DINESH P. MEHTA: Curriculum Vitae

DEPARTMENT OF MATHEMATICAL AND COMPUTER SCIENCES
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March 13, 2009

1 EDUCATION

- Ph.D., Computer and Information Sciences, University of Florida, Gainesville, 1992.
  Thesis Title: Models and Techniques for the Visualization of Labeled Discrete Objects.
  Advisor: Dr. Sartaj Sahni

- M.S., Computer and Information Sciences, University of Minnesota, Minneapolis, 1990.

- B.Tech., Computer Science and Engineering, Indian Institute of Technology, Bombay, India, 1987.

2 EMPLOYMENT HISTORY

- Interim Department Head, **Department of Mathematical and Computer Sciences, Colorado School of Mines** Jul'08 - present.

- Professor (with tenure), **Department of Mathematical and Computer Sciences, Colorado School of Mines** Apr '05 - present.

- Associate Professor (with tenure), **Department of Mathematical and Computer Sciences, Colorado School of Mines** Aug '00 - Apr '05.

- Associate Professor (with tenure), **Department of Computer Science, University of Tennessee Space Institute**, Aug '98 - Jul '00.

- Assistant Professor, **Department of Computer Science, University of Tennessee Space Institute**, Aug '92 - Jul '98.

- Research Team Member **University of Tennessee at Knoxville**, Participated in DARPA-sponsored contract "CHAMPION: A Software Design Environment for Adaptive Computing Systems" May '99 - Jul '99.

- Visiting Professor, **Intel Corporation: Strategic CAD Laboratory**, Apr '97 - Sep '97.

- Visiting Professor, **Intel Development Labs: Strategic CAD Technology**, May '96 - Jul '96.

- Research and Teaching Assistant, **Department of Computer and Information Sciences, University of Florida**, Jan '91 - Aug '92.

- Instructor, Research and Teaching Assistant, **Department of Computer Science, University of Minnesota**, Dec '87 - Dec '90.

- Research Assistant, **Department of Psychology, University of Minnesota**, Dec '87 - Aug '90.

- Summer Intern, **International Data Management, Bombay, India**, Jun '86 - Aug '86.

3 MEMBERSHIP IN PROFESSIONAL SOCIETIES

- IEEE Computer Society.

- Sigma Xi (Secretary, Highland Rim Club, 1994-97).

4 PROFESSIONAL ACTIVITIES AND SERVICE

- Member of Computing Research Association (CRA) Outstanding Undergraduate Committee (reviewed over 100 nominations for this award), 2006.

- Associate Editor for **IEEE Transactions on Circuits and Systems - I**, Jan 2004- Dec 2005. Organized reviews for 25 papers submitted to the journal and made recommendations to the Editor-in-Chief based on these reviews. The average review time for the papers I handled was 93 days.

- Founding Member of the technical committee on "Graph Theory and Computing" in the IEEE Circuits and Systems Society. Participated in formulating the proposal for establishing this technical committee.

- Conference Session chair/co-chair for

  - VLSI 2006, Hyderabad, India.
  - Session 4a: Model for Floorplan, Asian South Pacific Design Automation Conference (ASPDAC) 2003, Kitakyushu, Japan.
  - Session on *Theoretical Results in Routing* at the Fourth Great Lakes Symposium on VLSI (GLSVLSI), 1994.

- Conference Program/Review Committees

  - IASTED CST 2003.
  - International Symposium on Circuits and Systems (ISCAS) 2003, 2004, 2006.
  - International Conference on Computer Design (ICCD) 2004.

- Reviewer for the following journals and conferences:

  - ACM Transactions on Design Automation of Electronic Systems (TODAES).
  - Great Lakes Symposium on VLSI (GLSVLSI).
  - IEEE Transactions on Computers.
  - IEEE Transactions on Industrial Engineering.
  - IEEE Transactions on Circuits and Systems I.
  - IEEE Transactions on Computer-aided Design.
  - IEEE Transactions on Very Large Scale Integration.
  - IEEE Transactions on Mobile Computing.
  - IEEE Transactions on Networks.
  - IEEE Transactions on Parallel and Distributed Computing.
  - International Journal of Circuit Theory and Applications.
  - Journal of Mathematical Imaging and Vision.

- – The International Conference on VLSI Design.
- – International Conference on Computer-aided Design (ICCAD).
- – Journal of Systems and Software.
- – The International Symposium on Circuits and Systems (ISCAS): 2003, 2004.
- – IPCCC.
- – International Journal on Foundations of Computer Science.
- – IASTED CST 2003.
- – Integration.
- – Computer Networks.

- • Reviewer of research proposals for

  - – NSF panel, Computer Communications Research (CCR), 2002.
  - – NSF panel, Information Technology Research (ITR) Program, 2002.
  - – Ministry of Higher Education, Kingdom of Saudi Arabia (2000, 2002).

- • Book Reviews

  - – "Parallel Programming in C with MPI and OpenMP" (Quinn) for McGraw-Hill in 2002.
  - – "Introduction to the Design and Analysis of Algorithms" (Levitin) for Addison-Wesley, 2004.
  - – "Algorithm Design" (Goodrich & Tamassia) for Wiley, 2004.

5 TEACHING EXPERIENCE

5.1 Courses Taught at CSM

1. CSCI 598 Randomized Algorithms.

2. CSCI/MATH 406 Algorithms (previously MACS 406 Design and Analysis of Algorithms.)

3. MACS 562 Applied Algorithms and Data Structures.

4. MACS 564 Advanced Computer Architecture.

5. MACS 440/563 Parallel Computing.

5.2 Courses Taught at UTSI

1. Computer Networks [graduate-level]: two-semester sequence.

2. Object Oriented Design Patterns [graduate-level]: two-semester sequence.

3. VLSI Physical Design on interactive video [graduate-level].

4. Advanced Topics in VLSI Design [graduate-level].

5. Logic Synthesis and Optimization [graduate-level].

6. Discrete Structures.

7. Foundations of Computer Science [graduate-level].

8. Advanced Data Structures in C++. Class was broadcast to the University of Tennessee at Knoxville and Oak Ridge National Labs on interactive video.

5.3 Courses Taught at U. Minnesota

1. Advanced Data Structures [senior/grad-level].

2. Introduction to Data Structures [junior-level].

5.4 Short Course/Tutorials

- Instructor for a 5-day workshop on "Introduction to C++" for employees of Arnold Engineering Development Center (United States Air Force) in Tullahoma, TN, August, 1994.

- Co-Instructor with Naveed Sherwani for a day-long tutorial on "Physical Design" at the Tenth International Conference on VLSI Design in Hyderabad, India, January, 1997.

6 FUNDED RESEARCH

6.1 Technical Interests

- VLSI Design Automation.

- Applied Algorithms and Data Structures.

6.2 Proposals Funded

- *Broadening Female Participation in Computing: Middle School through Undergraduate Study*, BPC-DP-0739233, National Science Foundation, PI: B. Moskal, co-PI: G. Fairweather, M. Colagrosso, D. P. Mehta , Sep 1, 2007- Aug 31, 2010, $579,557.

- *Productivity-Driven Floorplanning*, CCR-9988338, National Science Foundation, PI: D. P. Mehta, Jul 15, 2000-June 30, 2003, $266,636.

- *Online Computer Science Program by University of Colorado at Denver and Colorado School of Mines*, Colorado Institute of Technology, 2001-2002, $300,000. (Role: part of the team that developed the proposal.)

- *Computational Efficiency Enhancement Studies*, Task 96-01, United States Air Force, PI: R. Roach, co-PI: D. P. Mehta, T. Moulden, $140,880.

- *Computational Efficiency Enhancement Studies*, Task 95-01 under Award/Contract No F40600-94-D-001, United States Air Force, PI: R. Roach, co-PI: D. P. Mehta, T. Moulden, K. C. Reddy, $114,981.

- *MLRC Laboratory Upgrade*, CSM Technology Fee Grant, G. Fairweather and D. P. Mehta, Spring 2006, $37,356.80.

- *ASPDAC Travel Grant*, ASPDAC 2003, Kitakyushu, Japan. D. P. Mehta, Feb. 2003, $1285.

- *Laptops and Portable LCD Projector for the MCS Dept*, CSM Technology Fee Grant, D. P. Mehta, G. Fairweather and M. Robbert, Spring 2003, $7,662.

- *MCS Linux Laboratory Renewal*, CSM Technology Fee Grant, P. Christopher, G. Fairweather and D. P. Mehta, Fall 2003, $46,123.

- *Classroom Equipment Upgrade*, Colorado School of Mines, D. P. Mehta, Jan. 2003, $3000.

- *Software to Improve the Quality of MACS 406*, D. P. Mehta, CSM Technology Fee Grant, $2000.

7 STUDENTS

7.1 PhD Advisees at CSM

Note: UTSI did not offer a PhD program.

1. John Crabtree (2007, CSM). Dissertation title: *Design and Implementation of Computational Automation Tools for the Evaluation of Detailed Chemical Kinetic Mechanisms.* John is an Associate Professor at the University of Northern Alabama.

2. Sahar Idwan (2005, CSM). Dissertation title: *Algorithms for Discrete Geometric and Graph Theoretic Pursuit Problems.* Sahar is on the faculty at the Hashemite University in Jordan.

3. Yan Feng (2004, CSM). Dissertation title: *Interactive Floorplanning in VLSI.* Yan's first employment was as a post-doctoral researcher in the Department of Electrical and Computer Engineering at the University of Minnesota. He is currently employed at Cadence.

4. Steven Stoddard (2003, CSM), co-advisor. Dissertation title: *Optimizing Federal Natural Gas Royalties in the Gulf of Mexico.* A paper resulting from Steve's dissertation has been selected as a finalist for the Daniel H. Wagner prize for excellence in operations research practice. Steve is an Operations Research Analyst at the U.S. Army's Center for Army Analysis (CAA) in Ft. Belvoir, Virginia.

7.2 M.S. Thesis Advisees (CSM, UTSI)

1. Balazs Nagy (in progress, CSM).

2. Dean Simmons (2006,CSM).

3. Andrew Johnson (2005,CSM).

4. Lin Zhu (2001, CSM).

5. Rui Lopes (2000, UTSI).

6. Larry Cunningham (2000, UTSI).

7. Cheng Yu (2000, UTSI).

8. Carl Shetters (1999, UTSI).

9. Erica Wilson(1996, UTSI).

10. Richard Tito(1996, UTSI).

11. Evan Reynolds(1994, UTSI).

12. George Blust(1994, UTSI).

7.3 Student Collaborators

1. Brad Williams (CSM).

2. Sean Liao (Univ. of Denver).

3. Lan Lin (Univ. of Denver).

4. Kun Gao (CSM)

5. Rachana Rao (University of Colorado, Denver).

8 PUBLICATIONS

8.1 Books

1. Charles J. Alpert, Dinesh P. Mehta and Sachin S. Sapatnekar (editors), *Handbook of Algorithms for Physical Design Automation*, Auerbach Publications, 2009, ISBN 978-0-8493-7242-1. [1]

2. Ellis Horowitz, Sartaj Sahni, and Dinesh P. Mehta, *Fundamentals of Data Structures in C++*, Second Edition, Silicon Press, 2007, ISBN 0-929306-37-6.

3. Dinesh P. Mehta and Sartaj Sahni (editors), *Handbook of DATA STRUCTURES and APPLICATIONS*, CRC Press, 2005, ISBN 1-58488-435-5. [2]

4. Dinesh P. Mehta, *Solutions Manual for Fundamentals of Data Structures in C++*, W. H. Freeman, Feb '96 (only available to instructors!).

5. Ellis Horowitz, Sartaj Sahni, and Dinesh P. Mehta, *Fundamentals of Data Structures in C++*, W.H. Freeman, Feb'95, ISBN 0-7167-8292-8. [3]

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[1] Handbook of Algorithms for Physical Design Automation.

- The handbook consists of 47 chapters and is approximately 1000 pages.

- 82 authors from 26 universities and eleven design automation companies were involved in this project.

[2] Handbook of DATA STRUCTURES and APPLICATIONS.

- The handbook consists of 64 chapters and is approximately 1400 pages.

- This was a collaborative national and international project involving 84 authors.

- Chapters have been contributed by international authors from fifteen countries including Australia, Canada, China, Denmark, Germany, Hong Kong, India, Israel, Italy, The Netherlands, Poland, Sweden, Switzerland, Taiwan, and the United Kingdom.

- Within the United States, chapters have been contributed by authors from 32 universities including Brown, Colorado School of Mines, Colorado State, Duke, Florida International University, Georgia State, Georgia Tech., Iowa State, Louisiana State, Louisiana Tech., Michigan State, New Jersey Inst. of Technology, Northeastern, Old Dominion, Princeton, Purdue, Rutgers, Stanford, U. California Irvine, U. California Riverside, U. California San Diego, U. California Santa Barbara, U. Central Florida, U. Colorado, U. Denver, U. Florida, U. Maryland, U. Miami, U. Minnesota, U. North Carolina Chapel Hill, U. Texas at Austin, and the US Military Academy West Point.

- Chapters have also been contributed by authors from industry including Cypress Semiconductors, Google, and Sun Microsystems.

[3] Fundamentals of Data Structures in C++.

- Three translations (Korean, Chinese(Taiwan), Chinese(mainland)).

- Adopted by over 90 U.S. universities.

- Approximately 28,000 copies in print (1995-2004).

8.2   Book Chapters

1. Charles J. Alpert, Dinesh P. Mehta, Sachin Sapatnekar, *Introduction to Physical Design Automation*, Chapter 1, pp. 3-7, Handbook of Algorithms for Physical Design Automation, Alpert, Mehta and Sapatnekar (eds), Auerbach (2009).

2. Dinesh P. Mehta, Hai Zhou *Basic Data Structures*, Chapter 4, pp. 55-71, Handbook of Algorithms for Physical Design Automation, Alpert, Mehta and Sapatnekar (eds), Auerbach (2009).

3. Dinesh P. Mehta, Yan Feng *Recent Advances in Floorplanning*, Chapter 12, pp. 239-256, Handbook of Algorithms for Physical Design Automation, Alpert, Mehta and Sapatnekar (eds), Auerbach (2009).

4. Dinesh P. Mehta, *Basic Structures* chapter in Handbook of Data Structures and Applications, Mehta and Sahni (eds), CRC Press (2004).

5. Dinesh P. Mehta, *Trees* chapter in Handbook of Data Structures and Applications, Mehta and Sahni (eds), CRC Press (2004).

6. Dinesh P. Mehta, *VLSI Layout* chapter in Handbook of Data Structures and Applications, Mehta and Sahni (eds), CRC Press (2004).

8.3   Journal Publications

1. Teresa E. B. Davies, Dinesh P. Mehta, J.L. Rodriguez-Lopez, George H. Gilmer and Cristian V. Ciobanu, *A Variable-Number Genetic Algorithm for Growth of 1-Dimensional Nanostructures into their Global Minimum Configuration under Radial Confinement*, **Materials and Manufacturing Processes**, Vol. 24, No. 3, March, 2009, pp. 265-273.

2. John D. Crabtree, Dinesh P. Mehta, *Automated Reaction Mapping*, **ACM Journal of Experimental Algorithmics**, Vol. 13, February, 2009, Article 1.15, 29 pages.

3. Yan Feng, Dinesh P. Mehta, *Module Relocation to Obtain Feasible Constrained Floorplans*, **IEEE Transactions on Computer-aided Design**, Vol. 25, No 5, May 2006, pp. 856-866.

4. Sahar Idwan, Dinesh P. Mehta, Mario A. Lopez, *Fast Pursuit of Mobile Nodes using TPR Trees*. **International Journal on the Foundations of Computer Science**, Vol. 15, No 5, October 2004, pp. 753-772.

5. Yan Feng, Dinesh P. Mehta, Hannah Yang, *Constrained Floorplanning using Network Flows*. **IEEE Transactions on Computer- aided Design**. Vol. 23, No. 4, April 2004, pp. 572-580.

6. Brad Williams, Dinesh P. Mehta, Tracy Camp, William Navidi, *Predictive Models to Rebroadcast in Mobile Ad Hoc Networks*. **IEEE Transactions on Mobile Computing**, Vol. 3, No. 3, July-September 2004, pp. 295-303.

7. Keishi Sakanushi, Yoji Kajitani, Dinesh P. Mehta, *The Quarter-State Sequence Floorplan Representation*. **IEEE Transactions on Circuits and Systems - I**, Vol. 50, No. 3, March 2003, pp. 376-386.

8. Krishna M. Kavi and Dinesh P. Mehta, *Mutual Exclusion on Optical Buses*. **Parallel Processing Letters**, Vol. 12, Nos. 3&4, December 2002, pp. 341-358.

9. Dinesh P. Mehta and Vijay Raghavan, *Decision Tree Approximations of Boolean Functions*, **Theoretical Computer Science**, Vol. 270, No 1-2, January 2002, pp. 609-623.

10. Sean Liao, Mario Lopez, and Dinesh P. Mehta, *Constrained Polygon Transformations for Incremental Floorplanning* **ACM Transactions on Design Automation of Electronic Systems**. Vol. 6, No. 3, July 2001, pp. 322-342.

11. Dinesh P. Mehta and Naveed Sherwani, *On the use of Flexible, Rectilinear Blocks to obtain Minimum-Area Floorplans for Mixed Block and Cell Designs*. **ACM Transactions on the Design Automation of Electronic Systems**, Vol 5, No. 2, January 2000, pp. 82-97.

12. Dinesh P. Mehta and Erica Wilson, *Parallel Algorithms for Corner Stitching*. **Concurrency: Practice and Experience**, Vol 10(15), 1998, pp. 1317-1341.

13. Dinesh P. Mehta, *CLOTH_MEASURE: A Software Tool for Estimating the Memory Requirements of Corner Stitching Data Structures*, **VLSI Design**, Vol. 7, No. 4, 1998, pp. 425-436.

14. Dinesh P. Mehta, *Estimating the Memory Requirements of the Rectangular and L-shaped Corner Stitching Data Structures*, **ACM Transactions on the Design Automation of Electronic Systems**. Vol. 3, No. 2, April 1998, pp. 272-284.

15. Dinesh P. Mehta and Sartaj Sahni, *Models, Techniques, and Algorithms for Finding, Selecting, and Displaying Patterns in Strings and other Discrete Objects*, **The Journal of Systems and Software**. Vol. 39, December 1997, pp. 201-221.

16. Dinesh P. Mehta and George Blust, *Corner Stitching for Simple Rectilinear Shapes*, **IEEE Transactions on Computer-aided Design**, Vol. 16, No. 2, February 1997, pp. 186-198.

17. Mario A. Lopez and Dinesh P. Mehta, *Efficient Decomposition of Polygons into L-shapes with Applications to VLSI Layouts*, **ACM Transactions on Design Automation of Electronic Systems**, Vol. 1, No. 3, July 1996, pp. 371-395.

18. Dinesh P. Mehta and Sartaj Sahni, *Computing Display Conflicts in String Visualization*, **IEEE Transactions on Computers**, Volume 43, Number 3, March 1994, pp. 350-361.

19. Dinesh P. Mehta and Sartaj Sahni, *A Data Structure for Circular String Analysis and Visualization*, **IEEE Transactions on Computers**, Volume 42, Number 8, August 1993, pp. 992-997.

8.4 Conference Publications

Acceptance rates of conferences are indicated when known.

1. M. V. Panduranga Rao, A. Ahuja, S. Iyengar, K. Iyer, R. Khade, S. Lodha, D. Mehta, B. Nagy, *A minimum-variance method for problems in radio antenna placement (abstract)*, **Scientific Programme and Book of Abstracts of The Low-Frequency Radio Universe**, 8-12 December, 2008, Pune, India, pp. 131.

2. John D. Crabtree, Dinesh P. Mehta, J. Thomas McKinnon and Anthony M. Dean, *Improved Algorithms for Reaction Mapping (abstract)*, **4th Annual Rocky Mountain Bioinformatics Conference**, December 1-3 2006, Snowmass/Aspen, USA.

3. Sahar Idwan and Dinesh P. Mehta, *Accelerated Pursuit Using Hierarchal Graphs*, **Proceedings of 2nd Jordan International Conference on Computer Science and Engineering**, December 5-7 2006, Al-Salt, Jordan, pp. 104-110.

4. Sahar Idwan and Dinesh P. Mehta, *Fast Probablistic Pursuit of Mobile Entities in Road Networks*, **Proceedings of Grace Hopper Celebration of Women in Computing**, October 4-7 2006, San Diego, USA, pp. 437-444.

5. Yan Feng and Dinesh P. Mehta, *Heterogeneous Floorplanning for FPGAs*, **VLSI Design 2006**, January 2-6 2006, Hyderabad, India (**Acceptance Rate (long papers): 27%**).

6. Sahar Idwan and Dinesh P. Mehta, *Fast Pursuit of Mobile Nodes in Road Networks*, **Proceedings of the 2005 International Arab Conference on Information Technology, AcIT2005**, Dec 6-8, 2005, Amman, Jordan, pp. 519-526.

7. Yan Feng and Dinesh P. Mehta, *Constrained Floorplanning with Whitespace*, **VLSI Design 2004**, January 5-9 2004, Mumbai, India (**Acceptance rate: 23%**).

8. Kun Gao and Dinesh P. Mehta, *Floorplan Classification Algorithms*, **VLSI Design 2004**, January 5-9 2004, Mumbai, India (**Acceptance rate: 23%**).

9. Dinesh P. Mehta, Mario Lopez, and Lan Lin, *Optimal Coverage Paths in Ad-hoc Sensor Networks*, **IEEE International Conference on Communications (ICC 2003)**, May 11-15, Anchorage, Alaska. (**Acceptance rate: 37%**).

10. Yan Feng, Dinesh P. Mehta, and Hannah Yang, *Constrained "Modern" Floorplanning*, **International Symposium on Physical Design**, April 6-9, 2003, Monterey, CA. ACM Press. (**Acceptance rate: 31%**).

11. Dinesh P. Mehta, Carl Shetters, and Don Bouldin, *Scheduling a Chain of Coarse-Grained Tasks on an Array of Reconfigurable FPGAs*, Abstract, **Tenth ACM International Symposium on Field Programmable Gate Arrays (FPGA 2002)**, p. 253.

12. Krishna Kavi and Dinesh P. Mehta, *Mutual Exclusion on Optical Buses*, **Proc. of the ISCA 13th International Conference**, Las Vegas, 2000, pp. 250-255.

13. Dinesh P. Mehta and Vijay Raghavan, *Decision Tree Approximations of Boolean Functions*, **Proceedings of the Thirteenth Annual Conference on Computational Learning Theory (COLT)**, July 2000.

14. Dinesh P. Mehta and Naveed Sherwani *A Minimum-Area Floorplanning Algorithm for Mixed Block and Cell Designs*, **Sixth Great Lakes Symposium on VLSI**, 1996, pp. 56-59.

15. Mario A. Lopez and Dinesh P. Mehta *Partitioning Algorithms for Corner Stitching*, **Sixth Great Lakes Symposium on VLSI**, 1996, pp. 200-205.

16. Dinesh P. Mehta, *Estimating the Memory Requirements of the Rectangular and L-shaped Corner Stitching Data Structures*, **Fourth Great Lakes Symposium on VLSI**, 1994, pp. 34-37.

17. George Blust and Dinesh P. Mehta, *Corner Stitching for L-shaped tiles*, **Third Great Lakes Symposium on VLSI**, 1993, pp. 67-68.

18. Dinesh P. Mehta and Sartaj Sahni, *Models and Techniques for the Visualization of Labeled Discrete Objects* **1992 ACM Symposium on Applied Computing**, 1992, pp. 1224-1233.

19. Dinesh P. Mehta and Sartaj Sahni, *Computing Display Conflicts in String and Circular String Visualization*, **Third Symposium on Combinatorial Pattern Matching**, 1992, pp. 241-258.

9 PRESENTATIONS

9.1 Seminars/Colloquia

- Bloomsburg University, 1992.

- University of Tennesee Space Institute, 1992.

- University of Tennesee at Knoxville, 1992.

- Intel Corporation, 1995.

- Intel Corporation, 1996.

- University of Tennesee at Knoxville, 1997.

- University of Alabama in Huntsville, 1999.

- Vanderbilt University, 1999.

- Northwestern University, 1999.

- Colorado School of Mines, 2000.

- Clemson University, 2000.

- Old Dominion University, 2000.

- University of Texas at San Antonio, 2000.

- University of Oklahoma, 2000.

- Xilinx Corporation, 2001.

- StorePerform Corporation, 2004.

- University of Colorado Denver, 2005.

- Tata Consultancy Services, 2005.

- OpenSilicon, 2007.

- Texas Instruments, 2007.

- Tata Consultancy Sevices, 2007.

- Indian Statistical Institute, 2007.

- Department of Physics, Colorado School of Mines, 2008.

9.2 Conference Presentations (contributed)

- Talk: *Chip Floorplanning*, **FRACTALS workshop**, February 10, 2007, Fort Collins, USA.

- Talk: *Improved Algorithms for Reaction Mapping*, **4th Annual Rocky Mountain Bioinformatics Conference**, December 1-3 2006, Snowmass/Aspen, USA [presenter: John Crabtree].

- Talk: *Accelerated Pursuit Using Hierarchal Graphs*, **2nd Jordan International Conference on Computer Science and Engineering**, December 5-7 2006, Al-Salt, Jordan [presenter: Sahar Idwan].

- Talk: *Fast Probablistic Pursuit of Mobile Entities in Road Networks*, **Grace Hopper Celebration of Women in Computing**, October 4-7 2006, San Diego, USA [presenter: Sahar Idwan].

- Talk: *Heterogeneous Floorplanning for FPGAs*, **VLSI Design 2006**, January 3-7 2006, Hyderabad, India.

- Talk: *Fast Pursuit of Mobile Nodes in Road Networks*, **AcIT2005**, Dec 6-8 2005, Amman, Jordan [presenter: Sahar Idwan].

- Poster: *A Tool for Identifying Proteins from MALDI-TOF Spectra*, **The Rocky Mountain Bioinformatics Conference**, December 10-12, Aspen, Colorado, Rachana Rao, Krzysztof Cios, Dinesh Mehta [presenter: Krzysztof Cios].

- Talk: *Constrained Floorplanning with Whitespace*, **VLSI Design 2004**, January 5-9 2004, Mumbai, India.

- Talk: *Floorplan Classification Algorithms*, **VLSI Design 2004**, January 5-9 2004, Mumbai, India

- Talk: *Optimal Coverage Paths in Ad-hoc Sensor Networks*, **IEEE International Conference on Communications (ICC 2003)**, May 11-15, Anchorage, Alaska.

- Talk: *Constrained "Modern" Floorplanning*, **International Symposium on Physical Design**, April 6-9, 2003, Monterey, CA [presenter: Yan Feng].

- Poster: *Scheduling a Chain of Coarse-Grained Tasks on an Array of Reconfigurable FPGAs*, **Tenth ACM International Symposium on Field Programmable Gate Arrays (FPGA 2002)**, Monterey, California.

- Talk: *Mutual Exclusion on Optical Buses*, **The 13th ISCA International Conference**, Las Vegas, 2000 [presenter: Krishna Kavi].

- Talk: *Decision Tree Approximations of Boolean Functions*, **The Thirteenth Annual Conference on Computational Learning Theory**, July 2000 [presenter: Vijay Raghavan].

- Talk: *A Minimum-Area Floorplanning Algorithm for Mixed Block and Cell Designs*, **Sixth Great Lakes Symposium on VLSI**, 1996, Ames, Iowa.

- Talk: *Partitioning Algorithms for Corner Stitching*, **Sixth Great Lakes Symposium on VLSI**, 1996, Ames, Iowa.

- Talk: *Estimating the Memory Requirements of the Rectangular and L-shaped Corner Stitching Data Structures*, **Fourth Great Lakes Symposium on VLSI**, 1994, Notre Dame, Indiana.

- Talk: *Corner Stitching for L-shaped tiles*, **Third Great Lakes Symposium on VLSI**, 1993, Kalamazoo, Michigan.

- Talk: *Models and Techniques for the Visualization of Labeled Discrete Objects*, **1992 ACM Symposium on Applied Computing**, Kansas City, 1992.

- Talk: *Computing Display Conflicts in String and Circular String Visualization*, **Third Symposium on Combinatorial Pattern Matching**, Tucson, 1992.

10 AWARDS & HONORS

- CSM Graduate Students and the CSM Alumni Association Outstanding Faculty Award, Fall 2008.

- CSM Graduate Students and the CSM Alumni Association Faculty Award, Fall 2007.

- Member of team selected as Finalist for the Daniel H. Wagner Prize for Excellence in Operations Research Practice, 2004 (Based on S. Stoddard's Ph.D. dissertation),

- Senior Member, IEEE (2004).

- Listed in Marquis Who's Who in Science and Engineering, Millenium Edition (2000-2001).

- 1996-97 UTSI Vice-President's Teaching Excellence Award.

- Departmental award for performance on Ph.D. Written Preliminary Examination at the University of Minnesota. (1989)

- Ranked in the top 100 from among over 60,000 students in the All-India Joint Entrance Examination for the Indian Institute of Technology, 1983.

11 UNIVERSITY SERVICE

- Assistant Department Head, Department of Mathematical and Computer Sciences (2004-2008).

- CSM Faculty Senate (2003-2006). Senate Representative to Undergraduate Council (2004-2006).

- Hosted Profs Guan Zhijin, Qiu Jianlin, and Liu Weifu, visiting faculty from the Nantong Institute of Technology, Nantong, Jiangsu, China (September 2003 - January 2004).

- CSM Faculty Advisor, Asian Students Association (2003-2005).

- CSM Math and CS Dept Computer Science Faculty Search Committee (2000-2002, 2003-2008). Chair of committee in 2001-2002, 2003-2008.

- CSM Math and CS Dept Mathematics and Computer Science Education Faculty Search Committee (2007-2008).

- Faculty member responsible for administering combined BS-MS program in Computer Science.

- CSM Math and CS Dept Promotion and Tenure Committee Chair (2007-2008).

- CSM Math and CS Dept Executive Committee (2000-2001).

- CSM Math and CS Dept Graduate Committee (2000-2001, 2003-2006, 2007-2008).

- CSM Math and CS Dept IT Professional Search Committee (2000,2004).

- CSM Math and CS Colloquium Coordinator (2002-2003).

- UTSI Computer Science Faculty Search Committee, 1992-93.

- UTSI Library Committee, 1992-1998.

- UTSI Computer Center Advisory Committee, 1992-93.

- Vice-President's Award for Teaching Excellence Selection Committee, 1997-2000. (Chair, 1999).

- UTSI representative to the University of Tennessee Faculty Senate, 1998-2000

- UTSI Tenure & Promotions Committee, 1998-2000

- UTSI Faculty Affairs Committee, 1999-2000