

COMPUTER AND INFORMATION SCIENCES

Hossein Hakimzadeh, Chair

2006 marked the retirement of Dr. William J. Knight. During his 20 years of teaching at IU South Bend Dr. Knight was a central figure in the development of every aspect of the computer science department. Aside from his complete devotion to teaching, he skillfully led the department from 1993 to 1999 and laid the foundation for a quality computer science program. From 1999 to 2006 he served as the associate chair, helping develop and implement a number of major initiatives in the department. During Professor Knight's tenure at IU, the department grew from 5 to 10 faculty members, developed a new B.S. in Informatics and a joint M.S. program with the department of Mathematical Sciences. Dr. Knight was a mentor to hundreds of computer science students. His detailed and meticulous lecture notes in data structures and analysis of algorithms are widely used by both new and experienced faculty. The department will surely feel the void created by his retirement.

Pursuing our goal to refine and expand our graduate and undergraduate programs in computer science and informatics, the department was pleased to welcome Dr. Raman Adaikkalavan to our department. Dr. Adaikkalavan specializes in Computer Security and holds a doctorate in computer science and engineering from University of Texas at Arlington.

Our enrollment in computer science and informatics continued to be healthy. Enrollment was approximately 200 undergraduates in computer science and informatics and about 30 graduate students pursuing their MS degrees in Applied Mathematics and Computer Science.

In 2006, with the support of our college, the department was able to renovate and reequip two of its laboratories. To honor our emeritus faculty, these two labs were named the "John P. Russo" and the "William J. Knight" laboratories.

During 2006, our faculty remained active in their research, teaching and service to the university. The faculty published their research in more than 25 journal articles and conference proceedings. The faculty were also active in grantsmanship. Dr. Murli Nair received a NSF grant, Dr. Mike Scheessele received a Travel Grant, Dr. James Wolfer received a UCET/FACET Faculty Development Grant and an Assessment Grant, Dr. Knight received an assessment grant, Dr. Liqiang Zhang received a Faculty Research Grant, and Dr. Hakimzadeh received funding from a Lilly Foundation Grant and an Assessment Grant. The department also received a McGraw-Hill Equipment Grant.

Also in 2006, the department initiated its seven year self-study and review process. We obtained an assessment grant to invite a nationally recognized external reviewer to perform our 7 year review. We further chose to be reviewed under the stringent ABET accreditation criteria. We felt that augmenting the seven year external review process by inviting a nationally experienced reviewer would strengthen our department's posture toward ABET accreditation, define directions for future departmental goals, and identify the strengths and weaknesses of our current

assessment program against national norms. This, in turn, would help to ensure a first-class, systematic, and continuous process of improvement for our constituents.

The department continued to be active in its outreach mission. Examples of such activity include faculty and student volunteering efforts to provide expertise to our local and regional non-profit organizations; increased interaction with local and regional K-12 educational institutions; internships and professional practice; increased course offerings for non-majors and community members; increased departmental sponsorship of public presentations; development of stronger relationships with our alumni; and the creation of endowments and scholarships in computer science.

SCHOLARSHIP

Print or electronic *refereed* journal articles, book chapters, and creative works published

David R. Surma. The use of presentations and competition in an introductory computer graphics course. *The Journal of Computing Sciences in Colleges*, Vol. 22(1), pp. 7-14, 2006.

Liguo Yu. Indirectly predicting the maintenance effort of open-source software. *Journal of Software Maintenance and Evolution: Research and Practice*, Vol. 18(5), pp. 311-332, 2006.

Liguo Yu, Stephen R. Schach, Kai Chen, Jeff Offutt, and Gillian Heller. Maintainability of the kernels of open-source operating systems: A comparison of Linux with FreeBSD, NetBSD, and OpenBSD. *Journal of Systems and Software*, Vol. 79(6), pp. 807-815, 2006.

Liguo Yu. Operating system process management and the effect on maintenance: A comparison of Linux, FreeBSD, and Darwin. *INFOCOMP Journal of Computer Science*, Vol. 5(2), pp. 38-44, 2006.

Liqiang Zhang and Sherali Zeadally. Enabling end-to-end QoS over hybrid wired-wireless networks. *Wireless Personal Communications (WPC) Journal*, Vol. 38(2), pp. 167-185, 2006.

Papers appearing in *published* (print or online) Proceedings of professional conferences

Hossein Hakimzadeh and Lynn Williams. "IU-EVAL - An electronic course evaluation system." In *Proceedings of the ACM SIGUCCS Fall Conference*, Edmonton, Alberta, November 5-8, <http://www.siguccs.org/Conference/Fall2006/>

Ruth B. Schwartz, **Hossein Hakimzadeh**, and **James Wolfer.** "Meeting computing curriculum challenges: A profile of the Indiana University South Bend Informatics Program." In the *Proceedings of the 9th Annual IJME / INTERTECH Joint International Conference on Engineering and Technology: Research-Education-Entrepreneurship*, New York, October 19-21, Paper ENT107-089.

- Hossein Hakimzadeh**, Lynn Williams, B. Kress, J. Ostrom, C. Beelby, J. DeBoni, and T. Eash. "IU-EVAL - Implementing an open-source electronic course evaluation system." In *Proceedings of the IASTED International Conference of Web Technologies, Applications, and Services, (WTAS 2006)*, Calgary, Alberta Canada, July 17-19, <http://www.iasted.org/conferences/2006/calgary/wtas.htm>
- Michael R. Scheessele** and T. Schriefer. "Poker as a group project for artificial intelligence." In *Proceedings of the thirty-seventh SIGCSE technical symposium on Computer Science Education, Houston, TX*, Vol. 37, pp. 548-552.
- David R. Surma**. "Communication reduction techniques in multiple multicasts in 3D mesh and torus networks." In *Proceedings of the 18th International Association of Science and Technology for Development (IASTED) International Conference on Parallel and Distributed Computing and Systems*, pp. 466-471, November.
- Dana Vrajitoru**. "NPCs and chatterbots with personality and emotional response." In S. J. Louis and G. Kendall (Eds.), *Proceedings of the IEEE Symposium on Computational Intelligence and Games (CIG 2006)*, Reno/Lake Tahoe, May 22-24, pp. 142-147. URL: http://www.cs.iusb.edu/~danav/papers/dv_cig06.pdf
- Dana Vrajitoru** and B. El-Gamil. "Genetic algorithms for graph layouts with geometric constraints." In B. Kovalerchuck (Ed.), *Proceedings of the IASTED Conference on Computational Intelligence (CI'06)*, San Francisco, November 20-22, pp. 64-69. URL: <http://www.cs.iusb.edu/~danav/papers/dvci06.pdf>
- Susan L. Gordon and **James Wolfer**, "WIP: Exploring the feasibility of a robot-centric CPU simulator to control physical robots as an assembly language instructional aid." In the *Proceedings of the 9th Annual IJME / INTERTECH Joint International Conference on Engineering and Technology: Research-Education-Entrepreneurship*, October 19-21, New York, Paper ENT104-030.
- James Wolfer**, James Roberge, and Jeffery Soble, "Enhancing left-ventricular short-axis echocardiographic cineloops with a pulse-coupled neural network." In *Proceedings of Environment and Health World Congress*, July 16-19, pp. 4-8.
- James Wolfer** and James Roberge, "Road identification in Landsat thematic mapper imagery using pulse-coupled neural networks: An initial assessment." In *Proceedings of Environment and Health World Congress*, July 6-19, p. 9.
- James Wolfer**, "An inexpensive tactile infrastructure for robotics, graphics, and human interaction." In *Proceedings of World Congress on Computer Science, Engineering, and Technology Education*, March, pp. 51-54.
- James Wolfer** and Chad George, "Fuzzy logic control for robot maze traversal: An undergraduate case study." In *Proceedings of World Congress on Computer Science, Engineering, and Technology Education*, March, pp. 46-50.

Chad George and **James Wolfer**, “A swarm intelligence approach to counting stacked symmetric objects.” In *Proceedings of IASTED International Conference on Artificial Intelligence and Applications*, February, pp.125-130.

Liguo Yu and Srini Ramaswamy. “Software and biological evolvability: A comparison using key properties.” In *Proceedings of the 2nd International IEEE Workshop on Software Evolvability*. Philadelphia, PA. September, pp. 82-88.

Liguo Yu and Kai Chen. “An empirical study of the maintenance effort.” In *Proceedings of the 8th International Conference on Software Engineering and Knowledge Engineering*, San Francisco, CA. July, pp. 242-245.

Liguo Yu and Kai Chen. “Two perspectives on open-source software evolution: Maintenance and reuse.” First International Workshop on Evaluation and Evolution of Component Composition, In *Proceedings of the 8th International Conference on Software Engineering and Knowledge Engineering*, San Francisco, CA. July, pp. 737-742.

Liguo Yu, Robert P. Batzinger, and Srini Ramaswamy. “A comparison of the efficiencies of code inspections in software development and maintenance.” In *Proceedings of 2006 International Conference on Software Engineering Research and Practice*, Las Vegas, Nevada, June 26-29, pp. 460-465.

Khalid Rames Al-asmari and **Liguo Yu**, “Experiences in distributed software development with Wiki.” In *Proceedings of 2006 International Conference on Software Engineering Research and Practice*, Las Vegas, Nevada, June 26-29, pp.389-393.

Liguo Yu and Srini Ramaswamy, “Introduction to extended common coupling with an application study on Linux.” In *Proceedings of the 44th ACM Southeast Conference*, Melbourne, Florida, March, CD format.

Liqiang Zhang, Xiaobo Zhou, and Qiang Cheng. “Landscape-3D: A robust localization scheme for sensor networks over complex 3D terrains.” In *Proceedings of 31st IEEE Annual Conference on Local Computer Networks (LCN 2006)*, pp. 239-246, Tampa, FL, November.

Liqiang Zhang and Qiang Cheng. “Landscape(T): A robust and low-cost sensor positioning system using the dual of target tracking.” In *Poster Proceedings of IEEE/ACM International Conference on Distributed Computing in Sensor Systems (DCOSS'06)*, (no pagination), San Francisco, CA, June.

[Invited presentations made](#)

James Wolfer, James Roberge, and Jeffery Soble, “Enhancing left-ventricular short-axis echocardiographic cine-loops with a pulse-coupled neural network.” Plenary/keynote address at the Environment and Health World Congress, July 16-19.

Formal presentations at state, regional, national, and international professional meetings

Hossein Hakimzadeh. "IU-EVAL - An electronic course evaluation system." Presentation at the ACM SIGUCCS Fall Conference, Association of Computing Machinery, Special Interest Group, University and College Computing Services, Edmonton, Alberta November 5-8, <http://www.siguccs.org/Conference/Fall2006/>

Hossein Hakimzadeh and Lynn Williams. "Pros and cons of electronic course evaluations." Workshop presented at the 2006 Assessment Institute in Indianapolis, Sponsored by Indiana University-Purdue University Indianapolis, October 29-31, <http://www.planning.iupui.edu/conferences/national/nationalconf.html>

Hossein Hakimzadeh. "IU-EVAL - Implementing an open-source electronic course evaluation system." Presentation at the International Association of Science and Technology for Development (IASTED) International Conference of Web Technologies, Applications, and Services, (WTAS 2006), July 17-19, Calgary, Alberta Canada, <http://www.iasted.org/conferences/2006/calgary/wtas.htm>

Scheessele, M.R. "The two cultures: A zero-sum game?" Presentation at the *Oxford Round Table*, Oxford University, Oxford, England, July.

_____. Is perception of a degraded figure resistant to spatial context at short exposure? [Abstract]. *Journal of Vision*, 6(6), 762a, <http://journalofvision.org/6/6/762/>, doi:10.1167/6.6.762. (Abstract of a presentation at the Vision Sciences Society Annual Meeting, Sarasota FL, May)

Schwartz, R. B., **Hakimzadeh, Hossein**, and **James Wolfer.** "Meeting computing curriculum challenges: A profile of the Indiana University South Bend Informatics Program." Presentation at the 9th Annual IJME (International Journal of Modern Engineering) / INTERTECH (Joint International Conference on Engineering and Technology), New York, October 19-21.

David Surma. "The use of presentations and competition in an introductory computer graphics course." Presentation at the Consortium for Computing Sciences in Colleges (CCSC) Midwest Conference, DePauw University, Greencastle IN, September 29.

_____. "Communication reduction techniques in multiple multicasts for 3D mesh and torus networks." Presentation at the 18th International Association of Science and Technology for Development (IASTED) International Conference on Parallel and Distributed Computing and Systems, Dallas, TX, November 15.

Dana Vrajitoru. "NPCs and chatterbots with personality and emotional response." Presentation at the IEEE (Institute of Electrical and Electronics Engineers) Symposium on Computational Intelligence and Games (CIG 2006), Reno/Lake Tahoe, May 22-24.

_____. "Genetic algorithms for graph layouts with geometric constraints." Presentation at the 18th International Association of Science and Technology for Development (IASTED) Conference on Computational Intelligence (CI'06), San Francisco, November 20-22.

James Wolfer. "WIP: Exploring the feasibility of a robot-centric CPU simulator to control physical robots as an assembly language instructional aid." Presentation at the IJME-Intertech International Conference on Engineering & Technology: Research-Education-Entrepreneurship, Oct. 19-21.

_____. "Road identification in Landsat Thematic Mapper Imagery using pulse-coupled neural networks: An initial assessment." Presentation at the Environment and Health World Congress, July 6-19.

_____. "An inexpensive tactile infrastructure for robotics, graphics, and human interaction." Presentation at the World Congress on Computer Science, Engineering, and Technology Education, March

_____. "Fuzzy logic control for robot maze traversal: An undergraduate case study." Presentation at the World Congress on Computer Science, Engineering, and Technology Education, March

Liguo Yu and Kai Chen, "An empirical study of the maintenance effort." Presentation at the 8th International Conference on Software Engineering and Knowledge Engineering, San Francisco, CA, July 6.

Liguo Yu and Kai Chen, "Two perspectives on open-source software evolution: Maintenance and reuse." Presentation at the First International Workshop on Evaluation and Evolution of Component Composition, San Francisco, CA, July 7.

Liqiang Zhang, "Landscape-3D: A robust localization scheme for sensor networks over complex 3D terrains." Presentation at the 31st IEEE (Institute of Electrical and Electronics Engineers) Annual Conference on Local Computer Networks (LCN 2006), Tampa, FL, November.

_____. "Landscape(T): A robust and low-cost sensor positioning system using the dual of target tracking." Presentation at the IEEE/ACM (Institute of Electrical and Electronics Engineers/Association for Computer Machinery) International Conference on Distributed Computing in Sensor Systems (DCOSS'06), San Francisco, CA, June.

Formal sessions at state, regional, national, and international professional meetings with a chair role or organizing function

Hossein Hakimzadeh. Session Chair, International Association of Science and Technology for Development (IASTED) International Conference of Web Technologies, Applications, and Services, (WTAS 2006), July 17-20, Calgary, Alberta Canada,

David Surma. Conference Program Committee, International Federation for Information Processing (IFIP) 2006 International Conference on Embedded and Ubiquitous Computing (EUC), August 1-4, Seoul, Korea.

Dana Vrajitoru. Session chair, International Association of Science and Technology for Development (IASTED) International Conference on Computational Intelligence, session on “Genetic algorithms,” San Francisco, November 20-22.

Digital programs or development of applications and items for technology transfer (e.g., software development, web-based learning modules) designed

Hossein Hakimzadeh. IU_ALUMNI (An Electronic Alumni Survey System), supported by IU South Bend Assessment Grant; IU_RETAIN (An Electronic Retention System), supported by Lilly Foundation Grant; IU_EVAL (An Electronic Course Evaluation System), partially supported by Lilly Foundation Grant, and IU South Bend Assessment Grant.

Provisional or issued patents registered

James Wolfer. Structured Speech Recognition, with James Roberge and Jeffrey Soble, United States Patent 7,043,426, May 9.

Scholarly work not appearing elsewhere

Hossein Hakimzadeh. Poster display at the 2006 “Make IT Happen” event.

OTHER: GRANT ACTIVITIES

New external grants, contracts, and scholarly fellowships awarded

Hossein Hakimzadeh. Grant to improve support for the instructional mission of the department of Computer and Information Sciences, Irwin/McGraw Hill Publishing, (\$2,200)

Michael Scheessele. Exploration Traveling Fellowship Grant (Lilly-sponsored New Frontiers Program) (2,500) to participate in the Oxford Round Table at Oxford University in July.

Murlidharan Nair. Sequence and Structural Patterns in RNA. (Approximately \$200K). CoPI with Professor Michael Gribskov of Purdue University.

New internal grants, contracts, and scholarly fellowships awarded

Hossein Hakimzadeh. Lilly Foundation Grant, to direct the CIVECS internship program, Spring. (\$2,200 and \$7000+ in student funds); Lilly Foundation Grant, to direct the CIVECS internship program, Fall. (\$2,200); Lilly Foundation Grant, to direct the CIVECS internship program, Summer. (\$6,900).

William J. Knight. Assessment Grant, “Consultant to Facilitate ABET Accreditation” (\$1,900), joint with James Wolfer and Hossein Hakimzadeh.

Michael Scheessele. Fund Travel Grant (\$700.00) to participate in the Oxford Round Table at Oxford University in July.

James Wolfer. UCET/FACET Faculty Development Grant (\$500); Assessment Grant, “Consultant to Facilitate ABET Accreditation” (\$1,900).

Liqiang Zhang. Indiana University South Bend Faculty Research Grant (\$8,000).

New external and internal grants, contracts, and scholarly fellowship proposals submitted

Hossein Hakimzadeh. Studebaker Grant, Studebaker Kiosk project (\$27,000), Studebaker National Museum, Fall (under review).

Michael Scheessele. Computer Science Study Group; Defense Advanced Research Projects Agency (DARPA); (\$100K; under review).

Liguo Yu. A grant entitled “SCESM: A framework for measuring software component evolutionary stability” (\$287,175), submitted to National Science Foundation in October.

Continuing external and internal grants, contracts, and scholarly fellowships

Hossein Hakimzadeh. Assessment Grant entitled “Assessing ourselves: The Computer Science external program review,” Spring 2006. (Approximate value \$1,900) (Joint proposal with William Knight and **James Wolfer**); “Web based alumni survey system for departments and other academic units at IUSB” (Joint proposal with Ruth Schwartz), Assessment Grant (\$2,937).

David Surma. National Science Foundation grant (\$100,000) “RUI: Using communication reduction techniques to improve throughput in high-performance networks” (August 2003 - August 2007).

OTHER: HONORS AND AWARDS

Honors or Awards received

Raman Adaikkalavan. Listed in Marquis *Who’s Who in America*, 61st Edition, 2007.
<http://www.marquiswhoswho.com/products/WAprodinfo.asp>

Editorial positions

Liqiang Zhang. Selected as guest co-editor, *Computer Communications*, special issue on “Wireless Mesh Networks.”

Other Recognition

Michael Scheessele. Invited to participate in Oxford Round Table at Oxford University in Oxford England.

PROFESSIONAL ACTIVITIES

Other professional activities

James Wolfer. Presentation on “Travel Report,” at the University Center for Excellence in Teaching (UCET) 2006 Holiday Event Presentation, December 4.

SERVICE-Campus

Campus service activities

Hossein Hakimzadeh. Senate IT committee, Chair (Fall); CLAS Budget Committee; Helped UCET develop a survey using IU-EVAL; Campus Security Committee; Training session on the use of IU-EVAL (for departmental administrators and secretarial staff).

Michael Scheessele. CLAS Cognitive Science Committee; Graduate Liberal Studies Faculty Member (Fall); CLAS Curriculum Committee (Fall); Institutional Review Board (IRB) member.

David Surma. CLAS Promotion, Tenure and Reappointment Committee; Academic Senate Library Affairs Committee.

Dana Vrajitoru. Cognitive Science Committee; CLAS Graduate Liberal Studies Committee; IUSB SMART grant committee.

James Wolfer. Cognitive Science Committee.

SERVICE-University

University service activities (IU system)

Hossein Hakimzadeh. Participated as a Co-PI in IU’s Biocrossroad initiative; Member of the Informatics CORE group; Member of the university-wide informatics curriculum committee.

SERVICE-Community

Local community service activities

Hossein Hakimzadeh. Member of the Riley High School Technology and Engineering Magnet School Advisory Council.

David Surma. Psi Iota Xi Service Sorority: continued to serve as their volunteer “webmaster” and have worked to teach members to maintain their site; St. John’s Lutheran Church & School, La Porte, IN, served as system administrator for the network at the church and school.

Extension and outreach activities related to field of expertise (other than formal presentations)

Hossein Hakimzadeh. Co-taught (with Robert Batzinger) a 10 week course on “Object Oriented Programming and Problem Solving” to students at Riley High School, Spring.

SERVICE-National/International

National or international service activities (other than review activities)

Liqiang Zhang. Technical Program Committee member of The 2nd IFIP International Symposium on Network Centric Ubiquitous Systems, Seoul, Korea, August; Technical Program Committee member of the 2006 International Conference on Wireless Networks, Las Vegas, NV, June; Technical Program Committee member of the 2006 International Conference on Parallel and Distributed Techniques and Applications, Las Vegas, NV, June.

Active tenure cases serving as an external reviewer

James Wolfer. Reviewed tenure materials, Medical Engineering and Computing, Brigham Young University.

Professional publication manuscript review activities

Hossein Hakimzadeh. Reviewed 1 paper for the 15th International Conference on Software Engineering and Data Engineering (SEDE-2006), Los Angeles, California, July 6-8.

David Surma. Reviewed 3 manuscripts for the 2006 Consortium for Computing Sciences in Colleges, 22nd Annual Eastern Conference, University of Mary Washington, Fredericksburg, Virginia; reviewed 3 manuscripts for the International Federation for Information Processing (IFIP) 2006 International Conference on Embedded and Ubiquitous Computing (EUC).

James Wolfer. Reviewed 3 papers for the IASTED (International Association of Science and Technology for Development) Computer Graphics and Imaging Conference.

Liqiang Zhang. *Journal of Supercomputing* (1); *IEEE Transactions on Computer* (1); *The International Journal of Grid Computing* (1); Reviewed 1 chapter of *The Handbook of Computer Networks*, John Wiley & Sons; Reviewed 4 papers for the IEEE (Institute of Electrical and Electronics Engineers) International Conference on Communications; Reviewed 3 papers for the International Federation for Information Processing (IFIP) International Symposium on Network Centric Ubiquitous Systems.

ADVISING

New Student Orientation Advising Sessions (2006 dates were January 4, May 20, June 23, July 21, August 18, August 23, December 15)

Hossein Hakimzadeh. July 21, August 18 and August 23.

Liguo Yu. June 23.

MENTORING

Active thesis/dissertation committees where served as first reader or chair

Michael Scheessele. 2 Applied Mathematics and Computer Science Theses; 1 Master of Liberal Studies Thesis.

Dana Vrajitoru. 3 graduate theses. (AMCS)

Liguo Yu. 1 Master of Science Thesis. (AMCS)

Liqiang Zhang. 1 Applied Mathematics and Computer Science Thesis.

Active thesis/dissertation committees where served in a non-chair role

Dana Vrajitoru. 3 graduate theses. (AMCS)

James Wolfer. 1 Graduate thesis. (AMCS)

Undergraduate senior theses advised

Dana Vrajitoru. 1 Honors Thesis.

Undergraduate students formally engaged in research

Hossein Hakimzadeh. 3 students.

Graduate students formally engaged in research

Michael Scheessele. 1 student.

Clinical, practicum, internship or students in cooperative and service learning programs formally assigned and directed

Hossein Hakimzadeh. 7 intern students.

Mentored students who have co-authored a journal article or book chapter

Hossein Hakimzadeh. *Ben Kress, Josh Ostrom, Chris Beelby, Jason DeBoni, and Tim Eash* were co-authors in a paper titled “IU-EVAL - Implementing an Open-Source Electronic Course Evaluation System”, which was presented and published in the *Proceedings of The IASTED International Conference of Web Technologies, Applications, and Services*, (WTAS 2006), July 17-19, Calgary, Alberta Canada, <http://www.iasted.org/conferences/2006/calgary/wtas.htm>

Michael R. Scheessele and *Thomas Schriefer*. “Poker as a group project for artificial intelligence.” In *Proceedings of the thirty-seventh SIGCSE technical symposium on Computer Science Education, Houston, TX*, Vol. 37, pp. 548-552.

Dana Vrajitoru, *P. Konnanur* and *R. Mehler*. “Genetic algorithms for a single-track vehicle autonomous pilot”, accepted with modifications by the journal *Control and Intelligent Systems*.

Susan L. Gordon and **James Wolfer**, “WIP: Exploring the feasibility of a robot-centric CPU simulator to control physical robots as an assembly language instructional aid.” In the *Proceedings of the 9th Annual IJME / INTERTECH Joint International Conference on Engineering and Technology: Research-Education-Entrepreneurship*, October 19-21, New York, Paper ENT104-030.

James Wolfer and *Chad George*. “Fuzzy logic control for robot maze traversal: An undergraduate case study.” In *Proceedings of World Congress on Computer Science, Engineering, and Technology Education*, March, pp. 46-50.

Chad George and **James Wolfer**. “A swarm intelligence approach to counting stacked symmetric objects.” In *Proceedings of IASTED International Conference on Artificial Intelligence and Applications*, February, pp. 125-130.

Mentored students who have co-presented a paper at a professional meeting

Michael Scheessele and *Thomas Schriefer*. “Poker as a group project for artificial intelligence.” Presentation at the ACM 37th SIGCSE Technical Symposium on Computer Science Education, Houston, TX, March.

Dana Vrajitoru. *Dana Cremer* presented his project “Marbles and Mazes” at the IUSB “Make IT Happen” event.

Chad George and **James Wolfer**, “A Swarm Intelligence Approach to Counting Stacked Symmetric Objects.” Presented at the IASTED (International Association of Science and Technology for Development) International Conference on Artificial Intelligence and Applications, February.