CURRICULUM VITAE

March, 2022

Xin He
Department of Computer Science and Engineering
State University of New York at Buffalo
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EDUCATION

1987	Ph.D., Computer and Information Science, Ohio State University. Dissertation: On Efficient Parallel Algorithms for Solving Graph Problems. Advisor: Yaacov Yesha.
1984	M.S., Computer and Information Science, Ohio State University.
1981	M.S., Mathematics, Ohio State University.
1978-1980	Graduate School, University of Science and Technology of China, Beijing, China, Mathematics major.
1978	Lanzhow University, Lanzhow, China, Chemistry major.

EMPLOYMENT HISTORY

2004-8 - 2005-8	Acting Chairman, Department of Computer Science and Engineering, State University of New York at Buffalo.
2002-8 - present	Professor, Department of Computer Science and Engineering, State University of New York at Buffalo.
1993-9 - 2002-7	Associate Professor, Department of Computer Science and Engineering, State University of New York at Buffalo.
1987 - l993-8	Assistant Professor, Department of Computer Science, State University of New York at Buffalo.

AWARDS

Presidential Fellowship, Ohio State University, 1986-1987.

PROFESSIONAL MEMBERSHIPS and ACTIVITIES

Professional Membership
Member, IEEE.

Editorial Service

- Member of the Editorial Board, Frontiers of Computer Science, (2019 – present).

- Member of the Editorial Board of the Journal of Graph Algorithms and Applications, (2001 – present).

- Editor, Special Issue of Journal of Graph Algorithms and Applications for Graph Drawing 2002.

Conference Service

- Program Committee Member, Third Annual International Computing and Combinatorics Conference (COCOON'97), Shanghai, China, August 20-22, 1997.

- Program Committee Member, Forth Annual International Computing and Combinatorics Conference (COCOON'98), Taipei, Taiwan, August 12-14, 1998.

- Program Committee Member, the 2000 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'2000): June 26-29, 2000, Monte Carlo Resort, Las Vegas, Nevada, USA.

- Program Committee Member, 12th Annual International Symposium on Algorithms and Computation (ISAAC'2001), Christchurch, New Zealand, 2001.

- Program Committee Member, Graph Drawing 2002, Irvine, California, August 2002.

- Organization Committee Member, The 37th International Symposium on Computational Geometry (SoCG), Buffalo New York, June 7 - 11, 2021.

Reviewer for the following journals:

- Algorithmica

- BIT

- Combinatorica

- Computational Geometry, Theory and Applications

- IEEE Transactions on Software Engineering

- IEEE Transactions on Parallel and Distributed Systems

- Information and Computation

- Information Processing Letters

- International Journal of Computational Geometry and Applications

- Journal of Algorithms

- Journal of Computer and Software Engineering

- Journal of Computer and System Sciences

- Journal of Information Science and Engineering

- Journal of Parallel and Distributed Computing

- Parallel Computing

- Parallel Processing Letters

- SIAM Journal on Computing

- Theoretical Computer Science

Reviewer for the following conferences:

- 1991 International Conference on Parallel Processing

- 4th Symposium on the Frontiers of Massively Parallel Computation

- 4th IEEE Symposium on Parallel and Distributed Processing

- 26th Annual ACM Symposium on Theory of Computation

- 28th Hawaii International Conference on System Sciences

- Workshop on Algorithms and Data Structures (WADS'93)

- 9th International Parallel Processing Symposium (IPPS)

- 22nd ICALP, 1995.

- International Symposium on Algorithms and Computation (ISAAC'95).

- Asian Computing Science Conference, 1998.

- 5th Annual International Computing and Combinatorics Conference (COCOON'99)

- 41st Annual Symposium on Foundations of Computer Science (FOCS 2000)

- 19th IEEE Symposium on Reliable Distributed Systems (SRDS 2000)

Reviewer of proposals for the following agency:

NSF Panel Review for ITR Program.

National Science Foundation (NSF)

Research Grants Council (RGC), Hong Kong

Consultancy:

NEC Research Lab, Princeton, New Jersey, Summer 1992.

SERVICES

University Services:

1990-1992   Alternate Member of Faculty Senate

College Services:

2017-Present	SEAS Graduate Academic Program Committee
2007-2009	SEAS Promotion Committee
2001	Graduate Enrollment Manager Search Committee
2001	Graduate Enrollment Manager Search Committee
1999-2001	SEAS Graduate Academic Program Committee
1998	CSE Chair Search Committee
1997-1998	FNSM Grievance Committee
1997-1998	Internship Committee

Departmental Services:

2017-2021	Graduate Admission Committee (Chair)
	Graduate Affairs
	Executive Committee
	Personal
2015-2017	Library Committee
	Grievance (chair)
	Faculty Search
	Undergraduate Affairs
	Personal
2014-2015	Library Committee
	Undergraduate Affairs
	Personal
2013-2014	Library Committee
	Undergraduate Affairs
	Personal
2012-2013	Graduate Admission Committee
	Undergrad Affairs Committee
	Personal
2010-2012	Graduate Admission Committee
	Undergrad Affairs Committee
	Personal
2007-2010	Undergrad Affairs Committee

	Personal
2006-2007	Faculty Search Committee
	Personal
2005-2006	Faculty Search Committee, (chair)
	Executive Committee
	Distinguished Speaker Series Committee
	Personal
2004-2005	Executive Committee, (chair)
2003-2004	Graduate Study Committee
	Faculty Recruiting Committee
	Personal
2002-2003	Graduate Study Committee
	Personal
1999-2002	Graduate Study Committee (director)
	Personal
1998-1999	Internship Committee (chair)
1997-1998	Internship Committee (chair)
	Colloquium Committee (chair)
	Indirect Cost Recovery (ICR) Funds Committee (chair)
1996-1997	Library Committee (chair)
1995-1996	Graduate Affairs Committee
1994-1995	Graduate Affairs Committee
	Library Committee (chair)
1993-1994	Undergraduate Affairs Committee
	Library Committee (chair)
1992-1993	Graduate Affairs Committee
	Internship Committee (chair)
1991-1992	Colloquium Committee (chair)
	Internship Committee
1990-1991	Colloquium Committee (chair)
	Internship Committee (chair)
	Undergraduate Studies Committee
1989-1990	Recruiting Committee
	Graduate Admission Committee
	Internship Committee (chair)
1988-1989	Recruiting Committee

Internship Committee (chair)

| 1987-1988 | Colloquium Committee |
| | Internship Committee (chair) |

COURSES TAUGHT

State University of New York at Buffalo:

2016	Spring	CSE800	1	Thesis Guidance
		CSE632	5	Algorithm Analysis and Design 2
2016	Spring	CSE800	2	Thesis Guidance
		(Sabbatical Leave)		
2015	Fall	CSE431	1	Algorithm Analysis and Design
		CSE531	181	Algorithm Analysis and Design
		CSE702	23	Seminar
		CSE800	2	Thesis Guidance
2015	Spring	CSE431	2	Algorithm Analysis and Design
		CSE531	66	Algorithm Analysis and Design
		CSE800	2	Thesis Guidance
2014	Fall	CSE191	165	Introduction to Discrete Structures
		CSE702	40	Seminar
		CSE800	2	Thesis Guidance
2014	Spring	CSE191	220	Introduction to Discrete Structures
		CSE702	13	Seminar
		CSE799	1	Supervised Research
		CSE800	2	Thesis Guidance
2013	Fall	CSE531	185	Algorithm Analysis and Design
		CSE799	1	Supervised Research
		CSE800	2	Thesis Guidance
2013	Spring	CSE431	5	Algorithm Analysis and Design
		CSE531	45	Algorithm Analysis and Design
		CSE799	1	Supervised Research
		CSE800	2	Thesis Guidance
2012	Fall	CSE191	129	Introduction to Discrete Structures

		CSE708	9	Seminars
		CS800	1	Thesis Guidance
2012	Spring	CSE191	129	Introduction to Discrete Structures
		CSE708	22	Seminars
		CS800	1	Thesis Guidance
2011	Fall	CSE431	6	Algorithm Analysis and Design
		CSE531	122	Algorithm Analysis and Design
		CSE799	1	Supervised Research
		CSE800	1	Thesis Guidance
2011	Spring	CSE250	69	Data Structures
		CSE632	5	Algorithm Analysis and Design 2
		CSE700	1	Independent Study
2010	Fall	CSE431	2	Algorithm Analysis and Design
		CSE531	87	Algorithm Analysis and Design
2010	Spring	CSE250	98	Data Structures
		CSE702	13	Seminar
		CSE700	1	Independent Study
2009	Fall	CSE431	4	Algorithm Analysis and Design
		CSE531	110	Algorithm Analysis and Design
2009	Spring	Sabbatical Leave		
2008	Fall	CSE431	2	Algorithm Analysis and Design
		CSE531	90	Algorithm Analysis and Design
2008	Spring	CSE431	11	Algorithm Analysis and Design
		CSE531	42	Algorithm Analysis and Design
2007	Fall	CSE250	66	Algorithms and Data Structures
		CSE710	6	Seminars
2007	Spring	CSE250	66	Algorithms and Data Structures
		CSE726	9	Seminars
2006	Fall	CSE431	5	Algorithm Analysis and Design
		CSE531	51	Algorithm Analysis and Design
		CSE700	1	Independent Study
2006	Spring	CSE431	8	Algorithm Analysis and Design

		CSE531	39	Algorithm Analysis and Design
		CSE799	1	Supervised Research
		CSE800	1	Thesis Guidance
2005	Fall	CSE431	5	Algorithm Analysis and Design
		CSE531	42	Algorithm Analysis and Design
		CSE749	6	Seminar
2005	Spring	CSE431	5	Algorithm Analysis and Design
		CSE531	45	Algorithm Analysis and Design
		CSE800	3	Thesis Guidance
2004	Fall	CS721	6	Seminars
2004	Spring	CS431	5	Algorithm Analysis and Design
		CS531	32	Algorithm Analysis and Design
		CS721	6	Seminars
2003	Fall	CS250	61	Algorithms and Data Structures
		CS499	1	Independent Studies
		CS700	1	Independent Studies
		CS800	2	Thesis Guidance
2003	Spring	CS632	5	Algorithm Analysis and Design II
		CS721	6	Seminars
2002	Fall	(Sabbatical Leave)		
		CS800	2	Thesis Guidance
2002	Spring	CS721	6	Seminars
		CS700	1	Independent Study
2001	Fall	CS250	75	Algorithms and Data Structures
		CS700	3	Independent Study
		CS799	1	Supervised Research
2001	Spring	CS250	66	Algorithms and Data Structures
		CS700	2	Independent Study
		CS799	1	Supervised Research
2000	Fall	CS724	11	Seminars
		CS700	2	Independent Study
2000	Spring	CS431/531	109	Design and Analysis of Algorithms
		CS700	1	Independent Study

		CS799	1	Supervised Research
1999	Fall	CS632	6	Design and Analysis of Algorithms II
		CS700	2	Independent Study
1999	Spring	CS498/598	6	Internship
		CS431/531	87	Design and Analysis of Algorithms
		CS700	2	Independent Study
		CS799	1	Supervised Research
		CS800	1	Thesis Guidance
1998	Fall	CS739	9	Seminar
		CS250	67	Algorithm and Data Structure
1998	Spring	CS498	2	Internship
		CS632	5	Design and Analysis of Algorithms II
		CS735	5	Seminar: Planar Graph Algorithms
		CS799	1	Supervised Research
1997	Fall	CS250	73	Algorithms and Data Structures
		CS700	2	Independent Study
		CS799	1	Supervised Research
		CS800	1	Thesis Guidance
1997	Spring	CS250	52	Algorithms and Data Structures
		CS704	2	Seminar: Graph Drawing Algorithms
1996	Fall	CS632	10	Design and Analysis of Algorithms II
1996	Spring	CS250	60	Algorithms and Data Structures
		CS700	1	Independent Study
		CS799	1	Supervised Research
1995	Fall	(On sabbatical leave.)		
1995	Spring	CS192	86	Introduction to Discrete Math
		CS711	4	Seminar: Computational Biology
		CS799	1	Supervised Research
1994	Fall	CS531	26	Design and Analysis of Algorithms
		CS700	1	Independent Study
1994	Spring	CS632	6	Design and Analysis of Algorithms II
		CS700	1	Independent Study
		CS799	1	Supervised Research

		CS800	1	Thesis Guidance
1993	Fall	CS633	7	Parallel Algorithms
		CS700	2	Independent Study
		CS711	5	Seminar: On-Line Algorithms
		CS498	3	Internship
		CS800	1	Thesis Guidance
1993	Spring	CS4/531	53	Design and Analysis of Algorithms
		CS700	1	Independent Study
		CS704	4	Seminar: Graph Drawing Algorithms
		CS800	2	Thesis Guidance
1992	Fall	CS350	42	Advanced Data Structures
		CS799	1	Supervised Research
		CS800	2	Thesis Guidance
1992	Spring	CS4/531	64	Design and Analysis of Algorithms
		CS700	1	Independent Study
		CS704	4	Seminar: Parallel Algorithms
		CS799	1	Supervised Research
		CS800	2	Thesis Guidance
		CS498	2	Internship
1991	Fall	CS632	11	Design and Analysis of Algorithms II
		CS799	1	Supervised Research
		CS800	2	Thesis Guidance
1991	Spring	CS498	1	Internship
		CS632	7	Design and Analysis of Algorithms II
		CS706	7	Seminar: Recent Advances in Graph Algorithms
		CS799	2	Supervised Research
		CS800	1	Thesis Guidance
1990	Fall	CS498	4	Internship
		CS4/596	80	Introduction to Theory of Computation
		CS700	2	Independent Study
		CS799	3	Supervised Research
		CS800	2	Thesis Guidance
1990	Spring	CS498	1	Internship
		CS4/531	86	Design and Analysis of Algorithms
		CS704	4	Seminar: Recent Advances in Graph Algorithms
		CS799	2	Supervised Research

1989	Fall	CS498	1	Internship
		CS632	16	Design and Analysis of Algorithms II
		CS799	1	Supervised Research
1989	Spring	CS498	4	Internship
		CS4/531	87	Design and Analysis of Algorithms
		CS700	3	Independent Study
		CS799	1	Supervised Research
1988	Fall	CS499	1	Independent Study
		CS505	26	Fundamentals of Programming Systems
		CS705	6	Seminar: Parallel Algorithms II
		CS700	1	Independent Study
		CS800	1	Thesis Guidance
1988	Spring	CS499	2	Independent Study
		CS711	10	Seminar: Parallel Algorithms
1987	Fall	CS305	46	Programming Languages
		CS699	1	Supervised Teaching

Other Teaching Activities:

- Designed and Introduced CS632: Design and Analysis of Algorithms II.

- Designed (with others) CS606: Parallel Architecture.

- Revised CS4/531: Design and Analysis of Algorithms I.

- Designed and Supervised CS498: Computer Science Internship Program.

RESEARCH SUPERVISION

As Advisor for Ph.D. Students:

1. Ramnath Sarnath, "Multi-point Sampling in Parallel Algorithms for Combinatorial Search", graduated in Feb. 1994.

2. S. Sunder, "Parallel Algorithms for Scheduling Problems", graduated in June 1994.

3. Chun-Hsi, Huang, "Communication-Efficient Bulk Synchronous Parallel Algorithms", graduated in July 2001.

4. Zhang, Huaming, "Graph Orientation, Labeling and their applications", graduated in June 2005.

5. Junjie Wang, "Drawing Plane Graphs via Graph Orientations", graduated in Jan. 2016.

6. Dayu He, "Algorithms for Graph Drawing Problems", Graduated in May 2017.

7. Érika Santos, expected Aug 2019.

8. Yunus Esencayi, expected Aug 2020.

As Committee Member for Ph.D. Students:

1. Mythili Mantharam, "The Real Two Zero Algorithm, A Parallel Algorithm to Reduce an Arbitrary Matrix to a Real Schur Form, and Jacobi-Sets for Parallel Computations", graduated in May 1993. (Advisor: Pat. Eberlein.)

2. Arun Jagota, "The Hopfield-Clique Network, Associative Memories, and Combinatorial Optimization", graduated in Dec. 1993. (Advisor: Kenneth Regan.)

3. Yiming Gong, "Exploiting Dynamic Computation to Diagnose Bridging Faults", graduated in Feb. 1996. (Advisor: Sreeijit Chakravarty.)

4. Vinay Padmakar Dabholkar, "Optimization Problems in Low Power and Stress Testing", graduated in Sep. 1996. (Advisor: Sreeijit Chakravarty.)

5. Paul Joseph Thadikaran, "Evaluation, Selection and Generation of IDDQ Tests", graduated in Feb. 1997. (Advisor: Sreeijit Chakravarty.)

6. Ajay Shekhawat, "A Framework for Interpreting Structured Handwritten Documents", graduated in Feb. 1998. (Advisor: Sargur Srihari).

7. Petr Slavik, "Approximation Algorithms for Set Cover and Related Problems", graduated in May 1998. (Advisor: Gene Kleinberg, Mathematics Department.)

8. Dantong Yu, "Multidimensional Indexing and Management for Large-Scale Databases", graduated in Dec. 2000. (Advisor: Aidong Zhang).

9. Yuqing Song, "Monotonic Tree and Its Application to Multimedia Information Retrieval", graduated in Aug. 2002. (Advisor: Aidong Zhang).

10. Adrian Rusu, "Area-Efficient Grid Drawings of Graphs", graduated in Aug 2003. (Advisor: Ashim Garg).

11. Xiaojun Cao, "Design and Analysis of Burst Scheduling Algorithms in Optical Burst Switching Networks". Graduated in June 2004. (Advisor: Chunming Qiao).

12. Dahai Xu, "Effective Failure Protection Schemes for Survivable Networks". Graduated in June 2004. (Advisor: Chunming Qiao).

13. Yong Shi, "Shrinking-Based Approaches for Multi-Dimensional Data Analysis". Graduated in June, 2006. (Advisor: Aidong Zhang).

14. Guang Xu, "Approximation Algorithms for Clustering and Related Problems". Graduated in June, 2006. (Advisor: Jinhui Xu).

15. Maurice Jansen, "Lower Bound Frontiers in Arithmetical Circuit Complexity". Graduated in Aug, 2006. (Advisor: Kenneth Regan)

16. Mingen Lin, "New Results for Several Bin Packing and Related Problems". Graduated in June 2007. (Advisor: Jinhui Xu).

17. Zhiyong Lin, "Approximation Algorithms for Several Geometric Optimization Problems with Disturbed Distance Functions". (Advisor: Jinhui Xu).

18. Yang Yang, "On Several Geometric Network Design Problems ". Graduated in June 2007. (Advisor: Jinhui Xu).

19. Liyu Zhang, "Disjoint NP-pairs". Graduated in 2007. (Advisor Alan Selman.)

20. Woochang Hwang, "Network Mining from Element Level to Group Level ". Graduated in June 2009. (Advisor: Aidong Zhang).

21. Young-Rae Cho, "Functional Module Identification and Function Prediction from Protein Interaction Networks". Graduated in June 2009. (Advisor: Aidong Zhang).

22. Moonjung Cho. "Novel Techniques for Data Warehousing and Online Analytical Processing in Emerging Applications". (Advisor: Jian Pei).

23. Lei Shi, "Protein Functionality Analysis Through Protein-Protein Interaction Networks" Graduated in June 2011. (Advisor: Aidong Zhang).

24. Yongding Zhu, "On the Central Path and Related Problems", Graduated Dec 2011. (Advisor: Jinhui Xu)

25. Tingting Chen, "Privacy preserving and incentive compatible protocols for cooperation in distributed computations", Graduated 2011. (Advisor: Sheng Zhong)

26. Taehyong Kim, "NETWORK ANALYSIS BY TOPOLOGICAL PROPERTIES AND COMPUTATIONAL MODELING" Graduated 2012. (Advisor: Aidong Zhang).

27. Lei Xu, "Efficient Geometric Algorithms and Application", Graduated Aug 2012. (Advisor: Jinhui Xu)

28. Kang Li, Representation Learning on Multiple Sources, Graduated June 2014. (Advisor: Aidong Zhang).

29. Nan Du, Community Analysis on Multiple Sources: Progression, Evolution and Mutual Knowledge Learning, Graduated June 2014. (Advisor: Aidong Zhang).

30. Hu Ding, "New Algorithmic Frameworks for Geometric Optimization: Clustering, Matching, and Fitting", Graduated June 2015. (Advisor: Jinhui Xu).

31. Suxin Guo, Learning on Private Data with Homomorphic Encryption and Differential Privacy, Graduated June 2015. (Advisor: Aidong Zhang).

32. Jianmei Yang, "Statistical Analysis of Interaction Information and Its Application in Multi-class System", (Advisor: Aidong Zhang).

33. Yuan Zhang, "On Privacy Protection in Distributed Computation Protocols", (Advisor: Sheng Zhong)

34. Yangwei Liu, "New Geometric Approaches for Several Machine Learning Problems", (Advisor: Jinhui Xu)

35. Ziyun Huang "On the Theory of Joint Influence", (Advisor: Jinhui Xu)

36. Xiangyu Wang "New Computational Geometry Methods for Some Fundamental Machine Learning Problems", (Advisor: Jinhui Xu)

As Advisor for MS. Students:

1. Shivesh Kumar, graduated in Aug. 1994. (Co-advisor: Valerie Shalin, Department of Industrial Engineering.)

As Committee Member for M.S. Students:

1. Giancarlo Succi, "Set Representations in a Subset-Equational Language", 1991. (Advisor: Bharadwaj Jayaraman.)

2. Gang Fang, graduated in June 2007, "Representative Ridge Points in Fingerprints: A Modified Minutiae Matching Algorithm and Analysis of Individuality", Advisor: Sargur Srihari.

Undergraduate Students:

1. Jianqiao Zhu, supported by the "Research Experience for Undergraduate (REU)" portion of NSF grant in Spring Semester 2008, "The Travelling Salesman Problem".

2. Paul J. Powers, supported by the "Research Experience for Undergraduate (REU)" portion of NSF grant in Spring Semester 2008, "The Algorithm of Traffic Control System Model".

RESEARCH INTERESTS

- Design and Analysis of Algorithms
- Graph Algorithms
- Graph Theory
- Graph Drawing
- Computational Geometry

GRANT SUPPORT

External Individual Funding:

1990-1993	National Science Foundation, principal investigator Research Initiation Award "Parallel Algorithms for Special Graphs"	$ 35,581
1993-1996	National Science Foundation, principal investigator "Parallel Algorithms for Graph Problems"	$83,462
2000-2003	National Science Foundation, principal investigator "Graph Encodings, Embeddings, Labelings and Applications"	$191,240
2003-2007	National Science Foundation, principal investigator "Graph Orientations and Applications"	$206,000
2003-2006	National Institute of Health, investigator "Computational Approaches to Disease Causes and Treatment" (PI: Aidong Zhang, with total 12 investigators.)	$1,177,500
2006-2011	National Science Foundation, principal investigator "Algorithms and Applications of Planar Graphs and Planar Meshes"	$239,923
2013-2017	National Science Foundation, principal investigator "AF: Small: Efficient Algorithms for Rectangular Layouts and Cartograms"	$349,986

Submitted:

2019-2022	National Science Foundation, principal investigator "AF: Small: Geometric Drawings of Planar Graphs and Applications"	$413,908

Internal Individual Funding: Internal Individual Funding:

1988	United University Professions New Faculty Development Award	$750
1989	United University Professions Experienced Faculty Travel Award	$500
1993	United University Professions Experienced Faculty Travel Award	$735

1994	United University Professions	$525
	Continuing Faculty Development Award	

Refereed Journal Articles - Published:

1. Xin He and Yaacov Yesha, "Parallel Recognition and Decomposition of Two Terminal Series Parallel Graphs", *Information and Computation*, Vol. 75 (1), 1987, pp. 15-39.

2. Xin He and Yaacov Yesha, "Binary Tree Algebraic Computations and Parallel Algorithms for Simple Graphs", *Journal of Algorithms*, Vol. 9 (1), 1988, pp. 92-113.

3. Xin He and Yaacov Yesha, "A Nearly Optimal Parallel Algorithm for Constructing Depth First Spanning Trees in Planar Graphs", *SIAM[1] Journal on Computing*, Vol. 17 (3), 1988, pp. 486-491.

4. Xin He, "A Nearly Optimal Parallel Algorithm for Constructing Maximal Independent Sets in Planar Graphs", *Theoretical Computer Science*, Vol. 61 (1), 1988, pp. 33-47.

5. Xin He and Yaacov Yesha, "Efficient Parallel Algorithms for $r-$ Dominating Set and $p-$Center Problems on Trees", *Algorithmica*, Vol. 5, 1990, pp. 129-145.

6. Xin He, "An Efficient Algorithm for Edge Coloring Planar Graphs with Δ Colors", *Theoretical Computer Science*, Vol. 74 (3), 1990, pp. 299-312.

7. Xin He, "Efficient Parallel and Sequential Algorithms for 4-Coloring Perfect Planar Graphs", *Algorithmica*, Vol. 5 (4), 1990, pp. 545-559.

8. R. Sarnath and Xin He, "A P-complete Graph Partition Problem", *Theoretical Computer Science*, Vol. 76 (2), 1990, pp. 343-351.

9. Xin He, "An Improved Algorithm for the Planar 3-Cut Problem", *Journal of Algorithms*, Vol. 12, 1991, pp. 23-37.

10. Xin He, "An Efficient Parallel Algorithm for Finding Minimum Weight Matching for Points on a Convex Polygon", *Information Processing Letters*, Vol. 37, 1991, pp. 111-116.

11. Xin He, "Efficient Parallel Algorithms for Series Parallel Graphs", *Journal of Algorithms*, Vol. 12, 1991, pp. 409-430.

12. S. Chakravarty, Xin He, and S. S. Ravi, "Minimum Area Layout of Series-Parallel Transistor Networks Is NP-Hard", *IEEE[2] Transactions on Computer-Aided Design of Integrated Circuits and Systems*, Vol. 10 (7), 1991, pp. 943-949.

13. Xin He, "Parallel Algorithms for Cograph Recognition with Applications", *Journal of Algorithms*, Vol. 15, 1993, pp. 284-313.

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[1]SIAM is an abbreviation for Society of Industrial and Applied Mathematics.
[2]IEEE is an abbreviation for Institute of Electrical and Electronics Engineers.

14. Xin He, "On Finding Rectangular Duals of Planar Triangular Graphs", *SIAM Journal on Computing*, Vol. 22 (6), 1993, pp. 1218-1226.

15. S. Hambrusch, Xin He, and R. Miller, "Parallel Algorithms for Gray-Scale Image Component Labeling on a Mesh-Connected Computer", *Journal of Parallel and Distributed Computing*, Vol. 20, 1994, pp. 56-68.

16. M. Y. Kao, M. Fürer, Xin He, and B. Raghavachari, "Optimal Parallel Algorithms for Straight-Line Grid Embeddings of Planar Graphs", *SIAM Journal on Discrete Mathematics*, Vol. 7(4), 1994, pp. 632-646.

17. Xin He, "An Efficient Parallel Algorithm for Finding Rectangular Duals of Planar Triangular Graphs", *Algorithmica*, Vol 13(6), 1995, pp. 553-572.

18. Xin He and David Sher, "On Determining Non-Isomorphic Configurations of Circles through Points on a Sphere", *Discrete Applied Mathematics*, Vol 59, 1995, pp. 33-50.

19. S. Sunder and Xin He, "An NC Algorithm for Finding Minimum Weighted Completion Time Schedule on Series Parallel Graphs", *Algorithmica* Vol 16, 1996, pp. 243-262.

20. Z-Z Chen and Xin He, Parallel Complexity of Partitioning Planar Graphs into Vertex-Induced Forests, *Discrete Applied Math.* 69, 1996, pp. 183-198.

21. Xin He, "Grid Embedding of 4-Connected Plane Graphs", *Discrete and Computational Geometry* 17, 1997, pp. 339-358.

22. R. Sarnath and Xin He, "On Parallel Searching and Selection in Partial Orders: Sorted Matrices", *Journal of Parallel and Distributed Computing*, 40, 1997, pp. 242-247.

23. G. Kant and Xin He, "Regular Edge Labeling of 4-Connected Plane Graphs and its Applications in Graph Drawing Problems," *Theoretical Computer Science* Vol. 172, 1997, pp. 175-193.

24. Zhi-Zhong Chen and Xin He, "Parallel Algorithms for Maximal Acyclic Sets", *Algorithmica* Vol 19, 1997, pp. 354-368.

25. S. Sunder and Xin He, "Scheduling Interval Ordered Tasks in Parallel", *Journal of Algorithms* Vol 26, 1998, pp. 34-47.

26. Ryuhei Uehara, Zhi-Zhong Chen, and Xin He, "Fast RNC and NC Algorithms for Maximal Path Sets", *Theoretical Computer Science* Vol 215, 1999, pp. 89-98.

27. Bhaskar DasGupta, Xin He, Tao Jiang, Ming Li, John Tromp, "On the Linear-Cost Subtree-Transfer Distance between Phylogenetic Trees", *Algorithmica* Vol 25, 1999, pp. 176-195.

28. Xin He and Zhi-Zhong Chen, "An Algorithm for Shortest Paths in Bipartite Digraphs with Concave Weight Matrices and its Applications", *SIAM J. Computing.* Vol 29 (1), 1999, pp. 65-80.

29. Xin He, Ming-Yang Kao and H-I Lu, "Linear-Time Succinct Encodings of Planar Graphs via Canonical Orderings", *SIAM J. Discrete mathematics*, Vol 12 (3), 1999, pp. 317-325.

30. Xin He, "On Floor-Plan of Planar Graphs", *SIAM J. Comput.* Vol. 28 (6), 1999, pp. 2150-2167.

31. X. He, M-Y Kao and H-I Lu, "A Fast General Methodology for Information-Theoretically Optimal Encodings of Graphs", *SIAM J. Comput.* Vol. 30 (3), 2000, pp. 838-846.

32. Xin He, "A Simple Linear Time Algorithm for Proper Box Rectangular Drawing of Plane Graphs", Journal of Algorithms, Vol 40, 2001, pp. 82-101.

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COLLOQUIUM PRESENTATIONS

"Compact Encodings of Planar Graphs",

- Department of Computer and Information Science, Ohio State University, Columbus, Ohio, Nov. 19, 1998.

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- Department of Computer Science, Nanjing University, Nanjing, China, July 12, 1993.

"Parallel Algorithms for Cograph Recognition with Applications"

- State University of New York at Buffalo, Department of Computer Science, February, 1992.

"Parallel Algorithms for Two Graph Layout Problems"

- University of Puerto Rico, Department of Mathematics, October, 1991.

- University of Waterloo, Department of Computer Science, May, 1991.

- State University of New York at Buffalo, Department of Computer Science, September, 1990.

"Efficient Parallel Algorithms for Graph Coloring Problems"

- University of British Columbia, Computer Science Department, April, 1988.

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