 2015.
185. A. Biniiaz, A. Maheshwari, S.C. Nandy and M. Smid, Plane perfect matchings in multipartite geometric graphs, WADS, LNCS 9214: 66-78, Victoria, August 2015.
186. A. Biniiaz, A. Maheshwari and M. Smid, Higher-Order Triangular-Distance Delaunay Graphs: Graph-Theoretical Properties, CALDAM 2015: 89–100, LNCS 8959, Kanpur, February 2015.
187. B. Bhattacharya, M. De, A. Maheshwari, S. Nandy and S. Roy, Rectilinear path problems in the presences of rectangular obstacles, CALDAM 8959: 69–80, LNCS, Kanpur, February 2015.
188. A. Gheibi, A. Maheshwari, J.-R. Sack and C. Scheffer, Minimum backward Frechet distance, ACM SIGSPATIAL GIS 2014.
189. S. Das, A. Maheshwari, A. Nandy and M. Smid, A facility coloring problem in 1-D, AAIM 2014: 88-99, LNCS 8546, 2014.
190. A. Banik, S. Das, A. Maheshwari and M. Smid, The Discrete Voronoi Game in a Simple Polygon, COCOON: 197-207, LNCS 7936. 2013.
191. J. Babu, A. Biniiaz, A. Maheshwari, M. Smid, Fixed-Orientation Equilateral Triangle Matching of Point Sets, WALCOM 2013: 17-28, LNCS 7748, 2013.
192. M. Ghodsi, A. Maheshwari, M. Nouri, J.-R. Sack and H. Zarrabi-Zadeh, α -visibility, SWAT 2012, LNCS: 7357:1–12, July 2012.
193. S. Banerjee, B. B. Bhattacharya, S. Das, A. Karmakar, A. Maheshwari and S. Roy, On the Construction of a Generalized Voronoi Inverse of a Rectangular Tessellation, International Symposium on Voronoi Diagrams, pp. 132–137, IEEE, June 2012.
194. A. Maheshwari, J.-R. Sack, K. Shahbaz and H. Zarrabi-Zadeh, Improved algorithms for partial curve matching, ESA, LNCS 6942: 518–529, 2011.
195. P. Bose, P. Carmi, M. Damian, R. Flatland, M. Katz, and A. Maheshwari, Switching to directional antennas with constant increase in radius and hop distance, WADS, LNCS 6844: 134–146, 2011.
196. P. Bose, P. Carmi, D. Jansens, A. Maheshwari, P. Morin and M. Smid, Improved methods for generating quasi-Gray codes 12th SWAT, LNCS 6139: 224-235, 2010.

197. C. Dillabaugh, M. He, A. Maheshwari and N. Zeh, I/O efficient and succinct path traversal in planar graphs, 20th ISAAC, LNCS 5878: 1175–1184, 2009.
198. P. Bose, M. He, A. Maheshwari and P. Morin, Succinct orthogonal range search structures on a grid with applications to text indexing, 10th WADS, LNCS 5664: 98–109, 2009.
199. M. Ahmed, A. Lubiw and A. Maheshwari, Shortest gently descending paths, . 3rd International Workshop on Algorithms and Computations (WALCOM), LNCS 5431: 59–70, 2009.
200. S. Ghosh, P. Goswami, A. Maheshwari, S. Nandy, S. P. Pal and Swami Sarvattomananda, Algorithms for computing diffuse reflection paths in polygons, 3rd International Workshop on Algorithms and Computations (WALCOM), LNCS 5431: 47–58, 2009.
201. P. Bose, E.Y. Chen, M. He, A. Maheshwari and P. Morin, Succinct geometric indexes supporting point location queries, 20th ACM-SIAM SODA, 635–644, 2009.
202. C. Dillabaugh, M. He and A. Maheshwari, Succinct and I/O efficient data structures for traversal in trees, 19th ISAAC. LNCS 5369: 112–123, 2008.
203. G. Hickey, P. Carmi, A. Maheshwari and N. Zeh, NAPX: A polynomial time approximation scheme for the Noah’s ark problem, 8th International Workshop on Algorithms in Bioinformatics (WABI), LNCS 5252: 76–86, 2008.
204. P. Bose, P. Carmi, M. Farshi, A. Maheshwari and M. Smid, Computing the greedy spanner in near-quadratic time, 11th SWAT, LNCS 5124: 390–401, Sweden, July 2008.
205. H. Guo, A. Maheshwari, J.-R. Sack, Shortest path queries in polygonal domains, 4th Algorithmic aspects in information and management, LNCS 5034: 200–211, Fudan University, Shanghai, June 2008.
206. P. Bose, P. Carmi, M. Couture, A. Maheshwari, P. Morin and M. Smid, Spanners of Complete k-Partite Geometric Graphs, 8th LATIN 2008, LNCS 4957: 170–181, Rio de Janeiro, Brazil, April 2008.
207. A. Maheshwari, D. Nussbaum, J.-R. Sack, J. Yi, Shortest paths amidst growing discs, 18th ISAAC, LNCS 4835: 668–680, Japan, December 2007.
208. H. Guo, A. Maheshwari, D. Nussbaum and J.-R. Sack, Shortest path queries among objects, 7th Intl. Workshop on Computational Geometry and Applications, LNCS 4705: 82–95, Malaysia, August 2007
209. P. Bose, P. Carmi, M. Couture, A. Maheshwari, M. Smid and N. Zeh, Chromatic Spanners, 5th Workshop on Approximation and Online Algorithms (WAOA), LNCS 4927: 75–88, Israel, October 2007.
210. M. Nikserht, A. Maheshwari and D. Hutchinson, Experimental results on simulating BSP algorithms as external memory algorithms, 14th IEEE Intl. Conference on High Performance Computing, India, LNCS, December 2007.
211. F. Dehne, A. Maheshwari and R. Taylor, A coarse grained parallel algorithm for Hausdorff Voronoi diagrams, In Proceedings of ICPP, Columbus, Ohio, August 2006.
212. L. Aleksandrov, H. Djidjev, H. Guo. A. Maheshwari, D. Nussbaum and J.-R. Sack, Approximate shortest path queries on weighted polyhedral surfaces, to appear in 31st MFCS, Stara Lesna, Slovakia, August 2006.

213. A. Maheshwari and M. Smid, A Dynamic Dictionary for Priced Information with Application, 14th International Symposium on Algorithms and Computation, LNCS 2906:16-25, Kyoto, December 2003.
214. L. Aleksandrov, A. Maheshwari and J.-R. Sack, An Improved Approximation Algorithm for Computing Geometric Shortest Paths, 14th International Foundations of Computing Theory, LNCS 2751:246-257, Malmo 2003.
215. P. Bose, A. Maheshwari, G. Narasimhan, M. Smid, and N. Zeh, Approximating geometric bottleneck shortest paths, 20th STACS, LNCS 2607:38-49, Berlin (Germany), February 2003.
216. L. Aleksandrov, H. Djidjev, H. Guo, and A. Maheshwari, Partitioning Planar Graphs with Costs and Weights, 4th ALENEX, LNCS 2409:98-107, San Francisco, January 2002.
217. A. Maheshwari and N. Zeh, I/O-efficient algorithms for planar graphs using separators, 13th ACM-SIAM Symposium on Discrete Algorithms, pp. 372–381, San Francisco, January 2002.
218. T. Lukovszki, A. Maheshwari and N. Zeh, I/O-Efficient Batched Range Counting and Its Applications to Proximity Problems, 21st FSTTCS, LNCS 2245:244-255, Bangalore (India), December 2001.
219. P. Bose, A. Maheshwari, P. Morin and J. Morrison, The grid placement problem, Workshop on Algorithms and Data Structures, LNCS 2125:180-191, Providence (RI), August 2001.
220. A. Maheshwari, M. Smid and N. Zeh, I/O-efficient shortest path queries in geometric spanners, Workshop on Algorithms and Data Structures, LNCS 2125:287-299, Providence (RI), August 2001.
221. A. Maheshwari and N. Zeh, External memory algorithms for bounded treewidth graphs, 12th ACM-SIAM Symposium on Discrete Algorithms, pp. 89-90, Washington D.C., January 2001.
222. S. Govindarajan, T. Lukovszki, A. Maheshwari and N. Zeh, I/O-efficient well-separated pair decomposition and its applications, European Symposium on Algorithms, LNCS 1879:220-231, Saarbrücken (Germany), September 2000.
223. L. Aleksandrov, A. Maheshwari and J.-R. Sack, Approximation algorithms for geometric shortest path problems, Proc. 32nd ACM Symposium on Theory of Computing, Portland (Oregon), May 2000, pp. 286–295.
224. A. Maheshwari and N. Zeh, External memory algorithms for outerplanar graphs, 10th International Symposium on Algorithms and Computation, LNCS 1741:307-316, Chennai (India), December 1999.
225. D. Hutchinson, A. Maheshwari and N. Zeh, An external-memory data structure for shortest path queries, 5th ACM-SIAM Computing and Combinatorics Conference, LNCS 1627:51-60, Tokyo, July 1999.
226. M. Lanthier, A. Maheshwari and J.-R. Sack, Shortest anisotropic paths in terrains, 26th International Colloquium on Automata, Languages and Programming, LNCS 1644:524-533, Prague, July 1999.

227. F. Dehne, W. Dittrich, D. Hutchinson and A. Maheshwari, Reducing I/O complexity by simulating coarse grained parallel algorithms, International Parallel Processing Symposium, pp. 65-72, Puerto Rico, April 1999.
228. F. Dehne, W. Dittrich, D. Hutchinson and A. Maheshwari, Parallel Virtual Memory, 10th ACM-SIAM Symposium on Discrete Algorithms, Baltimore, January 1999, pp. 889-890.
229. P. Bose, J. Czyzowicz, E. Kranakis and A. Maheshwari, Algorithms for packing two circles in a simple polygon, Discrete and Computational Geometry (JCDCG), LNCS 1763:93-103, Tokyo, December 1998.
230. P. Bose, J. Czyzowicz, E. Kranakis, D. Krizanc and A. Maheshwari, Polygon cutting theorem revisited, Discrete and Computational geometry (JCDCG), LNCS 1763: 81-92, Tokyo, December 1998, pp. 114-118.
231. W. Dittrich, D. Hutchinson and A. Maheshwari, Blocking in Parallel Multisearch Problems, 10th ACM Symposium on Parallel Algorithms and Architecture, Puerto Vallarta (Mexico), June 1998, pp. 98-107.
232. P. Bose, J. Czyzowicz, E. Kranakis, D. Krizanc and A. Maheshwari, Cutting circles and squares into equal area pieces, Proc. FUN'98, Italy, June 1998.
233. L. Aleksandrov, M. Lanthier, A. Maheshwari and J.-R. Sack, An ϵ -approximation scheme for weighted shortest paths, 6th Scandinavian Workshop on Algorithmic Theory, LNCS 1432:11-22, Stockholm, July 1998.
234. A. Maheshwari, P. Morin, and J.-R. Sack, Progressive TINs: Algorithms and Applications, 5th ACM International Workshop on Advances in GIS, Las Vegas, ACM-GIS:24-29, November 1997.
235. D. Hutchinson, A. Maheshwari, J.-R. Sack and R. VELICESCU, Early experiences in implementing the buffer tree, 1st Workshop on Algorithm Engineering, Venice, September 1997.
236. M. Lanthier, A. Maheshwari and J.-R. Sack, Approximating Weighted Shortest Paths on Polyhedral Surfaces, 13th Annual ACM Computational Geometry Conference, ACM-SoCG:274-283, Nice (France), June 1997.
237. D. Hutchinson, M. Lanthier, A. Maheshwari, D. ROYTENBERG, D. Nussbaum and J.-R. Sack, Parallel neighbourhood modeling, 4th ACM International Workshop on Advances in GIS, ACM-GIS:26-34, Rockville, U.S.A., November 1996.
238. L. KUTTNER, M. Lanthier, A. Maheshwari, D. ROYTENBERG, D. Nussbaum and J.-R. Sack, Parallel Neighbourhood Modeling, 8th Annual ACM Symposium on Parallel Algorithms and Architectures, ACM-SPAA:204-207, Padua (Italy), June 1996.
239. F. Bauernoppel, E. Kranakis, D. Krizanc, A. Maheshwari, M. NOY, J.-R. Sack and J. Urrutia, Optimal Shooting: characterization, solutions and applications, 22nd International Colloquium on Automata, Languages and Programming, LNCS 944:220-231, Szeged (Hungary), July 1995.
240. S. Arikati and A. Maheshwari, An $O(n)$ -algorithm for realizing sequences, Foundations of Software Technology and Theoretical Computer Science Conference, LNCS 880: 125-136, Madras (India), Dec. 1994.

- 241. S. Arikati and A. Maheshwari, Realizing degree sequences in parallel, 5th International Symposium Algorithms and computation, LNCS 834:1-9, Beijing, August 1994.
- 242. A. Lingas and A. Maheshwari, A simple optimal parallel algorithm for reporting paths in a tree, 11th Annual Symposium on Theoretical Aspects of Computer Science, LNCS 775:487-495, Caen (France), February 1994.
- 243. A. Datta, A. Maheshwari and J.-R. Sack, Optimal CREW-PRAM algorithms for direct dominance problems, European Symposium on Algorithms, LNCS 726: 109-120, Bad Honnef (Germany), September-October 1993.
- 244. A. Lingas, A. Maheshwari and J.-R. Sack, Parallel algorithms for rectilinear link distance problems, 7th IEEE International Parallel Processing Symposium, New Port Beach (USA), IPPS:65–72, April 1993.
- 245. A. Dessmark, A. Lingas and A. Maheshwari, Multi list ranking: Complexity and Applications, 10th STACS, LNCS 665:306-316, Würzburg (Germany), February 1993.
- 246. S.K. Ghosh and A. Maheshwari, Parallel algorithms for all minimum link paths and link center problems, SWAT, LNCS 621:106-117, Helsinki, July 1992.
- 247. S.K. Ghosh, A. Maheshwari, S.P. Pal, S. Saluja and C.E. Veni Madhavan, Computing the shortest path tree in a weak visibility polygon, FSTTCS, LNCS 560:369–389, New-Delhi (India), December 1991.

In Conference Proceedings

- 248. P. Bose, J.-L. De Carufel, G. Esteban and A. Maheshwari, Computing shortest paths amid non-overlapping weighted disks, CCCG 2024.
- 249. P. Bose, J.-L. De Carufel, G. Esteban and A. Maheshwari, Approximate shortest paths on weighted disks, 20th Spanish meeting on Computational Geometry, 2023.
- 250. P. Bose, G. Esteban and A. Maheshwari, Weighted shortest path in equilateral triangular meshes, CCCG 2022.
- 251. R. Seth, A. Maheshwari, and S.C. Nandy, An Acrophobic Guard Watchtower Problem on Terrains, CCCG 2021.
- 252. J.-L. De Carufel, D. Hill, A. Maheshwari, S. Roy, L.F.S.X. da Silveira, Constant Delay Lattice Train Schedules, CCCG 2021.
- 253. A. Maheshwari, Matching and Spanning Trees in Geometric Graphs, Google Invited Talk at the 7th CALDAM, IIT Ropar, 2021.
- 254. A. Maheshwari, Spanning Trees in Geometric Graphs, Invited Talk at the 4th ICCG, Yazd University, 2021.
- 255. A. Maheshwari, S. Mehrabi, S. Roy and M. Smid, Covering points with concentric objects, CCCG 2020.
- 256. A. Biniiaz, A. Maheshwari, M. Smid, Compatible 4-Holes in Point Sets, CCCG 2018.
- 257. A. Nouri, A. Maheshwari and J.-R. Sack, Time-Dependent Shortest Path Queries Among Growing Discs, CCCG 2018.
- 258. T. Biedl, A. Biniiaz, A. Maheshwari, and S. Mehrabi, Packing Boundary-Anchored Rectangles, CCCG 2017.

259. A. Biniiaz, A. Maheshwari, and M. Smid, Bottleneck Matchings and Hamiltonian Cycles in Gabriel Graphs, EuroCG March 2016.
260. S. Kumari, A. Maheshwari, P. Goyal, N. Goyal, Parallel Framework for Efficient k-means Clustering, ACM Compute, October 2015.
261. A. Biniiaz, P. Liu, A. Maheshwari, and M. Smid, A Faster 4-approximation algorithm for the unit disk cover problem, CCCG 2015, Kingston, ON.
262. A. Gheibi, A. Maheshwari and J.-R. Sack, Weighted minimum backward Frechet distance problem, CCCG 2015, Kingston, ON.
263. A. Biniiaz, A. Maheshwari and M. Smid, Approximating full Steiner tree in a unit disk graph, CCCG 2014, Halifax, NS.
264. A. Biniiaz, A. Maheshwari and M. Smid, Bottleneck bichromatic plane matching of points, CCCG 2014, Halifax, NS.
265. A. Banik, J.L. De Carufel, A. Maheshwari and M. Smid, Discrete Voronoi games and ϵ -nets, CCCG 2014, Halifax, NS.
266. P. Bose, J.L. De Carufel, C. Grimm, A. Maheshwari and M. Smid, Optimal data structures for farthest-point queries in cactus networks, CCCG 2013, Waterloo, Ontario.
267. A. Gheibi, A. Maheshwari and J.-R. Sack, Weighted region problem in arrangement of lines, CCCG 2013, Waterloo, Ontario.
268. G. Bint, A. Maheshwari and M. Smid, xy -Monotone Path Existence Queries in a Rectilinear Environment, CCCG 2012, Charlottetown, PEI.
269. P. Bose, J.-L. De Carufel, C. Grimm, A. Maheshwari and M. Smid, On Farthest-Point Information in Networks CCCG 2012, Charlottetown, PEI.
270. J.-L. D. Carufel, C. Grimm, A. Maheshwari, M. Owen and M. Smid, Unsolvability of the Weighted Region Shortest Path Problem, EuroCG 2012.
271. Jean-Lou De Carufel, C. Dillabaugh, and A. Maheshwari, Point location in well-shaped meshes using jump-and-walk, CCCG 2011, Toronto.
272. A. Maheshwari, J.-R. Sack, K. Shahbaz and H. Zarrabi-Zadeh, Staying close to a curve, CCCG 2011, Toronto.
273. M. De, A. Maheshwari, S.C. Nandy and M. Smid, An in-place priority search tree, CCCG 2011, 2011.
274. K. Douïeb, M. Eastman, A. Maheshwari and M. Smid, Approximation algorithms for a triangle enclosure problem, CCCG 2011, Toronto.
275. M. Niksereht, A. Somayji and A. Maheshwari, Customer Appeasement Scheduling, 2010. (<http://arxiv.org/abs/1012.3452>)
276. A. Maheshwari, J.-R. Sack and K. Shanbaz, Frechet distance with speed limits, CCCG 2009, Vancouver, Canada.
277. T. Asano, P. Bose, P. Carmi, A. Maheshwari, C. Shu, M. Smid and S. Wuhrer, Linear apace algorithms for distance preserving embedding, 19th Canadian Conference on Computational Geometry, Ottawa, 2007.
278. S. Roy, S. Lodha, S. Das, A. Maheshwari, Approximate Shortest Descent Path on a Terrain, 19th Canadian Conference on Computational Geometry, Ottawa, 2007.

279. A. Maheshwari and J. Yi, On computing Frechet distance of two paths on a convex polyhedron, Proceedings of the 21st European Workshop on Computational Geometry, 41–44, Eindhoven March 2005.
280. P. Bose, A. Maheshwari, P. Morin, J. Morrison, M. Smid, and J. Vahrenhold, Space-efficient geometric divide-and-conquer algorithms, Proceedings of the 20th European Workshop on Computational Geometry (EWCG 2004).
281. A. Maheshwari, J. Vahrenhold and N. Zeh, On Reverse Nearest Neighbour Queries, 14th Canadian Conference on Computational Geometry, pp. 128–132, Lethbridge (Alberta), August 2002.
282. P. Bose, A. Maheshwari, P. Morin and J. Morrison, The grid placement problem, Proceedings of the 17th European Computational Geometry Workshop, Berlin, March 2001.
283. A. Maheshwari and N. Zeh, External memory algorithms for outerplanar graphs, DIMACS-HongKong Workshop on Computational Graph Theory, City University of Hong Kong, Hongkong, July 1999.
284. A. Maheshwari, Richard Karp speaks on the future trends in Computer Science, Carleton Journal of Computer Science, Vol. 3, pp. 10–13, 1999.
285. F. Dehne, W. Dittrich, D. Hutchinson, and A. Maheshwari, Coarse Grained Parallel Algorithms Yield Better Parallel I/O Complexity, DIMACS Workshop on External Memory Algorithms and Visualization, Piscataway (NJ), May 1998.
286. A. Maheshwari, P. Morin and J.-R. Sack, A framework for multiresolution modeling, Visualization Workshop on Multi-Resolution Representation of 3D Geometry for Progressive Transmissions, Durham (NC), Oct., 1998.
287. L. Aleksandrov, M. Lanthier, A. Maheshwari and J.-R. Sack, An ϵ -approximation algorithm for weighted shortest path queries on polyhedral surfaces, 14th European Workshop on Computational Geometry, Spain, March 1998.
288. M. Lanthier, A. Maheshwari and J.-R. Sack, Approximating Weighted Shortest Paths on Polyhedral Surfaces, 13th Annual ACM Computational Geometry Conference, Nice, France, June 1997, pp. 485–86.
289. J. Huang, A. Maheshwari, D. Nussbaum and J.-R. Sack, A note on approximations of rectilinear polygons, 7th Canadian Conference in Computational Geometry, Quebec City, pp. 43–48, August 1995.
290. S. Arikati, A. Maheshwari, C.D. Zaroliagis, Saving bits made easy, 6th Canadian Conference in Computational Geometry, Waterloo, pp. 140–146, August 1994.
291. S.K. Ghosh and A. Maheshwari, Optimal parallel algorithm for determining the intersection type of two star-shaped polygons, 3rd Canadian Conference in Computational Geometry, Saskatoon, pp. 3–7, August 1991.
292. S.K. Ghosh, A. Maheshwari, S.P. Pal, S. Saluja and C.E. Veni Madhavan, Characterizing weak visibility polygons and related problems, 2nd Canadian Conference in Computational Geometry, Ottawa, pp. 93–97, August 1990.
293. S.K. Ghosh, A. Maheshwari, S.P. Pal and C.E. Veni Madhavan, An algorithm for recognizing palm polygons, 2nd Canadian Conference in Computational Geometry, Ottawa, pp. 246–251, August 1990.