

## Faculty and Faculty/Student Research Grants and Scholarly Activity

### 2008-09

- Ernst, Daniel J., with Daniel E. Stevenson and Paul J. Wagner. “Hybrid and Custom Data Structures: Evolution of the Data Structures Course. Published in the Proceedings of the 14<sup>th</sup> Annual Conference on Innovation and Technology in Computer Science Education (ITiCSE 2009); July 2009.
- Ernst, Daniel J. (moderator), with Barry Wittman, Brian Harvey, Tom Murphy, Michael Wrinn. “Preparing Students for Ubiquitous Parallelism” (panel). Proceedings of the 40<sup>th</sup> ACM Technical Symposium on Computer Science Education (SIGCSE), Chatanooga, TN, March 2009.
- Ernst, Daniel J., with Christine Hupy, Simei Tong and Brian Troy (undergraduate student.) “Effective and Usable Tools for Efficient Evacuation Planning”. UWEC Student Research Day – Poster Session 27-28 April 2009, Faculty/Student Collaborative Research Project.
- Morrison, Joline with C. Michael Morrison, Nick Heidke (undergraduate student). “Assessing the Effectiveness of the Model View Controller Architecture for Creating Web Applications”. Proceedings of the Midwest Instruction and Computing Symposium (MICS 2009, online), April 2009.
- Morrison, Joline with C. Michael Morrison, Brandon Holt (undergraduate student) and Luke Komiskey (undergraduate student). “A Peer Review System to Enhance Collaborative Learning”. Proceedings of the Midwest Instruction and Computing Symposium (MICS 2009, online), April 2009.
- Morrison, C. Michael., with Joline Morrison, Luke Komiskey (undergraduate student) and Brandon Holt (undergraduate student.) “A Peer Review System to Enhance Undergraduate Learning”. UWEC Student Research Day – Poster Session 27-28 April 2009, Faculty/Student Collaborative Research Project.
- Stevenson, Daniel E., with Alexander Cobian (undergraduate student.) “Designing a Horizontal Image Translation Algorithm for Dynamic Stereographic Virtual Worlds”. UWEC Student Research Day – Poster Session 27-28 April 2009, Faculty/Student Collaborative Research Project.
- Tan, Jack S. E., with Tanya Smeltzer (undergraduate student.) “Error Control in Dialog Systems”. UWEC Student Research Day – Poster Session 27-28 April 2009, Faculty/Student Collaborative Research Project.

- Wagner, Paul J. "MOBILE: A Portable Networked Workshop System." National Science Foundation; Course, Curriculum and Laboratory Improvement program Phase II grant. NSF #0817295, Extramural grant of \$404,305.
- Wagner, Paul J., with Hou Xiong (undergraduate student.) "Extension of a Query Execution Simulator to Support Multiple Database Management Systems". UWEC Student Research Day – Poster Session 27-28 April 2009, Faculty/Student Collaborative Research Project.
- Wick, Michael R. "Using Programming to Help Students Understand the Value of Diversity". 40<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Chattanooga, TN, March 2009. Ed. ACM. New York: ACM Press, 2007. 367-371.
- Wick, Michael R., with Carl Hoover (undergraduate student) and Heather Sommer (undergraduate student.) "The Automated Chinese-to-English Translation of Creative Writings". UWEC Student Research Day – Poster Session 27-28 April 2009, Faculty/Student Collaborative Research Project.

## **2007-08**

- Ernst, Daniel J., with Daniel E. Stevenson. "Concurrent CS: Preparing Students for a Multicore World". Published in the Proceedings of the 13<sup>th</sup> Annual Conference on Innovation and Technology in Computer Science Education (ITiCSE), Madrid, Spain. June 2008.
- Ernst, Daniel J., with Darren Kulp (undergraduate student.) "ISOMER – Enhancing Test Coverage Using Constrained Random Tests." Proceedings of the 41<sup>st</sup> Annual Midwest Instruction and Computing Symposium, La Crosse, WI, 11-12 April 2008.
- Ernst, Daniel J., with Darren Kulp (undergraduate student.) "ISOMER – Enhancing Test Coverage Using Constrained Random Tests." UWEC Student Research Day—Poster Session 28-29 April 2008, Faculty/Student Research Collaborative Project.
- Ernst, Daniel J., with Joe Myre (undergraduate student.) "Enhancing the Price/Performance for a Clustered Multiprocessor System." Proceedings of the 41<sup>st</sup> Annual Midwest Instruction and Computing Symposium, La Crosse, WI, 11-12 April 2008.
- Ernst, Daniel J., with Joe Myre (undergraduate student.) "Enhancing the Price/Performance for a Clustered Multiprocessor System." UWEC Student Research Day—Poster Session 28-29 April 2008, Faculty/Student Research Collaborative Project.

- Morrison, Joline P. "Using Clickers to Enhance Computer Science Classes." Proceedings of the 41<sup>st</sup> Annual Midwest Instruction and Computing Symposium, La Crosse, WI, 11-12 April 2008.
- Morrison, C. Michael, "Exploring the Web Programming Jungle." Proceedings of the 41<sup>st</sup> Annual Midwest Instruction and Computing Symposium, La Crosse, WI, 11-12 April 2008.
- Stevenson, Daniel E., with Alex Cobian (undergraduate student.) "Implementing Auto-Focus in a Stereographical Projection System." UWEC Student Research Day—Poster Session 28-29 April 2008, Faculty/Student Research Collaborative Project.
- Tan, Jack S. E., with Erin Johnson (undergraduate student). "ReHack: A Network Playback Tool." Faculty/Student Research Collaborative Project.
- Tan, Jack S. E., with John Koenig (undergraduate student). "SAI and NANN: A Hybrid Approach." Faculty/Student Research Collaborative Project.
- Wagner, Paul J., with Amruth Kumar, Patricia Joseph and Michael Goldweber. "Reviewing the SIGCSE Reviewing Process." Published in the ACM Special Interest Group in Computer Science Education (SIGCSE) Bulletin inroads. 40:2. June 2008. 84-89.
- Wagner, Paul J., with Joline Morrison, Brett Allenstein (undergraduate alumnus) and Andrew Yost (undergraduate student). "A Query Simulation System to Illustrate Database Query Execution." 39<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Portland, OR, March 2008. Ed. ACM. New York: ACM Press, 2008. 493-497.
- Wick, Michael R., with Simei Tong, M. Phillipson, Tanya Smeltzer (undergraduate student). "Optimal Evacuations in Emergency Situations." Poster Session, National Conference on Undergraduate Research (NCUR). Salisbury, MD, 2008.
- Wick, Michael R. "Faculty Engagement and its Impact on Student Learning." Proceedings of the 14<sup>th</sup> National Conference on Students in Transition. Cincinnati, OH. November 2007. 38.
- Wick, Michael R., with Andrew T. Phillips. "A Liberal Education Scorecard." Liberal Education, American Association of Colleges and Universities (AAC&U). 94:1. Winter 2008. 22-29.
- Wick, Michael R., with M. Bonstead-Bruns and Don Mowry. "Establishing Institutional Cultures of Evidence to Prove/Improve the First Year. Proceedings of the University of Wisconsin System Office of Professional and Instructional

Development (OPID). Spring conference, Madison, WI. 2007.

## 2006-07

- Ernst, Daniel J., with Aaron Styx and Bjorn Hanson, undergraduate students. "Using Graphical Toolsets for Enhanced Visual Learning in Computer Organization Courses." UWEC Student Research Day—Poster Session 23-24 April 2007, Faculty/Student Research Collaborative Project.
- Morrison, Charles M., with Matthew Giuliani, undergraduate student. "Creating a Secure Architecture for a Peer Review System." Proceedings of the 40<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Grand Forks, ND, 20-21 April 2007.
- Morrison, Charles M., with Matthew Giuliani, undergraduate student. "Creating a Secure Architecture for a Peer Review System." UWEC Student Research Day—Poster Session 23-24 April 2007, Faculty/Student Research Collaborative Project.
- Morrison, Joline P., with Charles M. Morrison. "Using SQL Queries to Generate XML-Formatted Data." Proceedings of the 40<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Grand Forks, ND, 20-21 April 2007.
- Stevenson, Daniel E., with Joshua Burton and John Finnestad, undergraduate students. "Portable Interactive Display." UWEC Student Research Day—Poster Session 23-24 April 2007, Faculty/Student Research Collaborative Project.
- Stevenson, Daniel E., with Alexander Cobian, undergraduate student. "Creating a Dynamic Stereographical Programming Demonstration." UWEC Student Research Day—Poster Session 23-24 April 2007, Faculty/Student Research Collaborative Project.
- Stevenson, Daniel E., with James Schwarzmeier, undergraduate alumnus. "Building an Autonomous Vehicle by Integrating Lego Mindstorms and a Web Cam." 38<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Covington, KY, March 2007. Ed. ACM. New York: ACM Press, 2007. 165-169.
- Tan, Jack S.E., with Joseph Myre, undergraduate student. "Investigating and Applying Distributed Systems." Proceedings of the 21<sup>th</sup> National Conference on Undergraduate Research, San Rafael, CA. Apr. 2007.
- Tan, Jack S.E., with Benjamin Smith, undergraduate student. "Parallel Distributed Processing with Neural Networks." Proceedings of the 21<sup>th</sup> National Conference on Undergraduate Research, San Rafael, CA. Apr. 2007.

- Tan, Jack S.E., with Stephen Smith, undergraduate student. "Compressing Music Files Using Linear Projection and Huffman Encoding." Proceedings of the 21<sup>th</sup> National Conference on Undergraduate Research, San Rafael, CA. Apr. 2007.
- Wagner, Paul J., with Andrew T. Phillips. "A Portable Computer Security Workshop." Journal of Educational Resources in Computing (JERIC), 6:4, December 2006, online.
- Wagner, Paul J., with Erin Johnson and John Koenig, undergraduate students. "Development and Implementation of a Honeynet on a University Owned Subnet." Proceedings of the 40<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Grand Forks, ND, 20-21 April 2007.
- Wagner, Paul J., with Andrew Yost, undergraduate student. "Developing a Dynamic Visualization of the Oracle Query Execution Process." Proceedings of the 21<sup>th</sup> National Conference on Undergraduate Research, San Rafael, CA. Apr. 2007.
- Wagner, Paul J., with Erin Johnson and John Koenig, undergraduate students. "Development and Implementation of a Honeynet on a University Owned Subnet." UWEC Student Research Day—Poster Session 23-24 April 2007, Faculty/Student Research Collaborative Project.
- Wagner, Paul J., with Kevin Spinar, undergraduate student. "Digitally Signed Transcripts." UWEC Student Research Day—Poster Session 23-24 April 2007, Faculty/Student Research Collaborative Project.
- Wagner, Paul J., with Andrew Yost, undergraduate student. "Developing a Dynamic Visualization of the Oracle Query Execution Process." UWEC Student Research Day—Poster Session 23-24 April 2007, Faculty/Student Research Collaborative Project.
- Wick, Michael R. "Bridging the Conceptual Gap: Assessing the Impact on Student Attitudes toward Programming." 38<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Covington, KY, March 2007. Ed. ACM. New York: ACM Press, 2007. 509-513.
- Wick, Michael R. (moderator), with R.B. Allen, David Klappholz, and C. Zander. "Panel on Programming-Lite: A Dialog on Educating Computer Science Practitioners in a Flat World". 38<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Covington, KY, March 2007. Ed. ACM. New York: ACM Press, 2007. 243-244.

**2005-06**

- Morrison, Charles M. “.NET Framework Support for XML in the Database Curriculum.” Proceedings of the 39<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Mt. Pleasant, IA, 7-8 April 2006.
- Morrison, Charles M., with Christopher Andringa and Josh Burton, undergraduate students. “Developing a Software Application for Peer Reviewing.” UWEC Student Research Day—Poster Session 1-2 May 2006, Faculty/Student Research Collaborative Project.
- Morrison, Joline P., with Yu Fan, undergraduate student. “Design Patterns for Database Application Interfaces.” Proceedings of the 39<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Mt. Pleasant, IA, 7-8 April 2006.
- Morrison, Joline P., with Yu Fan, undergraduate student. “Design Patterns for Database Applications.” UWEC Student Research Day—Poster Session 1-2 May 2006, Faculty/Student Research Collaborative Project.
- Stevenson, Daniel E. “PNG Palette Permuter”. Proceedings of the 11th Annual Conference on Innovation and Technology in Computer Science Education; June 2006. Ed. ACM. New York: ACM Press, 2006.
- Stevenson, Daniel E., with Wagner, Paul J. “Developing Real-World Programming Assignments for CS1”. Proceedings of the 11th Annual Conference on Innovation and Technology in Computer Science Education; June 2006. Ed. ACM. New York: ACM Press, 2006.
- Stevenson, Daniel E., with Elizabeth Adams (moderator), Douglas Baldwin, Judith Bishop, John English and Pamela Lawhead. “Panel on Approaches to Teaching the Programming Languages Course: A Potpourri”. Proceedings of the 11th Annual Conference on Innovation and Technology in Computer Science Education; June 2006. Ed. ACM. New York: ACM Press, 2006.
- Stevenson, Daniel E., with Lindsey Lepisko and Mark De Neve, undergraduate students. “Building a Portable Interactive Whiteboard.” UWEC Student Research Day—Poster Session 1-2 May 2006, Faculty/Student Research Collaborative Project.
- Tan, Jack S.E., with Michael LeMay, former student. “Acoustic Surveillance of Physically Unmodified PCs.” Proceedings of the 2006 International Conference on Security and Management, Las Vegas, NV. June 2006.
- Tan, Jack S.E., with Benjamin Smith, undergraduate student. “Efficient Adaptive Resource Management for Linux Systems.” Proceedings of the 39<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Mt. Pleasant, IA, 7-8 April

2006.

- Tan, Jack S.E., with Benjamin Smith, undergraduate student. "Efficient Adaptive Resource Management for Linux Systems." UWEC Student Research Day—Poster Session 1-2 May 2006, Faculty/Student Research Collaborative Project.
- Wagner, Paul J., with Tuan Nguyen, undergraduate student. "Modular Web Framework: Software Automation." Proceedings of the 39<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Mt. Pleasant, IA, 7-8 April 2006.
- Wagner, Paul J., with Matthew Giuliani and Eric Lobner, undergraduate students. "Investigating Database Security in a Networked Environment." Proceedings of the 39<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Mt. Pleasant, IA, 7-8 April 2006.
- Wagner, Paul J., with Matthew Giuliani and Eric Lobner, undergraduate students. "Investigating Database Security in a Networked Environment." UWEC Student Research Day—Poster Session 1-2 May 2006, Faculty/Student Research Collaborative Project.
- Wick, Michael R, with Daniel E. Stevenson. "On Using Scheme to Teach Prolog." 37<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Houston, TX, March 2006. Ed. ACM. New York: ACM Press, 2006. 41-45.
- Wick, Michael R, with Paul J. Wagner. "Using Market Basket Analysis to Integrate and Motivate Topics in Discrete Structures." 37<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Houston, TX, March 2006. Ed. ACM. New York: ACM Press, 2006. 323-327.
- Wick, Michael R, with Ursula Wolz (moderator), Tiffany Barnes, and Ian Parberry. "Panel on Digital Gaming as a Vehicle for Learning." 37<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Houston, TX, March 2006. Ed. ACM. New York: ACM Press, 2006. 394-395.
- Wick, Michael R., with Thomas Richmond and Julie Wielenga, undergraduate students. "Solving the Course Scheduling Problem with Genetic Algorithms." UWEC Student Research Day—Poster Session 1-2 May 2006, Faculty/Student Research Collaborative Project.

## **2004-05**

- Harrison, Susan M. "Opening the Eyes of Those Who Can See to the World of Those Who Can't: A Case Study." 36<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, St. Louis, MO, 24 February 2005. Ed. ACM. New

York: ACM Press, 2005. 22-26.

- Morrison, Charles M. "PRISM: A Peer Review Management Systems for Programming Assignments." *Issues in Information Systems*, V:1. Sept. 2004. 626-633.
- Morrison, Joline P. "Facilitating Collaborative Learning Within Programming Projects." *Issues in Information Systems*. V:1. Sept. 2004. 221-225.
- Morrison, Joline P, with M.E. Jennex, D. Croasdell, and L. Olfman. "Knowledge Management, Organizational Memory, and Organizational Learning." *International Journal of Knowledge Management (IJKM)*. 1:1. Jan. 2005. 1-7.
- Morrison, Joline P., with D. Becker, J. Connolly, and P. Lentz. "Your Cheatin' Heart Will Tell On You." *Proceedings of the Allied Academies International Conference, Academy of Legal, Ethical, and Regulatory Issues*, Memphis, TN. Apr. 13-16, 2005.
- Phillips, Andrew T, with Paul J. Wagner. "CLICS: A Computational Laboratory for Information and Computer Security." National Science Foundation; Course, Curriculum and Laboratory Improvement program. Supplemental award to NSF-0309818 for creation of computer security workshops for university instructors. \$31,000.
- Phillips, Andrew T., with Michael R. Wick. "A Dynamic Programming Approach to Generating a Binary Reflected Gray Code Sequence." *Proceedings of the 38th Annual Midwest Instruction and Computing Symposium*, Eau Claire, WI, 8-9 April 2005.
- Ratering, Steven J., with Russell Bayuk, undergraduate student. "A Comparison of Robot Navigation Algorithms for an Unknown Goal." *Proceedings of the 38th Annual Midwest Instruction and Computing Symposium*, Eau Claire, WI, 8-9 April 2005.
- Ratering, Steven J., with Russell Bayuk, undergraduate student. "Robot Navigation Algorithm Efficiency in an Unknown Environment to an Unknown Destination." *UWEC Student Research Day—Poster Session* 25-26 Apr. 2005, Faculty/Student Research Collaborative Project.
- Stevenson, Daniel E., with Michael R. Wick and Steven J. Ratering. "Steganography and Cartography: Interesting Assignments that Reinforce Machine Representation, Bit Manipulation, and Discrete Structures Concepts." *36th ACM SIGCSE Technical Symposium on Computer Science Education*, St. Louis, MO, 25 February 2005. Ed. ACM. New York: ACM Press, 2005. 277-281.

- Stevenson, Daniel E., with Lindsey Lepisko, undergraduate student. "An Eclipse Plug-in for Automating the Generation of Unit Tests." UWEC Student Research Day—Poster Session 25-26 Apr. 2005, Faculty/Student Research Collaborative Project.
- Stevenson, Daniel E., with Philip Ihinger (Geology) and Ryan Prechel, undergraduate student. "Web-based visual simulation of crystal growth and development of sector zoning in hydrothermal quartz." UWEC Student Research Day—Poster Session 25-26 Apr. 2005, Faculty/Student Research Collaborative Project.
- Tan, Jack S.E., with Michael LeMay, undergraduate student. "Secure Exploring and Advancing Side-Channel Cryptanalysis Techniques." Proceedings of the 19<sup>th</sup> National Conference on Undergraduate Research, Lexington, VA. Apr. 2005.
- Tan, Jack S.E., with Kinnell Tackett, undergraduate student. "Power-Efficient, Multi-Level, Ad Hoc Wireless Network Security and Routing." Proceedings of the 19<sup>th</sup> National Conference on Undergraduate Research, Lexington, VA. Apr. 2005.
- Tan, Jack S.E., with Michael LeMay, undergraduate student. "Side-Channel Attack and Defense Techniques for Acoustic Emissions from Computing Machinery." UWEC Student Research Day—Poster Session 25-26 Apr. 2005, Faculty/Student Research Collaborative Project.
- Tan, Jack S.E., with Michael LeMay, undergraduate student. "Secure Comprehensive Message Control and Assurance with the Secure Email Transport Protocol." IEEE Electro Information Technology Conference, Milwaukee, WI. Aug. 2004.
- Wagner, Paul J. "Teaching Data Modeling: Process and Patterns". Proceedings of the 10<sup>th</sup> Annual Conference on Innovation and Technology in Computer Science Education; June 2005. Ed. ACM. New York: ACM Press, 2005.
- Wagner, Paul J., with Brett Allenstein, undergraduate student. "A DBMS Engine Simulator to Assist in Classroom Understanding of Oracle Query Execution." Proceedings of the 38<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Eau Claire, WI, 8-9 April 2005.
- Wagner, Paul J., with Jason Vorpahl, undergraduate student. "An Object-Oriented Framework for Database Benchmarking Based on the Open Source Database Benchmark Project." Proceedings of the 38<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Eau Claire, WI, 8-9 April 2005.

- Wagner, Paul J., with Mark Kapke, undergraduate student. "Laying the Foundation for the Investigation of the Quality of service for Resource Management in Grid Computing." Proceedings of the 38<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Eau Claire, WI, 8-9 April 2005.
- Wagner, Paul J., with Jason Vorpahl, undergraduate student. "Expanding and Redesigning and Open Source Database Benchmark System." UWEC Student Research Day—Poster Session 25-26 Apr. 2005, Faculty/Student Research Collaborative Project.
- Wick, Michael R, with Daniel E. Stevenson and Paul J. Wagner. "Using Testing and JUnit Across the Curriculum." 36<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, St. Louis, MO, 25 February 2005. Ed. ACM. New York: ACM Press, 2005. 236-240.
- Wick, Michael R. "Teaching Design Patterns in CS1: a Closed Laboratory Sequence based on the Game of Life." 36<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, St. Louis, MO, 26 February 2005. Ed. ACM. New York: ACM Press, 2005. 487-491.
- Wick, Michael R. "Using the Game of Life to Introduce Design Patterns to Freshmen." 19<sup>th</sup> Annual ACM Conference on Object-Oriented Programming, Systems, Languages and Applications (OOPSLA), Vancouver, BC, Educators Symposium Presentation, 25 October 2004.
- Wick, Michael R., with Christopher Andringa, undergraduate student. "Developing a Program Visualization Tool using Aspect-Oriented Programming." UWEC Student Research Day—Poster Session 25-26 Apr. 2005, Faculty/Student Research Collaborative Project.

## 2003-04

- Phillips, Andrew T, with Paul J. Wagner. "CLICS: A Computational Laboratory for Information and Computer Security." National Science Foundation; Course, Curriculum and Laboratory Improvement program. NSF 0309818, Extramural grant. \$99,850.
- Phillips, Andrew T., with Alex Buerkle. "A Computational Science Case Study: Classification of Hybrids Using Genetic Markers and Maximum-Likelihood Estimates." SIGCSE Bulletin inroads 35:2 (2003): 94-98.
- Phillips, Andrew T. "Highlighting Programming Language Issues Using Mixed Language Programming in Maple and C." 35<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Norfolk, VA, 6 March. 2004. Ed. ACM. New York: ACM Press, 2004. 85-89.

- Phillips, Andrew T., with Justin Ehlert, undergraduate student. "A Performance Analysis of Coding Style Using the Verilog HDL." UWEC Student Research Day—Poster Session 26-27 Apr. 2004, Faculty/Student Research Collaborative Project.
- Phillips, Andrew T., with Justin Ehlert, undergraduate student. "An Analysis of Verilog Software Design Techniques on Hardware Implementations." Proceedings of the 37<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Morris, MN, 17 April 2004.
- Ratering, Steven J., with Michael R. Wick. "Using An Environmental Chain Model to Teach Inheritance in C#." Proceedings of the 37<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Morris, MN, 17 April 2004.
- Ratering, Steven J., with Chris Andringa, undergraduate student. "A Case Study in Refactoring." Proceedings of the 37<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Morris, MN, 17 April 2004.
- Stevenson, Daniel E., with Phillip Ihinger and Ryan Prechel, undergraduate student. "Visual Simulation of Quartz Crystal Growth." UWEC Student Research Day—Poster Session 26-27 Apr. 2004, Faculty/Student Research Collaborative Project.
- Stevenson, Daniel E., with Theresa Steffen, undergraduate student, and Cindy Smith, undergraduate student. "Analyzing the Lack of Diversity in Computer Science." UWEC Student Research Day—Poster Session 26-27 Apr. 2004, Faculty/Student Research Collaborative Project.
- Stevenson, Daniel E., with Heidi Tessmer, undergraduate student. "Preventing Detection of Steganographic Data in Image Files." UWEC Student Research Day—Poster Session 26-27 Apr. 2004, Faculty/Student Research Collaborative Project.
- Tan, Jack, with Michael LeMay, undergraduate student. "Secure Email Transport Protocol – Software Design and Implementation." UWEC Student Research Day—Poster Session 26-27 Apr. 2004, Faculty/Student Research Collaborative Project.
- Tan, Jack, with Michael LeMay, undergraduate student. "Abstracting Low-Level Network Programming with ACE, a Pattern-Oriented Network Programming Framework." Proc. International Conference on Software Engineering Research and Practice, Nevada, June 2004.
- Tan, Jack, with Michael LeMay, undergraduate student. "Pattern-Oriented Design

and Implementation of a High-Performance Secure Email Transport System.” Proc. 18<sup>th</sup> National Conference on Undergraduate Research, Indianapolis, IN, April 2004.

- Wagner, Paul J., with Jason M. Wudi. “Designing and Implementing a Cyberwar Laboratory Exercise for a Computer Security Course.” 35<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Norfolk, VA, 6 Mar. 2004. Ed. ACM. New York: ACM Press, 2004. 402-406.
- Wagner, Paul J., with Manuel Perez-Quinones (moderator), Claude Anderson, Doug Baldwin, James Caristi, and Steve Edwards. “Special Session on An Object-Oriented Three-Course Introductory Sequence.” 35<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Norfolk, VA, 6 Mar. 2003. Ed. ACM. New York: ACM Press, 2004. 499-500.
- Wagner, Paul J., with Justin Sabelko, undergraduate student. “Developing Open Source Software as a Significant Part of Faculty-Student Collaborative Research.” Proceedings of the 37<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Morris, MN, 17 April 2004.
- Wagner, Paul J., with Scott Lemke, undergraduate student. “Symposium Session on Challenges in Software Engineering: Developing Software in New and Complex Domains.” Proceedings of the 37<sup>th</sup> Annual Midwest Instruction and Computing Symposium, Morris, MN, 17 April 2004.
- Wagner, Paul J., with Dennis Guster, Pam Jensen, Victor Piotrowsky, Scott Simonsen, Kevin Streff and Tom Wiggen. “Panel on The Current Status of Information Security Curriculum in Minnesota, Wisconsin and South Dakota.” Symposium on Operating Systems and Network Security (OSSS 2004), St. Cloud, MN, 24 April 2004.
- Wick, Michael R., with Andrew T. Phillips and Daniel E. Stevenson. “Seven Design Rules for Teaching Students Sound Encapsulation and Abstraction of Object Properties and member Data.” 35<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Norfolk, VA, 6 March. 2004. Ed. ACM. New York: ACM Press, 2004. 100-104.
- Wick, Michael R., with Paul J. Wagner and Marcia Vaughn, undergraduate student. “Developing a Shared Suggestive Sell Knowledge Repository Using the Internet.” UWEC Student Research Day, Poster Session, 26-27 Apr. 2004, Faculty/Student Collaborative Research Project.
- Wick, Michael R., with Paul J. Wagner and Marcia Vaughn, undergraduate student. “Using Web Services to Support a Shared Knowledge Repository for Market Basket Analysis and Suggestive Sell Strategies.” Proceedings of the 37<sup>th</sup>

Annual Midwest Instruction and Computing Symposium, Morris, MN, 17 April 2004.

## 2002-03

- Moore, Thomas K., with Bret Lichtenwald and Justin Ehlert, undergraduate students. "Surveys OnLine (SOL) – an Online Survey Laboratory." UWEC Student Research Day, Poster Session, 28 Apr. 2003, Faculty/Student Collaborative Research Project.
- Phillips, Andrew T., with C. Alex Buerkle. "A Computational Science Case Study: Classification of Hybrids Using Genetic Markers and Maximum-Likelihood Estimates." *SIGCSE Bulletin* 34:2 (2003): 94-98.
- Phillips, Andrew T., with Daniel Stevenson and Michael Wick. "Implementing CC2001: A Breadth-First Introductory Course for a Just-in-Time Curriculum Design." 34<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Reno, NV, 21 Feb. 2003. Ed. ACM. New York: ACM Press, 2003. 238-242.
- Phillips, Andrew T., with Jack Tan. "Exploring Security Vulnerabilities by Exploiting Buffer Overflow using the MIPS ISA." 34<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Reno, NV, 21 Feb. 2003. Ed. ACM. New York: ACM Press, 2003. 172-176.
- Stevenson, Daniel, with Joe Meehean, undergraduate student. "Preventing Detection and Destruction of Steganographic Data in Image Files." UW-System Research Day, Poster Session, 29 Apr. 2003, Faculty/Student Collaborative Research Project.
- Stevenson, Daniel, with Andrew T. Phillips. "A Template Design for Properly Overriding the Operator== in C++." *Dr Dobbs Journal* #351 (2003): 44-48.
- Stevenson, Daniel, with Andrew T. Phillips. "Implementing Object Equivalence in Java Using the Template Method Design Pattern." 34<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Reno, NV, 21 Feb. 2003. Ed. ACM. New York: ACM Press, 2003. 278-282.
- Stevenson, Daniel, with Theresa Steffen and Cindy Johnson, undergraduate students. "Implementation Strategies for the Recruitment of Women into Computer Science." UWEC Student Research Day, Poster Session, 28 Apr. 2003, Karlgaard Grant Project.
- Stevenson, Daniel, with Ben Covi and Zach Pederson, undergraduate students. "Programming for the Emotion Engine." UWEC Student Research Day, Poster

Session, 28 Apr. 2003, Faculty/Student Collaborative Research Project.

- Tan, Jack, with Michael LeMay, undergraduate student. "A Secure Email Transport Protocol." UWEC Student Research Day, Poster Session, 28 Apr. 2003, Faculty/Student Collaborative Research Project.
- Tan, Jack, with Michael LeMay, undergraduate student. "On Complete Privacy and Security with the Secure Email Transport Protocol (SETP)." 17<sup>th</sup> National Conference on Undergraduate Research, Salt Lake City, UT, March 2003.
- Tan, Jack, with Eric Sorensen, undergraduate student. "Dynamic Real-Time Self-Routing Configuration for Bluetooth Networks." 17<sup>th</sup> National Conference on Undergraduate Research, Salt Lake City, UT, March 2003.
- Wagner, Paul, with Michael Wick and Nick Karpenske, undergraduate student. "JaRTS – a Java Run-Time Simulation System." UWEC Student Research Day, Poster Session, 28 Apr. 2003, Faculty/Student Collaborative Research Project.
- Wagner, Paul, with Justin Sabelko, undergraduate student. "Developing an Open Source Database Benchmark System." UWEC Student Research Day, Poster Session, 28 Apr. 2003, and UW-System Research Day, Poster Session, 29 Apr. 2003, Faculty/Student Collaborative Research Project.
- Wagner, Paul, with Thomas Moore. "Integrating XML into a Database Systems Course." 34<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Reno, NV, 20 Feb. 2003. Ed. ACM. New York: ACM Press, 2003. 26-30.
- Wagner, Paul, with Elizabeth Shoop, Macalester College, and John V. Carlis University of Minnesota. "Using Scientific Data to Teach a Database Systems Course." 34<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Reno, NV, 21 Feb. 2003. Ed. ACM. New York: ACM Press, 2003. 224-228.
- Wagner, Paul, with D. Paul Benjamin, Pace University, Charles Border, Rochester Institute of Technology, and Robert Montante, Bloomsburg University. "Panel on Undergraduate Cyber Security Course Projects." 34<sup>th</sup> ACM SIGCSE Technical Symposium on Computer Science Education, Reno, NV, 22 Feb. 2003. Ed. ACM. New York: ACM Press, 2003. 351-352.
- Wagner, Paul, with Keitha Murray (moderator), Jesse Heines, Michael Kolling, Thomas Moore, Nan Schaller, and John Trono. "Panel on Using Java Integrated Development Environments in Teaching: What Works and What Doesn't". Proceedings of the 8th Annual Conference on Innovation and Technology in Computer Science Education; June 2003. Ed. ACM. New York: ACM Press,

2003. 215-216.

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