

1. Personal Information

Current Position

Rank: Associate Professor with Tenure
Departments: Department of Computer Science
Department of Mechanical Engineering and Mechanics: 0%
Laboratories: Director, Geometric and Intelligent Computing Laboratory (GICL)
Academic Council, Lawrence A. Baiada Center for Entrepreneurship in Technology

Addresses

Office address: Department of Computer Science
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Education

Degree	Date	School	Major
Ph.D.	1995 December 22	The University of Maryland at College Park	Computer Science
M.S.	1994 August 27	The University of Maryland at College Park	Computer Science
B.S.	1989 May 20	Saint Joseph's University	Mathematics and Computer Science Dual Major, <i>Cum Laude</i>

Employment Background

Date	Position	Institution
09/01–present	Associate Professor	Drexel University
06/99–09/99	Research Scientist	AT&T Labs Internet Platform Technology Organization San Jose, California
07/97–08/01	Assistant Professor	Drexel University
01/97–09/97	Visiting Research Engineer (equivalent to Assistant Professor)	Carnegie Mellon University Institute for Complex Engineered Systems Carnegie Institute of Technology School of Computer Science
01/96–01/97	Post-Doctoral Research Associate	National Institute of Standards and Technology (NIST)
05/92–12/95	Computer Scientist	United States Department of Commerce National Institute of Standards and Technology (NIST) United States Department of Commerce
01/90–12/95	Research Assistant	The University of Maryland at College Park Institute for Systems Research Department of Computer Science

08/90-05/92	Adjunct Faculty	The University of Maryland, University College
08/89-12/89	Teaching Assistant	The University of Maryland at College Park
01/87-08/88	Research Fellowship	Saint Joseph's University Center for Machine Learning
05/88-08/88	Actuarial Internship	Prudential Insurance Company of North America
05/86-01/88	Actuarial Internship	CIGNA

2. Research, Scholarly, and Creative Activities

A. Books

i. Theses

1. *Geometric Algorithms for the Recognition of Features from Solid Models*. Ph.D. Thesis, The University of Maryland at College Park. December 1995. Also available as CS-TR-3564 and UMIACS-TR-95-115.
2. *Recognition of Volumetric Features from CAD Models: Problem Formalization and Algorithms*. M.S. Scholarly Paper. Department of Computer Science, The University of Maryland at College Park. May 1994. Available as ISR TR93-41.

ii. Edited Proceedings

3. *Proceedings of the 1996 NIST Workshop on Network-Centric Computer-Aided Design*, with Peter F. Brown, Stephen J. J. Smith and Simon Szykman. Gaithersburg, Maryland, December 3-4, 1996. NIST IR 6043.
4. *Proceedings of the 1996 NIST Workshop on Computer-Aided Process Planning and Manufacturing Engineering*, with Swee Leong and Michael Smith. Gaithersburg, Maryland, June 10-11, 1996. NIST IR.
5. *Computer Science: A Working Partnership Joining Government, Industry, and Academia: A Conference Summary*. Department of Computer Science and Institute for Advanced Computer Studies, University of Maryland at College Park. March 30, 1994. Available as CS-TR-3251 and UMIACS-TR-94-41.

iii. Chapters in Books

6. Building and Evaluating Networked Engineering Environments, with Vera Zaychik, Thomas T. Hewett and Jonathan Sevy. Chapter 16, pp 229-235, of *Fourth IFIP WG 5.2 Workshop on Knowledge Intensive CAD (KIC-4)*, Umberto Cugini and Michael Wozny, Editors. International Federation for Information Processing (IFIP) Working Group 5.2. November, 2001. Extended version of the conference paper (listed below). Kluwer Academic Publishers; ISBN: 0792376196.
7. Enabling Technologies for Automated Redesign, with Dana Nau and James Hendler. *First IFIP WG 5.2 Workshop on Knowledge Intensive CAD (KIC-1)*, T. Tomiyama, M. Mäntylä, and S. Finger, Editors. International Federation for Information Processing (IFIP) Working Group 5.2. Kluwer Academic Publishers, 1996. ISBN 0412729105. pp. 455-463.
8. A Methodology for Systematic Generation and Evaluation of Alternative Operation Plans, with Satyandra K. Gupta, Dana S. Nau, and Guangming Zhang. *Advances in Feature Based Manufacturing*, Jami J. Shah, Martti Mäntylä, Dana S. Nau, Editors. Elsevier/North Holland, 1994, pp. 161-184. Also available as and URL ftp://ftp.cs.umd.edu/pub/cim/papers/FBM_chapter3.ps.
9. Boundary Representation Based Feature Identification, with Mark R. Henderson, Gopal Srinath, Roger Stage, and Kim Walker. *Advances in Feature Based Manufacturing*, Jami J. Shah, Martti Mäntylä, Dana S. Nau, Editors. Elsevier/North Holland, 1994.

B. Journal Publications

i. Refereed Articles

10. Role-based Viewing for Secure Collaborative Modeling, with Christopher D. Cera, Taesong Kim and JungHyun Han. Submitted to the *Journal of Computer Aided Design*.
11. Using Assembly Representations to Enable Evolutionary Design of Lego Structures, with Maxim Peysakhov. Accepted for publication in *Journal of Artificial Intelligence in Engineering Design, Analysis and Manufacturing (AI-EDAM)*, Volume 17, Number 2, April 2003
12. Capturing Communication and Context in the Software Project Lifecycle, with Vera Zaychik. Accepted for publication in *Research in Engineering Design* and presently in press, 2002/2003.
13. DAMLJessKB: A Tool for Reasoning with the Semantic Web, with Joseph Kopena. *IEEE Intelligent Systems*, ("Semantic Web" Column), April-May, 2003.
14. An Approach to Feature-based Comparison of Solid Models of Machined Parts, with Vincent Cicirello. *Journal of Artificial Intelligence in Engineering Design, Analysis and Manufacturing (AI-EDAM)*, Volume 16, Issue 6, 2002, pp. 385-399.
15. A Multi-User 3D Environment for Collaborative Authoring of Design Semantics, with Christopher Cera, Ilya Braude, Cheryl Foster, and Yuri Shapirstein. *IEEE Computer Graphics and Applications*, Special Issue on "Graphics in Advanced Computer-Aided Design." Volume 22, Number 3, May/June 2002. pp. 43-55.
16. Solid Model Databases: Techniques and Empirical Results, with David McWherter, Mitchell Peabody and Ali Shokoufandeh. *ASME/ACM Transactions, Journal of Computer and Information Science in Engineering*. Volume 1, Issue 4, December 2001, pp 300-310. Special issue sponsored by ASME and ACM on "Applications of Solid Modeling in Product Development," a selection of invited papers from the *Sixth ACM/SIGGRAPH Symposium on Solid Modeling and Applications*.
17. An Approach to Capturing Structure, Behavior and Function of Artifacts in Computer-Aided Design, with Lisa P. Anthony, Jon E. John and Santiago V. Lombeyda. *ASME/ACM Transactions, Journal of Computer and Information Science in Engineering*. Volume 1, Issue 2, June 2001. pp. 186-192.
18. The Role of Knowledge in Next-Generation Product Development Systems, with Ram D. Sriram and Simon Szykman. *Transactions of the ASME, the Journal of Computer and Information Science in Engineering* (now the *ASME/ACM Transactions, Journal of Computer and Information Science in Engineering*), Volume 1, Number 1, March, 2001. pp. 3-11.
19. Algorithms for Feature Recognition from Solid Models: A Status Report, with Jung-Hyun Han and Michael Pratt. *IEEE Transactions on Robotics and Automation*. Volume 16, Number 5, December 2000, pp. 782-796.
20. A Survey of Design Rationale Systems: Approaches, Representation, Capture and Retrieval, with Xiaochun Hu, Michael Atwood and Wei Sun. *Engineering with Computers: An International Journal for Simulation-Based Engineering*, Special Issue on Computer Aided Engineering in Honor of Professor Steven J. Fenves. Edited by Kincho H. Law, Ram D. Sriram and James Garrett. Volume 16, Issue 3/4, December 2000. pp. 209-235.
21. Building an IP Network Quality-of-Service Testbed, with David McWherter and Jonathan Sevy. *IEEE Internet Computing*, Volume 4, Number 4, July/August, 2000. pp. 65-73.
22. Managing Digital Libraries for Computer-Aided Design, with Vincent Cicirello. *Journal of Computer Aided Design*, Volume 32, Issue 2, February 2000. pp. 119-132. Special Issue on "CAD After 2000," Mohsen Rezyat, Editor.
23. Hint-Based Reasoning for Feature Recognition: Status Report, with JungHyun Han and Steve Brooks. *Journal of Computer Aided Design*. November 1998, Vol 30, No 13, pp. 1003-1007.
24. IMACS: A Case Study in Real-World Planning, with Satyandra K. Gupta and Dana S. Nau. *IEEE Intelligent Systems and Applications* (formerly *IEEE Expert and Intelligent Systems*). May/June 1998, Volume 13, Number 3, pp. 49-60.

25. A Repository of Designs for Process and Assembly Planning, with Daniel M. Gaines. *Journal of Computer Aided Design*. Volume 29, Number 12, December 1997, pp. 895-905. An earlier version is available as NIST Interagency Report #5982.
26. Automated Manufacturability Analysis: A Survey, with Diganta Das, Satyandra K. Gupta, and Dana S. Nau. *Research in Engineering Design*. Volume 9, Number 3, 1997, pp. 168-190. Also available as NIST IR #5713, CS-TR-3404, UMIACS-TR-95-08, ISR-TR-95-14 and URL ftp://ftp.cs.umd.edu/pub/cim/papers/ISR_TR_95-14.ps.
27. Internet-Enabled Computer-Aided Design. *IEEE Internet Computing*, January-February 1997, Volume 1, Number 1, pp. 39-51.
28. Towards Multi-Processor Feature Recognition, with Satyandra K. Gupta and Dana S. Nau. *Journal of Computer Aided Design*, Volume 29, Number 1, January 1997, pp. 37-51. Also available as NIST IR #5706, CS-TR-3375, UMIACS-TR-94-126, ISR-TR-94-82 and URL ftp://ftp.cs.umd.edu/pub/cim/papers/ISR_TR_FR-94-82.ps.
29. Extracting Alternative Machining Features: An Algorithmic Approach, with Satyandra K. Gupta and Dana S. Nau. *Research in Engineering Design*. Volume 7, Number 3, pp. 173-192, 1995. Also available as CS-TR-3329, UMIACS-TR-94-95, ISR-TR94-55, and URL ftp://ftp.cs.umd.edu/pub/cim/papers/ISR_TR_94-55.ps.
30. Building MRSEV Models for CAM Applications, with Satyandra K. Gupta, Thomas R. Kramer, Dana S. Nau, and Guangming Zhang. *Advances in Engineering Software*, 1994, Volume 20, Number 2/3, pp. 121-139. Special issue on Feature-Based Design and Manufacturing. Also available as CS-TR-3331, UMIACS-94-97, ISR-TR93-84, and URL ftp://ftp.cs.umd.edu/pub/cim/papers/ISR_TR_93-84.ps.
31. Integrating DFM with CAD Through Design Critiquing, with Satyandra K. Gupta and Dana S. Nau. *Concurrent Engineering: Research and Applications*, 1994, Volume 2, Number 2, pp. 85-95. Special issue on AI in Concurrent Engineering. Also available as CS-TR-3330, UMIACS-TR-94-96, ISR-TR94-11, and URL ftp://ftp.cs.umd.edu/pub/cim/papers/ISR_TR_94-11.ps.

ii. Edited Issues of Refereed Publications

32. *Journal of Artificial Intelligence in Engineering, Design, Analysis and Manufacturing (AI-EDAM)*, a special issue "AI in Manufacturing: State of the Art," sponsored by the American Association for Artificial Intelligence (AAAI) Special Interest Group on AI in Manufacturing (SIGMAN). Cambridge University Press. September, 2002. Edited with Daniel Gaines.
33. *Journal of Computer-Aided Design*, special issue on *Feature-Based Manufacturing*. Elsevier Science Ltd. Volume 33, Issue 9, August 2001. Edited with Satyandra K. Gupta.
34. *IEEE Internet Computing*, special issue on *Knowledge Networking*. IEEE Press. Volume 4, Number 5, September-October, 2000. Edited with Frank Maurer.
35. *Journal of Artificial Intelligence in Engineering, Design, Analysis and Manufacturing (AI-EDAM)*, a special issue "AI in Manufacturing: State of the Art," sponsored by the American Association for Artificial Intelligence (AAAI) Special Interest Group on AI in Manufacturing (SIGMAN). Cambridge University Press. Volume 14, Number 4. September, 2000.
36. *Journal of Computer-Aided Design*, special issue on *Network-Centric Computer-Aided Design*. Elsevier Science Ltd. Volume 30, Number 6. June/July, 1998. Edited with Jai Menon.
37. *IEEE Internet Computing*, special issue on *Intranets*. IEEE Press. Volume 1, Number 5, September-October, 1997.
38. *The Communications of the ACM*, special issue on *Computer Science in Manufacturing*. Association for Computing Machinery, Volume 39, Number 2, February 1996. Edited with Michael Wozny.

C. Monographs, Reports, and Extension Publications

N/A.

D. Book Reviews, Other Articles, and Notes

N/A.

E. Talks, Abstracts, and Other Professional Papers Presented

i. Invited Talks, Etc.

Date	Activity	Location
2003	lecture	Saint Joseph's University Department of Mathematics and Computer Science
2003	lecture	Rutgers University Department of Computer Science
2002	lecture	Lockheed Martin, Advanced Technologies Laboratory
2002	lecture	Penn State University Department of Industrial Engineering
2002	lecture	United States Army, Ft. Monmouth, NJ Communications and Electronics Command (CECOM), C2 Division
2002	lecture	United States Army, Ft. Monmouth, NJ Communications and Electronics Command (CECOM), C2 Division
2002	lecture	United States Department of Energy Lawrence Livermore National Laboratories
2002	lecture	Spatial Technologies Insider's Summit
2002	lecture	United States Department of Energy Kansas City Plant (KCP) Honeywell Federal Manufacturing and Technologies
2002	lecture	New Mexico Software, Incorporated
2002	lecture	United States Department of Energy Los Alamos National Laboratories Security and Non-Proliferation Division
2002	lecture	National Institute of Standards and Technology Manufacturing Systems Integration Division
2001	lecture	United States Military Academy at West Point Department of Electrical Engineering and Computer Science
2001	panelist	Princeton University and NEC Research Institute Department of Computer Science Workshop on Shape-Based Retrieval and Analysis of 3D Models
2001	lecture	The University of Southern California Department of Industrial Engineering
2000	lecture	The University of Michigan Department of Mechanical Engineering and Mechanics Fall 2000 Design and Manufacturing Seminar Series
2000	lecture	The University of Delaware Department of Computer and Information Science
2000	lecture	AIPS 2000, The AI Planning Conference Workshop on Decision Theoretic Planning
2000	lecture	Lehigh University Department of Industrial Engineering
1999	lecture	Drexel University

		Department of Mechanical Engineering
1999	lecture	SciTech V, Philadelphia Science and Technology Town Meeting
1999	lecture	Boeing Aerospace, Mathematics & Computing Technology Division
1999	lecture	AT&T Labs, Internet Platforms Technology Organization
1998	lecture	Mechanical Engineering, University of Maryland at College Park
1998	lecture	SIAM Features Workshop
1998	lecture	Structural Dynamics Research Corporation (CCSD '98)
1997	lecture	Society of Automotive Engineers
1997	lecture	Bentley Systems Incorporated (PES '97)
1997	lecture	Johns Hopkins University, Department of Computer Science
1997	lecture	Bentley Systems Incorporated
1997	lecture	IBM T. J. Watson Laboratories
1997	lecture	Bell Communications Research Laboratories (Bellcore)
1997	lecture	ACM Solid Modeling Symposium
1997	panel chair	TeamCAD Workshop at Georgia Tech.
1997	lecture	Global Virtual Manufacturing Conference
1996	lecture	CAM-I Features Workshop
1996	lecture	University of Illinois at Urbana-Champaign, Department of Computer Science
1996	panelist	<i>IEEE Internet Computing</i> Roundtable
1996	panel chair	ASME Computers in Engineering Conference
1996	panel chair	AAAI SIGMAN Workshop
1996	lecture	Structural Dynamics Research Corporation (SDRC)
1996	lecture	Siemens Corporate Research
1996	lecture	Spatial Technologies Incorporated
1996	lecture	AMP Incorporated
1995	lecture	Drexel University, Department of Mach and Computer Science
1995	lecture	Saint Joseph's University, Department of Mathematics and Computer Science
1994	lecture	The University of Pennsylvania, GRASP Lab
1994	lecture	West Virginia University, Concurrent Engineering Research Center (CERC)
1993	lecture	Lehigh University, Department of Electrical Engineering and Computer Science
1993	lecture	Carnegie-Mellon University, Engineering Design Research Center (EDRC)
1992	lecture	National Institute of Standards and Technology
1992	lecture	Saint Joseph's University, Department of Mathematics and Computer Science

ii. Refereed Conference Papers, Contributed Talks, Etc.

39. DAMLJessKB, with Joseph Kopena. Submitted to the *Semantic Web Conference*.
40. Knowledge Representations for Design, with Joseph Kopena. Submitted to the *Semantic Web Conference*.
41. Role-based Viewing for Secure Collaborative Modeling, with Christopher D. Cera, Taesong Kim and JungHyun Han. Accepted to *ASME DETC CIE*, Chicago, Illinois September 2-6, 2003.
42. Modeling Design Semantics with Conceptual Graphs, with Joe Kopena. Accepted to *ASME DETC CIE*, Chicago, Illinois September 2-6, 2003.
43. Reeb-Graph Shape Matching for CAD, with Dmitry Bepalov and Ali Shokoufandeh. Accepted to *ASME DETC CIE*, Chicago, Illinois September 2-6, 2003.
44. Network Meta-Reasoning for Information Assurance in Mobile Agent Systems (poster paper), with Donovan Artz and Maxim Peysakhov. Accepted to the *International Joint Conferences on Artificial Intelligence (IJCAI)*, August 9-15, 2003. Alcapulco, MX. 26% overall conference acceptance rate (papers + posters).
45. SWAT: A Secure Wireless Agent Testbed, with Evan Sultanik et al, Accepted to the *Innovative Applications of Artificial Intelligence Conference (IAAI)*. August 11-13 2003. Alcapulco, MX.

46. Scale-space Representation of 3D Models and Topological Matching, with Dmitriy Bespalov, Ali Shokoufandeh and Wei Sun. Accepted to the *Eighth ACM/SIGGRAPH Symposium on Solid Modeling and Applications*, Gershon Elber and Vadim Shapiro, Editors. June 16-20, 2003. Seattle, WA. 25 papers, 15 posters, 4 emerging results papers out of 80 submitted papers.
47. Representation of Porous Artifacts for Bio-Medical Applications, with Craig Schroeder, Ali Shokoufandeh and Wei Sun. Accepted to the *Eighth ACM/SIGGRAPH Symposium on Solid Modeling and Applications*, Gershon Elber and Vadim Shapiro, Editors. June 16-20, 2003. Seattle, WA. (Emerging Concepts paper), 25 papers, 15 posters, 4 emerging results papers out of 80 submitted papers.
48. Automated Learning of Model Classifications, with Cheuk Yiu Ip, Leonard Sieger and Ali Shokoufandeh. Accepted to the *Eighth ACM/SIGGRAPH Symposium on Solid Modeling and Applications*, Gershon Elber and Vadim Shapiro, Editors. June 16-20, 2003. Seattle, WA. (poster paper). 25 papers, 15 posters, 4 emerging results papers out of 80 submitted papers.
49. Representation and design of heterogenous tissue structures, with W. Sun and A. Shokoufandeh, *2002 Winter Biotechnology Conference in Tissue Engineering (CSHL)*, Cold Spring, NY, November 22, 2002.
50. Using Shape Distributions to Compare Solid Models, with Cheuk Yiu Ip, Daniel Lapadat and Leonard Sieger. *Seventh ACM/SIGGRAPH Symposium on Solid Modeling and Applications*, Hans-Peter Seidel, Editor. June 17-21, 2002. Saarbrücken, Germany. pp. 273-280. (Poster paper). 20 papers, 15 posters out of 100 submissions.
51. Collaborative Sketching of NURBS Surfaces, with Cheryl Foster and Yuriy Shapirshteyn. *ASME Design Engineering Technical Conferences, Computers and Information in Engineering Conference*. September 9-12, 2001. Pittsburgh, PA. DETC2001/CIE-21256.
52. Integrating Design Process Knowledge with CAD Models, with Erik E. Hayes. *ASME Design Engineering Technical Conferences, Computers and Information in Engineering Conference*. September 9-12, 2001. Pittsburgh, PA. DETC2001/CIE-21247.
53. Transformation Invariant Similarity Assessment of Solid Models, with David McWherter, Mitchell Peabody and Ali Shokoufandeh. *ASME Design Engineering Technical Conferences, Sixth Design for Manufacturing Conference*. David O. Kazmer, Editor. September 9-12, 2001. Pittsburgh, PA. DETC2001/DFM-21191.
54. A Student Project in Software Evaluation, with Michael F. Czajkowski, Cheryl V. Foster, Thomas T. Hewett, Joseph A. Casacio, and H. A. Sperber. *Proceedings of the 6th Annual Conference on Integrating Technology into Computer Science Education*. June 25-28, 2001. Canterbury, UK. ACM Press, New York. pp. ??.
55. Representation and Capture of Temporal Change in Solid Models, with Erik E. Hayes and Jonathan Sevy. *Sixth ACM/SIGGRAPH Symposium on Solid Modeling and Applications*, Deba Dutta and Hans-Peter Seidel, Editors. June 4-8, 2001. Ann Arbor, MI. pp. 317-318. (Poster paper). 30 papers and 15 posters accepted out of approximately 100 papers.
56. Techniques for Indexing and Clustering of Solid Models, with David McWherter, Mitchell Peabody and Ali Shokoufandeh. *Sixth ACM/SIGGRAPH Symposium on Solid Modeling and Applications*, Deba Dutta and Hans-Peter Seidel, Editors. June 4-8, 2001. Ann Arbor, MI. pp. 78-87. 30 papers and 15 posters accepted out of approximately 100 papers.
57. Machining Feature-Based Comparisons of Mechanical Parts, with Vincent Cicirello. *International Conference on Shape Modeling and Applications*, Sponsored by ACM SIGGRAPH, the Computer Graphics Society and EUROGRAPHICS. IEEE Computer Society Press. Genoa, Italy, May 7-11, 2001. pp. 176-185. 30 papers where accepted of 67 submitted.
58. Software Architecture to Facilitate Automated Message Recording and Context Annotation, with Erik E. Hayes, David McWherter, Jonathan Sevy and Vera Zaychik. *Network Intelligence: Internet-Based Manufacturing, Proceedings of the International Society for Optical Engineering (SPIE), Volume 4208*. Boston, MA. November 5-8, 2000.

59. A Collaborative Design Studio, with Jonathan Sevy and Vera Zaychik. *Co-Designing 2000 Conference* (Adjunct Proceedings), Stephen A. R. Scrivener, Linden J. Ball and Andree Woodcock, Editors. Coventry University, U.K., 11-13 September, 2000. ISBN 0-905949-93-5. pp. 117-121.
60. Building Internet-Based Virtual Environments Collaborative Design, with Yuriy Shapirshteyn, Cheryl V. Foster, Jon E. John and Lisa P. Anthony. *Co-Designing 2000 Conference*, Stephen A. R. Scrivener, Linden J. Ball and Andree Woodcock, Editors. Coventry University, U.K., 11-13 September, 2000. pp. 117-122.
61. A Survey on Design Rationale: Representation, Capture and Retrieval, with Xiaochun Hu, Jun Pang, Yan Pang, Michael Atwood and Wei Sun *ASME Design Engineering Technical Conferences, Fifth Design for Manufacturing Conference*. Michael Yang, Editor. September 10-14, 2000. Baltimore, Maryland. DETC2000/DFM-14008.
62. Applying Case-Based Reasoning to Mechanical Bearing Design, with Xiaoli Qin. *ASME Design Engineering Technical Conferences, Fifth Design for Manufacturing Conference*. Michael Yang, Editor. September 10-14, 2000. Baltimore, Maryland. DETC2000/DFM-14011.
63. Using Graph-Grammars and Genetic Algorithms to Represent and Evolve Lego Assemblies, with Maxim Peysakhov and Vlada Galinskaya. *Genetic and Evolutionary Computation Conference (GECCO 2000)*. Las Vegas, NV. Late breaking results paper. pp. 269-275. Morgan Kaufmann Publishers, San Francisco, CA
64. Genetic Algorithms for Optimization of Lego Assemblies, with Maxim Peysakhov and Vlada Galinskaya. *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2000)*. Darrell Whitley, David Goldberg, Erick Cantu-Paz, Lee Spector, Ian Parmee, Hans-Georg Beyer, Editors. July 10-12, Las Vegas, NV. (Poster paper). p. 968. Morgan Kaufmann Publishers, San Francisco, CA
65. Evaluating Collaborative Engineering Environments, with Vera Zaychik, Thomas Hewett and Jon Sevy. *IEEE Eighth International Workshops on Enabling Technologies: Infrastructure for Collaborative Enterprises (WET ICE 2000)* Workshop on Evaluation of Collaborative Enterprises, June 14-16, 2000, National Institute of Standards and Technology Gaithersburg, Maryland, USA. pp. 118-124.
66. Populating and Interacting with Large Design Knowledge-Bases. *Proceedings of the Fourth IFIP WG 5.2 Workshop on Knowledge Intensive CAD (KIC-4)*, Umberto Cugini and Michael Wozny, Editors. International Federation for Information Processing (IFIP) Working Group 5.2. May 22-24, 2000. The University of Parma, Parma, Italy. (Extended Abstract). pp. 38-39.
67. Issues in Building and Evaluating Networked Engineering Environments, with Vera Zaychik, Thomas T. Hewett and Jonathan Sevy *Proceedings of the Fourth IFIP WG 5.2 Workshop on Knowledge Intensive CAD (KIC-4)*, Umberto Cugini and Michael Wozny, Editors. International Federation for Information Processing (IFIP) Working Group 5.2. May 22-24, 2000. The University of Parma, Parma, Italy. pp. 259-265.
68. Conceptual Design for Assembly, with Santiago Lombeyda. *ASME Design Engineering Technical Conferences, Fourth Design for Manufacturing Conference*. DETC99/DFM-8943. Robert Sturges, Editor. September 12-15, 1999. Las Vegas, Nevada.
69. Digital Library Support for Engineering Design and Manufacturing. *ASME Design Engineering Technical Conferences, Eleventh Computers in Engineering Conference*. DETC99/CIE-9080. Special Track on Internet-based Design and Manufacturing. September 12-15, 1999. Las Vegas, Nevada.
70. Conceptual Design for Mechatronic Assemblies (Extended Abstract), with Santiago Lombeyda. *Fifth ACM/SIGGRAPH Symposium on Solid Modeling and Applications*. David Anderson and Wim Bronsvoort, Editors. June 8-11, 1999. Ann Arbor, MI. pp. 320-321.
71. Resolving Non-Uniqueness in Design Feature Histories, with Vincent A. Cicirello. *Fifth ACM/SIGGRAPH Symposium on Solid Modeling and Applications*. David Anderson and Wim Bronsvoort, Editors. June 8-11, 1999. Ann Arbor, MI. pp. 76-84.
72. 1997 Special Session on Feature Recognition, with JungHun Han and David Rosen. *ASME Design Engineering Technical Conferences, Computers in Engineering Conference*, September, 1997. Sacramento, CA. 97-DETC:CIE-4423.

73. Hint-based Feature Recognition, with JungHun Han and Steve Brooks. *ASME Design Engineering Technical Conferences, Computers in Engineering Conference*, September, 1997. Sacramento, CA. 97-DETC:CIE-4485.
74. Feature-based Similarity Assessment of Solid Models, with Alexei Elinson and Dana S. Nau. *Fourth ACM/SIGGRAPH Symposium on Solid Modeling and Applications*. Christoph Hoffman and Wim Bronsvort, Editors. May 14-16, 1997. pp. 297-310. Atlanta, GA.
75. Research Issues in Network-Centric Computer-Aided Design. *The 1997 TEAM-CAD Workshop*. pp. 3-10. May 12-13, Atlanta, GA. A longer version of this article is available as NIST Interagency Report #5949.
76. Common Libraries for Networked Engineering Applications, with Robert Tuttle, Gordon Little, Jonathan Corney and D. E. R. Clark. **EUROPIA97**, *Proceedings of the Sixth International Conference on Applications/Implications of Computer Networking in Architecture, Construction, Design, Civil Engineering, and Urban Planning*. Edinburgh, Scotland. April 2-3, 1997. pp. 1-11. ISBN 2-909285-07-3.
77. What are Feature Interactions?, with Michael Pratt. *ASME Design Engineering Technical Conferences, Design for Manufacturability Symposium*, August 18-22, 1996. Irvine, CA. 96-DETC:DFM-1285.
78. AI Planning versus Manufacturing-Operation Planning: A Case Study, with Satyandra K. Gupta and Dana S. Nau. *14th International Joint Conference on Artificial Intelligence (IJCAI)*, August 19-26, 1995. Montreal, Canada. pp. 1670-1676. Also available as CS-TR-3397, UMIACS-TR-95-3, ISR-TR-95-4.
79. Current Trends and Future Challenges in Automated Manufacturability Analysis, with Diganta Das, Satyandra K. Gupta, and Dana S. Nau. *ASME Design Engineering Technical Conferences, Computers in Engineering Conference*, September 18-21, 1995. Boston, MA. pp. 655-666. Also available as ISR-TR-95-16 and URL <ftp://ftp.cs.umd.edu/pub/cim/papers/CIE95.ps>.
80. Interactive Feature Recognition Using Multiprocessor Methods, with Satyandra K. Gupta and Dana S. Nau. *ASME Design Engineering Technical Conferences, Design for Manufacturability Symposium*, September 18-21, 1995. Boston, MA. pp. 927-938. Also available as CS-TR-3375, UMIACS-TR-94-126, ISR-TR-94-82, and URL ftp://ftp.cs.umd.edu/pub/cim/papers/ISR_TR_94-82.ps.
81. Manufacturing Feature Instances: Which Ones to Recognize?, with Satyandra K. Gupta and Dana S. Nau. *Third ACM/IEEE Symposium on Solid Modeling and Applications*, May 16-19, 1995. Salt Lake City, Utah. pp. 141-152. Also available as NIST IR #5655, CS-TR-3376, UMIACS-TR-94-127, ISR-TR-94-81, and URL ftp://ftp.cs.umd.edu/pub/cim/papers/ISR_TR_94-81.ps.
82. Manufacturing-Operation Planning versus AI Planning, with Satyandra K. Gupta and Dana S. Nau. *AAAI Spring Symposium*, March 1995, Stanford, CA. American Association for Artificial Intelligence. Also available as URL ftp://ftp.cs.umd.edu/pub/cim/papers/AAAI_Spring95.ps.
83. Feature Recognition for Manufacturability Analysis, with Satyandra K. Gupta and Dana S. Nau. *ASME Design Engineering Technical Conferences, Computers in Engineering Conference*, September 13-16, 1994. Minneapolis, MN. pp. 93-104. Also available as ISR-TR-94-10 and URL <ftp://ftp.cs.umd.edu/pub/cim/papers/CIE94.ps>.
84. Development of Machining Alternatives Based on MRSEVs, with Satyandra K. Gupta, Dana S. Nau, Thomas R. Kramer, and Guangming Zhang. *ASME Design Engineering Technical Conferences, Computers in Engineering Conference*, August 1993. pp. 47-57. Also available as URL <ftp://ftp.cs.umd.edu/pub/cim/papers/CIE93.ps>.
85. Building a General Approach to Feature Recognition of Material Removal Shape Element Volumes (MRSEVs), with Dana S. Nau. *Second ACM/IEEE Symposium on Solid Modeling and Applications*, May 19-21, 1993. Montreal, Canada. pp. 293-302.

iii. Other Articles, Technical Reports, Letters , Etc.

86. The National Design Repository: A Status Report, with Cheryl Foster, Erik Hayes, Cheuk Yiu Ip, David McWherter, Mitchell Peabody, Yuriy Shapirsteyn and Vera Zaychik. *International Joint Conferences on Artificial Intelligence (IJCAI) AAAI/SIGMAN Workshop on AI in Manufacturing Systems*, August 5, 2001. Daniel M. Gaines, Editor. Seattle, WA. pp. 94-96.
87. Discovering Knowledge in Design and Manufacturing Repositories, with Cheryl Foster, Erik Hayes, David McWherter, Mitchell Peabody, Yuriy Shapirsteyn and Lisa Anthony. *International Joint Conferences on Artificial Intelligence (IJCAI) Workshop on Knowledge Discovery from Distributed, Heterogeneous, Dynamic, Autonomous Data Sources*, August 6, 2001. Vasant Honavar, Editor. Seattle, WA. pp. 40-42.
88. CUP: A Computer-Aided Conceptual Design Environment for Assembly Modeling, with Lisa P. Anthony, Jon E. John and Santiago V. Lombeyda. Drexel University Computer Science Technical Report, 2001.
89. Clustering Techniques for Databases of CAD Models, with David McWherter and Mitchell Peabody and Ali Shokoufandeh. Drexel University Computer Science Technical Report, 2001.
90. Clustering Solid Models for Database Storage, with David McWherter, Mitchell Peabody and Ali Shokoufandeh. Drexel University Computer Science Technical Report, 2001.
91. An Approach to Indexing Databases of Graphs, with David McWherter, Mitchell Peabody and Ali Shokoufandeh. Drexel University Computer Science Technical Report, 2001.
92. An Approach to Indexing Databases of Solid Models, with David McWherter, Mitchell Peabody and Ali Shokoufandeh. Drexel University Computer Science Technical Report, 2001.
93. The Engineering Design Repositories Project, with Lisa Anthony, Vincent Cicirello, Jon John, Xiaoli Qin, Yuriy Shapirshteyn and Vera Zaychik. *National Science Foundation Design and Manufacturing Grantees Conference*. January 3-6, 2000. Vancouver, BC. Canada.
94. Design Classification and Hybrid Variant-Generative Process Planning: Status Report, with Jeffrey W. Herrmann and Dana S. Nau. *National Science Foundation Design and Manufacturing Grantees Conference*. January 3-6, 2000. Vancouver, BC. Canada.
95. Building GeoPlex Gate Proxies on GUNet, with Yuriy Shapirshteyn and Vera Zaychik. AT&T Labs, Internet Platforms Technology Organization, GeoPlex University Network (GUNet) Technical Report. <http://www.gunet.net>. August 1999.
96. GUNet Applications: Active User and Active Service Registry, with Yuriy Shapirshteyn and Vera Zaychik. AT&T Labs, Internet Platforms Technology Organization, GeoPlex University Network (GUNet) Technical Report. <http://www.gunet.net>. August 1999.
97. GUNet Applications: The HelloWorld Service and Client Peerlets, with Yuriy Shapirshteyn and Vera Zaychik. AT&T Labs, Internet Platforms Technology Organization, GeoPlex University Network (GUNet) Technical Report. <http://www.gunet.net>. August 1999.
98. GUNet Application: A Network Bandwidth Flow Checker, with Yuriy Shapirshteyn and Vera Zaychik. AT&T Labs, Internet Platforms Technology Organization, GeoPlex University Network (GUNet) Technical Report. <http://www.gunet.net>. August 1999.
99. HCI Issues in Collaborative and Networked Engineering Design, with Thomas Hewett, *ACM Conference on Human-Computer Interaction, Workshop on HCI in Application Domains*. Editor: Guy Boy. May 17, 1999. Pittsburgh, PA.
100. Dvorak vs. QWERTY, Letters to the Editor, *The Economist*, May 8th — May 14th, 1999. p. 6.
101. KDI: Networked Engineering. *National Science Foundation HCI Grantees Workshop*. Edited by Kay Stanney and Gary Strong. February 21-23, 1999. Orlando, FL. pp. 202-204.

102. CAREER: Geometric Reasoning for Large Engineering Knowledge-Bases. *National Science Foundation Design and Manufacturing Grantees Conference*. Edited by Stan Settles. January 4-8, 1999. Long Beach, CA.
103. KDI: Networked Engineering, with Thomas Hewett, Pradeep Khosla, Ramayya Krishnan, Stephen Lu and Berok Khoshnevis. *National Science Foundation Design and Manufacturing Grantees Conference*. Edited by Stan Settles. January 4-8, 1999. Long Beach, CA.
104. Design Classification for Hybrid Variant/Generative Process Planning, with Dana S. Nau and Jeffrey Herrmann. *National Science Foundation Design and Manufacturing Grantees Conference*. January 5-8, 1998. Monterey, Mexico.
105. Classification and Retrieval of CAD Models using Feature Graphs, with Alexei Elinson and Dana S. Nau. *National Science Foundation Design and Manufacturing Grantees Conference*, pp 143-144. January 7-10, 1997. Seattle, WA.
106. An Overview of the NIST Repository for Design, Process Planning, and Assembly, with Dan Gaines. *National Science Foundation Design and Manufacturing Grantees Conference*. January 7-10, 1997. Seattle, WA. pp 673-674.
107. The Tax Liability of 'Chad's House of Croissant's/Car Talk' T-Shirts, Car Talk, National Public Radio, December 14, 1996.
108. An Overview of the NIST Design, Planning, and Assembly Repository, with Daniel Gaines. June 1996. Also available through <http://www.parts.nist.gov/parts> and as NIST-IR #5982.
109. MicroStation Development Language (MDL) as Enabling Technology for Network-Centric CAD. March 1996.
110. Computer Science in Manufacturing: An Introduction, with Michael Wozny. *The Communications of the ACM*. Volume 39, Number 2, pp. 32-33, February 1996. Special issue on *Computer Science in Manufacturing*.
111. Contribution to Virtual Manufacturing Background Research—Phase II, with Edward Lin, Ioannis Minis, and Dana Nau. January, 1996. Report for Air Force Manufacturing Technology (ManTech) Contract F33615-92-D-5812. Also available as <http://www.isr.umd.edu/Labs/CIM/virtual.html>.
112. An Assessment of Virtual Manufacturing Technologies, with Edward Lin, Ioannis Minis, and Dana Nau. *National Science Foundation Design and Manufacturing Systems Conference*. Albuquerque, NM. January 2-6, 1996.
113. IMACS (Interactive Manufacturability Analysis and Critiquing System), with Satyandra K. Gupta, Dana S. Nau, and Guangming Zhang. *National Science Foundation Design and Manufacturing Systems Conference*. Albuquerque, NM. January 2-6, 1996.
114. Automating Redesign of Electro-Mechanical Assemblies, with Dana Nau and James Hendler. *International Joint Conferences on Artificial Intelligence (IJCAI) Workshop on Intelligent Manufacturing Systems*, August 18, 1995. Montreal, Canada. pp. 289-309.
115. Contribution to Virtual Manufacturing Background Research, with Edward Lin, Ioannis Minis, and Dana Nau. May, 1995. Report for Air Force Manufacturing Technology (ManTech) Contract F33615-92-D-5812. Also available as <http://www.isr.umd.edu/Labs/CIM/virtual.html>.
116. Systematically Analyzing the Manufacturability of Machined Parts, with Satyandra K. Gupta and Dana S. Nau. *National Science Foundation Design and Manufacturing Systems Conference*, January, 1995.
117. The Future of the WWW: Cultivating Policies that Make Governments and Corporations Active Participants, with Brian J. Regli. The Fletcher School, Tufts University, April 1994.
118. Recognition of Volumetric Features from CAD Models: A New Approach, with Dana S. Nau. *National Science Foundation Design and Manufacturing Systems Conference*, Boston, MA, January, 1994, pp. 745-746.
119. Generation and Evaluation of Machining Alternatives based on MRSEVs, Dana S. Nau, Satyandra K. Gupta, Thomas R. Kramer, and Guangming Zhang, *AAAI SIGMAN Workshop on Intelligent Manufacturing Technology*, July 1993, American Association for Artificial Intelligence. Also available as URL ftp://ftp.cs.umd.edu/pub/cim/papers/AAAI93_SIGMAN.ps.

120. An Inquiry to Mr. Letterman, Viewer Mail, Late Night with David Letterman, National Broadcasting Company (NBC), June 4, 1993.
121. Multimedia E-Mail for Starting the Development of a National Manufacturing Infrastructure, The National Institute of Standards and Technology, September 1992.
122. A Survey of Automated Feature Recognition Techniques, The University of Maryland, Institute for Systems Research, SRC TR92-18, January 1992.

F. Films, Tapes, Photographs, etc.

N/A.

G. Exhibits, Performances, Demonstrations, and other Creative Activities

N/A.

H. Original Designs, Plans, Inventions, and Patents

Date Description

- 2002 3D CAD Search
 Provisional U.S. Patent #60/380,109
 Drexel University File No. 02-0446D
- 2000 **The National Design Repository**
<http://www.designrepository.org>.
- 1995 **The Internet Ski Map Servertm**
 The University of Maryland at College Park Invention Disclosure IS-95-069.
<http://www.skimaps.com>.

I. Research Contracts, Grants and Donations

Total academic grants since joining Drexel University on 07/01/97 is \$6,480,387, of which \$4,688,402 is as Principal Investigator. These grants funded \$4,462,148 in research at Drexel University.

Under Review.

Ali Shokoufandeh, William C. Regli, Sanjay Joshi, E. Amine Lehtihet, Spiros Mancoridis and David Breen
 National Science Foundation, 2003 Information Technology Research Program (ITR), Medium Grants, A Penn State-Drexel Research Proposal "ITR: Engineering Informatics: The Tolerancing Problem", \$837,012.

05/2003–08/2003.

Joseph Kopena, Dimitry Bespalov; award supervised by William C. Regli (PI).
 National Institute of Standards and Technology, Summer Undergraduate Research Fellowship (SURF) Program, Grant 70-NAN-B2H0029, "Knowledge-Based Design." \$13,402.

6/2003-5/2006.

Denis Blackmore, Ming Leu, William C. Regli and Wei Sun.
 DARPA in conjunction with the National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Computer and Computation Research (CCR), Numeric, Symbolic, and Geometric Computation (NSGC) Program, Computational and Algorithmic Representations of Geometric Objects (CARGO) Initiative grant CCR-0310619, "Accuracy and Stability of Computational Representations of Swept Volume Operations," \$450,000, (Drexel portion \$132,975).

03/2003-06/2004.

Moshe Kam and William C. Regli (PIs).
 U.S. Army, Communications and Electronics Command (CECOM), Fort Monmouth, NJ, FY 2003 subaward under DoD contract DAAB07-01-9-L504. Title: "SWAT: A Secure Wireless Agent Testbed for Information Assurance of PDA-based Mobile Agents," \$1,606,000.

12/2002–11/2003

Lloyd Greenwald, Jeffrey Popyack, and William Regli.

The Boeing Company, 2002 Distributed Mission Computing Cluster IR&D Program, “Adaptive Distributed Mission Computing”, \$50,000. Contract Number P.O. ALK025.

10/2002–09/2005.

Wei Sun, Earlin Lutz, Ali Shokoufandeh and William C. Regli.

National Science Foundation, 2002 Information Technology Research Program (ITR), Directorate for Engineering (ENG), Division of Design, Manufacturing and Industrial Innovation (DMI) Grant DMI-0219176. “ITR: Design and Representation of Heterogeneous Structures.” \$482,605.

04/2002–06/2003.

Moshe Kam and William C. Regli (PIs).

U.S. Army, Communications and Electronics Command (CECOM), Fort Monmouth, NJ, FY 2002 subaward under DoD contract DAAB07-01-9-L504. Title: “Information Assurance and Information Security for Networks of Lightweight PDA-based Mobile Agents,” \$850,000.

08/2002.

William C. Regli.

Software Donation (CATIA CAD System), IBM/Dassault Systems. In-Kind Value: \$5,000.

05/2002–08/2002.

Joseph Kopena; award supervised by William C. Regli (PI).

National Institute of Standards and Technology, Summer Undergraduate Research Fellowship (SURF) Program, Grant 70-NAN-B2H0029, “Knowledge-Based Design.” \$6,701.

04/2002–12/2002.

William C. Regli (PI), Lloyd Greenwald, Harish Sethu, Alexander Meystel.

Lockheed Martin, Naval Engineering and Surveillance Systems (NE&SS), “Knowledge Integration Across ad hoc Networks for Battle Space Awareness,” Contract Number TT0515374, \$75,000.

10/2001–9/2002.

Ali Shokoufandeh and William C. Regli.

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Information and Intelligent Systems (IIS), Information and Data Management (IDM) Program, Grant CISE/IIS-0136337. Title: “SGER: Algorithmic Infrastructures for Knowledge Management.” \$50,000.

2001-2002.

William C. Regli (PI).

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Information, Robotics, and Intelligent Systems (IRIS), FY 2001 Research Experiences for Undergraduates (REU) Supplement under No. CISE/IIS-9733545. Title: “CAREER: Geometric Reasoning for Large Engineering Knowledge-Bases.” \$10,000.

5/2001–4/2004.

William C. Regli (PI).

Office of Naval Research (ONR), Submitted to FY 2001 Young Investigator Program (YIP) and funded under FY 2001 ONR core business funding as Award No. N00014-01-1-0618, Proposal/Modification No. 01PR07356-00, “YIP: Process Knowledge Repositories.” \$300,000.

2000–2003.

Vera Zaychik; award supervised by William C. Regli.

National Science Foundation, Graduate Research Fellowship Program, Grant NSF/DGE-9818283, \$105,600.

2000.

Lisa P. Anthony; award supervised by William C. Regli (PI).

National Institute of Standards and Technology, Summer Undergraduate Research Fellowship (SURF) Program, Grant 70-NAN-B0H0057, “Knowledge-Based Design.” \$5,701.

2000–2001.

William C. Regli (PI).

Bentley Systems Incorporated, Drexel GICL/Bentley Fellow Program, \$25,000.

2000–2001.

John A Bielec and William C. Regli (PI).

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Advanced Network Infrastructure and Research (ANI), FY 2000 Research Experiences for Undergraduates (REU) Supplement under NSF Grant CISE/ANI-9729732 “Drexel University Access to vBNS.” \$10,000.

2000.

William C. Regli (PI).

National Science Foundation, Directorate for Engineering (ENG), Division of Design, Manufacturing and Industrial Innovation (DMI). DMI-0001791, “Gordon Research Conference on Theoretical Foundations of Product Design and Manufacturing, June 11-16, 2000.” \$25,000. Joint grant with the Gordon Research Foundation and Carlyle B. Storm.

2000–2001.

William C. Regli (PI).

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Information, Robotics, and Intelligent Systems (IRIS), One-Time Equipment Matching Funds Supplemental Award under No. CISE/IIS-9733545 “CAREER: Geometric Reasoning for Large Engineering Knowledge-Bases.” \$20,000. (\$10,000 from NSF, \$10,000 from Drexel University).

2000.

William C. Regli (PI).

National Science Foundation, Directorate for Engineering (ENG), Division of Design, Manufacturing and Industrial Innovation (DMI). FY 2000 Research Experiences for Undergraduates (REU) Supplement under DMI-9713718, “Design Classification for Hybrid Generative/Variant Process Planning.” \$10,000.

2000–2002.

Spiros Mancoridis, Bruce Char, Lloyd Greenwald, and William C. Regli.

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Cross-Disciplinary Activities (CDA), Instrumentation Grants for Research in Computer and Information Science, Grant No. CISE/EIA-9986015. Title: “A Multidisciplinary Design Testbed for Research and Education.” \$107,973.

2000.

William C. Regli (PI).

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Information, Robotics, and Intelligent Systems (IRIS), FY 2000 Research Experiences for Undergraduates (REU) Supplement under No. CISE/IIS-9733545. Title: “CAREER: Geometric Reasoning for Large Engineering Knowledge-Bases.” \$10,000.

1999–2000.

Spiros Mancoridis and William C. Regli.

Sun Microsystems Computer Corporation, Academic Equipment Grant Program. “Drexel/Sun Microsystems Collaborative Design Laboratory,” \$113,470.

1999–2002.

William C. Regli (PI).

AT&T Research, Internet Platform Technology Organization. Title: “Use of Internet2 and GeoPlex for Network-Enabled Collaborative Design and Manufacturing.” \$100,000.

6/1999–11/1999.

William C. Regli (PI).

Defense Advanced Research Projects Agency (DARPA), **Next Generation Internet (NGI) Initiative**. Subcontract to SAIC Prime Contract No. 1800327 with ITT Industries, Inc. for Government Prime Contract No. SP0700-98-D-4000 on BAA 99-23. **Hospitals, Universities, Businesses and Schools Initiative (HUBS)** topic: “Networked Environments for Chem/Bio Warfare Demonstration Project.” \$30,000.

1999–2000.

John A Bielec and William C. Regli (PI).

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Advanced Network Infrastructure and Research (ANI), FY 1999 Research Experiences for Undergraduates (REU) Supplement under NSF Grant CISE/ANI-9729732 “Drexel University Access to vBNS.” \$10,000.

3/1998–2/2000

John A Bielec, Gregory Palmer, Da Hsuan Feng, and William C. Regli.

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Advanced Network Infrastructure and Research (ANI), “Drexel University Access to vBNS.” NSF Grant CISE/ANI-9729732. \$350,000.

4/1999–4/2000

William C. Regli (PI).

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Information, Robotics, and Intelligent Systems (IRIS), FY 1999 Research Experiences for Undergraduates (REU) Supplement under No. CISE/IIS-9733545. Title: “CAREER: Geometric Reasoning for Large Engineering Knowledge-Bases.” \$10,000.

2/1999–2/2000.

William C. Regli (PI).

National Science Foundation, Directorate for Engineering (ENG), Division of Design, Manufacturing and Industrial Innovation (DMI). FY 1999 Research Experiences for Undergraduates (REU) Supplement under DMI-9713718, “Design Classification for Hybrid Generative/Variant Process Planning.” \$10,000.

01/1999–01/2000

William C. Regli (PI).

State of Pennsylvania (via Carnegie Mellon University), Pennsylvania Information Technology Alliance (PITA). Title “Partner and Subcontractor Selection Over Information Networks.” \$10,000.

10/1998–10/1999

William C. Regli (PI).

Defense Advanced Research Projects Agency (DARPA), **Next Generation Internet (NGI) Initiative**. Subcontract to SAIC Prime Contract No. 1800327 with ITT Industries, Inc. for Government Prime Contract No. SP0700-98-D-4000 on BAA 99-23. **Hospitals, Universities, Businesses and Schools Initiative (HUBS)** topic: “Networked Environments for Telemaintenance.” \$30,000.

10/1998–10/2002.

William C. Regli (PI), Thomas Hewett, Pradeep Khosla, Ramayya Krishnan, Stephen Lu and Berok Khoshnevis.

National Science Foundation (NSF), Knowledge and Distributed Intelligence in the Information Age (KDI) Initiative, “KDI: Networked Engineering.” NSF Grant CISE/IIS-9873005. Joint with Carnegie Mellon University and The University of Southern California. \$1,200,000.

1998–1999.

William C. Regli (PI).

National Science Foundation, Directorate for Engineering (ENG), Division of Design, Manufacturing and Industrial Innovation (DMI), Grant No. ENG/DMI-9842664. FY 1998 Research Experiences for Undergraduates (REU) Supplement under DMI-9713718, “Design Classification for Hybrid Generative/Variant Process Planning.” \$5,000.

1998.

William C. Regli (PI).

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Information, Robotics, and Intelligent Systems (IRIS), Grant No. CISE/IIS-9815915, Title: “Sponsorship for the 1998 AAAI SIGMAN AI in Manufacturing Workshop.” \$10,000.

1998.

William C. Regli (PI).

United States Department of Commerce, National Institute of Standards and Technology (NIST) and United States Department of Defense, Defense Advanced Research Projects Agency (DARPA), "Sponsorship of the 1998 AAAI SIGMAN AI in Manufacturing Workshop." \$5,000.

1998.

William C. Regli.

Structural Dynamics Research Corporation and Metaphase Technology Incorporated, Software Donation: Metaphase Product Data Management (PDM) System and Oracle Enterprise Server. In-Kind Value: \$50,000.

1998.

William C. Regli.

Bridgeport Machine Tools Incorporated, Computerized Manufacturing Division, Software Donation: EZ-CAM Machining Software. In-Kind Value: \$10,000.

1998.

William C. Regli.

Hardware donation (Sun SPARCServer 5 and Cylink CryptoChannel), AT&T Research, Internet Platform Technology Organization. In-Kind Value: \$7,500.

1998.

William C. Regli.

Software Donation (GeoPlex E-Commerce System), AT&T Research, Internet Platform Technology Organization. In-Kind Value: \$250,000.

1998–1999.

William C. Regli (PI).

AT&T Research, Internet Platform Technology Organization. Title: "Network-Enabled Design and Manufacturing." \$15,000.

10/1998–10/2002.

William C. Regli (PI).

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Information, Robotics, and Intelligent Systems (IRIS), Knowledge Models and Cognitive Systems (KMCS), 1997 CAREER Program, Grant No. CISE/IIS-9733545. Title: "CAREER: Geometric Reasoning for Large Engineering Knowledge-bases." \$285,000.

1998.

William C. Regli.

Software Donation (MicroStation), Bentley Systems Incorporated. In-Kind Value: \$45,000.

2/1998–2/1999.

Satyandra K. Gupta, Pradeep K. Khosla, Christian Paredis, and William C. Regli.

National Science Foundation, Directorate for Computer, Information Science, and Engineering (CISE), Division of Cross-Disciplinary Activities (CDA), Instrumentation Grants for Research in Computer and Information Science, Grant No. CISE/CDA-9729827. Title: "Infrastructure for an Information-based Manufacturing Testbed: a Joint Initiative of Carnegie Mellon and Drexel Universities." Joint with Carnegie Mellon University's Institute for Complex Engineered Systems. \$169,540.

9/1997–9/2000.

Dana Nau, Jeffrey Herrmann, William C. Regli.

National Science Foundation, Directorate for Engineering (ENG), Division of Design, Manufacturing and Industrial Innovation (DMI), Grant No. ENG/DMI-9713718. Title: "Design Classification for Hybrid Generative/Variant Process Planning." Joint with the University of Maryland at College Park. \$576,370.

08/1997–08/1998.

William C. Regli (PI).

National Institute of Standards and Technology (NIST), Manufacturing Systems Integration Division, Grant No. 60NANB7D0092. Title: "Infrastructure and Content for a National Design Repository." \$45,000.

1996.

William C. Regli and Simon Szykman.
Defense Advanced Research Projects Agency (DARPA), MADE/RaDEO Program, Sponsorship of 1996 Network-Centric CAD Workshop, \$10,000.

1996.

William C. Regli and Simon Szykman.
US Navy ManTech and NIST National Advanced Manufacturing Testbed, Sponsorship of 1996 Network-Centric CAD Workshop, \$2,500. 1996.

1996.

William C. Regli and Simon Szykman.
Office of Naval Research (contract N00014-96-1-0880), Sponsorship of 1996 Network-Centric CAD Workshop, \$10,000. Joint with the Carnegie Mellon University Engineering Design Research Center (CMU EDRC). 1996.

1996.

William C. Regli and Simon Szykman.
Army Research Office, Directorate for Mathematics and Computer Science, Discrete Mathematics and Computer Science Program. Sponsorship of 1996 Network-Centric CAD Workshop, \$7,500.

1996.

William C. Regli.
Software Donation (MicroStation), Bentley Systems Incorporated. In-Kind Value: \$118,000.

1996.

William C. Regli.
Software Donation (FBMach and FBToI), Allied Signal Aerospace, Federal Manufacturing Technologies Division. In-Kind Value: \$25,000.

1996–1997.

William C. Regli.
National Institute for Standards and Technology and National Research Council, NRC Post-doctoral Associateship Program with Government Laboratories, \$130,805.

1994.

William C. Regli.
General Electric Corporation, Forgivable Loan (1994), \$5,000.

H. Fellowships, Prizes, and Awards

Date	Award	Institution/Organization
2003	10 ⁶ Club	Drexel University Office of Research
2002	10 ⁶ Club	Drexel University Office of Research \$1M in external research funding for 2001-2002
2002	Phase II Winner	Wharton Business Plan Competition Wharton School of Business, The University of Pennsylvania
1998	CAREER Award	National Science Foundation
1996	Second Place	The University of Maryland at College Park Office of Technology Liaison Information Technology Invention of the Year
1995	Post-Doctoral Fellowship	National Research Council
1995	Special Service Award	National Institute of Standards and Technology (\$2,500)
1995	The George Harhalakis Outstanding Systems Engineering Graduate Student Award	The University of Maryland at College Park Institute for Systems Research (\$1,500)
1994	Forgivable Loan Grant	General Electric Corporation and The University of Maryland College of Engineering

1991	Honorable Mention	National Science Foundation Graduate Fellowship Competition
1989	Outstanding Student Speaker	American Mathematical Society Summer Conference
1989	Alumni Association Award	Saint Joseph's University
1989	Medal for Computer Science	Saint Joseph's University
1989	Medal for Mathematics	Saint Joseph's University
1989	Elected	Pi Mu Epsilon, National Mathematics Honor Society
1987-1989	Dean's List	Saint Joseph's University
1985-1989	Presidential Scholarship	Saint Joseph's University
1985-1987	Villiger Debating Society Scholarship	Saint Joseph's University

I. Editorships, Editorial Boards, and Reviewing Activities for Journals and Other Learned Publications

Editorships and Editorial Boards:

Date	Activity
2002-present	Editorial Board, <i>Journal of Computer-Aided Design (CAD)</i> Elsevier Science Publishers
2001-present	Editorial Board, <i>The Journal of Artificial Intelligence in Engineering Design, Analysis and Manufacturing (AI-EDAM)</i> , Cambridge University Press
1996-2000	Charter Member, Editorial Board, <i>IEEE Internet Computing</i>

Reviewing Activities:

Date	Activity
	<i>Transactions of the ASME/ACM</i> , 2000–present
1995–present	<i>Research in Engineering Design</i>
1994–present	<i>ASME Design Engineering Technical Conferences</i> Design for Manufacturing Conference Design Theory and Methodology Conference Design Automation Conference Computers and Information in Engineering Conference
1994–present	<i>International Journal of Computer Aided Design (CAD)</i>
1993–present	<i>ACM/IEEE Symposium on Solid Modeling and Applications</i> <i>IEEE International Workshops on Enabling Technologies</i> : 2000–present
2002	<i>Computers in Industrial Engineering</i>
1993, 2002	<i>IEEE Conference on Robotics and Automation</i>
1996–2001	<i>Transactions of the ASME, Journal of Mechanical Design</i>
1996–2001	<i>IEEE Internet Computing</i>
2001	<i>The Communications of the ACM</i>
2001	<i>IEEE Transactions on Robotics and Automation (R&A)</i>
2000	<i>ACM Transactions on Information Systems</i>
2000	<i>IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)</i>
2000	<i>Engineering with Computers</i>
1998	<i>IIE Transactions</i>
1998	<i>Integrated Computer-Aided Engineering</i>
1996	<i>ACM Computing Surveys</i>
1996	<i>IIE Transactions</i>
1996	<i>Journal of Agile Enterprises</i>
1996	<i>International Journal of Computational Geometry</i>
1995	<i>IIE Transactions</i>
1995	<i>Journal of Intelligent Manufacturing</i>
1994	<i>ACM Computing Surveys</i>

3. Teaching and Advising

A. Courses Taught

i. General

Semester	Number	Course Title
2003 Winter	MCS 480	Computer Graphics I
2002 Fall	MCS 380/590	Introduction to Artificial Intelligence
2002 Summer	MCS 480	Computer Graphics I
2002 Spring	MCS 380/590	Introduction to Artificial Intelligence
2002 Winter	MCS 558	Advanced Data Structures and Algorithms II
2001 Fall	MCS 380/590	Introduction to Artificial Intelligence
2001 Summer	MCS 7XX	Knowledge-Based Agents
2001 Spring	MCS 380/590	Introduction to Artificial Intelligence
2000 Fall	MCS 380/590	Introduction to Artificial Intelligence
2000 Summer	MCS 7XX	Knowledge-Based Agents
2000 Winter	MCS 558	Advanced Data Structures and Algorithms II
1999 Fall	MCS 557	Advanced Data Structures and Algorithms I
1999 Fall	MCS 380	Introduction to Artificial Intelligence
1999 Spring	MCS 558 001	Advanced Data Structures and Algorithms II
1999 Spring	MCS 558 002	Advanced Data Structures and Algorithms II
1999 Winter	MCS 557 001	Advanced Data Structures and Algorithms I
1999 Winter	MCS 557 002	Advanced Data Structures and Algorithms I
1998 Fall	MCS 380	Introduction to Artificial Intelligence
1998 Fall	MCS 590	Introduction to Artificial Intelligence
1998 Fall	MCS 557	Advanced Data Structures and Algorithms I
1998 Spring	MCS 380	Introduction to Artificial Intelligence
1998 Spring	MCS 590	Introduction to Artificial Intelligence
1998 Winter	MCS 771	Expert and Knowledge-Based Systems
1998 Winter	MCS 280	Advanced Data Structures and Algorithms II
1997 Fall	MCS 590	Introduction to Artificial Intelligence
1997 Fall	MCS 280	Advanced Data Structures and Algorithms I
1992 Spring	CMSC 150	Discrete Mathematics (U. Maryland)
1991 Fall	CMSC 150	Discrete Mathematics (U. Maryland)
1990 Spring	CMSC 150	Discrete Mathematics (U. Maryland)

ii. Specialized

Semester	Number	Course Title
2000 Winter	MCS ???	AI Planning
2000 Winter	MCS ???	Graduate Software Engineering Project III
1999 Fall	MCS ???	Graduate Software Engineering Project II
1999 Summer	MCS ???	Graduate Software Engineering Project I
1999 Spring	MCS 800	Knowledge Representation for Engineering Design
1999 Winter	MCS 280	Advanced AI
1998 Summer	MCS 800	AI in Design and Manufacturing

iii. Independent Study

Semester	Number	Course Title
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1999 Winter	MCS 280	Internet Computing
1998 Spring	MCS 280	Geometric Algorithms II
1998 Winter	MCS 280	Internet Computing
1998 Winter	MCS 280	Geometric Algorithms I

B. Course or Curriculum Development

Semester	Number	Course Title
2002 Summer	MCS 480	Computer Graphics I
2001 Summer	MCS 7XX	Knowledge-Based Agents
2000 Summer	MCS 7XX	Knowledge-Based Agents
1999 Spring	MCS 558	Advanced Data Structures and Algorithms II
1998 Fall	MCS 557	Advanced Data Structures and Algorithms I
1998 Summer	MCS 800	AI in Design and Manufacturing
1998 Spring	MCS 380	Introduction to Artificial Intelligence
1998 Winter	MCS 771	Expert and Knowledge-Based Systems
1998 Winter	MCS 280	Advanced Data Structures and Algorithms II
1997 Fall	MCS 280	Advanced Data Structures and Algorithms I
1997 Fall	MCS 590	Introduction to Artificial Intelligence

E. Advising: Other than Research Direction

i. Graduate

- Course advising for roughly 3-5 students per year, in the MCS graduate program.
- Ph.D. and Masters thesis committees for roughly 2-3 students per year, for a number of departments including Computer Science, Mech. Eng., and Civil Eng., as well as at other universities including Carnegie Mellon University and the University of Maryland at College Park.

F. Advising: Research Direction

i. Undergraduate Students

Undergraduate students are actively involved in the life of the Geometric and Intelligent Computing Laboratory. We employ approximately 6-8 undergraduate research assistants per year (which is too many to list below).

ii. M.S. Students

1. *Cheuk (Horace) Yui Ip*. B.S./M.S., Computer Science, 2004.
Research area: CAD Databases and Data Mining.
2. *Joseph Kopena*. B.S./M.S., Computer Science, 2004.
Research area: Knowledge Representation and Engineering Semantics.
3. *Donovan Artz*. B.S./M.S., Computer Science, 2003.
Research area: Agent security
4. *Christopher Cera*. B.S./M.S., Computer Science, 2003.
Research area: Collaborative Graphics.
5. *Mitchell Peabody*. B.S./M.S., Computer Science, 2003.
Research area: Engineering and Graph Databases.
Current Position: Ph.D. Student, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology (MIT).

6. *Lisa Anthony*. B.S./M.S., Computer Science, 2002.
Research area: Multi-Agent Systems.
Current Position: Ph.D. Student, School of Computer Science, Carnegie Mellon University.
7. *David McWherter*. B.S./M.S., Computer Science, 2001.
Research area: Engineering and Graph Databases.
Current Position: Ph.D. Student, School of Computer Science, Carnegie Mellon University.
8. *Yuriy Shapirshteyn*. B.S./M.S., Computer Science, June 2001.
Research area: Collaborative Design.
9. *Vera Zaychik*. M.S., Computer Science, August 2001.
Research area: Collaborative Software Design.
Current Position: Lockheed Martin, Advanced Technology Laboratories.
10. *Jonathan Sevy*. M.S., Computer Science, August 2000.
Research area: Collaborative Design.
Current Position: Agere/Orinico Systems.
11. *Max Peysakhov*. M.S.S.E., Software Engineering, June 2000
Research area: Genetic Algorithms for Design Evolution.
Current Position: Research Programmer, ACIN Project.
12. *Vlada Galinskaya*. M.S.S.E., Software Engineering, June 2000
Research area: Genetic Algorithms for Design Evolution.
13. *Jun Pang*. M.S., Computer Science, March 2000.
Research area: Design Rationale.
14. *Yan Pang*. M.S., Computer Science, December 1999.
Research area: Design Rationale.
15. *Xiaoli Qin*. M.S., Computer Science, June 1999.
Research area: Case-based Reasoning for Engineering Design.
Thesis Title: *A Case-Based Reasoning System for Bearing Design*
Current Position: Computer Scientist, Drexel Intelligent Infrastructure and Safety Institute.
16. *Vincent Cicirello*. B.S./M.S., Computer Science, June 1999.
Research area: Indexing and Retrieval of Mechanical Designs.
Thesis Title: *Intelligent Retrieval of Solid Models*
Current Position: Ph.D. Student, School of Computer Science, Carnegie Mellon University.
17. *Santiago Lombeyda*. M.S., Computer Science, 1998.
Research area: Conceptual and Collaborative Design.
Thesis Title: *A GUI for Conceptual and Collaborative Design*
Current Position: Research Programmer, California Institute of Technology.

iii. Doctoral

1. *Max Peysakhov* Ph.D., Computer Science, 2003 (expected)
Research area: Design Evolution.

4. Service

A. University

i. Departmental

Date	Activity
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1999–present	Ph.D. in Computer Science Committee
1998–present	MCS Planning Committee
1997–1999	Algorithms Track and Curriculum Chair
1997–present	AI Track
1997–1999	AI Track and Curriculum Chair
1997–present	MCS Development Committee
1997–present	MCS Computer Science Faculty Search Committee
1997–present	MCS Advisory Committee
1993–1995	Computer Science Department Council (U. Maryland)
1992	Review Committee for Ph.D. written qualifying exam system (U. Maryland)

ii. College and Divisional

Date	Activity
1993–1994	College of Computer, Mathematical, and Physical Sciences (CMPS) Council (U. Maryland)

iii. University-Wide

Date	Activity
2002-2003	Search Committee for Vice-Provost for Research and Graduate Studies
2002	Vice-President for Research's Committee on MCP/HU-Drexel Research Merger
1998–present	Vice-President for Research's Committee on Graduate Education and Research
1998–present	Vice-President for Research's Committee on Interdisciplinary Computer Science Research
1998–present	Vice-President for Research's Building Design Committee
1998–present	Co-Organizer Joint Mathematics and Computer Science and Electrical and Computer Engineering Seminar Series

B. Professional

i. Offices and Committee Memberships in Professional Organizations

Date	Activity	Performed for
1997–2000	Benchmarks Chair	AAAI Special Interest Group on Manufacturing (SIGMAN)

ii. Reviewing for Agencies

Date	Activity	Performed for
2002	Reviewer	National Science Foundation (NSF) Chemical Engineering Program
2001	Reviewer	National Science Foundation (NSF) IDM/CAREER Program
2000	Reviewer	National Aeronautics and Space Administration (NASA) Intelligent Systems Program
1999	Reviewer	National Science Foundation (NSF) KDI Program
1999	Reviewer	National Science Foundation (NSF) CISE/IIS/KMCS Program
1999	Reviewer	National Science Foundation (NSF) CISE/IIS/DKM Program
1999	Reviewer	National Science Foundation (NSF) KDI Program Pre-Proposals
1998	Reviewer	National Science Foundation (NSF) ENG/POWRE Program
1998	Reviewer	National Science Foundation (NSF) ENG/GOALI Program
1997	Reviewer	National Science Foundation (NSF) ENG/DMI Program
1996	Reviewer	National Science Foundation (NSF) ENG/DMI Small Business Innovative Research (SBIR) Program
1996	Reviewer	National Science Foundation (NSF) CISE/MIPS Program
1996	Reviewer	National Science Foundation (NSF) CISE/IRIS/KMCS Program
1995	Reviewer	United States Department of Defense, Defense Advanced Research Projects Agency (DARPA)

iv. Other non-University Committees, Commissions, Panels, Etc.

Date	Activity
2002–	Ad hoc member, <i>United States Department of Energy, Model Archive Working Group</i>
2000	Co-Vice-Chair, <i>Gordon Research Conference on Theoretical Foundations of Engineering Design and Manufacturing</i>
2000	Papers Co-Chair, <i>Fifth ASME Design for Manufacturing Conference</i>
2000	Program Committee, <i>AAAI SIGMAN Workshop on AI in Manufacturing</i>
1999	Program Committee, <i>AAAI SIGMAN Workshop on AI in Manufacturing</i>
1999	Program Committee, <i>ASME Design for Manufacturing Conference</i>
1998	Member, Structural Dynamics Research Corporation, Customer Council for Strategic Direction
1998	Papers Chair, <i>ASME Design for Manufacturing Conference</i>
1998	Program Committee, <i>AAAI SIGMAN Workshop on AI in Manufacturing</i>
1998	Program Committee, <i>SIAM Workshop on Mathematical Foundations for Features in Computer-Aided Design</i>
1997	Area Chair, <i>ASME Design for Manufacturing Conference</i>
1997	Program Committee, <i>TEAMCAD Workshop</i>
1996	Area Chair, <i>ASME Design for Manufacturing Conference</i>
1996	Co-Chair, <i>CAM-I Features Workshop</i>
1996	Co-Chair, <i>Network-Centric CAD: Technology Assessment Workshop</i>
1996	Program Committee, <i>AAAI SIGMAN Workshop on AI in Manufacturing</i>
1996	Chair and Organizer, <i>Fourth NIST Workshop on Manufacturing Process Planning</i>

v. Professional Memberships, Etc.

Date	Organization
1989–present	Sigma Xi, The National Research Society
1989–present	Association for Computing Machinery (ACM)
1990–present	American Association for Artificial Intelligence (AAAI)
1996–present	Institute for Electronics and Electrical Engineers (IEEE) Computer Society

vi. Paid Consultancies

Date	Activity
2001	P. Haughton Inc.
2000-2001	Technology Consultant, Bluestone Consulting Inc.
2000	Technology Consultant, SourceONE Inc.
1999–present	Technology Advisor, Inlec Communications Corporation
1999–present	Technology Consultant, Mann, Ungar, Spector & Labovitz
1998	Technology Consultant, Syscom Services
1998	Technology Consultant, New Century Associates Incorporated
1996-97	Technology Consultant, InterVisage Incorporated
1995	Book Reviewer, Wiley Publishing Company
1992	Technology Consultant, Capitol Consultants

5. Miscellaneous

6. References

Available upon request.