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Education

Ph.D.	Computer Science	Wayne State University	1995
M.S.	Computer Science	Wayne State University	1989
B.S.	Computer Science, Mathematics Minor	The University of Michigan-Flint	1985

Academic Experience

- *Professor.* Department of Computer Science, Kent State University, Kent, Ohio. 8/10 - present.
- *Interim Chair.* Department of Computer Science, Kent State University, Kent, Ohio. 7/1/10 - 11/15/10.
- *Associate Professor.* Department of Computer Science, Kent State University, Kent, Ohio. 8/04 - 8/10.
- *Assistant Professor.* Department of Computer Science, Kent State University, Kent, Ohio. 7/01 - 8/04.
- *Assistant Professor.* Division of Computer Science, Department of Mathematical Sciences, The University of Memphis, Memphis, Tennessee. 9/97 - 5/02.
- *Lecturer.* Department of Computer Science, Wayne State University, Detroit, Michigan. Non-tenure track teaching position. 9/95 - 8/97.
- *NASA Graduate Student Researchers Program Fellowship.* Department of Computer Science, Wayne State University, Detroit, Michigan. GSRP fellowship awarded based on a competitive evaluation of academic qualifications and submitted proposals of research. Topic: "Analysis of Object Oriented Programming Paradigm as it Relates to Problem Solving". 93/94 renewed for 94/95.
- *Graduate Teaching Assistantship.* Department of Computer Science, Wayne State University, Detroit, Michigan. 92/93, 89/90, and 88/89.
- *Graduate Research Assistantship.* Department of Computer Science, Wayne State University, Detroit, Michigan. Funded by Ford Motor Company, Institute for Manufacturing Research, and IBM. 90/91 and 87/88.
- *Adjunct Lecturer.* Computer Science Department, The University of Michigan-Flint, Flint, Michigan. 86/87.

Non Academic Experience

- *Independent Software Consultant.* Arizona Department of Transportation (ADOT), Phoenix, Arizona. Litigation Technical Support. Advised issues of software verification and validation, process models, and software system performance simulation. 5/97 - 8/97.
- *Software Consultant.* Computer Software Inc. consulting for Ford Motor Company, Dearborn, Michigan. Development of Client/Server GUI application using C, TCP/IP, Visual Basic, and Oracle, Development of web application using cgi-bin and Pearl. 2/95 - 11/95.
- *Associate Research Scientist.* Systems and Research Center, Honeywell Inc., Minneapolis, Minnesota. Development of a production quality temporal reasoning system, TMM using LISP/CLOS, UNIX. Assisted in proposals submitted to DARPA, DoD, and FAA. 9/91 - 8/92.
- *Programmer.* Eagle Data Products. Holly, Michigan. Installation, and modification of an Inventory/Accounting package. Developed communications program between PC and central phone system processor. 4/86 - 9/86.

Professional Affiliations

- Association for Computing Machinery (ACM), *Senior Member* ('06) since 1984
- Institute of Electrical and Electronics Engineers - Computer Society (IEEE-CS) since 1985

Research Interests

Software engineering, evolution, & maintenance; software traceability; program comprehension & analysis; reverse engineering; source code manipulation and transformation; software visualization; document engineering

Research Statement

The research program focuses on the construction of methods, tools, and environments to assist in the process of software evolution, maintenance, and reverse engineering of large-scale systems. Current investigation include:

- *Source Code Analysis, Manipulation, and Syntactic Differencing.* XML is used to augment source code with syntactic information from the parse tree as a means to add explicit structure to program source code [97]. This underlying representation, srcML (Source Code Markup Language), supports lightweight fact extraction, source code transformation [95], and source code difference analysis. The src2srcml translator works for C/C++ and Java. It is very robust and efficient, running faster than compilers on the same input [38, 39, 42, 48, 49, 51]. The translator is used by a large number of researchers and a commercial version is in use to support software porting [95]. srcML forms the basis for an efficient syntactic differencing method. This is being used to analyze differences between software versions [49, 65, 84].
- *Software Traceability.* A XML based hypertext model is being developed to support complex link structure, versioning of individual links, and a traceability query language [46, 58]. The hypertext model supports complex linking structures such as multi links and typed links. Fine-grained versioning of individual links is supported by external link-bases [69]. A traceability query language (TQL) is being developed on top of XPath to support sophisticated querying about such things as requirements traceability, safety critical issues, and impact analysis [82, 96]. This work aims to support long-term evolution of large software systems. Additional work focuses on the automatic identification of traceability links [40, 73, 75, 84, 92].
- *Information Retrieval for Software Engineering.* The research focuses on investigating the combined use of semantic and structural information of programs to support the comprehension tasks involved in the maintenance and reengineering of software systems. Here, semantic refers to the domain specific issues (both problem and development domains) of a software system. The other dimension, structural, refers to issues such as the actual syntactic structure of the program along with the control and data flow that it represents. Advanced information retrieval (IR) methods, such as latent semantic indexing (LSI), are used to define a semantic similarity measure between software components [27, 33, 36, 40, 50, 56].
- *Reverse Engineering for Generic Programs & Libraries.* An automated approach to the identification of C++0x concepts in function and class templates is being investigated. Concepts are part of a new language feature appearing in the next standard for C++ (i.e., C++0x). Concept identification is the enumeration of constraints on the sets of types over which templates can be instantiated [76, 81, 87, 90]. The approach analyzes template source code and computes a set of viable concept instances describing the implied data abstraction of the template parameters. The approach can be used to assist in reengineering existing generic libraries to C++0x. Additionally, it has the potential to assist in the validation of concept hierarchies and interface definition in generic libraries.
- *Reverse Engineering Design Information.* An automated approach to reverse engineer UML class diagrams from C++ has been developed [57, 67, 76] which accurately identifies association, dependency, and generalization relationships along with the multiplicity on relationships. Method and Class stereotypes are automatically reverse engineered [64, 86, 94, 98] and the source code is re-documented to support program understanding and recovery of class stereotype information.
- *Mining Software Repositories.* Data mining techniques are being utilized to analyze multiple versions of a system's history to uncover latent trends and evolutionary couplings. The techniques have been applied to the problems of defect identification, software localization, and traceability link recovery [52, 59, 62, 68, 70, 71, 73, 75, 77, 79, 80, 89]. Additionally the first in depth survey of the field was conducted in 2007 [66].
- *Software Visualization and Comprehension.* A number of efforts to develop visualization tools to support understanding large software systems are being conducted [37, 99]. Eye tracking equipment is being used to assess the comprehensibility of design documents (UML class diagrams) in a non-obtrusive manner [74, 78, 91, 93]. This work augments the work on software visualization and supports a means to measure the quality of UML class diagram layout techniques [54, 83, 85, 88]. Also, focus+context methods for visualizing very large UML class diagrams using onion graph notations have been investigated [55, 72]. Extending the Seesoft metaphor to 3D and investigating how this can be used to assist developers is being explored [32, 34, 41, 44].

Funding and Support

Funding Awards – External Federal Agency (Current)

Title	Investigator(s)	Agency/Source	Amount	Period
MRI-R2 Consortium: Development of a Software Traceability Instrument to Facilitate and Empower Traceability Research and Technology Transfer www.cs.kent.edu/~jmaletic/papers/MRI09.pdf	J. Huang (PI) (DePaul U.), J. Maletic (KSU), D. Poshyvanyk (William & Mary)	National Science Foundation – MRI-R2 CNS 09-59924 \$2,000,000 Total	\$415,326	5/25/2010- 5/13 CURRENT
Research Experience for Undergraduates: Supplement to CCF 08-1102	J. Maletic (PI)	National Science Foundation CCF 11-29908	\$6,250	5/20/2011- 7/31/11 CURRENT
CPA-SEL-T: Collaborative Research: Traceability ⁺ : A Service Oriented Framework to Support Value-Added Software Traceability www.cs.kent.edu/~jmaletic/papers/CCF08.pdf	Maletic, J., Hayes, J. (U. of Kentucky), Cleland-Huang, J. (DePaul U.)	National Science Foundation – CPA CCF 08-11021 \$750,000 Total	\$250,000	8/1/2008- 7/31/12 CURRENT
Kent State University Scholarships for Broadening Participation in Sciences	Maletic, J.I. (PI), Ortiz, J., Selinger, R., Portman, J., Case, A.	National Science Foundation – S-STEM DUE 11-54422	\$599,999	08/01/2012- 7/31/2017 CURRENT
Total (Current)			\$1,271,575	

Funding Awards – External Federal Agency (Completed)

Title	Investigator(s)	Agency/Source	Amount	Period
Kent State University Scholarships for Broadening Participation in Sciences www.cs.kent.edu/~jmaletic/papers/DUE06.pdf	Maletic, J.I. (PI), Ortiz, J., Selinger, R., Portman, J., Lee, S.	National Science Foundation – S-STEM DUE 06-31088	\$499,926	9/15/2006- 8/31/2012
Research Experience for Undergraduates: Supplement to CCF 08-1102	J. Maletic (PI)	National Science Foundation CCF 10-37576	\$6,250	5/20/2010- 7/31/11
NIST Summer Undergraduate Research Fellowship - MSEL	Maletic, J. I. (PI) Bartolo, L., K. Stemen (student)	National Institute of Standards (NIST) 70NANB3H1025	\$6,576	5/2003- 8/2003
A Framework to Combine Semantic and Structural Information for Static Analysis	Maletic, J. I. (PI)	National Science Foundation - SE&L CCR 02-04175	\$150,000	8/2002- 7/2005
Interactive Display Models for Information Visualization in Virtual Reality	Maletic, J. I. (PI)	Office of Naval Research MURI N00014-00-1-0769	\$81,567	6/2001- 9/2002
Instruments for Systems, Software, and Database Research	Maletic, J. I. (PI) Dasgupta, D. Lin, K.I. Das, G.	National Science Foundation CCR 98-18323 (\$38,000) University of Memphis cost share (\$21,000)	\$59,000	3/1999- 2/2002
Automated Data Cleansing	Maletic, J. I. (PI)	Office of Naval Research N00014-99-1-0730	\$99,752	5/1999- 5/2001
Workshop on Data Visualization	Maletic, J. I. (PI) Shah, P.	National Science Foundation IIS 99-07299	\$10,264	5/1999- 4/2001
Workshop on Data Visualization	Maletic, J. I. (PI) Shah, P.	Office of Naval Research N00014-99-1-0522	\$10,263	5/1999- 4/2000
Cognitive Studies of Complex Data Visualization	Shah, P. (PI), Maletic, J. I.	Office of Naval Research N00014-98-1-0350	\$71,385	2/1998- 9/2000
Analysis of Object Oriented Programming Paradigm as it Relates to Problem Solving	Maletic, J. I. (PI)	National Aeronautics and Space Administration (NASA) Office of Space Science, Graduate Student Researchers Fellowship	\$44,000	7/1993- 7/1995
Total (Completed)			\$1,038,983	

Funding Awards – External Industry

Title	Investigator(s)	Agency/Source	Amount	Period
Visualizing Large Scale Software Change Characteristics	Maletic, J.I.	ABB Inc. (Normal overhead rate)	\$120,000	1/2012-12/2013 CURRENT
Visualizing Large Scale Software Change Characteristics	Maletic, J.I.	ABB Inc. (Normal overhead rate)	\$61,720	1/2011-12/2011
Automatic Platform Change via a Transformational Approach using srcML	Maletic, J.I. (PI), Collard, M.L.	ABB Inc. (Normal overhead rate)	\$59,741	11/2009-12/2010
Visualizing Large Scale Software Change Characteristics	Maletic, J.I.	ABB Inc. (Normal overhead rate)	\$60,208	11/2009-12/2010
Automatic Platform Change via a Transformational Approach using srcML	Maletic, J.I. (PI), Collard, M.L.	ABB Inc. (Normal overhead rate)	\$60,199	6/2008-5/2009
Equipment Grant for purchase of PN250b	Maletic, J.I.	SMARTer Kids Grant for SMART Roomware (NEC)	\$1,200	4/25/2002
C++ Training Program	Maletic, J.I., Lin, K.I.	Brother Inc., Memphis TN (Normal overhead rate)	\$12,500	7/1998-8/1998
Total			\$375,568	

Funding Awards – University or State

Title	Investigator(s)	Agency/Source	Amount	Period
Diversifying Ohio in STEM (DO-STEM) – Sub-award from Central State University	J. Maletic	Choose Ohio First	\$42,300	7/1/08-6/30/13 CURRENT
Support for the Evolution of Software Traceability Links	J. Maletic	Kent State University Summer Research Appointment	\$6,500	6/06-8/06
Automatically Clustering Software Components	J. Maletic	The University of Memphis, New Faculty Research Initiative	\$8,500	5/99-4/00
Supplemental Overhead in support of GSRP Fellowship	J. Maletic	Graduate School, Wayne State University	\$1,000	7/93-6/94
Total			\$58,300	

Proposals Submitted & Pending

Title	Investigator(s)	Agency/Source	Amount	Period
SHF: Small: Automated Construction of Transformations Rules to Support Large Scale Adaptive Changes <i>Submitted Dec 19, 2011</i>	Maletic, J.I. (PI)	National Science Foundation CCF: Core Programs 11-557	\$358,320	3 years
CI-ADDO-EN: Enhancing the srcML Infrastructure A Robust Reverse Engineering Parser to Support Static Analysis, Transformation, and Syntactic Differencing <i>Submitted Oct. 25, 2011</i>	Maletic, J.I. (PI), Collard, M.L. (Akron)	National Science Foundation CRI 11-536	KSU: \$675,549 Akron: \$227,164 Total: \$902,713	3 years

Unfunded Proposals Submitted – External Federal Agency

Title	Investigator(s)	Agency/Source	Amount	Submitted
Kent State University Scholarships for Broadening Participation in Sciences	Maletic, J.I. (PI), Ortiz, J., Selinger, R., Portman, J., Lee, S.	National Science Foundation S-STEM	\$599,954	August 2010
SHF: Medium: Collaborative Research: The Software Engineering of Generic Libraries	J. Maletic (PI), J. Seik (Colorado), M. Collard (Akron)	National Science Foundation - CCF: Core Programs - Medium	738,003 KSU \$244,578 UC \$217,415 Akron \$1,199,996 Total	August 2009 Rated Competitive
The Software Engineering of Generic Libraries	J. Maletic (PI)	National Science Foundation - CCF: Core Programs-Small	\$488,186 3 years	December 2008 Rated Competitive
Collaborative Research: Visualization Support for Software Evolution	Marcus, A. (PI), Maletic, J.,	National Science Foundation – CPA	\$455,000 (KSU) \$468,000 (WSU) 3 years	October 2006
Collaborative Research: Visualization Support for Software Evolution	Marcus, A. (PI), Maletic, J., Draghici, S.	National Science Foundation – CPA	\$451,068 (KSU) \$465,000 (WSU) 3 years	June 2005
Collaborative Research: A 3D Metaphor for Software and Data Visualization	Marcus, A. (PI), Maletic, J., Draghici, S.	National Science Foundation - CPA	\$286,132 (KSU) \$299,694 (WSU) 3 years	March 2004
Meta-differencing: A Mechanism for Analyzing Source Code Changes	Maletic, J. (PI)	National Science Foundation - CPA	\$392,695 3 years	March 2004
The Kent State University Computer Science Educational and Economic Initiative	Walker, R. (PI), Lu, C.C., Maletic, J.	National Science Foundation - CSEMS-CS, ENG & MATH Scholarships	\$398,733 4 years	January 2004
Supporting Maintenance and Development Through Visualizing Software Systems in Collaborative Virtual Reality Environments	Maletic, J. (PI), Leigh, J.	National Science Foundation - NGS	\$591,265 3 years	November 2001
ITR/SY+SI: Supporting Maintenance and Development through Visualizing Software Systems in Collaborative Virtual Reality Environments	Maletic, J. (PI), Leigh, J.	National Science Foundation - ITR	\$457,803 3 years	January 2001
Interactive Display Models for Information Visualization in Virtual Reality	Maletic, J. (PI)	Office of Naval Research	\$181,902 3 years	August 2000
Combining Information Retrieval Methods and Structural Measures to Define Semantic Similarities Between Source Code Components	Maletic, J. (PI)	National Science Foundation – CAREER	\$516,007 5 years	July 2000

Unfunded Proposals Submitted – External Federal Agency (CONTINUED)

Title	Investigator(s)	Agency/Source	Amount	Submitted
Supporting Software Reuse through Research and Education	Maletic, J. (PI)	National Science Foundation – CAREER	\$351,196 4 years	July 1999
Supporting Reuse and Understanding using Latent Semantic Analysis	Maletic, J. (PI)	National Science Foundation – CAREER	\$208,893 4 years	July 1998

Unfunded Proposals Submitted – University or State

Title	Investigator(s)	Agency/Source	Amount	Submitted
Eye Tracking and Cognitive Processing During Comprehension: An Interdisciplinary Proposal	J. Folk (PI), J. Maletic	Kent State University OBR Research Incentive	\$34,750	March 2010
Eye Tracking and Cognitive Processing During Comprehension: An Interdisciplinary Proposal	J. Folk (PI), J. Maletic	Kent State University OBR Research Incentive	\$50,000	Dec. 2008
STEM Scholarship Program Kent State University (Lead) <i>In conjunction with:</i> KSU Regional Campuses, Youngstown State University, Cuyahoga Community College, Lorain County Community College, Stark State Technical College, Lakeland Community College	A. Gericke (Lead), J. Ortiz (Lead), J. Maletic (Co-PI), D. Stroup (Co-PI), J. Blank (Co-PI), R. Gregory (Co-PI), B. Anderson (Co-PI), J. Gleeson (Co-PI), A. Leff (Co-PI), D. Lawless-Andric (Co-PI)	State of Ohio, Choose Ohio First Scholarship Program	\$8,069,460 (Total) \$5,990,500 (KSU)	Jan. 2008
sv3D: A 3D Information Visualization System	Maletic, J.I, Volkert, L.G.	Kent State University OBR Research Challenge	\$59,836	Oct. 2005
sv3D: A 3D Information Visualization System to Support Simultaneous Display of Multiple Attributes Over Partitioned Information Spaces	Maletic, J.I, Volkert, L.G.	Kent State University OBR Research Challenge	\$69,825	Oct. 2004

Publications and Scholarly Work

Citations

Citation rates taken from Google Scholar (http://scholar.google.com/citations?user=n9_W4kYAAAAAJ&hl=en) on 19 January 2012. Note that Google Scholar does not exclude all self-citations. Based on the Google Scholar data the computed *h-index* is 23 and *i10-index* is 42.

Works in Progress

- Sutton, A., Maletic, J.I., “Uncovering Design Flaws in C++0x Concept Hierarchies”, to be submitted to IEEE Transactions on Software Engineering.
- Hayes, J., Huang, J., Lutz, R., Maletic, “Traceability⁺: Value-Added Services for Safety-Critical Systems”, to be submitted.
- Sutton, A., Maletic, J.I., “Supporting Comprehension through Email Archive Analysis”, to be submitted.
- Alomari, H., Collard, M.L., Maletic, J. I., “Lightweight Forward Static Slicing”, to be submitted.

Works Under Review

- Sharif, B., Dragan, N., Sutton, A., Collard, M.L., Maletic, J.I., “Identifying Design Activities via Discourse and Content Analysis”, submitted to the edited book *Software Designers in Action: A Human-Centric Look at Design Work*, CRC Press, Feb. 2012.
- Alali, A., Sutton, A., Maletic, J.I., “Combining Effort Measures and Evolutionary Coupling to Support Impact Analysis”, submitted to ASE 2012.
- Sutton, A., Maletic, J. I., “Emulating C++0x Concept”, *Science of Computer Programming*, Vol. ?, No. ?, pp. (to appear), submitted March 2, 2010, accepted with major revisions May 4, 2011, resubmitted Oct. 2011.

Publications (refereed)

101. Sharif, B., Maletic, J.I., (2012), “An Eye-tracking Study on the Role of Scan Time in Finding Source Code Defects”, in the Proceedings of the ACM Symposium on Eye Tracking Research & Applications, Santa Barbara, CA, USA, March 28-30, pp. (to appear).
100. Binkley, D., Davis, M., Lawrie, D., Maletic, J. I., Morrell, C., Sharif, B., (2012), “The Impact of Identifier Style on Effort and Comprehension”, *Journal of Empirical Software Engineering*, Vol. ?, No. ?, pp. (Accepted Dec. 2011 and to appear). (Invited submission to a special issue of the of the best papers from ICPC 2010)
99. Maletic, J.I., Mosora, D.J., Newman, C.D., Collard, M.L., Sutton, A., Robinson, B.P., (2011), “MosaiCode: Visualizing Large Scale Software: A Tool Demonstration”, in the Proceedings of the IEEE International Workshop on Visualizing Software for Understanding and Analysis (VISSOFT’11), Williamsburg, VA, USA, Sept 31 – Oct 1, pp. 96-101. (42% acceptance) www.cs.kent.edu/~jmaletic/papers/VISSOFT11.pdf
98. Dragan, N., Collard, M.L., Hammad, M., Maletic, J. I., (2011), “Categorizing Commits Based on Method Stereotypes”, in the Proceedings of the 27th IEEE International Conference on Software Maintenance (ICSM’11), Williamsburg, VA, USA, Sept 25 – Oct 1, pp. 520-523. www.cs.kent.edu/~jmaletic/papers/ICSM11/pdf
97. Collard, M.L., Decker, M., Maletic, J. I., (2011), “Lightweight Transformation and Fact Extraction with the srcML Toolkit”, in the Proceedings of the 11th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM’11), Williamsburg, VA, USA, Sept 25-26, pp. (10 pages). (37% acceptance) www.cs.kent.edu/~jmaletic/papers/SCAM11.pdf
96. Cleland-Huang, J., Czauderna, A., Dekhtyar, A., Gotel, O., Hayes, J.H., Keenan, E., Leach, G., Maletic, J.I., Poshyvanyk, P., Shin, Y., Zisman, A., Antoniol, G., Berenbach, B., Maeder, P., (2011), “Grand Challenges, Benchmarks, and TraceLab: Developing Infrastructure for the Software Traceability Research Community”, in the Proceedings of the 6th ACM International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE’11), Honolulu, Hawaii, May 23, pp. (7 pages). www.cs.kent.edu/~jmaletic/papers/TEFSE11.pdf
95. Collard, M.L., Maletic, J. I., Robinson, B.P., (2010), “A Lightweight Transformational Approach to Support Large Scale Adaptive Changes”, in the Proceedings of the 26th IEEE International Conference on Software Maintenance (ICSM’10), Timisoara, Romania, Sept 12 - 18, pp. (10 pages). (27% acceptance) www.cs.kent.edu/~jmaletic/papers/ICSM10-Collard.pdf

94. Dragan, N., Collard, M.L., Maletic, J. I., (2010), "Automatic Identification of Class Stereotypes", in the Proceedings of the 26th IEEE International Conference on Software Maintenance (ICSM'10), Timisoara, Romania, Sept 12 - 18, pp. (10 pages). (27% acceptance) www.cs.kent.edu/~jmaletic/papers/ICSM10-Dragan.pdf
93. Sharif, B., Maletic, J. I., (2010), "An Eye Tracking Study on the Effects of Layout in Understanding the Role of Design Patterns", in the Proceedings of the 26th IEEE International Conference on Software Maintenance (ICSM'10), Timisoara, Romania, Sept 12 - 18, pp. (10 pages). (27% acceptance) www.cs.kent.edu/~jmaletic/papers/ICPC10-Sharif.pdf
92. Hammad, M., Collard, M.L., Maletic, J. I., (2010), "Automatically Identifying Changes that Impact Code-to-Design Traceability During Evolution", *Journal of Software Quality*, DOI: 10.1007/s11219-010-9103-x, Vol. 19, No. 1, pp. 35-64. (Invited submission to special issue on **Best Papers from ICPC 2009**). www.cs.kent.edu/~jmaletic/papers/SQJ10.pdf
91. Sharif, B., Maletic, J. I., (2010), "An Eye tracking Study on camelCase and under_score Identifier Styles", in the Proceedings of the 18th IEEE International Conference on Program Comprehension (ICPC'10), Braga, Portugal, June 30 – July 2, pp. 196-205. (20% acceptance of full papers) (Cited by 9 Google Scholar) www.cs.kent.edu/~jmaletic/papers/ICPC10-CamelCaseUnderScore.pdf
90. Sutton, A., Holeman, R., Maletic, J. I., (2010), "Automatic Identification of Idiom Usage in C++ Generic Libraries", in the Proceedings of the 18th IEEE International Conference on Program Comprehension (ICPC'10), Braga, Portugal, June 30 – July 2, pp. 160-169. (20% acceptance of full papers) www.cs.kent.edu/~jmaletic/papers/ICPC10-Cpp.pdf
89. Hammad, M., Collard, M.L. Maletic, J. I., (2010), "Measuring Class Importance in the Context of Design Evolution", in the Proceedings of the 18th IEEE International Conference on Program Comprehension (ICPC'10), Braga, Portugal, June 30 – July 2, pp. 148-151. (20% acceptance of full papers, 35% acceptance of full & short papers) www.cs.kent.edu/~jmaletic/papers/ICPC10-Class.pdf
88. Sharif, B., Maletic, J. I., (2010), "The Effects of Layout on Detecting the Role of Design Patterns", in the Proceedings of the IEEE Conference on Software Engineering Education and Training (CSEET'10), Pittsburgh, PA March 9-12, pp. 20-27. www.cs.kent.edu/~jmaletic/papers/CSEET10.pdf
87. Sutton, A., Holeman, R., Maletic, J. I., (2009), "Abstracting the Template Instantiation Relation in C++", in the Proceedings of the IEEE International Conference on Software Maintenance (ICSM'09), Edmonton, Canada, September 20-26, pp. 559-562. (21% acceptance of full, 39% acceptance of full & short papers) www.cs.kent.edu/~jmaletic/papers/ICSM09-template.pdf
86. Dragan, N., Collard, M.L., Maletic, J. I., (2009), "Using Method Stereotype Distribution as a Signature Descriptor for Software Systems", in the Proceedings of the IEEE International Conference on Software Maintenance (ICSM'09), Edmonton, Canada, September 20-26, pp. 567-570. (21% acceptance of full, 39% acceptance of full & short papers) www.cs.kent.edu/~jmaletic/papers/ICSM09-stereo.pdf
85. Sharif, B., Maletic, J. I., (2009), "The Effect of Layout on the Comprehension of UML Class Diagrams: A Controlled Experiment", in the Proceedings of the IEEE International Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'09), Edmonton, Canada, September 25, pp. 11-18. (45% acceptance) www.cs.kent.edu/~jmaletic/papers/VISSOFT09.pdf
84. Hammad, M., Collard, M.L., Maletic, J. I., (2009), "Automatically Identifying Changes that Impact Code-to-Design Traceability", in Proceedings of the 16th IEEE International Conference on Program Comprehension (ICPC'09), Vancouver, BC, Canada, May 17-19, pp. 20-29. (27% acceptance of full papers) (Cited by 11 Google Scholar) www.cs.kent.edu/~jmaletic/papers/ICPC09-design.pdf
83. Sharif, B., Maletic, J. I., (2009), "An Empirical Study on the Comprehension of Stereotyped UML Class Diagram Layouts", in Proceedings of the 16th IEEE International Conference on Program Comprehension (ICPC'09), Vancouver, BC, Canada, May 17-19, pp. 268-272. (27% acceptance of full, 48% acceptance of full & short papers) www.cs.kent.edu/~jmaletic/papers/ICPC09-study.pdf
82. Maletic, J. I., Collard, M.L., (2009), "TQL: A Query Language to Support Traceability", in Proceedings of 5th ACM International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'09), Vancouver, BC, Canada, May 18, pp. 16-20. www.cs.kent.edu/~jmaletic/papers/TEFSE09-tql.pdf
81. Sutton, A. and Maletic, J. I., (2008), "Automatically Identifying C++0x Concepts in Function Templates", in Proceedings of the 24th IEEE International Conference on Software Maintenance (ICSM'08), Beijing China, Sept. 28 – Oct. 4, pp. 57-66. (25% acceptance) (Cited by 7 Google Scholar) www.cs.kent.edu/~jmaletic/papers/ICSM08-concepts.pdf

80. Kagdi, H., Hammad, M., and Maletic, J. I., (2008), "Who Can Help Me with this Source Code Change?", in Proceedings of the 24th IEEE International Conference on Software Maintenance (ICSM'08), Beijing China, Sept. 28 – Oct. 4, pp. 157-166. (25% acceptance) (Cited by 12 Google Scholar) www.cs.kent.edu/~jmaletic/papers/ICSM08-recommend.pdf
79. Alali, A., Kagdi, H., and Maletic, J. I., (2008), "What's a Typical Commit? A characterization of Open Source Software Repositories", in Proceedings of the 16th IEEE International Conference on Program Comprehension (ICPC'08), Amsterdam, The Netherlands, June 10-13, pp. 182-191. (35% acceptance) (Cited by 12 Google Scholar) www.cs.kent.edu/~jmaletic/papers/ICPC08.pdf
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Invited Submissions, Book Chapters, etc.

1. Guéhéneuc, Y.G., Kagdi, H., Maletic, J., (2009), "Working Session: Using Eye-Tracking to Understand Program Comprehension", in Proceedings of the 16th IEEE International Conference on Program Comprehension (ICPC'09), Vancouver, BC, Canada, May 17-19, pp. 278-279.
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Editor of Proceedings & Volumes

1. *The Proceedings of the 14th IEEE Working Conference on Reverse Engineering (WCRE 2007)*, M. Di Penta, J. I. Maletic, (Editors) October 28-31, Vancouver, BC, Canada, ISBN 0-7695-3034-6, 2007.
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3. *The Proceedings of the IEEE 4th International Workshop on Visualizing Software for Understanding and Analysis VISSOFT 2007*, J.I. Maletic, A. Telea, A. Marcus (Editors), June 25-26, Banff Alberta, Canada, IEEE, ISBN 1-4244-0600-5, 2007.
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5. *The Proceedings of the IEEE 3rd International Workshop on Visualizing Software for Understanding and Analysis VISSOFT 2005*, A. Marcus, J.I. Maletic, M.-A. Storey, M. Lanza, S. Ducasse (Editors), September 25th, Budapest Hungary, IEEE, ISBN 0-7803-9540-9, 2005.
6. *The Proceedings of the IEEE 13th International Workshop on Program Comprehension IWPC 2005*, J.R. Cordy, H. Gall, J.I. Maletic (Editors), May 15-16, St. Louis, Missouri USA, IEEE Computer Society, ISBN 0-7695-2254-8, 2005.
7. *The Proceedings of the 2002 ACM Symposium on Document Engineering*, R. Furuta, J.I. Maletic, E. Munson (Editors), Nov. 8-9, McLean, Virginia USA, ACM Press, ISBN 1-58113-594-7, 2002.

Guest Editor of Journal Special Issues

1. M. Di Penta, J. I. Maletic, Guest Editors, Special Issue: Best Papers from WCRE 2007, *Software Quality Journal*, vol. 17, No. 4, 2009. www.cs.kent.edu/~jmaletic/papers/SQJ09.pdf

2. J. R. Cordy, H. C. Gall, J. I. Maletic, Guest Editors, Special Issue: Program Comprehension, *Software Quality Journal*, vol. 14, No. 3, 2006. www.cs.kent.edu/~jmaletic/papers/SQJ06.pdf

Theses

- Maletic, J.I., *The Software Service Bay: A Knowledge Based Software Maintenance Methodology*, Ph.D. Dissertation, Wayne State University, Department of Computer Science, 1995.
- Maletic, J.I., *Refinement Metrics: Assessing a Programming Language's Support of the Stepwise Refinement Process*, M.S. Thesis, Wayne State University, Department of Computer Science, 1989.

Non-refereed Articles & Technical Reports

1. Sharif, B., Dragan, N., Sutton, A., Collard, M.L., Maletic, J.I., "Identifying Design Activities via Discourse and Content Analysis", in the proceedings of the NSF Workshop on Studying Professional Software Development, University of California-Irvine, Irvine, CA, February 8-10, 2010.
2. Antoniol, G., Berenbach, B., Eyged, A., Ferguson, S., Maletic, J., Zisman, A., Cleland-Huang, J., Dekhtyar, A., Hayes, J. H., (2006), "Center for Excellence for Traceability: Problem Statements and Grand Challenges", Lexington, KY: Center of Excellence for Traceability COET-GCT-06-01-0.9, September 10, 2006, 10 pages. www.cs.kent.edu/~jmaletic/papers/COET-GCT-06-01-0.9.pdf
3. Maletic, J.I., Collard, M.L., "Adding Structure to Unstructured Text", in the proceedings of Wright Center of Innovation for Advanced Data Management and Analysis and LexisNexis Conference on Using Metadata to Manage Unstructured Text, Dayton Ohio, October 7, 2005, 5 pages. www.cs.kent.edu/~jmaletic/papers/LexisNexis.pdf
4. Maletic, J.I., "Interactive Display Models for Information Visualization in Virtual Reality", in the proceedings of the MAS V – Military Personnel Research Workshop, Memphis, TN, June 4, 2002
5. Maletic, J., Shah, P., "NSF & ONR Workshop on Data Visualization – Final Report".
6. Maletic, J.I., "Automated Data Cleansing", in the proceedings of the MAS IV – Military Personnel Research Science Workshop, Memphis, TN, June 4, 2001
7. Maletic, J.I., Shah, P., "Workshop on Data Visualization", in the proceedings of the 2000 NSF Information and Data Management Workshop: Research Agenda into the Future, Chicago, IL, March 5-7, 2000, pp. 144-146.
8. Marcus, A., Maletic, J.I., "Utilizing Association Rules for the Data Cleansing", The University of Memphis, Division of Computer Science, TR-CS-00-04, 5-8-2000
9. Maletic, J.I., Marcus, A., "Utilizing Association Rules for Identification of Possible Errors in Data Sets", The University of Memphis, Division of Computer Science, TR-CS-00-03, 2-28-2000
10. Maletic, J.I., Marcus, A., "Automated Identification of Errors in Data Sets", The University of Memphis, Division of Computer Science, TR-CS-00-02, 2-2-2000
11. Maletic, J.I., Marcus, "A Progress Report on Data Cleansing", The University of Memphis, Division of Computer Science, TR-CS-99-02, 10-18-1999

Formal Research Demonstrations

1. "Lightweight Transformation and Fact Extraction with the srcML Toolkit", at the 11th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM), Williamsburg, VA, Sept 25, 2011.
2. "MosaiCode: Visualizing Large Scale Software: A Tool Demonstration", at the IEEE International Workshop on Visualizing Software for Understanding and Analysis (VISSOFT), Williamsburg, VA, USA, Sept 31, 2011.
3. "diffact: Factoring Differences for Iterative Change Management", at the 6th IEEE International Workshop on Source Code Analysis and Manipulation (SCAM), Philadelphia, Pennsylvania USA, September 28, 2006.
4. "Source Viewer 3D (sv3D) A System for Visualizing Multi Dimensional Software Analysis Data", Research Demonstration at the 2nd IEEE Workshop of Visualizing Software for Understanding and Analysis (VISSOFT), Amsterdam, The Netherlands, September 22, 2003.
5. "sv3D - 3D Representations for Software Visualization", Research Demonstration at the ACM Symposium on Software Visualization (SoftVis), San Diego, CA, June 12, 2003.
6. "Comprehension of Software Analysis Data Using 3D Visualization", Research Demonstration at the IEEE International Workshop on Program Comprehension (IWPC), Portland, OR, May 10, 2003.
7. "Source Viewer 3D (sv3D) – A Framework for Software Visualization", Research Demonstration at the 25th ACM/IEEE International Conference on Software Engineering (ICSE), Portland, OR, May 8, 2003.

Invited Participation in Workshop, Working Session, or Panel Session

- Workshop on Concepts (WoC), Bergen Language Design Laboratory (BLDL), University of Bergen, Bergen Norway, November 5th, 2007. Invited event.
- Working Session: Comprehension and Maintenance of Large Scale Multi-Language Software Applications at the IEEE 22nd International Conference on Software Maintenance (ICSM), Philadelphia, Pennsylvania, September 27th, 2006. Organizers: K. Kontogianis, K. Wong, P. Linos
- The Center of Excellence for Traceability 1st Workshop on Grand Challenges in Traceability (GCW'06), sponsored by National Aeronautics and Space Administration (NASA) IV & V, Fairmont WV, August 4-5, 2006. Organizers: J. Hayes, A. Dekhtyar, J. Cleland-Huang. Fully supported invited event funded by NASA. Ten international participants.

Presentations at Conferences, Symposia, and Workshops

1. "MosaiCode: Visualizing Large Scale Software: A Tool Demonstration", at the IEEE International Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'11), Williamsburg, VA, USA, Sept 31.
2. "Categorizing Commits Based on Method Stereotypes", at the 27th IEEE International Conference on Software Maintenance (ICSM'11), Williamsburg, VA, USA, Sept 26.
3. "An Eye Tracking Study on the Effects of Layout in Understanding the Role of Design Patterns", at the 26th IEEE International Conference on Software Maintenance (ICSM'10), Timisoara, Romania, Sept 12 – 18.
4. "An Eye tracking Study on camelCase and under_score Identifier Styles", at the 18th IEEE International Conference on Program Comprehension (ICPC'10), Braga, Portugal, June 30 – July 2, 2010
5. "Identifying Design Activities via Discourse and Content Analysis", at the NSF Workshop on Studying Professional Software Development, University of California-Irvine, Irvine, CA, February 8, 2010.
6. "Using Method Stereotype Distribution as a Signature Descriptor for Software Systems", at the IEEE International Conference on Software Maintenance (ICSM'09), Edmonton, Canada, September 20-26.
7. "The Effect of Layout on the Comprehension of UML Class Diagrams: A Controlled Experiment", at the IEEE International Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'09), Edmonton, Canada, September 25.
8. "An Empirical Study on the Comprehension of Stereotyped UML Class Diagram Layouts", at the 16th IEEE International Conference on Program Comprehension (ICPC'09), Vancouver, BC, Canada, May 17-19.
9. "TQL: A Query Language to Support Traceability", at the 5th ACM International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'09), Vancouver, BC, Canada, May 18.
10. "Who Can Help Me with this Source Code Change?", at the 24th IEEE International Conference on Software Maintenance (ICSM'08), Beijing China, Oct. 1.
11. "Automatically Identifying C++0x Concepts in Function Templates", at the 24th IEEE International Conference on Software Maintenance (ICSM'08), Beijing China, Sept. 30 – Oct. 4.
12. "What's a Typical Commit? A characterization of Open Source Software Repositories", at the 16th IEEE International Conference on Program Comprehension (ICPC'08), Amsterdam, The Netherlands, June 13, 2008.
13. "On Using Eye Tracking in Empirical Assessment of Software Visualizations", at the 1st ACM Workshop on Empirical Assessment of Software Engineering Languages and Technologies (WEASEL Tech'07), Atlanta, GA, Nov. 5, 2007.
14. "Assessing the Comprehension of UML Diagrams via Eye Tracking", at the 15th IEEE International Conference on Program Comprehension (ICPC'07), Banff, Canada, June 26-29, 2007.
15. "Mining Software Repositories for Traceability Links", in Proceedings of 15th IEEE International Conference on Program Comprehension (ICPC 2007), Banff, Canada, June 26-29, 2007.
16. "Onion Graphs for Focus+Context Views of UML Class Diagrams", at the 4th IEEE International Workshop on Visualizing Software for Understanding and Analysis (VISSOFT 2007), Banff Canada, June 25-26, 2007.
17. "Reverse Engineering Method Stereotypes" at the IEEE 22nd International Conference on Software Maintenance (ICSM06), Philadelphia, Pennsylvania USA, September 25, 2006.
18. "Visualization & Traceability: Challenges & Research Directions", at the Center of Excellence for Traceability 1st Workshop on Grand Challenges in Traceability (GCW'06) at NASA IV & V Fairmont WV, August 4th, 2006.
19. "An XML-Based Approach to Support the Evolution of Model-to-Model Traceability Links", at the 3rd ACM International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'05), Long Beach CA, Nov. 8th, 2005.

20. "Adding Structure to Unstructured Text", at the Wright Center of Innovation for Advanced Data Management and Analysis and LexisNexis Conference on Using Metadata to Manage Unstructured Text, Dayton Ohio, October 7, 2005.
21. "Context-Free Slicing of UML Class Models", in Proceedings of the 21st IEEE International Conference on Software Maintenance (ICSM'05), Budapest Hungary, September 25-30 2005.
22. "Evaluating UML Class Diagram Layout based on Architectural Importance", in Proceedings of the 3rd IEEE International Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'05), Budapest, Hungary September 25th, 2005.
23. "Towards a Taxonomy of Approaches for Mining of Source Code Repositories" at the International Workshop on Mining Software Repositories (MSR '05), St. Louis Missouri, May 17th, 2005.
24. "Document-Oriented Source Code Transformation using XML" at the 1st International Workshop on Software Evolution Transformation (SET'04), Delft, The Netherlands, Nov. 9th, 2004.
25. "Leveraging XML Technologies in Developing Program Analysis Tools" at the 4th International Workshop on Adoption-Centric Software Engineering (ACSE '04) – ICSE'04 Workshop, Edinburgh, Scotland, May 25, 2004
26. "Combining Traceability Link Recovery with Conformance Analysis via a Formal Hypertext Model", at the 2nd International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'03), Montreal, Canada, October 7th, 2003
27. "CFB: A Call For Benchmarks – for Software Visualization", at the 2nd IEEE Workshop of Visualizing Software for Understanding and Analysis (VISSOFT'03), Amsterdam, The Netherlands, September 22nd, 2003
28. "Recovering Documentation-to-Source-Code Traceability Links using Latent Semantic Indexing" at the 25th ACM/IEEE International Conference on Software Engineering (ICSE'03), Portland, OR, May 6, 2003
29. "A Task Oriented View of Software Visualization", at the IEEE Workshop of Visualizing Software for Understanding and Analysis (VISSOFT'02), Paris France, June 26, 2002.
30. "Source Code Files as Structured Documents", at the 10th IEEE Workshop on Program Comprehension (IWPC'02), Paris France, June 27, 2002.
31. "Interactive Display Models for Information Visualization in Virtual Reality", at the MAS V – Military Personnel Research Workshop, Memphis, TN, June 4, 2002
32. "Identification of High-Level Concept Clones in Source Code", at the 16th International Conference on Automated Software Engineering (ASE'01), San Diego, CA, November 26-29, 2001.
33. "Ordinal Association Rules for Error Identification in Data Sets", at the 10th International Conference on Information and Knowledge Management (CIKM'01) Atlanta, GA, November 5-10 2001.
34. "Automated Data Cleansing", at the MAS IV – Military Personnel Research Science Workshop, Memphis, TN, June 4, 2001.
35. "A System for Visualizing Object Oriented Software Systems in Virtual Reality", at the 9th International Workshop on Program Comprehension (IWPC'01), Toronto, Ontario, May 12-13, 2001.
36. "Visualizing Software in an Immersive Virtual Reality Environment", at the ICSE'01 Workshop on Software Visualization, Toronto, Ontario, May 13-14th, 2001
37. "Incorporation PSP into a Traditional Software Engineering Course: An Experience Report", at the Conference on Software Engineering Education & Training (CSEE&T'01), Charlotte, NC, February 19-21, 2001.
38. "Using Latent Semantic Analysis to Identify Similarities in Source Code to Support Program Understanding", at the 12th IEEE International Conference on Tools with Artificial Intelligence (ICTAI'00), Vancouver, British Columbia, November 13th-15th, 2000.
39. "Support for Software Maintenance Using Latent Semantic Analysis", at the 4th Annual IASTED International Conference Software Engineering and Applications (SEA'00), Las Vegas, Nevada, November 6th-9th, 2000.
40. "Data Cleansing: Beyond Integrity Checking" at The MIT Conference on Information Quality (IQ'00), Massachusetts Institute of Technology, Cambridge, October 20-22, 2000.
41. "Conclusions from the 1999 NSF & ONR Workshop on Data Visualization" at the National Science Foundation Information and Data Management Program Workshop, Chicago IL, March 7th, 2000.
42. "Automatic Software Clustering via Latent Semantic Analysis" at the 14th IEEE International Conference on Automated Software Engineering (ASE'99), Cocoa Beach, FL, Oct. 12-15th, 1999.
43. "Identification of Test Cases from Business Requirements of Software Systems", at the 5th Americas Conference on Information Systems (AMCIS'99), Milwaukee, WI, August 13-15, 1999.
44. "Decoding the stepwise Refinement Process: Stepwise Refinement as a Problem Solving Activity", at the 19th Annual ACM Computer Science Conference, San Antonio, Texas, March 5-7, 1991.

Invited Presentations & Colloquia

1. "Expressiveness and Effectiveness of Program Comprehension: Thoughts on Future Research Directions", at the Frontiers of Software Maintenance (FoSM'08) at the 24th IEEE International Conference on Software Maintenance (ICSM'08), Beijing China, Sept. 30. (*Invited talk*)
2. Miami University, Oxford Ohio, Nov. 7, 2006, "srcML: Supporting Source-Code Analysis & Transformation"
3. ABB Inc., Cleveland Ohio, August 17th, 2006, "Supporting Source-Code Analysis & Transformation with srcML"
4. Wayne State University, January 27th, 2004, Computer Science Colloquium, "Source Code Models as an Infrastructure for Program Analysis and Transformation"
5. Kent State University, October 31st, 2001, Computer Science Colloquium, "Visualizing Software in a Virtual Reality Environment"
6. The University of Wisconsin - Milwaukee, March 30th, 2001 "Combining Semantic and Structural Information for Program Comprehension"
7. Kent State University, March 23rd, 2001 "Combining Semantic and Structural Information for Program Comprehension"
8. Oakland University, March 14th, 2001 "Combining Semantic and Structural Information for Program Comprehension"
9. The University of Delaware, March 9th, 2001 "Combining Semantic and Structural Information for Program Comprehension"
10. Syracuse University, March 5th, 2001 "Combining Semantic and Structural Information for Program Comprehension"
11. The University of New Hampshire, March 2nd, 2001 "Combining Semantic and Structural Information for Program Comprehension"
12. The University of Massachusetts-Lowell, March 1st, 2001 "Combining Semantic and Structural Information for Program Comprehension"
13. Worcester Polytechnic University, Feb. 23rd 2001 "Combining Semantic and Structural Information for Program Comprehension"
14. Western Michigan University, Feb. 15th, 2001 "Combining Semantic and Structural Information for Program Comprehension"
15. Drexel University, Feb. 9th, 2001 "Combining Semantic and Structural Information for Program Comprehension"
16. The University of Michigan - Dearborn, February 18th, 1997, "Stepwise Refinement and Problem Solving"
17. The City College of New York (CUNY) June 15th, 1996, "Stepwise Refinement and Problem Solving"
18. CSTAR of Andersen Consulting, May 10th, 1995, "Extracting Procedural Knowledge from Software Systems Using Inductive Learning Techniques"
19. NASA IV&V and CERC at West Virginia University, January 17-18, 1991 "Extracting Procedural Knowledge from Software Systems Using Inductive Learning Techniques"
20. The University of Michigan-Flint ACM Student Chapter Annual Future in Computing Seminar, Flint, Mi. Feb. 10, 1989 "Artificial Intelligence and Software Engineering"

Software Systems Developed

- *src2srcml* – a system to translate C/C++/Java source code to srcML (an XML format). Both GPL and Commercial License available. Developed collaboratively with H. Kagdi and M. Collard. Available for download at www.sdml.info
- *sv3D* – an independent visualization front end for software analysis tools. Developed collaboratively with L. Feng and A. Marcus. Available for download at www.sdml.info.

Professional Service (external)

Journal Editorial Board

- Journal of Software Maintenance and Evolution: Research and Practice and Software Process: Improvement and Practice 10/2010-current

Conference Steering Committee

- IEEE International Conference on Software Maintenance (ICSM) – *Elected* 9/2010-current
- IEEE International Conference on Program Comprehension (ICPC) – *Elected (Chair '07-'10)* 5/2005-6/2011
- IEEE Workshop on Visualizing Software for Understanding and Analysis (VISSOFT) 5/2006-current
- ACM Int. Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE) 6/2005-current
- ACM Symposium on Document Engineering (DocEng) 11/2002-10/2005

Conference Organization

- **Program Co-Chair** IEEE 28th International Conference on Software Maintenance (ICSM'12) 2012
Riva del Garda, Trento, Italy, September 23-30
- **Co-Organizer** Working Session: "Using Eye-Tracking to Understand Program Comprehension" at the 16th IEEE International Conference on Program Comprehension (ICPC'09), Vancouver, BC, Canada, May 17-19 2009
- **Program Co-Chair** IEEE 14th Working Conference on Reverse Engineering (WCRE'07) 2007
Vancouver, B.C., Canada, October 29-31
- **Finance Chair** ACM/IEEE 22nd International Conference on Automated Software Engineering (ASE'07), Atlanta, Georgia Nov. 5-9 2007
- **Co-Organizer** ACM/IEEE 1st International Workshop on Empirical Assessment of Automated Software Engineering Language and Technologies (WEASELTech'07), Atlanta, Georgia Nov. 5 2007
- **Program Co-Chair** IEEE 4th Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'07), Banff, Canada, June 25-26 2007
- **General Chair** ACM 3rd International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'05), Long Beach, CA November 8 2005
- **General Chair** IEEE 13th International Workshop on Program Comprehension (IWPC'05) 2005
St. Louis, Missouri, May 15-16
- **Organizing Committee** IEEE 3rd Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'05), Budapest, Hungary, Sept. 25 2005
- **Organizing Committee** IEEE 2nd Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'03), Amsterdam, The Netherlands Sept. 22 2003
- **Program Co-Chair** ACM Symposium on Document Engineering (DocEng'02) 2002
McLean, Virginia Nov. 8-9

Conference Program Committee

2011

- ACM/IEEE 26th International Conference on Automated Software Engineering (ASE'11) -*attended PC meeting*
- IEEE 27th International Conference on Software Maintenance (ICSM'11)
- IEEE 27th International Conference on Software Maintenance (ICSM'11) -*Industrial Track*
- ACM/IEEE 33rd International Conference on Software Engineering (ICSE'11) -*Research Demonstrations Track*
- IEEE 19th International Conference on Program Comprehension (ICPC'11)
- IEEE 11th International Working Conference on Source Code Analysis and Manipulation (SCAM '11)
- IEEE 6th Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'11)
- ACM 5th International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'11)
- IEEE 18th Working Conference on Reverse Engineering (WCRE'11)

2010

- ACM/IEEE 25th International Conference on Automated Software Engineering (ASE'10) -*Expert Review Panel*
- IEEE 18th International Conference on Program Comprehension (ICPC'10)
- IEEE 26th International Conference on Software Maintenance (ICSM'10)

- ACM 5th Symposium on Software Visualization (SoftVis'10)
- IEEE 17th Working Conference on Reverse Engineering (WCRE'10)
- IEEE 6th International Conference on Predictive Models in Software Engineering (PROMISE'10)

2009

- ACM/IEEE 24th International Conference on Automated Software Engineering (ASE'09) -*attended PC meeting*
- IEEE 25th International Conference on Software Maintenance (ICSM'09)
- IEEE 17th International Conference on Program Comprehension (ICPC'09)
- ACM/IEEE 31st International Conference on Software Engineering (ICSE'09) -*Research Demonstrations Track*
- IEEE 16th Working Conference on Reverse Engineering (WCRE'09)
- ACM 6th Workshop on Mining Software Repositories (MSR'09)
- ACM 4th International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'09)
- IEEE 5th Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'09)
- IEEE 12th International Workshop on Principles of Software Evolution (IWPSE'09)

2008

- ACM/IEEE 23rd International Conference on Automated Software Engineering (ASE'08) -*attended PC meeting*
- IEEE 16th International Conference on Program Comprehension (ICPC'08)
- ACM 5th Workshop on Mining Software Repositories (MSR'08)
- ACM 4th Symposium on Software Visualization (SoftVis'08)
- IEEE 15th Working Conference on Reverse Engineering (WCRE'08)

2007

- ACM/IEEE 22nd International Conference on Automated Software Engineering (ASE'07) -*attended PC meeting*
- IEEE 23rd International Conference on Software Maintenance (ICSM'07)
- IEEE 15th International Conference on Program Comprehension (ICPC'07)
- IEEE 10th International Workshop on Principles of Software Evolution (IWPSE'07)
- ACM 4th Workshop on Mining Software Repositories (MSR'07)

2006

- ACM/IEEE 21st International Conference on Automated Software Engineering (ASE'06) -*attended PC meeting*
- IEEE 14th International Conference on Program Comprehension (ICPC'06)
- IEEE 22nd International Conference on Software Maintenance (ICSM'06)
- IEEE 13th Working Conference on Reverse Engineering (WCRE'06)
- ACM 3rd Symposium on Software Visualization (SoftVis'06)
- ACM 3rd Workshop on Mining Software Repositories (MSR'06)

2005

- ACM/IEEE 20th International Conference on Automated Software Engineering (ASE'05)
- IEEE 21st International Conference on Software Maintenance (ICSM'05)
- IEEE 12th Working Conference on Reverse Engineering (WCRE'05)
- IEEE 8th International Workshop on Principles of Software Evolution (IWPSE'05)
- ACM/IEEE 8th International Conference on Model Driven Engineering Languages and Systems (MoDELS'05)
- ACM 20th Conf. on Object-Oriented Prog. Systems, Lang., and Apps. (OOPSLA'05) - *Onward! Committee*
- ACM 2nd Symposium on Software Visualization (SoftVis'05)

2004

- ACM/IEEE 19th International Conference on Automated Software Engineering (ASE'04) - *attended PC meeting*
- IEEE 7th International Workshop on Principles of Software Evolution (IWPSE'04)
- IEEE 12th International Workshop on Program Comprehension (IWPC'04)
- IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC'04)
- ACM Symposium on Document Engineering (DocEng'04)
- ACM International Conference on Design of Communication (SIGDOC'04)

2003-2001

- ACM Symposium on Document Engineering (DocEng'03)
- IEEE 11th International Workshop on Program Comprehension (IWPC'03)
- IEEE Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'02)
- ACM Symposium on Document Engineering (DocEng'01)

Conference Session Chair

- VISSOFT'11 Session 3: Program Dependencies
- ICSM'10 Research Session 18 – Quality
- ICPC'10 Technical Session VI – Software and System Structure
- ICSM'09 Research Session 12: Concept and Traceability Recovery
- VISSOFT'09 Session IV: Full Papers II
- ICSE'09 Formal Research Demonstrations: Software Development Assistance
- ICPC'09 Session: Visualization and Sonification
- ICPC'08, Session 3: Program Comprehension Studies
- ASE'07, Session 9: Traceability
- ICSM'07, Session 13: Reverse Engineering
- MSR'05, Session 5: Integration and Collaboration
- SET'04, Session 3: Software Transformation
- ICSM'04, T3: Program Comprehension
- IWPC'03, Short Papers 1
- DocEng'01, Document Analysis and Retrieval
- SEA'00, Software Economics, Development, and Maintenance

Meeting Attendance and/or Service (not noted elsewhere)

- Attended ACM/IEEE International Conference on Software Engineering (ICSE) 2009
- Attended IEEE International Conference on Program Comprehension (ICPC) 2006
- Attended ACM/IEEE International Conference on Automated Software Engineering (ASE) 2005
- Attended ACM/IEEE International Conference on Software Engineering (ICSE) 2005
- Attended ACM/IEEE International Conference on Software Engineering (ICSE) 2004
- Technical Council on Software Engineering (TCSE) – attended meeting on 5/19/2005 to advocate name change for IWPC to ICPC. Motion passed with full support of council.
- Attended ACM Technical Symposium on Computer Science Education SIGCSE 2002
- Chapter Treasurer, ACM Southeastern Michigan SIGART Local Chapter (SMART), 1/1996 to 3/1997

Grant Proposal Reviewer & Panelist

- Natural Sciences and Engineering Research Council of Canada (NSERC) (2 proposals) 2012
- National Science Foundation (NSF) – CISE Review Panelist 2011
- National Science Foundation (NSF) – CISE Review Panelist 2010
- Netherlands Organisation for Scientific Research (1 proposal) 2009
- Swiss National Science Foundation (2 proposals) 2009
- National Science Foundation (NSF) – CISE Review Panelist 2008
- National Science Foundation (NSF) – CISE Review Panelist (Two Panels) 2004
- National Science Foundation (NSF) – CISE Review Panelist 2003
- National Aeronautics and Space Administration (NASA) 2001

Program & Position Evaluation (site visit)

- Montclair University, Computer Science Department, External Program Reviewer 2010
- Miami University, Department of Computer and System Analysis, External Program Reviewer 2006
- Concordia University Research Chair Evaluation Committee, Montreal Canada 2005

Journal Reviewer

- *IEEE Transactions on Software Engineering, ACM Transactions on Software Engineering and Methodologies, Journal of Empirical Software Engineering, Automated Software Engineering Journal, Journal of Software Maintenance and Evolution, Journal of Systems and Software, Software Quality Journal, IEEE Software, IEEE Computer*

Textbook Reviewer

- CRC Press, McGraw-Hill, Addison-Wesley Longman Publishers, Scott/Jones, Inc. Publishers, Kluwer Academic Publisher

- Henry, J., *Software Project Management A Real-World Guide to Success*, Addison-Wesley, 2004. Acknowledged as a reviewer on page xiv.

Teaching & Mentoring

Dissertations Directed

7. Natalia Dragan, December 2010, Kent State University
 - *The Emergent Laws of Method and Class Stereotypes in Object Oriented Software*
 - Adjunct Lecturer, Kent State University - Stark
6. Andrew Sutton, August 2010, Kent State University
 - *Understanding and Maintaining C++ Generic Libraries*
 - Postdoctoral Fellow, Texas A&M, Supervisor: Bjarne Stroustrup
5. Maen Hammad, May 2010, Kent State University
 - *Supporting Code-Design Consistency During Software Evolution*
 - Assistant Professor, Hashemite University, Jordan
4. Bonita (Simoes) Sharif, May 2010, Kent State University
 - *Empirical Assessment of UML Class Diagram Layout Based on Architectural Importance*
 - Assistant Professor, Youngstown State University, Ohio
3. Huzefa Kagdi, August 2008, Kent State University
 - *Mining Software Repositories to Support Software Evolution*
 - Assistant Professor, Wichita State University, Wichita, Kansas
2. Michael L. Collard, August 2004, Kent State University
 - *Meta-Differencing: An Infrastructure for Source Code Difference Analysis*
 - Assistant Professor, University of Akron, Ohio
1. Adrian Marcus, August 2003, Kent State University
 - *Semantic Driven Program Analysis*
 - Awarded "Best Ph.D. Dissertation Paper" at the 20th IEEE International Conference on Software Maintenance (ICSM'04), Chicago, Illinois, Sept. 11-14, 2004, pp. 469-473.
 - Awarded NSF CAREER 2009
 - Associate Professor, Wayne State University

Doctoral Students Directing (current)

1. Abdulkareem Q. Alali, Passed Candidacy
2. Hakam Alomari, Passed Candidacy
3. Dale Haverstock, Passed Preliminary
4. Omar Meqdadi, Passed Preliminary
5. Saleh Alnaeli, Passed Preliminary
6. Nouh Alhindawi, Passed Preliminary
7. Gregory Delozier, (part time student), Passed Preliminary

Dissertation Committee Member (current)

1. Ning Ruan, Department of Computer Science, Kent State University, Advisor: Dr. R. Jin
2. Jamal Alsakran, Department of Computer Science, Kent State University, Advisor: R. Y. Zhao

Dissertation Committee Member (completed)

1. Nina Rytwinski, Department of Psychology, Kent State University, Defended Dissertation June 2009, Graduated: 5/2010. Committee: Dr. Jocelyn Folk, Dr. David Fresco, Dr. Jeffrey Ciesla
2. Valentin David, Language Design Laboratory, Universitetet i Bergen, Bergen Norway, Dissertation Defense November 2009, Graduated 12/2009. Committee: Dr. Magne Haveraaen, Dr. Bjarne Stroustrup
3. Saleh Al-shomrani, Department of Computer Science, Kent State University, Graduated: 12/2008, Advisor: Dr. P. Wang
4. Denys Poshyvanyk, Department of Computer Science, Wayne State University, Detroit MI, Graduated: 5/2008, Assistant Professor, College of William & Mary, Advisor: Dr. A. Marcus
5. Oleg Komogortsev, Department of Computer Science, Kent State University, Graduated 8/2007, Assistant Professor, Texas State University, Advisor: Dr. J. Khan

6. Congjun Yang, Department of Computer Science, University of Memphis, Graduated: 5/2001, FedEx, Advisor: Dr. K.I. Lin
7. Yuan Gao, Department of Computer Science, University of Memphis, Graduated: 5/2000, Advisor: Dr. G. Narasiman
8. German Hernandez, Department of Computer Science, University of Memphis, Graduated: 5/2000, University of Columbia, Bogotá, Advisor: Dr. D. Dasgupta
9. Myles Bogner, Department of Computer Science, University of Memphis, Graduated: 12/1999, Advisor: Dr. S. Franklin
10. David Vu, Department of Computer Science, University of Memphis, Graduated: 12/1999, FedEx, Advisor: Dr. G. Das

Masters Students Directing (current)

1. Christian Newman
2. Brian Bartman
3. Daniel Mosora (BS/Masters)

Masters Theses Directed

1. Ryan Holeman, *Identifying Programming Idioms in C++ Generic Libraries*, Kent State University, Graduated December 2009.
2. Alice Lewis, *A Case Study for a Lightweight Impact Analysis Tool*, Kent State University, Graduated May 2009, Current Position: Charles Schabb
3. Abdulkareem Q. Alali, *An Empirical Characterization of Commits In Software Repositories*, M.S. Thesis, Kent State University, Kent, Ohio, Graduated May 2008.
4. Shehnaaz Yusuf, *Assessing the Comprehension of UML Class Diagrams via Eye Tracking*, M.S. Thesis, Kent State University, Kent, Ohio, Graduated December 2007.
5. Natalia Dragan, *Method Stereotypes and their Automatic Identification*, M.S. Thesis, Kent State University, Kent, Ohio, Graduated December 2005.
6. Andrew Sutton, *Accurately Reverse Engineering UML Class Models from C++*, M.S. Thesis, Kent State University, Kent, Ohio, Graduated August 2005.
7. Louis Feng, *Source Viewer 3D – An Application Framework for Software Visualization*, M.S. Thesis, Kent State University, Kent, Ohio, Graduated August 2003. Current Position: Doctoral Program in Graphics at UC-Davis
8. Huzefa Kagdi, *Using an Island Grammar Approach for Lightweight Parsing: A C++ to srcML Translator*, M.S. Thesis, Kent State University, Kent, Ohio, Graduated May 2003.
9. Greg Dunlap, *Visualizing Object Oriented Software in a Virtual Reality Environment*, M.S. Thesis, The University of Memphis, Memphis, TN, Graduated December, 2001.
10. Bradford Smith, *Combining Gene Splicing and Genetic Algorithms*, M.S. Thesis, The University of Memphis, Memphis, TN, Graduated May 1999.

Masters Students Directed (non-Thesis)

1. Anita Howald, University of Memphis, Graduated: 5/2002, Woodson-Tenent Labs
2. Elizabeth Brooks, University of Memphis, Graduated: 12/2001
3. Andrian Marcus, University of Memphis, Graduated: 5/2001
4. Tony Colston, University of Memphis, Graduated: 12/2000, Buckman Labs
5. Zhijun Liu, University of Memphis, Graduated: 8/2000, Motorola
6. Ravi Seetharam, University of Memphis, Graduated: 12/1999, FedEx
7. Naveen Valluri, University of Memphis, Graduated: 5/1999, Microsoft.
8. Sudarshan Dharmapuri, University of Memphis, Graduated: 5/1999

Masters Thesis Committee Member (completed)

- Scott McCallen, Kent State University, Graduated: 12/2007
- David Watson, Kent State University, Graduated: 12/2004

- Irina Makkaveeva, University of Memphis, Graduated: 8/2000
- Sudipkumar Karnavat, University of Memphis, Graduated: 12/1998, Oracle Inc.
- Myles Bogner, University of Memphis, Graduated: 5/1998
- Elko Tchernev, University of Memphis, Graduated: 5/1998,
- Yuan Gao, University of Memphis, Graduated: 5/1998, IBM

Visiting Scholars Hosted

- Tie Feng, Jilin University China, 10/2005-9/2006, Supported by the China Scholarship Council
- Shu-Guang Zhang, Wuhan University, China, 01/2007-12/2007, Supported by the China Scholarship Council

Undergraduate Honors Thesis Directed

- Dan Mosora, Kent State University, Expected Graduation: 2012.
- Dylan Shearer, Kent State University, Graduated: 5/2007 – *co-directed with Dr. M. Collard (lead)*

Undergraduate Students Directed in an Independent Study

Kent State University

- Thomas Mullaly, Spring 2010
- Richard Hildebrand, Spring 2010
- Brian Bartman, Fall 2009
- Michael Lopez, Fall 2009
- Matthew Suhay, Summer 2009
- Edward Morrison, Spring 2009
- Christopher Tuttle, Spring 2009
- Rodney Johnston, Fall 2006
- Kyle Stemen, Fall 2004
- James Brundage, Fall 2004
- Howard Bandy, Spring 2003
- Robert Beck, Fall 2002

The University of Memphis

- Corey Donahoe, Spring 2003
- Leslie Saputra, Fall 2001
- Greg Dunlap, Spring 2000
- Michael Muellenmeister, Spring 2000
- Anastasia Nix, Spring 1999
- Scott Brown, Spring 1999
- George Eivazzadeh, Summer 1998

Wayne State University

- William L. Kilpatrick, Spring 1998
- Christopher Gallivan, Spring 1997

Teaching Interests

Software Engineering (at the graduate and undergraduate levels) and Introductory Programming (CS I & CS II)

Teaching Statement/Philosophy

The philosophies and methods of teaching must always evolve as new experiences are realized. This implies continual process improvement. The basis of this process is focused on the following:

- 1) Difficulty of the material;
- 2) Academic standards;
- 3) Fairness to the student;
- 4) Enjoyable learning.

Enthusiasm on the part of the instructor is an excellent way to make a course (and learning) more enjoyable for the student. Past experiences, both in teaching and taking courses, have proven this to be an excellent method in motivating and keeping the attention of students.

Lecture emphasizes that subjects covered in individual courses are tightly coupled with the entire curriculum. All too often, students are left without an understanding of how separate topics fit together and how they relate to the work place (or research). A broad knowledge of computer science coupled with industry experience is utilized to better explain these issues. However, a number of topics are very hard for students to master. Repetitive exposure and explanation, along with varying perspectives and analogies are systematically used to convey an understanding of the material. A question/answer dialog is consistently and constantly made available to the students to gauge the overall level of understanding of the students and pace of the course.

One of the responsibilities of college professor is to uphold the standards of the discipline and society. While it has been said that the responsibility of the teacher is to the student, the foremost responsibility of the teacher is to educate the student to function in society and the field to an adequate degree of competency. To promote fairness, all expected requirements are presented at the beginning of any course. The level of the professor's expectations is presented up front, and repeatedly throughout the term. All reference material is made available and the importance of each reference is well defined. Given a well defined set of course objectives, along with the support to achieve those objectives, the student has a level playing field and can be fairly assessed.

Teaching Experience (courses taught)

Title/Subject	Terms/Dates	Institution
Graduate		
Masters & Doctoral Seminar (CS6/89191)	Spr 06, Sum 04	KSU
Software Engineering (CS7/63901)	Fall 07, Fall 06, Fall 05, Fall 03, Fall 02	KSU
Software Evolution (CS7/63902)	Spr 04	KSU
Software Visualization (CS7/63903)	Spr 05, Spr 03	KSU
ST: Program Comprehension (CS6/79995)	Spr 08	KSU
Psychology of Programming (COMP8/7991)	Spr 01	Memphis
Software Process Models (COMP8/7081)	Fall 00, Fall 99	Memphis
Software Development (COMP8/7083)	Spr 00	Memphis
Software Testing (COMP8/7998)	Spr 99	Memphis
Software Reuse (COMP8/7992)	Fall 98	Memphis
Undergraduate Upper Division		
Capstone Project (CS49901)	Fall 04	KSU
Software Engineering (U/G) (CS5/43901)	Spr 10, Spr 03, Spr 02	KSU
Software Development (U/G) (COMP6/4081)	Spr 99, Spr 98	Memphis
Software Engineering (CSC411)	Sum 97, Win 97, Sum 96	WSU
Data Communications (U/G) (COMP6/4310)	Fall 97	Memphis
Operating Systems (U/G) (COMP6/4270)	Fall 98, Fall 97	Memphis
Operating Systems (CSC442)	Win 97, Fall 96	WSU
Theory of Computation (CSC450)	Sum 97, Win 97, Fall 96, Sum 96, Win 96, Fall 95	WSU
Programming Languages (U/G) (CSC520)	Fall 92	WSU
Undergraduate Lower Division		
CSII: Data Structures (C++) (CS33001)	Spr 11, Fall 10, Spr 10, Fall 09, Fall 08, Spr 08, Spr 07, Fall 02, Fall 01	KSU
CS2:Data Structures using C++ (COMP2150)	Spr 01, Fall 00, Spr 00, Fall 99	Memphis
Computer Science II using C++ (CSC211)	Fall 96, Fall 95	WSU
Computer Science II using Pascal (CSC203)	Win 90, Fall 89, Sum 89, Fall 88	WSU
Computer Science I using C++ (CSC110)	Win 96, Win 97	WSU
Computer Science I (CSC102)	Win 93 (using C), Win 89 (using Pascal)	WSU
Forth Programming Language (CSC286)	Fall 86	UM-Flint
Lisp Programming Language (CSC286)	Win 87	UM-Flint
Introduction to FORTRAN (CSC274)	Sum 87, Win 87, Fall 86	UM-Flint
Computer Literacy (COMP1200)	Spr 98	Memphis
Other		
OO Programming and Adv. C++ (6 weeks)	Sum 97	Brother Inc.
LISP/CLOS Programming (1 week intensive)	Sept. 95	Ford Motor Co.

Course & Curriculum Development

Kent State University

New Course Development & Teaching

- CS6/79995 ST: Program Comprehension – developed content and description for the course as part of a Software Engineering major concentration within our graduate curriculum. Offered as special topics during Spring 2008. www.cs.kent.edu/~jmaletic/Prog-Comp/
- CS49901 Capstone – developed content and description, in conjunction with CC, for this new course as a part of the revised undergraduate curriculum. Taught first offering of course in Fall 2004 - see www.cs.kent.edu/~jmaletic/Capstone/
- CS6/73903 Software Evolution – developed content and description for this course as a part of a Software Engineering Major Concentration within our graduate curriculum. Offered course as a Special Topics during Spring 2004. www.cs.kent.edu/~jmaletic/cs63902/
- CS6/73902 Software Visualization – developed content and description for this course as a part of a Software Engineering Major Concentration within our graduate curriculum. Offered course as a Special Topics during Spring 2003. www.cs.kent.edu/~jmaletic/cs63903/

Course Development & Revision

- CS33001 CS II: Data Structures & Abstraction Laboratory – developed materials, topics, and assignments for new laboratory component of the course for first offering in Fall 2011. Revised lecture materials to reflect lab component. www.cs.kent.edu/~jmaletic/CS33001/
- CS4/53901 Software Engineering – a complete revision of this course was made including a new catalog description. New text books were examined and a detailed syllabus developed so this course better fits into the new undergraduate catalog. The course now is focused on object oriented design and programming. This is a critical topic that can only be brushed upon in the prerequisites. This course went from an elective to a required course in the curriculum. www.cs.kent.edu/~jmaletic/cs43901/
- CS6/73901 Software Engineering Methodologies (previously Advanced Software Engineering) – a complete revision of this course was made including new name and catalog description. In the Fall 2002 this elective course had an enrollment of 23 students. www.cs.kent.edu/~jmaletic/cs63901/
- CS33001 Data Structures – The content of this core course was revised, standardized, and aligned with its prerequisites. A new textbook was selected under my guidance that better supports our program and students. Additionally, a course web page was developed that detailed the course and assignments and is intended as a model/resource for others to teach the course. Changes to this course were made in conjunction with the Curriculum Committee and others who teach it regularly. www.cs.kent.edu/~jmaletic/CS33001/
- CS23022 Discrete Structures for Computer Science – Worked with Dr. Dragan, Dr. Lu, and CC to develop a new course to replace CS/MATH31011 Discrete Mathematics. Course content and description were developed.
- CS23021 Introduction to Object Oriented Programming – The content of this course was revised and standardized to fit with its prerequisites and the follow on course, Data Structures. Changes to this course were made in conjunction with the Curriculum Committee and others who teach it regularly.

Undergraduate Curriculum Development

- An integral member of the Curriculum Committee during the 2001/02 academic year, a substantial re-design of the Computer Science undergraduate curriculum was made. Changes were made to align the Department's curriculum with those of the 2001 ACM Computer Science Curriculum Guidelines. These changes included the following new course:
- CS49901 Capstone – developed content and description for this course as a part of the new undergraduate curriculum. This was done in conjunction with the Curriculum Committee.

Graduate Curriculum Development

- Chair of Joint Committee (Graduate Studies and Curriculum Committees) to Examine the Graduate Curriculum for 2002/03. This committee assessed the current state of the Department's graduate curriculum and discussed problem and possible solutions about the program with faculty and graduate students. The committee developed and proposed a curriculum that represents a substantial departure from the old program. The new curriculum focuses on the support of all (and future) departmental research initiatives and facilitates the production of high quality, knowledgeable, graduate students.

- CS69198 Masters Seminar – developed content and description for this course as a part of the new graduate curriculum. This was done in conjunction with the Curriculum and Graduate Studies Committees.
- CS89198 Doctoral Seminar – developed content and description for this course as a part of the new graduate curriculum. This was done in conjunction with the Curriculum and Graduate Studies Committees.

**The University of Memphis
Course and Curriculum Development**

- Three new graduate courses in Software Engineering were developed and implemented over 1999-2001:
 - *COMP7/8085 Software Comprehension*. Description: Cognitive and mental models of how people learn to program and how people understand existing large software systems are covered. Software environments to assist software developers build, maintain, and evolve software systems are investigated. How visualization of software system aids in program comprehension is covered.
 - *COMP7/8081 Software Development Process Models*. Description: Development processes; maturity models; process improvement, metrics (process and product), estimation, management, maintenance; quality assurance; personal and team software process models, UML.
 - *COMP7/8083 Software Development Methodologies*. Description: Development methods for the support of process models; advanced object-oriented analysis and design methods; reuse, testing, adaptive software, software comprehension, understanding and environments.
- Developed and offered the following Special topics courses:
 - *COMP7/8992 Software Reuse*.
 - *COMP7/8998 Software Testing*.
 - *COMP7/8991 Psychology of Programming*
- New Curriculum Development
 - *Masters of Science in Electronic Commerce*. The University of Memphis. Member of the joint committee between College of Arts and Science and College of Business. Program accepted Fall 2000.
 - *Masters of Science in Software Development*. The University of Memphis. Development of initial proposal.

Departmental and University Service

Kent State University

2011/2012

- Curriculum Committee
- Faculty Advisory Committee
- Ph.D. Preliminary Examination Committee
- Graduate Faculty – Full, Level 4D

2010/2011

- Interim Chair (7/1/2010 – 11/15/2010)
- Curriculum Committee (Spring)
- Faculty Advisory Committee (Spring)
- Ph.D. Preliminary Examination Committee
- Graduate Faculty – Full, Level 4D

2009/2010

- University Advisory Committee for Academic Assessment (ACAA)
- Graduate Studies Committee
- Faculty Advisory Committee
- Ph.D. Preliminary Examination Committee
- Graduate Faculty – Full, Level 4D

2008/2009

- University Advisory Committee for Academic Assessment (ACAA)
- Kent State University Press Editorial Board
- OBR Budget Committee
- Faculty Advisory Committee
- Graduate Faculty – Full, Level 4D
- Professional Development Leave for Spring 09 but regularly served on all committees

2007/2008

- University Advisory Committee for Academic Assessment (ACAA)
- Kent State University Press Editorial Board (starting Spring 2008)
- University Research Incentive/Challenge Proposal Reviewer
- Faculty Advisor Ohio Graduate Student Symposium (OGSS) 2008
- Curriculum Committee
- Ph.D. Preliminary Examination Committee
- Faculty Advisory Committee
- Invited and arranged for Dr. Andrian Marcus (Wayne State University) to give a CS Colloquium
- Graduate Faculty – Full, Level 4D

2006/2007

- URC AY/S Proposal Review Panel
- Curriculum Committee
- Ph.D. Preliminary Examination Committee
- Faculty Advisory Committee
- Graduate Faculty – Full, Level 4D

2005/2006

- College of Arts and Sciences Curriculum Committee
- Chair of Curriculum Committee (*Computer Science Curriculum Coordinator*)
- Ph.D. Preliminary Examination Committee
- Faculty Search Committee
- Chair Search Committee

- Invited and arranged for Prof. Vaclav Rajlich (Wayne State University) to give a CS Colloquium
- Faculty Advisory Committee
- Graduate Faculty – Full, Level 4D

2004/2005

- College of Arts and Sciences Curriculum Committee
- URC AY/S Proposal Review Panel
- Chair of Curriculum Committee (*Computer Science Curriculum Coordinator*)
- Developed program assessment plans for B.S., M.S., M.A., and Ph.D. computer science programs
- Ph.D. Preliminary Examination Committee
- Student Computing Environment
- Faculty Advisory Committee
- Invited and arranged for Dr. Atanas Rountev (Ohio State University) to give a CS Colloquium
- Graduate Faculty – Full, Level 4D

2003/2004

- College of Arts and Sciences Curriculum Committee
- Chair of Curriculum Committee (*Computer Science Curriculum Coordinator*)
- Graduate Studies Committee
- Ph.D. Preliminary Examination Committee (Spring '04)
- Student Computing Environment
- Faculty Advisory Committee
- Graduate Faculty – Full, Level 4D

2002/2003

- Departmental Merit Committee
- Chair of the Joint GSC/CC Committee to Examine Graduate Curriculum. Made substantial contributions to the Department by organizing and leading the development of a completely new graduate curriculum. This includes new course requirements in the Master's and Doctoral programs, a new Doctoral preliminary examination, new Doctoral minor and major concentrations, and Master's/Doctoral Seminar course. Worked jointly with CC and GSC to develop the program catalog description, rationale for changing the program, and description of the new courses (Seminars).
- Graduate Studies Committee
- OBR Budget Committee
- Ph.D. Qualifying Exam Committee – Programming Languages (Fall '02, Spring '03)
- Faculty Advisory Committee
- Invited and arranged for Dr. Lee White (Case Western University) to give a CS Colloquium
- Invited and arranged for Dr. Kurt Stirewalt (Michigan State University) to give a CS Colloquium
- Graduate Faculty – Full, Level 4

2001/2002

- Curriculum Committee. An active participant and made substantial contributions to the Departments new undergraduate curriculum while serving on this committee. Much of these efforts are reflected in the upper division course organization, makeup of the Discrete Structures course, and makeup/definition of the new Capstone Project course.
- OBR Budget Committee
- Ph.D. Qualifying Exam Committee – Compilers (Fall '01)
- Faculty Advisory Committee
- Invited and arranged for Dr. Ethan Munson (The University of Wisconsin-Milwaukee) to give a CS Colloquium
- Graduate Faculty – Full, Level 4

The University of Memphis

2000/2001

- Technology Advisory Committee [Chair]
- Computer Science Ph.D. Qualifier Exam Committee [Chair]
- Faculty Advisor for Student ACM Chapter
- College of A&S Technology Advisory Committee
- College of A&S Computer Engineering/Computer Science Liaison Committee
- Graduate Faculty – Full

1999/2000

- Technology Advisory Committee [Chair]
- Computer Science Laboratory (CS1, CS2) [Chair] – oversaw multiple sections
- Computer Science Ph.D. Qualifier Exam Committee [Chair]
- Faculty Advisor for Student ACM Chapter
- College of A&S Technology Advisory Committee
- College of A&S Computer Engineering/Computer Science Liaison Committee
- College of A&S E-Commerce Degree Program Development Committee
- Graduate Faculty – Full

1998/1999

- Computer Science Ph.D. Qualifier Exam Committee [Chair] – developed new exam format and definition
- CS Graduate Assistantship Committee (Spring term) [Chair]
- Computer Science Laboratory (CS1, CS2) [Chair]– oversaw multiple sections
- Computer Systems Advisory Committee
- Library Committee
- College of A&S E-Commerce Degree Program Development Committee
- Graduate Faculty – Full

1997/1998

- Computer Science Laboratory (CS1, CS2) [Chair] – oversaw multiple sections
- Computer Systems Advisory Committee
- Library Committee
- College of A&S E-Commerce Degree Program Development Committee
- Graduate Faculty – Associate

Wayne State University

1996/1997

- Undergraduate Committee

As a Graduate Student

- Graduate Student Representative (elected), 9/90-8/91, 9/92-8/94
- Chair Search Committee Student Representative (elected), 9/90-8/91