

FILLIA MAKEDON
Professor of Computer Science
Dartmouth College

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Principal Fields of Study

Current Areas

Multimedia, software engineering, biomedical informatics theory and systems, human computer interaction, privacy, cybersecurity, negotiation, ubiquitous computing, user interface design, information access, peer to peer networks, social informatics, e-government, electronic commerce, sensor networks, image processing and visualization.

Previous Areas

Combinatorial algorithms, Graph Layout Theory, Graph Partitioning Algorithms, VLSI Physical Design Automation Algorithms, Circuit Design Algorithms and Heuristics, Circuit Testing, Parallel Computation, Algorithm Visualization and Computer Science Education.

Education

8/82 Ph.D. in Computer Science, Dept. of Electrical Engineering and Computer Science, Northwestern Univ.
6/79 Master of Science in Computer Science, Electrical Engineering and Computer Science, Northwestern Univ.
6/71 Master of Science in Biophysics, (and all Ph.D. Candidacy requirements), The Pennsylvania State Univ.
6/68 Bachelor of Science (Biology-Chemistry) w. honors, Skidmore College, Saratoga Springs, N.Y.

Professional Positions

1991-present Professor, Computer Science, Dartmouth College
1991-present Director, Dartmouth Experimental Visualization Laboratory (DEVLAB)
1990-1991 Associate Professor, Computer Science, The University of Texas at Dallas
1985-1991 Assistant Professor, Computer Science, The University of Texas at Dallas
1983-1985 Assistant Professor, Dept. of Computer Science, The Illinois Institute of Technology, Chicago
1982-1983 Post-doctoral researcher, Computer Science, National Technical University of Athens
1977-1982 Research and Teaching Fellow, Dept. of Electrical Eng. and Computer Science, Northwestern U.
1971-1973 Research Fellow, Cancer Research Laboratory, Department of Biophysics, University of Chicago
1969-1973 Research Assistant, Department of Biophysics, Penn State Univ. (Professor Paul Todd advisor)
1965-1968 Fulbright Scholar, Skidmore College, Saratoga Springs, NY.

Other Professional Appointments

2003-present Scientific Advisor, Software Knowledge Engineering Laboratory (SKEL), National Center for Scientific Research (NCSR) – Demokritos, Athens Greece.
2003-present Faculty, Fellows Training Program, Dartmouth Medical School, Hal Swartz Director.
2000-present ISTS Research Faculty, Institute for Security Technology Studies, Dartmouth College
(<http://www.thei3p.org/fellowships.html>)
1999-present Project Director, www.GREeCOM.org, Research Center for E-Commerce Technologies.
1997-present Director, Masters Program, Dartmouth College
1995-present Senior Research Faculty, Brain Imaging Laboratory, DHMC Dartmouth Hospital
1989-present Adjunct Professor, Department of Information Sciences, The University of The Aegean, Greece

1991-2000	Adjunct Professor, Dept. of Mathematics, Aegean University, Samos, Greece.
1995-1999	Consultant, The Foundation of the Hellenic World, Athens, Greece, Museums of the Future
1997-1998	Consultant, Chicana Art Project, San Jose Multimedia Museum, NEH Project.
1995-1996	Bremer Associates, Cambridge, MA. Multimedia Retrieval and Government Documents
1996-1998	Research Scientist, The Lambrakis Research Foundation, Athens, Greece
1995- 1997	Senior Research Scientist, Foundation of the Hellenic World, Athens, Greece
1995	Research Advisor on Digital Libraries, Visiting Fellow, Burndee Library, Dibner Institute, (MIT)
1995-1996	Visiting Research Scientist, Laboratory for Computer Science (LCS, MIT)
1992-1997	Director, The Dartmouth Institute of Advanced Graduate Studies (DAGS)
1991-1997	Adjunct Professor, Thayer School of Engineering, Dartmouth College
1987-1991	Director, The Computer Learning Research (CLEAR) Center, U. Texas at Dallas
1985-1992	Research Visiting Faculty, the Computer Technology Institute, University of Patras, Greece

Thesis Dissertations

Title:	<i>Graph Layout Problems and Their Complexity</i> , Ph.D. Thesis, Aug 1982, Electrical Engineering and Computer Science Department, Northwestern University, Evanston, IL 60201.
Advisor:	Gilbert Krulee, Professor of Electrical Engineering and Computer Science, Northwestern University
Title:	<i>Carcinogens and DNA Repair</i> , Ph.D. Thesis Title, Biophysics Department, Pennsylvania State University, 1969-1971 (Note: completed all Ph.D. degree requirements except thesis: unable to continue lab-based science on current research fellowship because of two infant children)
Advisor:	Paul Todd, Professor of Biophysics, The Pennsylvania State University

Master's Degree Theses

Title:	<i>On Languages Defined by Tree Controlled Grammars</i> , Computer Science MS Thesis, Electrical Engineering and Computer Science Department, Northwestern University, 1979.
Title:	<i>Effects of Ionizing Radiation on the Reproductive Capacity and DNA Integrity of Cultured Chinese Hamster Cells</i> , Department of Biophysics, The Pennsylvania State University, 1969, Paul Todd, Professor of Biophysics, MS and Ph.D. Thesis advisor.

Honors

- Cooperating Member, Digital Libraries Committee, Ionian University, Greece
<http://dlib.ionio.gr/en/Lab/Members/Membersindex.htm> (2004-present)
- CSTR Center (Cybersecurity Technology Center) Affiliate, Research Faculty, Institute of Security and Technology Studies.
- Invited, Government Bioterrorism Task Force Committee
- Appointed, Fulbright Board of Directors, NH Chapter, 2003-present.
- Panelist and site reviewer for the National Science Foundation (4 times), 2003-2004.
- Adjunct Research Professor, the Dartmouth Advanced Imaging Center (J. D. Pearlman Director), 2002-present.
- Adjunct Research Professor, the Brain Imaging Laboratory(BIL), DHMC (Saykin Director) (1987-present)
- Consultant, U. Texas Health Science Center, Medical Physics, Dallas, Texas, 2003-present.
- Technical Consultant, Illinois Institute of Technology, project automating fMRI data distribution, 2003.
- Technical Consultant, Mass General Hospital-Harvard U., tracking brain tumor development, A. Tzika Director, (2002-present).
- "Medical Interfaces: Automating Data Collection, Integration, Sharing and Analysis", Invited Parallel Session Chair, Intern. Conf. on Computer Human Interaction (CHI'2003), June 22-27, 2003, Crete,
- Panelist & site reviewer, National Science Foundation 2002-4 (9x), 2001 (3x), 2000 (2x), 1999-1994 (8x)
- Member of seven international conference program committees.
- Member of five journal editorial boards (1997-present).

- Fulbright Senior Research Professorship Award (1999).
- Associate Chair, Program Committee, ACM'99 Multimedia Conf., Germany
- WebNet Conf., Top paper award (1999).
- Advisory Board of *Health Member: Supplement Medical Education*. German Medline www.gma.mwn.de)(1998-present).
- PI of several NSF grants and Co-PI and Investigator in NIH and NIJ grants
- Senior Editor of the Electronic Journal on E-Commerce Tools and Applications, eJETA.org
- Invited Speaker, WEBNET 2000, Oct 31-Nov.3, San Antonio, TX , “Human Brain Data and the Web”.
- Senior Faculty Research Award, Dartmouth College, “Computational Methods Towards Early Detection of Alzheimer’s”, 2001.
- Invited Paper, “Fusing Spatial and Intensity Information for Tracking Tumors”, 8th World Congress on Advances in Oncology and 6th Intern. Symposium on Molecular Medicine, 16-18 Oct., 2003.
- Invited speaker, 9th World Congress on Advances in Oncology and 7th International Symposium on Molecular Medicine, Hersonissos, Crete, Oct. 14-19, 2004.
- Session Chair, Intern. Conf. on Computer Human Interaction (CHI'2003), June 22-27, 2003, Crete, Greece.
- Invited Presentation, Neuroscience Symposium, 9/27/02, Ten Years of Advanced Clinical Neuroscience and Neuroimaging at Dartmouth, “Sharing Neuroimaging Data”.
- Technical Collaborator of Multimedia Information Repository, A Computer-supported language Effort (MIRACLE), e-learning, multimedia project, European Commission <http://www.hyperwave.com>.
- Organizing Committee, 6th European Conf. on Digital Libraries (ECDL), Rome on Sept. 2002.
- Invited Member of International Worlddidac Awards Jury, Jan. 2000 and Jan. 2002, Zurich.
- Invited Member, Intern. Institute for Electronic Commerce, CIMIC Rutgers Univ., 1999-2001.
- Invited U.S. representative for Center of Excellence, Austrian Government 2001
- Senior Research Professorship, Fulbright Award 2000, U. Aegean, "Multimedia and Electronic Commerce"
- Invited Speaker, The workshop on Cultural Technology and Communication studies, U. Aegean, Mytilini 6/30-7/2, 2000, “Multimedia Digital Libraries of the Future”.
- Invited Speaker, WEBNET 2000, Oct 31-Nov.3, San Antonio, TX “Human Brain Data and the Web”.
- Organizing Committee, 6th European Conf. on Digital Libraries (ECDL), Rome, Italy, Sept.16-18, 2002.
- NIH Faculty Mentor for Heather Wishart and Laura Flashman, Brain Imaging Lab, DHMC.
- Associate Chair, Program Committee, ACM Multimedia Conference 1999, Darmstadt, Germany.
- Best paper award, WebNet 1998 conference.
- Computer Research Association (CRA) Mentorship Distributed Award, 1997.
- Invited Speaker, International Conference on Didactics, Patras, Greece, May 1997.
- Invited Speaker, EdMedia'97, World Conf. on Educational Multimedia and Hypermedia; World Conference on Educational Telecommunications, Calgary, June 14-19, 1997.
- Invited Speaker WEBNET'96, San Francisco, Oct. 17-19, 1996,
- Women In Science (WISP) Recognition for significant contributions , Dartmouth College,1995.
- Editorial Board, Journal for Network and Computers Applications, 1994-present.
- Chair, SIGACT Electronic Publishing Board (1994-1995).
- Founding Member and Editor, Journal for Universal Computer Science (1994-1997).
- Invited speaker, Dartmouth Alumni Workshop, Life in the Multimedia Age, 10/94, NY, NY.
- Invited speaker, Dartmouth Alumni Conf., 5/7,1994, “Quakes in the Information Highway”.
- Invited Paper, SPIE Conference, Boston, MA, SPIE: Bellingham, WA, 1994
- Invited presentation, Hermes Mathematical Society, Univ. of Athens, Greece ,1994.
- Invited Speaker, EDMEDIA'94, Two Presentations, Vancouver, Canada.
- University-wide Task, Library of the Future, Dartmouth College, 1993.
- Best Paper Award, joint w. student James Matthews, VideoScheme, ACM Multimedia Conf., June 1993.
- Design Automation Conference Award on “Pseudoexhaustive Test Pattern Generation”, 1993.
- Invited Reviewer, National Science Foundation 1993 CISE.
- Invited Presentation, 18th Intern. Workshop, Graph-Theoretic Concepts in Computer Science, WG'92, Dagstuhl, Germany, 18-20/6/92,
- Design Automation Conference Award, student research in VLSI, 1992.
- Design Automation Conference Award, student research in VLSI, 1991.
- Chaired Professorship, University of Klagenfurt, Austria, 6/91; offer declined 7/91.
- University of Texas at Dallas - Best Service Faculty Award, 1991, EECS Dept.

- Invited presentation (w. S. Tragoudas), IFIP Workshop, Circuit Partitioning, Siemens A.G., Lenggries-Munich, Germany, January, 1990.
- Design Automation Conference Award, student research in VLSI, 1990
- Research Faculty, Center of Parallel and Distributed Computing, U. North Texas, Denton, Texas, (1990-1991)
- Senior Fulbright Research Professorship Award ,1989, University of Freiburg, Germany (declined)
- Visiting Research Professor, Computer Technology Institute, U. Patras, Greece, 1989-1992.
- ACM/SIGDA (VLSI Design Automation) Award, VLSI research, 1989-1990.
- ACM/SGDA Library Award, 1988-1989.
- ACM/SGDA Library Award, 1987-1988.
- Faculty Research Award, Illinois Institute of Technology, Chicago, IL, 1983-1984.
- Teaching and Research Assistantship awards, Electrical Engineering and Computer Science Department, Northwestern U., 1978-1982.
- Research Fellowship Award, Northwestern University, 1981-1982.
- Research Fellowship, Biophysics Dept., Pennsylvania State Univ. 1969-1972.
- Research Fellowship, Biophysics Department, Univ. of Chicago, 1972-1973.
- Dean's List, Skidmore College, 1965-1968.
- Best Foreign Student of the Year Award, Skidmore College, 1968.
- Fulbright Foreign Student Scholarship, undergraduate award, 1965.

Books

1. *Computed Synchronization for Multimedia Applications*, (w. Charles Owen), Kluwer Academic Press, Boston, MA., 1999.
2. *Electronic Multimedia Publishing: Enabling Technologies and Authoring Issues*, F. Makedon and S. Rebelsky editors, Kluwer Academic Press (1998) ISBN 0-7923-8108-4.
3. *Electronic Publishing and the Information Superhighway*. Birkhauser: Boston, MA, 1995. J. Ford, F. Makedon and S. Rebelsky (editors).
4. *Electronic Publishing and the Information Superhighway*. Addison-Wesley Interactive, 1996. A Networked hypermedia conference proceedings, Birkhauser, J. Ford, P. Gloor, F. Makedon, and S. Rebelsky (editors).
5. *Educational Multimedia and Hypermedia, Editors*, P. Carison & F. Makedon, (Eds.), Proceedings of the 1996 ED-MEDIA Conference, AACE: Charlottesville, VA.

Journal and Book Chapter Publications

6. "Spherical mapping for processing of 3-D closed surfaces". Li Shen and Fillia Makedon. J. Image and Vision Computing, in review.
7. "Spatio-temporal modeling of lung images for cancer detection". Li Shen, Wei Zheng, Ling Gao, Heng Huang, Fillia Makedon, and Justin Pearlman. International Journal of Oncology, Special Issue on Computational Analysis and Decision Support Systems in Oncology, 2005, in review.
8. Computational Analysis and Decision Support Systems in Oncology, Special Issue, International Journal of Oncology, F. Makedon, V. Karkaletsis, Ilias Maglogiannis, Guest Editors, D. Spandidos editor, In preparation.
9. "Fast Algorithms to Compute the Force Histogram". Y. Wang, F. Makedon and "R. L. Drysdale. In Submission to Pattern Recognition Journal.
10. "HykGene: An Hybrid Approach for Selecting Marker Genes for Phenotype Classification Using Microarray Gene Expression Data". Yuhang Wang, Fillia Makedon, James Ford, and Justin Pearlman. Accepted by *Bioinformatics* (Journal). In Press.
11. "A SSurface-based Approach for Classification of 3D Neuroanatomic Structures". L. Shen, J. Ford, F. Makedon, and A. Saykin. Intelligent Data Analysis, An International Journal, 8(6), 2004.
12. "Principal Components Analysis of Hippocampal Shape in Schizophrenia". Saykin, A. J., Flashman, L. A., McHugh, T., Pietras, C., McAllister, T. W., Mamourian, A. C., Vidaver, R., Shen, L., Ford, J. C., Wang, L., & Makedon, F. (2003). Schizophrenia Research, 60(1), 206.

13. "Motor-Related Brain Activity in Multiple Sclerosis", w. H. Wishart et al, to Brain Journal, in submission, 3/03.
14. "Data Mining in Brain Imaging", J. Statistical Methods in Medical Research, w. V. Megalooikonomou, J. Ford, L. Shen, Invited Paper, Statistical Methods in Medical Research, vol. 9, pp. 359-394, 2000.
15. "Multimedia publishing systems," (w. C. Owen and S. ReBELsky), Chapter in *Handbook of Multimedia Computing*, CRC Press LLC, 1999, 457-482.
16. "Cross-modal Information Retrieval," (w. C. Owen), chapter in *Handbook of Internet and Multimedia Computing*, CRC Press LLC, 1999, 109-130.
17. "Cross-modal Information Retrieval," (w. C. Owen), chapter in *Handbook of Multimedia Computing*, CRC Press LLC, 1999, 403-424.
18. "Classification and characterization of digital watermarks for multimedia data," (w. J. Ford and C. Owen), chapter in *Handbook of Multimedia Computing*, CRC Press LLC, 1999, 299-316.
19. "ASML: Automatic site markup language," (w. C. Owen), *Multimedia Tools and Applications*, Volume 17, 113-139, 1998.
20. "The roles of Video in the Design, Use, and Construction of Interactive Electronic Conference Proceedings," S. ReBELsky, F. Makedon, C. Owen, J. Ford, P. Metaxas, and P. Gloor), *Journal of Universal Computer Science*, Springer-Verlag, Volume 4, Number 6, 1998.
21. "Parallel text alignment," (w. C. Owen, J. Ford, T. Steinberg, and C. Metaxaki-Kossionides), International Journal of Digital Libraries, Special Issue of International Journal on Digital Libraries containing invited. ECDL '98 papers, in Computer Science Lecture Note Series, Springer Verlag, C. Nikolaou and C. Stephanidis Editors, IJODL Special Issue "In the tradition of Alexandrian Scholars" dedicated to ECDL '98 published in 2000.
22. "Documentation Multi-targeting", (w. C. Owen. M. Sasles, T. Prizio, Ann de Bord), invited paper to J. Network Computer Applications (1999), also Best Paper Award in WebNet World Conf. (11/98, Orlando).
23. "Ancient Museum Collections and the Web," (w. J. Ford, C. Owen, and S. ReBELsky), *Journal for Universal Computer Science* (1998).
24. "ASML: Automatic Site Markup Language," (w. C. Owen), *Multimedia Tools and Applications*, Kluwer Press, Chapter of Special Issue on Electronic Multimedia Publishing, Makedon & ReBELsky editors, 1998.
25. "Resource-Limited Hyper-Reproductions: Electronically Reproducing and Extending Lectures", *Multimedia Tools and Applications* 6:2, 181-197, J. Ford, F. Makedon, and S. ReBELsky. March 1998.
26. "Obstacles in Web Multimedia Publishing: Bringing Conference Proceedings On-line", (w. P. Gloor & O. Van Ligten), *Special Issue, Multimedia Authoring, Journal of Multimedia Tools and Applications*, 1998.
27. "VLSI Algorithms and Architectures", Springer Verlag 1984, co-editor w. K. Melhorn and P. Spirakis.
28. "Approximation Algorithms for the Bandwidth Minimization Problem for a Large Class of Trees" (w. J. Haralambides), *Theory of Computing Systems*, Vol. 30, pp. 67-90, 1997.
29. "Ancient Museum Collections and the Web," (w. J. Ford, C. Owen, and S. ReBELsky), *Journal for Universal Computer Science*.
30. "ASML: Automatic Site Markup Language," (w. C. Owen), *Multimedia Tools and Applications*, Kluwer Press, Chapter of special issue on Electronic Multimedia Publishing, Makedon and ReBELsky editors, 1998.
31. "Approximate Solutions for Graph and Hypergraph Partitioning," (w. S. Tragoudas), Chapter in *Lecture Notes on Series of Computing*, vol.2, special issue on *Algorithmic Aspects of VLSI Layout*, editors M. Sarrafzadeh and D. T. Lee, World Scientific Publishers, 1993, pp. 133-167.
32. "Interactive Multimedia Publishing Systems", J. Ford, F. Makedon, C. B. Owen, and S. A. ReBELsky, in B. Fuhr (ed.) *Multimedia Tools and Applications*. Boston, MA: Kluwer Academic Press, pp. 359-392, 1996.
33. "Optimal Algorithms for the Many to One Packet Routing on Two-Dimensional Meshes," (w. A. Symvonis), *Journal of Microprocessors and Microsystems*, Butterworth-Heinemann Ltd, vol. 17, No 6, pp. 361-367 (1993).
34. "A Simple Linear-Time Algorithm for the Recognition of Bandwidth-2 Biconnected Graphs," w. D. Sheinwald and Y. Wofsthal," accepted (3/10/93) in *International Processing Letters* 46, pp. 103-107.
35. "Conference on a Disk: An Experiment in Hypermedia Publishing," (w. P. Metaxas, J. Matthews, P. Gloor, M. Cheyney, D. Johnson), *Journal of Communication of ACM*, Jan. 1996, pp. 51-60.
36. "Flit Serial Packet Routing on Meshes and Tori," (w. A. Symvonis), in the *Mathematical Systems Theory Journal*, 29, No. 4, pp. 311-330 (1996), Rao Kosaraju and Arnie Rosenberg editors.
37. "Approximate Solutions for Graph and Hypergraph Partitioning," (w. S. Tragoudas), Chapter in *Lecture Notes on Series of Computing*, vol.2, special issue on *Algorithmic Aspects of VLSI Layout*, editors M. Sarrafzadeh and D. T. Lee, World Scientific Publishers, 1993, pp. 133-167.

38. "Optimal Algorithms for the Many to One Packet Routing on Two-Dimensional Meshes," (w. A. Symvonis), *Journal of Microprocessors and Microsystems*, Butterworth-Heinemann Ltd, vol. 17, No 6, pp. 361-367 (1993).
39. "A Simple Linear-Time Algorithm for the Recognition of Bandwidth-2 Biconnected Graphs," w. D. Sheinwald and Y. Wofsthal," accepted (3/10/93) in *International Processing Letters* 46, pp. 103-107.
40. "A Visualization System for Correctness Proofs of Graph Algorithms," (w. P. Gloor, Donald B. Johnson, and P. Metaxas), in the *Journal of Computer Science Education* 3:(3):315-333, 1992: 1993
41. "Optimal Algorithms for Multipacket Routing Problems on Rings," (w. A. Symvonis), *Journal of Parallel and Distributed Computing*, Vol. 22, No. 1, pp. 37-43, July 1994.
42. "Circuit Partitioning into Small Sets," (w. S. Tragoudas and M. Farrel), *Journal of Microprocessors and Microsystems*, pp. 471-481, vol. 16, no. Butterworth-Heinemann Ltd, 1992.
43. "An Efficient Heuristic for Permutation Packet Routing on Meshes w. Low Buffer Requirements," (w. A. Symvonis), in *IEEE Journal on Transactions on Parallel and Distributed Systems*, (paper # 0363), volume 4, No.3, March 1993, pp. 270-276.
44. "ILONA: An advanced Computer Aided Instruction Tutorial System for the Fundamentals of Logic," (w. O. Mayer and G. E. Oberem), *Intern. J. of Computers in Education*, J7/92.
45. "Bandwidth Minimization: An Approximation Algorithm for Caterpillars" (w. J. Haralambides and B. Monien), in *Journal of Mathematical Systems Theory*, 24, pp. 169-177, 1991.
46. "A 2n-2 Step Algorithm for Routing in an n x n Array w. Constant Size Queues," (w. T. Leighton & I. Tollis), in *Algorithmica* #416 1994, paper #CKW89004.
47. "Improved Algorithms for Two-Dimensional Grid Routing," (w. D. Bhatia and F.T. Leighton), *Journal of Algorithms*.
48. "HyperCOSTOC: A Comprehensive Computer-Based Teaching System," (w. H. Huber and H. Maurer), *Journal for Microcomputer Applications* 12, pp. 293-317, 1989.
49. "Computer Learning: A Step Beyond the Book," (w. H. Maurer and T. Ottmann), in HECTOR, v.I, *New Ways in Education and Research*, (eds. B. Krause and A. Schreiner), Springer Verlag, 1988, pp. 441-449.
50. "Presentation-type CAI in Computer Science Education at University Level" (w. H. Maurer and T. Ottmann), *Journal of Microcomputer Applications* 10 (1987), pp. 283-295.
51. "Topological Bandwidth" (w. C. H. Papadimitriou and I. H. Sudborough), *SIAM Journal for Algebraic and Discrete Methods* 6,3 (July 1985), pp. 418-444.
52. "Polynomial Algorithms for the Min Cut Problem on Degree Restricted Trees," (w. M-J. Chung, I. H. Sudborough and J. Turner), *SIAM J. of Computing*, 14,1 (Feb. 1985), pp. 158-177.
53. "On Minimizing Width in Linear Layouts: (w. I. H. Sudborough), *J. Discrete Applied Mathematics* 23 (1989) (243-265), North Holland; also: in the Proceedings of the Intern. Conf. on Automata, Languages, and Programming Languages (ICALP'83), *1983 Springer Verlag Lecture Notes in CS*, 154, (478-490).
54. "Graph Layout Problems," (w. I. H. Sudborough), *Surveys in Computer Science*, Editor H. Maurer, Bibliographisches Institut, Zurich, Switzerland, 1984, pp. 145-192.
55. "Tumor Classification based on DNA Copy Number Aberrations Determined using SNP Arrays", Yuhang Wang, Fillia Makedon, Justin Pearlman, to the *International Journal of Oncology Special Issue on Computational Approaches, Tools and Systems in Oncology*, in press.

Refereed Conference Publications

56. "A Medical Data Collection System for Sharing Data with Non-medical Collaborators", Tilmann Steinberg, Yuhang Wang, James Ford, Fillia Makedon, submitted to EFMI, Conference on "Health and Medical Informatics Applications - Educational Aspects" of the European Federation for Medical Informatics, March 19-20, 2005, Athens, Greece.
http://ghia.nurs.uoa.gr/efmistic2005/index.asp?page=general_inf
57. "A Platform for Data Sharing in an Open Health Environment", Zhengyi Le, James Ford, and Fillia Makedon, submitted to EFMI, Conference on "Health and Medical Informatics Applications - Educational Aspects" of the European Federation for Medical Informatics, March 19-20, 2005, Athens, Greece.
http://ghia.nurs.uoa.gr/efmi-stc2005/index.asp?page=general_info
58. "Node Clustering Based on Link Delay in P2P Networks", Wei Zheng, Sheng Zhang, Yi Ouyang, Fillia S. Makedon, James Ford. The 20th Annual ACM Symposium on Applied Computing (SAC05-DSGC05), Santa Fe, New Mexico, March 13 -17, 2005

59. Privacy preserving learning in negotiation, Sheng Zhang and Fillia Makedon, to appear in ACM Symposium of Applied Computing (SAC) 2005.
60. "A Clustering-based Approach for Prediction of Cardiac Resynchronization Therapy", Heng Huang, Li Shen, Fillia Makedon, Sheng Zhang, Mark Greenberg, Ling Gao, Justin Pearlman. the 20th Annual ACM Symposium on Applied Computing, Computer Applications in Health Care (CACH) track, 2005.
61. "Functional Analysis of Cardiac MR Images using SPHARM Modeling", Heng Huang, Li Shen, James Ford, Fillia Makedon, Ling Gao, Justin Pearlman. SPIE Medical Imaging 2005 - Image Processing Conference, San Diego, CA, Feb. 2005.
62. "Local Data Protection, for In-Network Processing in Sensor Networks". Yi Ouyang, Zhengyi Le, James Ford, Fillia Makedon, Proceedings of the 25th Intern. Conf. on Distributed Computing Systems. ICDCS 2005, in submission.
63. "Efficient Similarity Retrieval for Temporal Shape Sequences: A Case Study using Cardiac MR Images". Heng Huang, Fillia Makedon, James Ford, Yuhang Wang, Li Shen, Tilmann Steinberg, Ling Gao, and Justin Pearlman. In *Proceedings of the 26th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, pages 3250-3253, San Francisco, California, 2004.
64. "R*-histograms: Efficient Representation of Spatial Relations between Objects of Arbitrary Topology". Yuhang Wang, Fillia Makedon, and Amit Chakrabarti. In *Proceedings of the 12th Annual ACM International Conference on Multimedia*, pages 356-359, New York, New York, 2004.
65. "Generating Fuzzy Semantic Metadata Describing Spatial Relations From Images using the R-Histogram". Yuhang Wang, Fillia Makedon, James Ford, Li Shen, and Dina Goldin. In *Proceedings of the Fourth ACM/IEEE-CS Joint Conference on Digital Libraries*, pp. 202-211, Tucson, Arizona, 2004.
66. "An interactive 3D visualization and manipulation tool for effective assessment of angiogenesis and arteriogenesis using computed tomographic angiography". Li Shen, Ling Gao, Zhenwu Zhuang, Ebo DeMuinck, Heng Huang, Fillia Makedon, and Justin Pearlman. SPIE Medical Imaging 2005, San Diego, California, 12-17 February 2005.
67. "An International Trade Negotiation Framework for E-Government", S. Zhang, F. Makedon, J. Ford, C. Sudborough, Lin Ai, S. Kapidakis, V. Karkaletsis, E. Loukis. Proc. of EGOV 04, Conf., International Conference on Electronic Government (EGOV) 2004. DEXA Conf. Framework, Zaragoza, Spain, Aug. 30-Sept.2, http://falcon.ifs.unilinz.ac.at/news/cfp_egovernment2004.html.
68. "A Hybrid Negotiation Strategy Mechanism in an Automated Negotiation System", Sheng Zhang, Song Ye, Fillia Makedon, and James Ford, ACM E-Commerce'04, page 256-257, May 17-20, 2004, New York City, NY.
69. "Collaboration-Aware Peer-to-Peer Media Streaming", Song Ye and Fillia Makedon, ACM Multimedia 2004, Oct. 10-16, New York, NY USA.
70. "Collaborative Automated Trust Negotiation in Peer-to-Peer Systems", Song Ye, Fillia Makedon, and James Ford, Proceedings in IEEE P2P 2004, Aug. 25-27, Zurich, Switzerland.
71. "Application of Relief-F Feature Filtering Algorithm to Selecting Informative Genes for Cancer Classification using Microarray Data", Y. Wang, F. Makedon. In *Proceedings of the 2004 IEEE Computational Systems Bioinformatics Conference*, pages 497-498, Stanford, California, 2004
72. "R*-histograms: Efficient Representation of Spatial Relations Between Objects of Arbitrary Topology". Yuhang Wang, Fillia Makedon, and Amit Chakrabarti. In *Proceedings of the 12th Annual ACM International Conference on Multimedia*, pages 356-359, New York, New York, 2004.
73. Generating Fuzzy Semantic Metadata Describing Spatial Relations From Images using the R-Histogram. Yuhang Wang, Fillia Makedon, James Ford, Li Shen, and Dina Goldin. In *Proceedings of the Fourth ACM/IEEE-CS Joint Conference on Digital Libraries*, pages 202-211, Tucson, Arizona, 2004.
74. "BP- Neural Network-Based Characterization of Electrographic Magneto-hydrodynamic Signals in MR". Yurong Xu, Z. Wang, F. Makedon, J. Pearlman, In the proceedings of the 26th Annual International Conference of the IEEE in Medicine and Biology Society (EMBS), San Francisco, Sept 2004.
75. "Efficient Similarity Retrieval for Temporal Shape Sequences: A Case Study Using Cardiac MR Images". Heng Huang, Fillia Makedon, James Ford, Yuhang Wang, Li Shen, Tilmann Steinberg, Ling Gao, and Justin Pearlman. In *Proceedings of the 26th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, pages 3250-3253, San Francisco, California, 2004.

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182. "A Model for University Computer Learning Research (CLEAR) Centers," (w. D. Bhatia), Proceedings of the Second International Conference on Human-Computer Interaction, (HCI'87), Hawaii, 10-14/8/87.
183. "CLEAR: Computer Learning Resource Centers", (w. H. Maurer), Proceedings IFIP TC3 International Conf. on Remote Education and Informatics: TELETEACHING '86, N. Holland , v. 1987, (107-119).
184. "Optimizing the Compression of Grids Into Grids," (w. P. Spirakis), WG'85 Proc. of the International Workshop on Graph Theoretic Concepts in Computer Science, Wurtzburg, Germany, 6/85.
185. "On the Complexity of Tree Embedding Problems," (w. C. Simonson and I. H. Sudborough), (1984), *Southeastern Conference on Combinatorics and Graph Theory*, Baton Rouge, La.

Papers in Submission or in Preparation

186. "Machine Learning Models For Cancer Classification Using Loss of Heterozygosity Data Derived from SNP Arrays", submitted to BMC Bioinformatics Journal, Yuhang Wang, Fillia Makedon, Justin Pearlman, **pending**.
187. "Fast surface alignment of 3D spherical harmonic models". Heng Huang, Li Shen, James Ford, and Ling Gao, Fillia Makedon, and Justin Pearlman. CVPR 2005, in review.
188. "Hippocampal morphometry in mild cognitive impairment". Li Shen, Andrew Saykin, John West, Moo K. Chung, Fillia Makedon, et al. Alzheimer's Association International Conference on Prevention of Dementia: Early diagnosis and intervention, Washington, D.C., June 18-21, 2005, in preparation.

189. "A Visualizer for Social Networks Applied to Negotiation", Yan Zhao, Fillia Makedon, Peter Gloor, submitted to EJETA J., Journal of E-Commerce Tools and Applications, **pending**.
190. "Interface Design for Tracking Negotiations", Y. Zhao, F. Makedon, and J. Ford, submitted to EJETA J., Journal of E-Commerce Tools and Applications, **pending**.
191. Spherical Mapping for Processing of 3-D Closed Surfaces. Image and Vision Computing, "Li Shen and Fillia Makedon", in preparation for journal submission.
192. "Local Data Protection for In-Network Processing in Sensor Networks", Yi Ouyang, Zhengyi Le, F. Makedon and J. Ford, submitted to the 25th International Conference on Distributed Computing Systems (ICDCS 2005), paper 1568947416, pending.
193. "Efficient Distributed Collaborative Filtering with Privacy", S. Zhang, W. Wang, and F. Makedon, submitted to SIAM-data Mining 2005, pending

Technical Reports and Software Development

194. CAT (Computer Aided Traversal) Tree: A Personalized HCI Component Applied to Medical Data Collection (2004), developed by K. Cao and J. Pearlman, (sequential pattern-mining of navigation).
195. Supervised development of gene selection (by Yuhang Wang) HykGene software is freely available at <http://www.cs.dartmouth.edu/~wyh/software.htm>.
196. Supervised creation of the NSF-IDM PI Workshop Proceedings in CD Format and on the Web, Boston, MA October 2004.
197. "Building International Scientific Collaboration Through Digital Library Data Exchange Tools", DEVLAB Technical Report, May 2003, F. Makedon.
198. "A Searchable MRI Database", Masters Thesis, Adeel Meer (student), Jan. 2003, Department of Computer Science, Dartmouth College.
199. "Motor-Related Brain Activity in Multiple Sclerosis: Characterization and Clinical Correlates" w. H. A. Wishart, A. J. Saykin^{1,2}, et al. Technical Report, Brain Imaging Laboratory, Dartmouth Hitchcock Medical School, Jan. 2003, Brain Journal.
200. "Hippocampal Structural Changes in Schizophrenia Detected w. Surface Morphology Algorithms", w. L. Shen, J. Ford, A. Saykin, L. Flashman, Neuroscience Day, Jan. 31, 2003, Dartmouth College.
201. "A Searchable MRI-Database of Traces of Regions of Interest", w. A. Meer, A. Saykin, L. Flashman, L. Shen, J. Ford, and T. Steinberg, Dartmouth College Computer Science Department, Hanover, NH, Technical Report DEVLAB-SCENS-03-02, Jan. 2003.
202. "Conference on a Disk": the first networked interactive multimedia conference simulation in various formats, CDROM, WWW, and software) that included Multimedia Networked conference proceedings.
203. "Parallel Computation: Practical Implementation of Algorithms and Machines", editor, (w. P. Gloor and J. Matthews). *1992 Symposium of the Dartmouth Institute for Advanced Graduate Studies in Parallel Computation (DAGS'92)*, CD-ROM, Springer Verlag Publishers, 1992.
204. "Parallel Input/Output", *1993 Symposium of the Dartmouth Institute for Advanced Graduate Studies in Parallel Computation (DAGS'93)*, (w. J. Ford, C. Owen and S. Rebelsky), Interactive Multimedia Conf. Proceedings on the World Wide Web. (<http://devlab.edu>).
205. "Problem Solving Environments", editor, (w. J. Ford, C. Owen, C. Langmead), *1994 Symposium of the Dartmouth Institute for Advanced Graduate Studies in Parallel Computation (DAGS'94)*, Interactive Multimedia Conference Proceedings on the World Wide Web. (<http://devlab.edu>).
206. "Electronic Publishing and the Information Superhighway", editor, (w. J. Ford, C. Owen, C. Langmead, S. Rebelsky), *1995 Symp. of the Dartmouth Institute for Advanced Graduate Studies in Parallel Computation (DAGS'95)*, Interactive Multimedia Conference Proc. on the World Wide Web. (<http://devlab.edu>).
207. L. Cheng, "TROI - A Training and Research System For Tracing Regions of Interest in Brain Images", Master's thesis under Makedon Supervision, Dartmouth College Dept. of Computer Science, June 2000.
208. Jim Shain, "Lip Motion Localization", Masters Thesis, Aug 2000.
209. Multimedia authoring, development environments, and digital video editing," (w. C. Owen, J. Matthews, and S. Rebelsky), Dartmouth College Technical Report PCS-TR94-231.
210. "Multiple media stream data analysis: Theory and applications (extended version)," (w. C. Owen), Dartmouth College Technical Report PCS-TR97-321, July, 1997.
211. "Multimedia Data Analysis Using ImageTel and Applications in Automating the Analysis of Human Communication", (w. C. Owen), Dartmouth College CS Tech. Report PCS-TR97-309 (1997).

212. "An Efficient Scheme for a Distributed Video Retrieval System for Remote Users", (w. C. Owen, J. Matthews, S. Rebelsky). ISMM'94, Distributed Multimedia Systems and Applications conf., 8/94. Dartmouth College Computer Science TR PCS-TR97-308 (1997).
213. "Automatic Video Pause Detection Filter", (w. X. Liu, and C. Owen), Dartmouth College Computer Science Technical Report PCS-TR97-307 (1997)
214. "Bottleneck Free Separable Affine Image Warping", (w. C. Owen). Tech. Report, Dartmouth College (w. C. B. Owen). 2/12/97.
215. S. A. Rebelsky, J. Ford, K. Harker, F. Makedon, P. T. Metaxas, and C.B. Owen, "The Design and Development of Interactive Multimedia Conference Proceedings." Dartmouth College Department of Computer Science, Hanover NH, Technical Report PCS-TR-239, November 1994.
216. "ASML: Automatic Site Markup Language", (w. C. Owen, G. Frank and M. Kenyon), DEVLAB Document, "ASML: Automatic Site Markup Language", (w. C. Owen, G. Frank and M. Kenyon), PCS-TR97-309, Department of Computer Science, Dartmouth College
217. "High Quality Alias Free Image Rotation" (w. Owen), TR PCS-TR96-301, also in Proc. of Asilomar Conference on Signals, Systems, and Computers, Nov. 1996.
218. The SIGACT Electronic Publishing Board (w. S. A. Rebelsky, D. Karger, P. T. Metaxas, C. Owen, I. Parberry, and S. Tate). "FOCS'95 electronic submissions." *SIGACT News* 26 (1), pp. 58–62, 3/95.
219. "Building multimedia conference proceedings: The roles of video in interactive electronic conference proceedings," (w. S. Rebelsky, C. Owen, J. Matthews, L. Bright, K. Harker, and N. Toth), Dartmouth College Technical Report PCS-TR94-241.
220. "Guidelines for Electronic Conference Submissions", SIGACT Electronic Publications, (w. S. Rebelsky, D. Karger, P. Metaxas, C. Owen, I. Parberry, and S. Tate). 1994.
<http://www.cs.dartmouth.edu/~samr/esub.html>
221. "Issues and Obstacles w. Multimedia Authoring," (w. M. Cheyney, P. Gloor, C. Owen and S. Rebelsky), Dartmouth College, Computer Science Technical Report PCS-TR94-207.
222. "Electronic Publishing: Multiple Perspectives from Diverse Communities." A document, Introduction to *Electronic Publishing and the Information Superhighway 1995*. (w. J. Ford , and S. A. Rebelsky).
223. "The Design and Development of Interactive Multimedia Conf. Proceedings". Dartmouth College CS TR PCS-TR-239, Nov.1994. S. A. Rebelsky, J. Ford, K. Harker, F. Makedon, P. T. Metaxas, & C. Owen.
224. "The roles of video in the design, use, and construction of interactive electronic conference proceedings." (w. S. A. Rebelsky, P. Gloor, P. T. Metaxas, J. Ford, J. Matthews, C. Owen, O. van Ligten, L. Bright, K. Harker, and N. Toth). Dartmouth College. Computer Science Tech. Report PCS-TR94-241, 11/94.
225. "An Efficient Scheme for a Distributed Video Retrieval System for Remote Users," Proceedings of ISMM'94 Conference on Distributed Multimedia Systems and Applications, May 3, 1994 (w. J. Matthews, C. Owen and J. Zhang), TR-96, Dartmouth College Dept. of Computer Science.
226. "A Digital Library Proposal for Support of Multimedia in a Campus Educational Environment," (w. C. Owen), Dartmouth College, TR-94 Dartmouth College, Department of Computer Science.
227. "Optimal Algorithms for Multipacket Routing Problems on Rings", w. A. Symvonis, Technical Report 424, Basser Dept. of Computer Science, The Univ. of Sydney, N.S.W. Australia 2006, Nov. 1991.
228. "A Metric Towards Efficient Pseudo-Exhaustive Test Pattern Generation", (D. Kagaris and S. Tragoudas), TR-PCS-TR91-162, Math. and CS, Dartmouth College.
229. "On Minimizing Hardware Overhead for Exhaustive Circuit Testability", (w. D. Kagaris and S. Tragoudas), TR-PCS-TR91-161, Dept. of Math. and CS, Dartmouth College.
230. "A Metric Towards Efficient Pseudo-Exhaustive Test Pattern Generation", (D. Kagaris and S. Tragoudas), TR-PCS-TR91-162, Math. and CS, Dartmouth College.
231. "How Can Educational Software Survive Current Hardware," (w. J. Dobrinski, T. Ottmann), CLEAR Center TR, 1989, U. Texas-Dallas, Richardson, TX75083-0688
232. "Active Annotation, in HyperCOSTOC," (w. H. Maurer and Reinsperger), IIG TR, No. 256 (1988), Graz University of Technology, Graz, Austria.
233. "On the CLOS Network for Statistical Switching," (w. W. Payne & R. Daasch), University of Texas-Dallas, Department of Computer Science, TR-UTDCS-14-87.
234. "Personal Computers in Higher Education," CLEAR Center TR, U. Texas-Dallas, Richardson, Texas, 12/85.
235. "An Object Oriented Learning/Design Support Environment," (w. J. David and J. Jumes), submitted to the Twenty Third SIGSE Technical Symposium, March 5-6 , 1992, Kansas City. MO; Also: TR-PCS-TR91-165, Dept. of Math and CS, Dartmouth, Hanover, NH 03755.

236. "Reconfiguring WSI Arrays in the Presence of Uniformly Distributed Faults, (w. D. Bhatia), (1989) TR-UTDCS-14-89 , Computer Science, U. Texas-Dallas, Richardson, TX, 75083-0688.
237. "Reconfiguring WSI Arrays in the Presence of Non-uniformly Distributed Faults, (w. D. Bhatia), (1989) TR-UTDCS-32-89 , Computer Science, U. Texas-Dallas, Richardson, TX,
238. "Routing Wires in Reconfigured Wafer Scale Integration Arrays", (1989) Technical Report UTDCS-31-89, University of Texas at Dallas, Richardson, Texas, 75083-0688.
239. "On Knowledge Structures for an Algorithm Design Support Environment," (w. J. David & M. Ouksel), TR-UTD-CS-6-90, CS, U. of Texas-Dallas, Richardson, TX, 75083-0688.
240. "A Data Structure for Parallel Processing of Large Sparse Matrices," (w. M. A. Ouksel), TR UTD-CS-33-89, U. of Texas-Dallas, Richardson, TX75083-0688.
241. "A Layered Architecture for a Relational Database w. (O. Mayer and S. Sarkar), CLEAR Center Technical Report, 1989, U.Texas at Dallas, Richardson, TX 75083-0688.
242. "How Can Educational Software Survive Current Hardware," (w. J. Dobrinski, Th. Ottmann), CLEAR Center Technical Report, 1989 , The University of Texas at Dallas, Richardson, TX.
243. "Active Annotation, in HyperCOSTOC," (w. H. Maurer and Reinsperger), IIG Technical Report, No. 256 (1988), Graz U. of Technology, Graz, Austria.
244. "Embedding a Graph into a Binary Tree w. Fixed Dilation or Fixed Cut Costs," (w. S. Simonson and I. H. Sudborough), TR - U. of Illinois at Chicago, CS Dept. (1987), revised version has been submitted to the Journal of Algorithms on 4/89.
245. "On the CLOS Network for Statistical Switching," (w. W. Payne and R. Daasch), TR-UTDCS-14-87.
246. "Personal Computers in Higher Education," CLEAR Center Technical Report, U. of Texas at Dallas, Richardson, Texas, Dec. 1985.
247. "A Brief Tutorial on Issues in Computational Complexity," (w. I. H. Sudborough), (1983), manuscript, revised version appears in EATCS'85 issue.

Funded Projects

1. **National Science Foundation** (NSF, IDM Supplement,) 2004-2005: Data Management of Protected Information for Data Sharing and Collaboration, PI, \$27,000.
2. Conference Travel Student Awards, Node Clustering Based on Link Delay in P2P Networks, SAC05-DSGC05 Conference <http://www.acm.org/conferences/sac/sac2005/>
3. "Data Mining and Data Analysis Projects", AIC, FAMRI foundation, support for five graduate students Sept 2003-present.
4. **National Science Foundation** (NSF Small ITR), 2003-2006, PI, \$500,000. "A System for Data Integration and Pattern Discovery in Multimodal, Spatio-temporal Data: Lesion Analysis and Data Sharing", for details see <http://www.cs.dartmouth.edu/~wyh/itr04.htm>.
5. **National Science Foundation** (NSF- IDM), 2003-2006, PI, \$400,000. "Data Management of Protected Information for Data Sharing and Collaboration".
6. **National Science Foundation** (NSF-IDM), 2001-2004, PI. "Mining Human Brain Data", PI \$680,000
7. Senior investigator, National Alliance for Medical Imaging Computing (NAMIC), U54 GM072977-01, NIGMS/NIH (PI: Ron Kikinis MD, Brigham & Women's, Harvard Medical School). A multi-institutional computational project for a center devoted to brain imaging and schizophrenia structural,functional, genetic data. PIs of Project III-A, Brain Connectivity in Schizophrenia: M. Shenton and A. Saykin.
8. "Memory Circuitry in MCI and Early Alzheimer's Disease". NIH/National Institute in Aging. 1 R01 AG19771-01. 09/15/2001-8/31/2006, \$237,500 annually. Senior Investigator, A. Saykin PI.
9. "ECOMRISK: an E-Commerce Security Resource", PI, funded by the US Dept. of Justice, and the Institute of Security and Technology Studies (ISTS) \$148,000/year (2001-2003)
10. Alzheimer's fMRI Study Proposal (Senior Investigator, A. Saykin PI, funded)
11. "ECOMRISK: an E-Commerce Security Resource", PI, funded by the US Dept. of Justice, and the Institute of Security and Technology Studies (ISTS) \$100,000 (2000-2001) and \$148,000 (2001-2002).
12. Interactive Multimedia Systems for E-Commerce, Deloitte and Touche (\$30,000)
13. Multimedia Interfaces for E-Commerce, PriceWaterHouseCoopers Grant 1998-1999) (\$10,000)
14. Authoring for Retrieval, University of Freiburg Multimedia Grant (1998-1999) (\$15,000)
15. Multimedia Tools for Information Retrieval, Databases and Data Mining, Informatics, DHMC, fellowship support for four graduate students (1999-2001) (estimated at \$ 240,000)

16. MULTIYEAR (1999-2001): Informatics Department in the Epidemiology Division of DHMC and Cancer Studies Project, Informatics Group, DHMC, stipend for 5 graduate students \$65,000 per year, \$195,000.
17. MULTIYEAR (1998-2002): Brain Imaging Lab, Dartmouth Hospital, DHMC Grant "Structural and Functional Analysis of Human Brain Data", 2 graduate student support for 4 years \$156,000.
18. "fMRI Brain Imaging", Project of a Departmental Infrastructure Proposal funded by the NSF CISE Research Infrastructure Program (1999), Faculty Investigator.
19. "Bringing to Dartmouth a New Teaching Resource on the History of Liberal Education from the Greeks to the Renaissance", The Hewlett Foundation, Dartmouth College, (\$15,000) 1997-1998.
20. "Course Resources for WWW Application Development: Development of ASML: Automatic Site Markup Language", Dartmouth Computer Venture Fund, May 1996 (\$15,000) 1996-1997.
21. "A Virtual Gallery on the Greek Bronze Age: Development of Website" (PI, w. J. Rutter), The Foundation of the Hellenic World. Dartmouth proposal # 5-37062.1996-1997
22. Computer Venture Fund, Dartmouth College, "A Digital Library for Introductory Computer Science", (S. Rebelsky PI), 1994-1995.
23. **National Science Foundation**, (NSF-9407750), Parallel Computing and Problem Solving Environments Providing Massively Parallel Computing to Problem Solvers Symposium, \$30,000 (Est.), August 1, 1994-December 31, 1994.
24. **National Science Foundation** (NSF 9352796), It's Never Too Early: Teaching Parallel Computing to Freshmen, \$100,000 (Estimated), July 1, 1993-June 30, 1995 (Estimated)
25. The New England Consortium for Undergraduate Science Education (NECUSE) for research on "A Multimedia CDROM for Teaching Parallel Computation" (w. T. Metaxas) 1993-1994.
26. Design Automation Conference, for research on "A Framework for Pseudoexhaustive Circuit Testing," (support for graduate student), \$12,000, Co-PI, w. S. Tragoudas (1993-1994).
27. "Experiments in Multimedia for Women Undergraduates," NECUSE, (New England Consortium for Undergraduate Science Education), 1993-1994.
28. Dartmouth College, "The DAGS Scholars Program," DAGS'93 School on Parallel Programming.
29. Hewlett Packard, (w. Al Henning PI), Thayer School of Engineering, Dartmouth College, \$85,000, 1993.
30. Dartmouth College, Shapiro Scholar Award \$1,000 to bring visitors, 1993.
31. **National Science Foundation (NSF ILI-LLD)**: "It is Never Too Early: Teaching Parallel Computing to Freshmen," 1993-96.
32. **National Science Foundation (NSF 9313063)**: "Summer School on Parallel Programming," Dartmouth Institute for Advanced Graduate Studies in Parallel Computation (DAGS93), June 23-30, 1993, \$25,000 (est) & June 15, 1993-May 31, 1994.
33. **National Science Foundation (NSF 9111651)** for research on "Parallel Communication Algorithms", \$60,000 (April 1992-Sept. 1994).
34. Design Automation Conf. Grant (1992-1993), PI, for research on: "A Framework for Pseudoexhaustive Circuit Testing".
35. The Hewlett Foundation, Dartmouth College, 1992, "Visualization Projects for Undergraduates," PI, with T. Metaxas).
36. Springer Verlag/TELOS Publishing, electronic publishing grant for DAGS'92 workshop, PI, 1992
37. Shapiro Scholar Award for visitors, PI, Dartmouth College computer science department, 1992.
38. Nissan Corp. (w. S. Drysdale) to support graduate student's research on Pseudoexhaustive Circuit Testing (1991-1992).
39. **National Science Foundation (NSF 9111385)**, for research "On Algorithm Visualization", PI, \$12,000 September 1, 1991-August 31, 1993
40. MENTOR Graphics Co., PI, "Visualization of CAD Algorithms, UTD proposal #890064, \$250,000.
41. Institute of Information Processing, Graz, Austria, "On Electronic Libraries in Computer Science," for development of software, (1990-1991).
42. ACM/SIGDA Design Automation Grant, for student support, (1990-1991).
43. ACM 1990 SIGDA Travel Fellowship Grant, PI, for research in VLSI, 1990.
44. "Establishment of the VENUS VLSI CAD System," Siemens Company of West Germany, \$300,000, UTD proposal #880204, (1989-1991).
45. "Efficient Design Techniques for the Reconfiguration of VLSI Arrays", PI, University of Texas at Dallas proposal number UTD#890147, 10,000, (1987-1988).
46. MCC Corp., Austin TX, "Projects in AI, VLSI Research and Education," PI, Artificial Intelligence Division, UTD equipment proposal #870046, \$88,000, 1987.

47. "Establishment of a Computer Learning Research Center," PEW Foundation Grant, PI, U. Texas at Dallas proposal #870049, \$900,000, (1987-1989).
48. Texas Instruments, VLSI Design Laboratory, "Cell-Based Routing," PI, University of Texas at Dallas award number UTD #860171, \$15,158, 1986-88.
49. Texas Instruments, Management and Information Systems Division, PI, "Natural Access Interface Research Problems," 6/1/86 to 6/1/87, UTD Proposal # 860163, \$24,486; (1986-1987).
50. "Fault Tolerance of VLSI Arrays," PI, Univ. of Texas Organized Research Awards (1986-1987).
51. Texas Instruments Research Grant, PI, Semiconductor Division, on "Practical Algorithms for IC Layout," (w. S. Ntafos and I. H. Sudborough), 7/1/86-6/30/87, UTD #860118, \$34,416; (1986-1987).
52. Faculty Research Fellowship Award, 1985, Illinois Institute of Technology, Research Grant on "Graph Layout Problems and Applications,"

Grants Pending or in Preparation

1. "Collaborative Sharing in Multiple Sclerosis", to NIH, \$250k/year for 5 years, **pending**.
2. Senior Investigator, two grants, Brain Imaging laboratory, Andrew Saykin PI, Dartmouth Medical School, **pending**.
3. "Multimodal Translational Imaging", Co-Investigator, NIH, Advanced Imaging Center, Dartmouth Medical School, J. Pearlman PI, **pending**.
4. "Collaborative Research: Integrating novel computational methods for neuroscience: structural, functional and genetic analysis". NSF Proposal No: [0515099](#). F. Makedon, PI. CoPIs: A. Saykin, L. Shen, J. Pearlman, J. Ford and J. Moore, **pending**.

Editorial Boards

- Guest Editor, International Journal of Oncology, Computational Aspects of Oncology, Spandidos Publishers, Special Issue, in press
- Senior Editor, eJETA.org: Electronic Journal on E-Commerce Tools and Applications (2001-present)
- Editor of Journal of Network and Computer Applications, Academic Press Ltd. (1994-present)
- Editorial board of the *Journal of Multimedia Tools and Applications* (1994-2002).
- Editor, Journal of Universal Computer Science, Springer Online, <http://www.iicm.edu/jucs>, 1994-2002.
- Co-editor, *Journal of Multimedia Tools and Applications*, special issue on Electronic Publishing (1997)
- Editor, *Journal of Computing in Higher Education* (1997)
- Senior Editor of DAGS'93, DAGS'94 and *DAGS'95 Electronic Conference Proc.* (1996-1997)
- Editor, Conf. Proceedings DAGS'95, *Electronic Publishing and the Information Superhighway (1995-96)*
- Senior Editor for the DAGS'95, Book Proceedings, 1995 Dartmouth Institute for Advanced Graduate Studies in Parallel Computation, "Electronic Publishing", hard copy proceedings (1995-1996)
- Editor of the *Electronic Journal for Universal Computer Science (J. UCS)* (1994-2001).
- Senior Editor of the *Electronic Journal for SIGACT NEWS and Proceedings*, the theoretical vehicle of dissemination for computer science theory (1994-1996).
- Senior Editor for the DAGS'94, hard copy proceedings, 1993 Dartmouth Institute for Advanced Graduate Studies in Parallel Computation, "Problem Solving Environments", hard copy proceedings (1994-1995)
- Senior Editor (w. P. Gloor, D. Johnson, P. Metaxas), (Electronic version), "Issues and Obstacles in the Implementation of Parallel Algorithms on Parallel Machines," Multimedia Proceedings of DAGS'92, the Second Annual Symposium. sponsored by the Dartmouth Institute for Advanced Graduate Studies in Parallel Computation, electronic proceedings CDROM, TELOS/Springer Verlag Publisher (1993-1994)
- Invited Editor of a special issue of the *Communications of the ACM* on DAGS'92 (1993-1994)
- Senior Editor for the DAGS'93, hard copy proceedings, 1993 Dartmouth Institute for Advanced Graduate Studies in Parallel Computation, "Parallel I/O", hard copy proceedings (1993-1994)
- Senior Editor of the DAGS'92 Proceedings, "Issues and Obstacles in the Implementation of Parallel Algorithms and the Use of Parallel Machines," June 1992, the Second Annual Symposium sponsored by the Dartmouth Institute for Advanced Graduate Studies in Parallel Computation, (1992-1993).
- Co-editor (w. K. Mehlhorn and P. Spirakis), Springer Verlag Proc. of AWOC 1986, "VLSI Algorithms and Architectures," Proc. of Second International Workshop, Loutraki, Greece (precursor to Symposium of Parallel Algorithms and Architectures SPAA) (1989)

Program Committees

- Invited Speaker, HCII, October 2004, Heraklion, Crete
- Appointed, NSF-IDM Workshop organizing committee member, October 2004, Boston, MA
- Invited Panelist on "Web Usage tracking and the role of clustering", Clustweb Workshop concurrently with EDBT04, March 14, 2004, Heraklion, Crete.
- Co-authored report for the "Trust, Privacy, and Security" breakout session, which took place at the NSF IDM Workshop in Seattle (September 14-16, 2003).
- CMSD 2003 Program Committee Member, <http://contessa.intranet.gr/conference/>
- HCII, Invited Chair, Parallel Session Organizer and Author, 6 papers, June 2003, Crete, Greece.
- SETN04, International AI Conference, May 5-8, Samos, Greece, Program Committee and also Session Chair
- NSF/EU joint Meeting of Digital Libraries, Rome, Italy, March 24-26, 2002. Session Chair.
- The Fifth Multi-Conference on Systemics, Cybernetics and Informatics, Orlando, Florida, USA, July 22 - 25, 2001
- The Fourth Conference of the SCI 2000 (Systemics, Cybernetics and Informatics), Orlando, FL, July 23 – 26, 2000
- WWW99 Program Committee, <http://www.www9.org>, Ninth International World Wide Web Conf. (WWW9), May 15-19, 2000, Amsterdam
- MIS'99, the Fifth International Workshop on Multimedia Inform. Systems, Palm Springs, CA, 10/21-23/99.
- EDMEDIA 1999, June 1999, SEATTLE, Washington
- WEBNET'99
- ICCE'99, International Conference on Computers in Education, NOV. 2-5 1999, CHIBA, JAPAN, icce99-inter@ai.is.uec.ac.jp
- IMSA '99 : Internet and Multimedia Systems and Applications, Grand Bahamas, Oct. 1999.
- ICMCS99 PC Member <http://conf.dsi.unifi.it/icmcs99/>: IEEE Multimedia Systems, Florence, Italy, 6/99.
- ACM Multimedia 1999, Associate Chair, Darmstadt, Germany, Nov. 1999, <http://www.acm.org/sigmm/mm99/>
- Program Committee MIS'99
- ACM Multimedia 1998, Associate Chair, Bristol England, Nov. 1998
- EdMedia 1998, Program Committee Member, Freiburg, Germany, June 20-25, 1998 and EDMEDIA 1999.
- WebNet 1998, Oct. 9-12, 1998, Orlando, FL
- EdMedia 1997, Program committee member, Calgary, June 1997
- Webnet 1997, Program committee member, Toronto, Oct. 31-Nov. 5 1997
- ACM Multimedia '96, Nov. '96, Boston, MA.
- ED-MEDIA'96 Co-chair, Program Committee & Tutorials Chair, June'95, Boston, MA
- 2nd IASTED/ISMM Int. Conference Distributed Multimedia Systems and Applications, 8/95,
- Northeastern Small College Computing Conf., Consortium for Computing in Small Colleges, 4/19/96.
- Workshop on Effective Abstractions in Multimedia, Nov. 4, 1995, SF, CA
- IASTED/ISMM International Program Committee, Distributed Multimedia Systems & Applications, 8/95, Stanford, CA
- DAGS'95 Co-chair: Fourth Annual Dartmouth Institute for Advanced Graduate Studies Conf. on Electronic Publishing and the Information Superhighway (6/95 Boston)
- ACM Multimedia 1995 Conference - Panels Chair
- ED-MEDIA'95: Education Multimedia Conference, June'95, Graz, Austria
- ISMM Intern. Conf. on Distributed Multimedia Systems and Applications, 8/15-17/94, Honolulu, Hawaii
- ISMM International Conf. on Distributed Multimedia Systems and Applications, Aug'95, Palo Alto, CA.
- ED-MEDIA'94: Education Multimedia Conference, 6/23-29/94, Vancouver, British Columbia, Canada.
- DAGS'94 CHAIR: Third Annual Dartmouth Institute for Advanced Graduate Studies in Parallel Computation; "Symposium on Parallel Computation and Problem Solving Environments," July 5-7, 1994, Dartmouth.
- DAGS'93, CHAIR: Second Annual Dartmouth Institute for Advanced Graduate Studies (DAGS) in Parallel Computation, Symposium on "Parallel I/O," 6/21-23/93, Hanover, NH.

- DAGS'92, CHAIR: First Annual Dartmouth Institute for Advanced Graduate Studies in Parallel Computation, Topic: "Issues and Obstacles in the Implementation of Parallel Algorithms on Parallel Machines," June 23-27, Dartmouth College.
- ICCAL'92, International Conference on Computers And Learning, New Foundland.
- ICCAL '90 , International Conference on Computers And Learning, June '90, Hagen, Germany
- ICCAL '89, International Conference on Computers And Learning, May '89, Dallas, Texas
- AWOC '88, Aegean Workshop on Computing, 28/6-1/7, 1988, Corfu Island, Greece (this is the predecessor of "SPAA", Symposium on Parallel Algorithms and Architectures)
- AWOC '86, Aegean Workshop on Computing, 7/8-11, Loutraki, Greece.
- WIT'85, Program Chair, Workshop on *Women in Technology*, Illinois Inst. of Technology, 6/8/85.
- Midwest Theory Computation Symposium, Chair, 12/3/83, Illinois Institute of Technology, Chicago, IL.

Conference and Workshop Organization

- Session Chair, Computational Issues in Oncology, 9th World Congress on Advances in Oncology and 7th International Symposium on Molecular Medicine, 14-16 October, 2004, Crete, Greece
- Session Chair, SSDBM 2004, Santorini, Greece
- Organizing Committee Member, NSF-IDM PI Workshop, October 2004, Boston
- NSF-IDM 2003 Workshop on "Trust, Privacy and Security", Technical Report Summary of a Workshop Breakout Session at the National Science Foundation Information and Data Management (IDM) Workshop, Seattle, Washington, September 14 - 16, 2003, Bharat Bhargava, Csilla Farkas, Leszek Lilien and Fillia Makedon
- Session Chair, Session on Agents and Multiagents, May 7, 2004, SETN04 Confrence, Samos, Greece
- Session Chair of Parallel Session, "Medical Interfaces", 8 Panelist papers, Intern. CHI'03, Crete, Greece, June 2003
- Publicity Chair, 6th European Conference on Digital Libraries (ECDL), Rome Sept. 2002.
- Panel and Session Chair in Webnet and EdMedia conferences (1999 and 2000)
- Steering Committee, Dartmouth Institute for Advanced Graduate Studies (1992, 1993, 1994, 1995)
- DAGS'95 Fourth Symposium: Chair. Electronic Publishing and the Information Superhighway, June 1995, Boston. (DAGS: Dartmouth Institute for Advanced Graduate Studies)
- DAGS'94 Third Symposium : Chair. Parallel Computation and Program Solving Environments, Dartmouth Institute for Advanced Graduate Studies, July 5-8, 1994
- DAGS'94 Summer School: Chair. Parallel Computation and Program Solving Environments, Dartmouth Institute for Advanced Graduate Studies School, July 9-12, 1994,
- DAGS'93 Summer School : Chair. Parallel Programming June 23-30, 1993, Dartmouth Institute for Advanced Graduate Studies Summer School, Dartmouth College.
- DAGS'93 Second Symposium: Co-Chair. Parallel Input and Output, Dartmouth Institute for Advanced Graduate Studies.
- DAGS'92 First Symposium: "Issues and Obstacles in the Implementation of Parallel Algorithms and the Use of Parallel Machines: Parallel I/O", Dartmouth Institute for Advanced Graduate Studies, 6/21-23/1992.
- Steering Committee, International Conference on Computer Assisted Learning (ICCAL), 1989-1991.
- Steering Committee, ACM Symposium on Parallel Algorithms and Architectures, (SPAA), 1988-1996.
- Steering Committee, Women in Science Program (WISP), Dartmouth College, 1992-1993.
- Steering Committee, Consortium for Computing in Small Colleges (1995-2000)
- Steering Committee, EDMEDIA, (1989-1992)
- SPAA'89, Co-chair, *Symposium of Parallel Algorithms and Architectures*, Crete, Greece, 8/89.
- ICCAL '89 Conf. Chair, 2nd International Conf. , Computer Assisted Learning, Dallas, Texas, 5/9-11/89
- AWOC '88 Co-chair, *Aegean Workshop on Computing: VLSI Algorithms and Architectures*, Corfu Island, Greece.(Predecessor of SPAA, ACM Symposium on Parallel Algorithms and Architectures).
- AWOC'86 Co-chair, *Aegean Workshop on Computing: VLSI Algorithms and Architectures*, July 8-11, 1986, Loutraki, Greece. (Precursor of SPAA, ACM Symposium on Parallel Algorithms & Architectures).
- Session Chair: ICCAL'90, Intern. Conference on Computer Assisted Learning: session chair, Simulation Tools, Hagen, Germany, June 11-13, 1990.
- Session Chair : IFIP/GI/ITG Workshop on Partitioning, session : "Partitioning for Testability and Timing," Lengries, Germany, Jan. 28-31, 1990.
- Session Chair : ICCAL '89 (International Conference on Computer Assisted Learning).

- Session Chair : AWOC '86 and AWOC '88 (Aegean Workshop on Computing).
- Session Chair : New Directions in Database and Knowledge Management Systems, 3/10/87, IEEE Computer Society, Richardson, TX.
- Session Chair : Third International Symposium on Applied Informatics, IASTED '85, Grindelwald, Switzerland.
- Electronic Publishing Committee: STOC'95 (ACM Symposium on the Theory of Computing), electronic submissions and refereeing.
- Electronic Publishing Committee: FOCS'95 (IEEE Symposium on Foundations of Computer Science), electronic submissions and refereeing.
- Electronic Publishing Committee: DAGS95 (Electronic Publishing and the Information Superhighway), electronic submissions and refereeing.
- Boston University NSF *MARINER Program*, invited presentation, Oct., 1995.
- Panel on Science and Technology, *Alumni Leadership Volunteer Conference*, “Will They Know Enough?” Oct. 8, 1993, Dartmouth College.
- Panel, Distance Learning, WCCE'90, *World Conf., Computers & Education*, Sydney, Australia, 6/90.
- Panel on “Algorithm Visualization,” ICCAL '89, *International Conference on Computers and Learning*, Dallas, Texas, May 9-11, 1989.
- Panel on Teleteaching, *ECCE Conference*, Zurich, Switzerland, July 26-29, 1988.

Refereeing

- 2004 Reviewer, The Handbook of Information Security, Chapter on Cyberterrorism, Hossein Bidgoli, Editor-in-Chief, The Handbook of Information Security
- 2004 Reviewer, Bioterrorism Review Committee (nominated), Office of Extramural Research, Education & Priority Populations, Agency for Healthcare Research & Quality, US Government.
- 2003 Five NSF panels – peer reviewing
- 2002 Reviewer of 3 papers, Multimedia Tools and Applications Journal
- 2002 March 4, Site Visitor, NSF RI Program
- 2002 NSF Panels (4)
- 2000 NSF Panels (3)
- 1999 WWW'99
- 1999 Multimedia Tools and Applications Journal
- 1999 NSF Panels (2)
- 1999 EdMedia Refereeing
- 1999 Journal of Network Applications
- 1999 Journal of Universal Computer Science
- 1999 ICCE, Intern. Conf. On Computers and Education
- 1999 WebNet 2000
- 1999 ACM Multimedia 1999
- 1998 NSF Panel (2)
- 1998 Journal of Multimedia Tools and Applications
- 1997 NSF Reviewer
- 1997 Multimedia Tools and Applications (over 20 articles since 1995)
- 1996 ACM Multimedia Conference
- 1996 NSF panel, IRIS
- 1996 EdMedia '95 Conference on Educational Multimedia and Hypermedia
- 1995 *Journal of Multimedia Tools and Applications*, Kluwer Press (1995-present)
- 1995 EdMedia '95 Conference on Educational Multimedia and Hypermedia.
- 1994: IEEE Transactions on CAD
- 1994 SIAM, Society for Industrial and Applied Mathematics
- 1994 Two tenure cases outside of Dartmouth
- 1994 Review of two books on Multimedia
- 1994 NSF Grant Review Panel.
- 1994 Algorithmica
- 1994 Journal of Universal Computer Science (1994-present)

1993 One tenure case outside of Dartmouth College
 1993: Two NSF proposals
 1993: NSF-CISE Review panel
 1992 4 NSF proposals, 3 IEEE Transactions on CAD
 1991 Mathematical Systems Theory Journal
 1991 International Journal of Man-Machine Studies
 1991 Discrete Applied Mathematics Journal
 1991 Fifth Intern. Parallel Processing Symposium
 1991 International Parallel Processing Symposium
 1990 IEEE Transactions on CAD (5 papers)
 1990 IASTED Computers and Control
 1990 Discrete Applied Mathematics Journal
 1989 IEEE Circuits and Systems Society
 1989 Hellenic Ministry of Industry, Research and Technology, Dept. of Scientific Policy
 1989 First International Conference on Systems Integration
 1989 Benjamin-Cummings Press
 1988 IEEE Transactions on Computers
 1988 Algorithmica
 1988 Society of Industrial and Applied Mathematics (SIAM) Journal of Computing
 1988 National Science Foundation Review (multiple times)

Affiliations (selected)

Fulbright Faculty Association
 Neuroscience Center, Dartmouth College
 National Texas Association of Artificial Intelligence, 1987 to 1989
 European Association of Theoretical Computer Science (EATCS), 1980-present
 IEEE Computer Society, 1986-present
 ACM Association for Computing Machinery, 1984-present
 Dallas Chapter of the ACM, 1985-1986
 Chicago Chapter of ACM, 1983-1984
 International Association of Science and Technology for Development IASTED, 1984-1985
 EDUCOM, 1987-1989
 Apple User Group, 1987-1989
 Member of the Upper Silicon Valley at Dartmouth 1993-1995
 Member of AACE (Association for the Advancement of Computers in Education) since 1992
 Member of The Web Society since 1995
 SPIE Society (1997-present)
 EBITS Consortium – E-Business and Information Technology for Society (1998-present).

Junior Faculty Mentoring

1. H. Wishart, Ph.D., Assistant Professor of Psychiatry, Neuropsychology Program and Brain Imaging Lab, Dartmouth Medical School Burnett Fellowship 2001-present.
2. Laura Flashman, Ph.D. Assistant Professor of Psychiatry, Dartmouth-Hitchcock Memorial Hospital (DHMC). 2000-present.
3. Aria Tzika, Ph.D. Assistant Professor, Harvard and MGH, 2003-present.
4. Viviane Bernardo, Postdoctoral candidate, Thayer School of Engineering, (with Prof. Cybenko), 4/04-8/04.

Ph.D. Students Completed

1. William Payne. Thesis: "Complexity and Performance of Statistically Switched Interconnection Networks," Aug 1985, Computer Science Dept., The Illinois Inst. of Technology, (R. Daasch co-advisor); now Senior Technical Staff, AT&T Bell Labs, Naperville, IL.

2. Shyam Sarkar. Thesis: Architecture and Language for a Layered Relational Database," May 1989, CS Program, University of Texas at Dallas; currently: Senior Technical Staff, E Systems.
3. Dinesh Bhatia, thesis: "Near Optimal Reconfiguration Algorithms of Linear Arrays and the Wafer Scale Integration Problem," Received Ph.D. Aug 1990, University of Texas at Dallas. Currently: Professor w. tenure, Electrical Engineering Dept., U. Texas-Dallas.
4. J. Haralambides. Thesis: "Graph Algorithms w. Applications to VLSI Design and Optical Computing". Received September 1991, U. of Texas-Dallas. Currently: Associate Professor, Dept. of Mathematics and Computer Science, Barry University, FLA.
5. Spyros Tragoudas. Thesis: "Circuit Partitioning and Applications ," September 91, University of Texas at Dallas; currently: Associate Professor w. tenure, Computer Science Department, Southern Illinois University, Carbondale, IL.
6. Jill David. Thesis: "An Object Oriented Experimental Environment for VLSI Algorithm Design and Visualization," 9/91, University of Texas at Dallas. Currently: Senior Technical Staff, MCI, Dallas, TX.
7. Antonios Symvonis. Thesis : "Parallel and Distributed Algorithms for Packet Routing." Received Ph.D. September 1991, University of Texas at Dallas, currently: Associate Professor w. tenure, University of Athens, Greece
8. Dimitrios Kagaris. Thesis: "Automatic Test Pattern Generation Techniques for Built--In Self--Test of Digital Circuits". Received Ph.D. Aug 1994, Assoc. Professor, Dept. of Electrical Engineering, U. of Southern Illinois, Carbondale, IL.
9. C. B. Owen. (June 1998, Dartmouth College). Thesis area: Multiple Media Stream Analysis: Theory and Applications, Ph.D. Degree, currently Assistant Professor Michigan State University.
10. J. Ford, "Patient Classification from fMRI Brain Activation Maps". Ph.D. 2003,; currently: Research Associate, Dartmouth Medical School and Assistant Director of the Dartmouth Experimental Visualization Laboratory, Dartmouth College.
11. Li Shen, "Three Dimensional Shape Analysis with Parametric Surface Modeling", June 2004. Currently: Assistant Professor of Computer Science, U. Mass, Dartmouth.

Masters Degree Students Completed or Supervised

1. Kefei Cao, "CAT Tree: A Personalized HCI Component Applied in Medical Data Collection", M.S. student, passed MS thesis defense 9/24/04.
2. Zhenhui. Jiang, "Intelligent Data Collection Interfaces", supervised Fall of 2004.
3. Lin Wang, "A Meta-data Based System for Sharing fMRI Brain Data", graduated June 2004.
4. Zhan Xiao, "A Consultation System for Cybersecurity", graduated February 2003.
5. Adeel Meer, "A Searchable Magnetic Resonance Imaging Database", graduated Febr. 2003.
6. Fang Pei, "Patterns of Pathology Detection for Multiple Sclerosis", supervised Fall of 2003.
7. Helen Wang, "Collaborative Knowledge Networks", supervised Fall of 2003.
8. Sanket Agrawal, "Medical Database Security", supervised 1999-2001.
9. David Isecke, "Structural Studies and Functional studies in Brain Imaging", supervised 1999-2000.
10. Yasir Ali, "Database Security Protocols", supervised Fall of 2000.
11. Ling Cheng, "TROI - A Training and Research System for Tracing Regions of Interest in Brain Images", graduated 2000.
12. Jim Shain: "Lip Localization in Digital Video Analysis", graduated August 2000.
13. Rahul Vaid, Thayer School of Engineering, Dartmouth College: "Image Tcl System Development", supervised 1997-98.
14. Alex Broadhead - completed MS thesis in Electro Acoustic Music Department, 6/95 1998 on Audio Compression (co-supervised by C. Owen).
15. Chris Langmead, supervised MS multimedia research, 1995-1997.
16. Jim Matthews. "VideoScheme, a Programmable Digital Video Editor", 1992-1997, graduated 1997.
17. Jun Zhang. "Information Retrieval of Video, User Interfaces and Multimedia", supervised 1992-1994
18. Qin Zhang. "Digital Video Editing Systems", supervised 1992-1994
19. Jing Feng. "Information Retrieval of Images", supervised 1992-1994
20. Katya Pelekhov. "Parallel Algorithm Visualization", 1991-1994 "Information Retrieval of Hypertext Documents", 1993-1994.
21. Michalis Sasles: "Visualization of tRNA molecules". supervised 1993-1994: "Visualization of CAD Algorithms", 1994.

22. Alok Kumar and Kanika Gupta, supervised 1993-1994.
23. Dimitrios Kagaris, "Circuit Testing Algorithms", supervised 1991-1993.
24. Julie Jumes (U. Texas-Dallas), supervised 1990-1991.
25. Mike Amundsen, Bob Farrell, Frank Sveda. (U. Texas at Dallas), supervised 1989-1990.
26. Philip Hilton, Glenn Karcher, Donald Scott, John Perser and Doug Barrios, 1985 – 1987.
27. Abdullah Abonamah (VLSI design), Dhun Wadia (VLSI Design), Illinois Institute of Technology, Chicago, 1983 - 1985
28. Spyros Tragoudas, J. Haralambides, Adonis Symvonis, Shyam Sarkar, Jill David, Dinesh Bhatia, Bob Farrell, and 6 other students at the Univ. of Texas at Dallas (1985-1991)

Current Graduate Student Supervision

1. Tilmann Steinberg: "Analysis of 3D Multimodal Spatiotemporal MS Data", Ph.D. expected 2005.
2. Song Ye, "SCENS: A Secure Content Exchange Negotiation System", Ph.D. expected 2006.
3. Yan Zhao, "TeCFlow : Tracking social communications by visualization", grad. 12/31/04.2005.
4. Yuhang Wang, "Spatial Feature Extraction Algorithms", Ph.D., 2002-present, graduation expected Feb. 2005.
5. Fei Xiong, "Pattern classification and feature selection of DNA microarray gene expression data", Ph.D. expected 2007.
6. Weihong Wang: "Collaborative Filtering for Recommendation Systems", Ph.D. graduation expected 2008
7. Yi Ouyang: Ontology based Image Retrieval Algorithms. Ph.D. expected 2007.
8. Wei Zheng: Ontology based image retrieval algorithms. Ph.D. expected 2007.
9. Zhifeng Wang: Mixed signal modeling for cardiac applications. Ph.D. expected 2007
10. Heng Huang: Shape analysis and visualization of heart dynamics. Ph.D. expected 2006.
11. Sheng Zhang: "Building Trustworthy Recommendation Systems", Ph.D., graduation expected 2007.
12. Zenghyi Le: Hierarchical encryption algorithms, Ph.D. expected 2007.
13. Yurong Xu: "Negotiation-based P2P Mobile Sensor Networks (P2P-MSN)". PhD expected 2007.

Selected Graduate Student Publications, Posters and Presentations

1. Ling Cheng, L. Shen, Fillia S. Makedon, Annette M. Donnelly, Laura A. Flashman, and Andrew J. Saykin. TROI - A Training and Research System For Tracing Regions of Interest in Brain Images. Poster Presentation at 16th Annual Neuroscience Day at Dartmouth, Jan 25, 2002.
2. Wei Zhang: supervised Fall03 and Winter04 in Image registration algorithms
3. J. Ford, Fillia Makedon, Vasilis Megalooikonomou, L. Shen, Tilmann, Steinberg, Andrew J. Saykin. Spatial Comparison of fMRI Activation Maps for Data Mining, Poster Presentation at 16th Annual Neuroscience Day at Dartmouth, Jan 25, 2002.
4. L. Shen, Faye Teng, Ling Cheng, J. Ford, T. Steinberg, Andrew J. Saykin and Fillia Makedon. A Multimedia System for Tracing and Studying Regions-of-Interest in Brain Images. Arts and Science Graduate Poster Session. Dartmouth College, April 18, 2001.
5. Talk by my student L. Shen at Harvard Medical School, McLean Hospital, Neuroimaging Center: "TROI – A System for Tracing and Studying Regions-of-interest in Brain Images". July 15, 2001.
6. Thesis Proposal by L. Shen, "Data Analysis and Mining of Structural Brain Images". May 16, 2001.
7. J. Ford and team Presentation of the SCADS system, Harvard University, McLean Hospital, Spatial Comparison of Activations Database System, May 25, 2001.
8. Weekly presentations at the Brain Imaging Laboratory, Dartmouth Hitchcock Hospital 2001-2002.
9. Multiple presentations by Greecom.org group of my lab to ISTS representatives on Ecomrisk.org security project (2001-2).
10. Sanket Agarwal, graduate student seminar presentation at CS Dept. seminar series.
11. Lin Wang, "A Survey of Shape Analysis Techniques", 8/21/02, Dartmouth College.
12. Spatial Classification of fMRI Activations, J. Ford, 1/25/02, Dartmouth College.
13. Ling Cheng, TROI: A Training and Research System for Tracing Regions of Interest in Brain Images"2000
14. Jim Shain: "Lip Localization in Digital Video Analysis", June 2000.

Other Service on MS and Ph.D. Qualifying Committees (selected from 1990-present)

1. John Markesini, 4/8/04
2. Miing Li, March 2004 PhD. Qualifying exam
3. Mihalis Sables: MS Thesis, member. "SCULPTUROR: An Efficient Simulator of Tool Movements in NC Machining", Dartmouth College, Jan. 14, 1999.
4. Stavros Kolliopoulos, "Exact and Approximation Algorithms for Network Flow and Disjoint Path Problems", Dartmouth College, 1998
5. Larry Raab, Ph.D. Thesis Member, Database Theory topic, Dartmouth College, 1992.
6. Adair Dingle, Theory of Computation, University of Texas at Dallas, 1990.

Undergraduate Student Supervision

2004-2005	Diede J. van Lamoen, "Price Appreciation Of Limited Edition Goods Sold Through Online Systems On The Basis Of Traffic Analysis", senior thesis.
2004	Joshua Stabner, Winter 2004, security research independent study.
2003-pres.	Kabir Sehgal, special Dartmouth government major, co-advisor, Fall 2003.
2002-2003	Six Dartmouth interns in DEVLAB working on Ecomrisk.org, an ISTS Security Center Project (Constantine Vetoshev independent study)
2001-2002	Nate Saperia, Alexei Pytel, Rizwan Mahmud, David Schnur, Alexandra Do, Fiona Herring, DEVLAB interns developing a cybersecurity game, ECOMSQUAD.ORG, still in progress.
2000-2001	Aidan Marcuss, Senior Thesis.
1998	Independent Study Projects: Monica Wilkins, Bill Bleier. Multimedia Applications. Presidential Scholar student: Marisa Kolodny (electronic text and website authoring).
1998	Paul Biggs: Interfaces for E-Commerce applications
1998	Projects: Faye Teng, Tracy Davis, Aidan Marcus, Mateusz Troicki
1994-1999	Supervised over 20 senior theses in the following areas: Algorithm Visualization; Virtual Reality Stimuli for Functional Magnetic Resonance; Automatic Collocation of English translations of Ancient Texts; Interactive Computer Graphics (J. Nelson co-supervised by C. Owen)
1997	CS82- Fall 96 and Winter 97 two terms independent study: Ingrid Brody, "Pathways through Bali", a website project. CS82: "Prometheus Bound", research on the use of rare books in a digital library, technical and multimedia user interface issues, Pauline Christo.
1997	Ahsan Kabir, Image Tcl, Sign Language Analysis
1997	Mentor Program Faculty: to host two students, summer 1997
1996-1997	Olympics Project: Heather Bach, Katie Lewis, Marcie Handler, Monica Wilkins Pauline Christo, Robert Puckett, Jessica Rogers, Bill Bleier. Created the Ancient Olympic Games Virtual Museum to recreate Ancient Olympic Games, received NetGuide's gold medal award.
1996-1997	Michael Pryor and Glen Frank (presidential scholars): Paedeia Project, Hewlett Foundation, to build a resource on Ancient Literacy (project joint w. Stanford, Princeton and Dartmouth). DEVLAB Research Interns: Patrick Korsnick, Adrian Murray, Jonas Meyer and five other students working during Spring and Summer '97 on virtual museum projects.
1996	DEVLAB High-school Interns Program: J. Meyer, then Dartmouth freshman. S. Lawrence, Music Department, CS82: A Java Applet for Alternate Tunings on E-mu EIV Series Samplers, Fall 1996
1995-1996	Five undergraduates working on electronic publishing projects, including John Burns.
1994-1995	Ken Harker and 8 other undergraduates (5 WISP students, 2 presidential scholars, and 2 others).
1994-1995	Daniel Kranowski. Algorithm Visualization
1993-1994	Parallel Algorithm Visualization: Song Bac Toh '96, Naval Ravikant '94, Dana Pascovici, M. Cheyney, Christopher Platt
1992-1994	Nancy Toth, Marvia Campbell, Anastasia Gentilcore, Jamie Robinson, Jewel Jones, Melanie Luna, Jennifer Trusty, Chen Yang, Nathan Herring, Benjamin Sherry, Mobina Hashmi, Laura Bright, Christopher Broggi, Robert Frost and 8-10 others.
1992-1993	Matt Williams '93: electronic publishing and multimedia;
1992-1993	Bruce Johnson: Parallel algorithm visualization
1992-1993	Brandon Hudgeons: Multimedia and Visualization Project on Music (Pres.scholar)

1992-1993	Jen Collins: Hypertext Chunking
1992-1993	Courtney Molloy '93: CS 82 and KIOSK Project
1992-1993	Clara Rankins, '93 multimedia publishing
1992-1996	Laura Bright, '96, Women In Science Multimedia Project
1991-present	Freshman advisor 6 students /year, except 1994-1995
1991-1992	Corby Page'92: Visualization for CAD
1991-1994	Matthew Cheyney '94: Quicktime movie editing

Undergraduate DEVLAB Project supervision (selected list)

1992-1993	(15 students) <i>Kiosk Development</i> : Interactive Multimedia Computer Science Department Brochure, the first of its kind in its multimedia user interface design.
1992-1994	(14 students) <i>The WISKIT Project</i> : a multimedia interactive resource for women and minorities which later has appeared in a restricted form as a website.
1991-1993	(2 students) <i>Digital Video Editing</i> , system development of VideoScheme, a digital video editing system to manipulate stored and live video and audio.
[1993-1994]	(6 students); <i>The Leadership Project</i> development of a multimedia course in computer science to introduce parallel computing to freshmen and sophomores, jointly w. D. Johnson and D. Kotz.
[1993-1993]	(6 students); <i>Digital Libraries Project</i> : research in information retrieval of documents, and hypertext documents.
[1994-1995]	(over 20 students); <i>Electronic Publishing</i> : User interfaces for multimedia conference proceedings. Projects ranged from the development of interactive multimedia environments in learning, to evaluation, multimedia publishing, visual interfaces for algorithmic design in VLSI, and others.
[1993-1994]	(2 students) <i>Algorithm Visualization</i> : visualization of parallel packet routing algorithms.
[1995-1997]	(18 students); <i>Preservation of Cultural Heritage</i> : Virtual Museum Development on the Web which involves research in issues of copyrights, watermarking, and fusion of web-based information w. physical spaces.
[1996-1997]	(over 30 students) <i>Hellenic History Projects</i> : Ancient Olympics, the Bronze Age, PAEDEIA-Ancient Literacy, "Hear-Homer".
[1998-1999]	Senior Theses: J. Nelson, Bill Bleier. Projects: Monica Wilkins (CS82)
[2000- 2001]	Faye Teng, Visualization of TROI System; Tracy Davis, Biomedical Data Security. Policy and Technology in E-Commerce : Aidan Marcus, Nathan Zwintscher. Richard Adams, Mateusz Troicki: John Snavely. Mason Kortz..
[2001-present]	www.ecomrisk.org TECHNICAL REPORTS : an expanding interactive library of 120 Dartmouth Undergraduate edited papers. Fall, Winter 2001: development of ECOMSQUAD.ORG, a game w. 6 undergraduates. Spring 2002: development of tools and methods for medical data privacy security – two independent study students.

Teaching (Dartmouth)

- Spring 2003 and Fall 2004: Freshman seminar CS7, Hot Topics in Computer Science <http://www.cs.dartmouth.edu/~cs7/students/paperall.html>
- Winter 2004: CS99 Culminating Experience, Computer Ethics and Trends (two course sections)
- Spring 2003: CS88 and CS 188 Seminar in Biomedical Informatics and Medical Imaging (http://www.cs.dartmouth.edu/~makedon/cs88_s03/)
- Bioinformatics Research seminar, ongoing, 19 students, DEVLAB, Fall, Winter, Spring 2002-present.
- Independent study courses, Computational Multimedia Applications, Winter 2004.
- Winter 2004: Ethics in Computing and Computer Trends, Culminating Experience
- Spring 2003; CS88 and CS188, Biomedical Informatics
- Winter and Spring 2000, 2001 and 2002: CS297 and CS299: graduate research
- CS82 : Medical Database security, undergraduate research 2002
- Fall 2000-2001: CS7 (Freshman Seminar: Hot Topics In Computer Science),

- Winter 2001, 2002: CS99 Section 1 and CS99 Section 2: Computer Trends and Ethical Issues in Computer Science
- Senior thesis supervision :(winter and spring 2001) on Electronic Commerce security under CS82 (new course) and four undergraduate students in research at the DEVLAB, one of them resulted in a publication at a major conference.
- Senior Faculty Grant Research On Alzheimer's Human Brain Data, spring 2002.
- CS82 and CS88 independent study projects: one senior thesis, one research undergraduate and four undergraduate independent study courses in spring 2001 (N. Zwintsher, A. Marcuss, R. Adams, J. Snavely, M. Kortz, F. Teng)
- Introduction to Electronic Commerce (CS88 and CS188, Spring 1999) – New Course
- Freshman Seminar: Hot Topics In Computer Science: Technical, Legal & Social Issues Spring 1999
- Theory of Computation, (CS49, Winter 1999)
- Multimedia Networks – (co-taught w. Prof. Ottmann, CS187, Fall 1997)
- Principles of Database Systems (CS33, Spring 1998)
- Multimedia Tools and Applications (CS88/CS188) (Winter 1998)
- Digital Library Design (CS82)
- Computer Architecture (CS37) (Spring 1997)
- Freshman Seminar on Hot Topics in Computer Science (CS7 - fall 1997)
- Theoretical Issues of Multimedia Systems (CS185 - Winter'94)
- Multimedia Systems (CS187-Fall'93)
- Image Processing for Multimedia (CS88 and CS188 Fall'95)
- Multimedia Data Access (CS188 and CS88)
- Databases (CS33) Spring'96
- Multimedia Database Systems, Fall 1996 (CS88 and CS188) - new seminar course
- Freshman Seminar Winter 1997 (New course on copyrights)
- Computer Architecture CS37
- CS82 Six Individual, Independent Study courses on Computational Multimedia Systems (13 students)
- “Hot Topics in Computer Science”, CS7, Fall 1997
- Multimedia Tools and Applications (CS88 / 188)
- Advanced Visual Interfaces (CS88 and CS188) - Fall'92 (New seminar courses)
- Concepts in Computing (CS4) - Winter'93
- Algorithms for VLSI Physical Design Automation (CS187)-Spring'93
- Algorithm Visualization
- Data Structures and Algorithms (CS15), Fall 1991
- Introduction to Algorithm Visualization (CS188 and CS88), Winter 1992 - new seminar courses
- VLSI Design Algorithms (CS187), Spring 1992 -new course
- 1982 – 1991 (Illinois Institute of Technology and University of Texas at Dallas)
- Algorithms Design (graduate level)
- Data Structures and Algorithms (graduate and undergraduate)
- Discrete Mathematics (graduate)
- Discrete Mathematics (undergraduate)
- Design Automation Heuristics
- VLSI Algorithms
- VLSI Physical Design Automation

Committee Service

- Library coordinator, Dartmouth College, (2004-2005)
- Recruiting Committee, Dartmouth College (2004-2005)
- Chair, Masters Program, Dartmouth College, 2004-2005
- Masters Committee Advisor, 2003-2004
- Faculty Search Committee, 2003-2004
- Curriculum Committee, 2003-2004
- PhD Qualifying Committees (3)
- Curriculum Committee (2002-2003)
- Chair (1999-2001) and Member Masters Program Admissions Committee (1999-present)

- Chair, Masters Degree Advisor Committee (2000-present)
- Faculty of Ph.D.- M.D. Program since 1999
- Presidential student adviser (5 students in the last three years),
- Senior Theses adviser (4 students);
- Ph.D. student adviser (currently advising 7 Ph.D. students, and 4 MS students.
- Committee for CS Vision Statement (vision for future leadership in the department)
- faculty advisor to Hellenic Student Society
- Led two Alumni trips, May 2000.
- First Year Student Advising
- Supervised over 20 Undergraduate projects in my lab, the DEVLAB (visualization and multimedia lab).
- Mentor to Brain Imaging Laboratory Junior Faculty
- Member and Research Consultant of the Brain Imaging Laboratory Technical Committee;
- Technical advisor of the Informatics Group (DHMC)
- Adjunct Faculty of the Thayer School (since 1991)
- Dartmouth M.D. – Ph.D. Program in Computational Biology Faculty;
<http://www.cs.dartmouth.edu/~mdphd/>
- Senior Recruiting Committee, Dept. of Computer Science 9/94-6/95 and 1995-present
- Director of the Dartmouth Institute for Advanced Graduate Studies (1991-present)
- Director of the DEVLAB, a computational multimedia laboratory (1992-present)
- Faculty Search Committee (1997-1998)
- Masters Program Committee Chair (1997-1998)
- Graduate Admissions Committee (1997-1998)
- Industrial Relations Committee Representative (1997-1998)
- Faculty Advisor, Hellenic Student Association, Dartmouth College (1997-present)
- Industrial Relations Representative, Computer Science Department, Dartmouth College
- Committee on Standards (1996-1997)
- Chair, Masters Program Committee (1996-1997).
- University-wide Task Force on the Library of the 21st Century (1993-1994).
- Chair of the Industrial Board Committee for the Department of Computer Science 9/94-6/95
- Graduate Admissions Committee, Dept. of Computer Science, Chair. 9/94-6/95 and 1995-1996
- Women In Science Program Steering Committee (1993-1994)
- Committee on Student Life (1995)
- Department Representative for College-wide MD/PhD. Admissions Committee (1995)
- Senior Candidate Search (1995-1996)
- University-wide Task Force on the Library of the 21st Century (1993-1994)
- University-wide Committee for Premedical Advisors (9/93-8/94)
- Computer Science Graduate Admissions Chair 9/93-8/94)
- Computer Science Search Committee (1993-1996)
- Thayer School of Engineering Search Committee for Computer Engineering (1993-1994)
- Women In Science Program (1993-present)
- Computer Science representative for the Upper Valley Community Committee (1993-1994)
- Search Committee Member Computer Engineering, Thayer School of Engineering (1992-1993)
- Computer Science Graduate Admissions Committee (1992-1993)
- Women in Science Program (WISP) Steering Committee, Dartmouth (1992-1993)
- New CS Building Committee (1992-1993)
- Wireless Computing Committee, Thayer School of Engineering (1992-1993)
- Computer Science Faculty Recruiting Committee (1991-1993)
- Colloquium Chair for Computer Science (1991-1992)
- Chair of Graduate Admissions Committee in Computer Science Committee (1991-1992)
- Colloquium Chair (IIT) (1983-1985)
- Graduate Admission (IIT) (1984 -1985)
- Undergraduate Advising (UTD) (1985-1987)
- Colloquium Chair (UTD) (1985-1987)
- Library Instruction (UTD) (1987-1988)
- Search Committee (UTD) (1987-7/91)
- Computing in the Classroom Committee (university-wide/UTD) (1989 - 7/91)

- UTD -CS Program Colloquium Committee (Fall 1990-7/91)
- UTD-CS Program, Chair and Founder of the Industrial Relations Committee (Fall 1990-7/91)
- Tenure and Promotion Committees: 1991-1992: two committees; 1992-1993: one external committee; 1993-1995: 3 committees; 1994: 2 committees
- Ph.D. Thesis Committees: 15 committees

Invited Lectures (selected)

1. Demokritos-National Center for Scientific Research, Athens Greece
2. Algorithms for mining human brain data, Wooster Polytechnic, Wooster, MA, invited talk, April 2003.
3. Invited Panel Chair, CHI 2003, Crete, June 2003, Medical Interfaces: Tools for Data Sharing and Collaboration.
4. Invited Presentation, University of Texas, Health Science Center, Dallas, TX, July 2002.
5. Invited Presentation, Ten Years of Neuroscience, DHMC, September 2002.
6. Invited Panel member of The Daniel Webster Legal Society: CYBERLAW:A Discussion on Regulating the Internet. 4/2001.
7. Mining Human Brain Data: Analysis, Classification, and Visualization of Probabilistic 3D Image Density Objects, Invited presentation and demo on our human brain data analysis work, at the NSF Information and Data Management (IDM) Workshop for 2001 April 29, 2001 in Fort Worth, Texas - see our lab results at <http://devlab.dartmouth.edu/IDM-REPORT/>
8. Invited Lecture: Multimedia Research and Ethical Issues; Ethics 19, Dartmouth College, 2000.
9. Invited Lecture Series: Computational Multimedia Tools and Applications, The University of the Aegean, Samos, Greece, Jan.-June 2000, while on sabbatical.
10. Three Invited Lectures on Electronic Commerce, Leading the Dartmouth Alumni Trip to Greece, May 2000.
11. "Multimedia Information Retrieval", Invited Talk, University of Central Florida, March 1998.
12. "A New Model of Multimedia Information Retrieval", The University of Texas at Dallas, Jan. 23, 1998.
13. "On Museums of the Future", University of Patras, May 1997
14. "Motion Analysis of Video and Information Retrieval", Invited presentation at the University of North Texas, Denton, Texas, May 3, 1996
15. "Experiences w. Interactive Multimedia Applications: Research Challenges and Goals," Dec. 18, 1995, Univ. of Klagenfurt, Austria
16. "New Horizons for Computing & Communications in New England," invited presentation by MARINER, Boston University's NSF sponsored initiative in supercomputing and networking for the New England Region and for Boston University's third generation computer facility ,Oct. 7, 1995
17. "Multimedia Communications" at AT&T Bell Laboratories, Invited Presentation 10/95
18. "Multimedia Communications at Dartmouth," Oct. 1995, Thayer School Overseers Meeting 10/95
19. "Teaching Parallel Computing to Freshmen," Parallel Computing for Undergraduates. 6/94 (D.
20. "CD-ROM and Beyond." Vox Clamantis in Cyberspace: Life in the Information Age, Dartmouth Alumni Association, NY, NY, Oct. 22, 1994.
21. "High Performance Computing: From Systems to Applications", invited presentation of new research results at the Hermis Conference, Athens, Greece, 9/24, 1994
22. "The Leadership Project, an interactive multimedia course to teach parallel computation to freshmen and sophomores," joint presentation w. David Kotz and Donald Johnson, Conference on Parallel Computing for Undergraduates at Colgate University, June 22-24, 1994.
23. Invited Presentation, Dartmouth Alumni Class Officers Weekend, May 7, 1994, "The Information Highway".
24. Invited Presentation, Fall 1994, Life in the Multimedia Age, Dartmouth Alumni organization
25. Packet Routing on the Mesh and the Torus, February 12, 1991, invited presentation at Dartmouth College.
26. Parallel Communication: On Flit Packet Routing," Invited talk at the Austrian Center of Parallel Computation, U. of Vienna, Austria, 12/13/90.
27. "On Packet Routing for the Mesh and the Torus" , Invited Colloquium, Purdue U., 1/991.
28. Invited Seminar, California State Univ., Fullerton, CA, May 18, 1990.
29. "Optimal Packet Routing on the Mesh," invited talk, Southern Methodist U., Dallas, Texas, 4/18/90.

30. "Efficient Solutions for a Partitioning Problem," (w. Spyros Tragoudas), invited presentation to the IFIP - ITG/GI Workshop on Partitioning, Lengries, Germany, 1/28-30/90.
31. "Efficient Packet Routing on a Mesh of Processors," University of Klagenfurt, Austria, 1/90 and University of California-Riverside, 12/89.
32. "Approximation Algorithms for the Bandwidth Minimization Problem," w. J. Haralambides, Fifth SIAM Conference on Discrete Mathematics, 6/11-14/90, Atlanta, Georgia.
33. "Visualization of CAD Algorithms," University of Patras, Greece, July 1989.
34. "Packet Routing," University of Patras, Computer Technology Institute, July 1, 1989.
35. "A Hypermedia Approach to University-Level Computer Science Education," invited talk, University of Patras, Computer Engineering Department, 3/17/88
36. "An Entity-Based Database Management System," (w. S. Sarkar) IEEE Computer Society Conference on New Directions in Database and Knowledge Management Systems, March 10, 1987.
37. VLSI Project Presentation, joint work with the Computer Technology Institute of Patras, Greece to the European Economic Community Research Directorship, 1/10/86.
38. "A Hypermedia Approach to University -Level Computer Science Education," invited talk at the Computer Technology Inst., Patras, Greece, March 17, 1988.
39. Workshop 1985 of Graph theoretic Concepts in Computer Science, June 19, 1985.
40. Invited presentation to DELTA project of the European Economic Community, Oct. 6-7, 1988.
41. "Grid Embeddings": Invited talks at Iowa State University (1/85), The U. of Iowa (1/85), The U. of Vermont (1/85), Rensselaer Polytechnic (2/85), Ohio State U. (2/85), The U. of New Mexico (1/85 & 3/85), Georgia Institute of Technology (3/85), The U. of Texas at Dallas (3/85).
42. IASTED Conf., February, 1985, Grindelwald, Switzerland, "High Tech Centers:An Institutional Alternative."
43. Illinois Inst. of Technology, CS Dept. Seminar Series, 9/83, "Graph Layouts: A Survey of Current Research".
44. Computer Science Dept., National Technical U.. of Athens, weekly colloquia on "Research in Graph Layout Theory," 1982-1983.
45. Dept. of Mathematics, Aristotelian U. of Thessaloniki, Thessaloniki,Greece, February 16, 1983, "Graph Layouts: Applications, Algorithms and Complexity."
46. Institute of Informatics, Graz, U. of Technology, Austria, Jan. 28, 1983, on Ph.D. Thesis results.
47. Anatolia College, "Career Counseling in Computer Science." February 16, 1983.
48. Computer Science Department, The Univ. of Patras, Greece, July 1981, "NP Complete Problems: A Survey."
49. "Using a Network of Microcomputers to Support Teaching of Computer Science," Computer Research Institute, University of Crete, Greece, Dec., 1986.

Multimedia Laboratory Projects and Tool Development [<http://devlab.dartmouth.edu/>]

2002-present	BRASSDL: BBrain Access Support System Digital Library, an interoperable, secure digital library system for secure browsing and access of clinical metadata.
2002-present	BRASS: Brain Access Support System for sharing human brain data by automating data collection, workflow and data management.
2002-present	SCENS: Secure Content Negotiation System, a negotiation protocol for sharing sensitive data.
2001-2002	ECOMSQUAD: An interactive educational system on cybersecurity w. game features (w. C. Heckman and several Dartmouth undergraduates).
2001-present	eJETA.org Journal: E-Journal on E-commerce, Tools and Applications (www.ejeta.org).
2001-present	DShape: a 3D structural surface representation and shape classification system by L. Shen, in progress http://synapse.hitchcock.org/local/Shape/Struct/index.htm .
2000-present	GREeCOM.org: research center on Global Research and Education in ECommerce
1999-2001	ECOMRISK (www.ecomrisk.org): An interactive system for the collection, characterization, classification and mining of Electronic Commerce Risks.
1999-2001	Ecomrisk.org Technical Report Series: an e-publishing resource of edited undergraduate papers on privacy, ethics, security, technology (120 technical reports) www.ecomrisk.org
1995-1998	DFunction: A system for the classification of fMRI Brain Activations. (http://synapse.hitchcock.org/local/Shape/Struct/index.htm).

	Cross Modal Information retrieval: Multiple Media Stream Correlation; Computed Media Synchronization;
1999-2001	TROI system (Tracing Regions of Interest – in the brain), supervised students L. Shen, & Ling Cheng F. Teng. http://synapse.hitchcock.org/local/Shape/troi.htm . (1999-present). TROI supports storage, analysis, visualization and retrieval of MRI structures (whole and segmented).
1999-2000	Lip Localization: A system to detect moving lips in video automatically (MS Thesis).
1997-2000	XTRIEVE: A multimedia information retrieval system interface (by Ph.D. student C. Owen).
1996-1997	PAEDEIA: A multimedia library to enhance ancient literacy, sponsored by the Hewlett Foundation (an undergraduate project). HEAR HOMER: A Multimedia Library on Homer”, a text alignment and multimedia information retrieval system http://devlab/shadows/hear_homer/odyssey.html
1996-1997	ASML: Automatic Site Markup Language [http://devlab.dartmouth.edu/asml/], (by student C. Owen): a web-authoring system, precursor to XML.
1995-1997	Prehistoric Archeology of the Aegean: A web-based authoring system jointly w. the Classics Department (Professor J. Rutter) [http://devlab.dartmouth.edu/history/bronze_age/]
1994-1996	“Ancient Olympic Games” (best site repeatedly by several educational committees, received Gold Award) [http://devlab.dartmouth.edu/olympic/], web-based resource (20 undergraduates).
1992-1993	VIDEOSHEME (w. student J. Matthews): a digital video editing system
1992-1993	Multimedia course materials for teaching parallel computing to novices (Jointly w. David Kotz).
1995-1996	The ImageTcl System (by student C. Owen): a fast multimedia prototyping system [http://devlab.dartmouth.edu/imagetcl/]
1993-1995	An automatic conference submission, review and dissemination system for SIGACT.
1993-1994	WISKIT: Women and Minorities in Computer Science [http://www.cs.dartmouth.edu/~wiskit/]: a multimedia resource on women in computer science.
1991-1996	“Dartmouth Institute for Advanced Graduate Studies in Parallel Computation” [http://devlab.dartmouth.edu/dags/]
1991-1993	CYBERMAP Project: (w. P. Gloor and C. Langmead): a multimedia navigational system
1991-1993	“Introductory Lectures on Data Parallel Computing” , Contributing Editor, w. P. Takis Metaxas Editor, A. K. Peters Publishers,
1991-1994	CDROM: Introductory Lectures on Data-Parallel Computing , Interactive Multimedia CD-ROM, (http://www.wellesley.edu/CS/lidpc.html)
1991-1992	CS KIOSK : A pre-web application, a CS brochure, an undergraduate multimedia project.

Programs and Laboratories Founded

1999-present:	Founder and Director of GREECOM.org, an Electronic Commerce Center
1998-1999:	Founder and Director of Ecomrisk.org, a security resource for Electronic Commerce.
1996-present	Founder and chair of the Masters Program in Computer Science at Dartmouth College.
1992-1996	Founder and Director of the Dartmouth Institute for Advanced Graduate Studies (DAGS), annual summer institutes: DAGS '92, DAGS'93, DAGS'94 AND DAGS'95; each summer institute included a Symposium and a Summer School session.
1992-1996	Founder and director of the DAGS Fellows, DAGS Interns and DAGS Scholars Programs.
1991-present	Founder and director of The Dartmouth Experimental Visualization Laboratory (DEVLAB), a computational multimedia and visualization laboratory; projects range from medical imaging to prototyping systems, information retrieval, digital libraries, electronic commerce applications and Human-Computer user interfaces.
1991-1994	CS Department senior faculty building team (Junior faculty recruiting, design of new building, external review reports, infrastructure grants for laboratories, team member of the committee for the separation of CS from Math, designed and implemented the formation of new committees in CS program -graduate admissions, colloquium and industrial relations; spearheaded the formation of a digital library consortium for NSF funding).
1987-1991	Founder and Director of the Computer Learning Research , the CLEAR Center, Univ. of Texas at Dallas, Texas. Secured major external funding, supervised staff and supervised research in (a) Parallel Algorithm Visualization, (c) Interactive VLSI Design, (c) Combinatorial Optimization and (d) Computer Aided Learning. Established three separate laboratories: Computer Aided Instruction Lab; Advanced Interfaces Lab and CAD Visualization Lab. Software Development:

(a) CAI lessons on VLSI topics; (b) ILONA, an Intelligent Tutor for Propositional Calculus (w. Oberem & Mayer); (d) Digital Library of Computer Science Lectures.