

# **TERRENCE P. FRIES, Ph.D.**

Professor

Department of Mathematical and Computer Sciences

Indiana University of Pennsylvania

Indiana, PA 15705

(724) 357-4492

tfries@iup.edu

## **Educational Background**

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Ph. D., University of Louisville, December 1998

Major: Computer Science and Engineering

M. S., Oakland University, Rochester, MI, April 1993

Major: Computer Science and Engineering

M. A., SS. Cyril & Methodius Seminary, Orchard Lake, MI, December 1991

Major: Religious Education

B. A., Madonna University, Livonia, MI, December 1988

Major: Religious Studies

B. S. (Honors), Oakland University, Rochester, MI, 1976

Major: Engineering with concentrations in Computer and Information Sciences and in Electronics (equivalent to Electrical Engineering).

## **Awards**

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- Best Paper of Session, 10th International Conference on Cybernetics and Information Technologies, Systems and Applications, Orlando, FL, July 2013.
- Best Paper of Session, Second International Symposium on Integrating Research, Education, and Problem Solving, Orlando, FL, July 2012.
- Best Paper of Session, 2011 Conference on Systematics, Cybernetics and Informatics, Orlando, FL, July 2011.
- Certificate of Merit in Recognition of Achievements in Scholarship during 2010, awarded by the Trustees and president of Indiana University of Pennsylvania, March 3, 2011.

## Teaching Experience

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**Indiana University of Pennsylvania, Indiana, PA**

August 2009 – Present

***Professor***

August 2014 – Present

***Associate Professor***

August 2009 – August 2014

Teach undergraduate courses in Data Structures, Compiler Construction, Theory of Computation, Java Programming, and Computer Literacy.

Research: Conduct research in artificial intelligence and robotics.

Committees:

- University Senate, Fall 2010 – present
- University Senate Rules Committee, Fall 2011 – present
- APSCUF Representative, Fall 2011 – present
- NS&M College Curriculum Committee, Fall 2010 – present
- College of Natural Science & Mathematics Assessment Committee, Fall 2009 – Spring 2010
- Computer Science Department Curriculum Committee, chair Fall 2010 – present
- Computer Science Department Curriculum Committee, member Fall 2009 – Spring 2010
- Computer Science Department ABET Accreditation Coordinator, Fall 2009 – present
- Computer Science Department Corporate Advisory Board Committee, Fall 2011 – present
- Computer Science Department Meeting Secretary, Fall 2010 – 2012
- Computer Science Department Recruitment & Retention Committee, Fall 2009 – Spring 2010

Other service:

- Editor of ABET Self-Study

**Coastal Carolina University, Conway, SC**

August 1999 – May 2009

***Associate Professor***

May 2003 – May 2009

***Assistant Professor***

August 1999 – May 2003

Teach undergraduate courses in Artificial Intelligence, Robotics, Software Engineering I & II, Java and C++ Programming (CS1/CS2), Data Structures (CS7), Computer Graphics, Theory of Computation, Organization of Programming Languages, Networking, Compiler Design, Computer Organization, Computer Architecture, Microcomputer Applications.

Conduct research in artificial intelligence and robotics. I have involved undergraduates in my research in the areas of fuzzy logic, evolutionary computation, mobile robot navigation, and intelligent agent systems.

Committees: Faculty Senate, Faculty Welfare and Development, Curriculum Committee of the College of Natural and Applied Sciences, NCAA Self-Study Fiscal Integrity Subcommittee, Buildings and Grounds, Distance Learning Task Force, Distance Learning Implementation Committee, ABET Accreditation Committee, several faculty search committees, many department level committees.

**Sullivan University**, Louisville, KY

June 1996 – June 1999

***Instructor***

Taught undergraduate courses in Visual Basic (Introductory and Advanced), Visual C++ (Introductory and Advanced), Networking (including Internet and HTML), Microcomputer Applications using Microsoft Office, and Basic Mathematics. Taught graduate courses in Management Information Systems and Quantitative Methods for MBA program. Other duties include advising students, member of Technology, SACS (accreditation), and Curriculum committees.

**Jefferson Community College**, Louisville, KY

August 1993 – June 1996

***Instructor***

Taught undergraduate courses in C++/Object-Oriented programming, Windows programming, Operating Systems (DOS, Windows, UNIX), Networking, Program Logic and Design, Systems Analysis and Design, and 3 levels (introductory, intermediate, and advanced) of Microcomputer Applications using Microsoft Office and Borland products. Other duties include advising students, assist with registration, member of Computer, Communication & Technology and Learning Resource Center committees, community service, and community education.

## **Part-Time Teaching Experience**

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**Bellarmino College**, Louisville, KY

January 1996 – June 1999

***Adjunct Instructor***

Taught undergraduate courses in C++ and microcomputer applications.

**Detroit College of Business**, Warren, MI

April 1989 – May 1993

***Adjunct Instructor***

Taught undergraduate courses in computer programming languages (including C, BASIC, and COBOL), Systems Analysis and Design, Microcomputer Applications (WordPerfect, Lotus 1-2-3, dBASE), Operating Systems, Computer Architecture, Networking, and Management Information Systems.

**Schoolcraft College, Livonia, MI**

September 1991 – May 1993

***Adjunct Instructor***

Taught undergraduate courses in computer programming languages and microcomputer applications (WordPerfect, Quattro Pro, Paradox) on IBM PC and Macintosh platforms.

**O/E Learning, Inc., Troy, MI**

January 1990 – August 1991

***Part-time Training Specialist***

Taught classes in microcomputer applications and microcomputer assembly and upgrading for Ford Motor Company employees.

**Oakland University, Rochester, MI**

September 1975 – April 1976

***Teaching Assistant***

Teach undergraduate courses in FORTRAN and BASIC computer programming. Tutoring students.

## **Industrial Experience**

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**Fries & Associates, Novi, MI**

August 1987 – June 1993

***Independent Consultant***

Developed microcomputer-based systems for small and medium sized businesses. Applications were implemented with IBM PCs and compatibles using a variety of packaged and custom designed software using dBase IV, C/C++, and assembly language. Applications were developed for MS-DOS and Windows environments. Performed hardware and software upgrades on personal computers. Also instructed training seminars and evaluated vendor proposals.

**Electronic Data Systems, Milford, MI**

April 1985 – June 1987

***Systems Engineer***

After General Motors purchased Electronic Data Systems, General Motors employees involved with computer systems were transferred to the new EDS subsidiary. At EDS, I held several positions. In customer support for the Buick-Oldsmobile-Cadillac Division, I designed and implemented user-specified applications on microcomputers. I also evaluated user needs and made recommendations for hardware and software. In addition, I wrote design specifications for use by Programming Staff personnel. I provided training of personnel who used the newly implemented applications. In a position with the Durability Test and Development Division, I designed and implemented interactive engineering test tracking applications on an IBM mainframe.

**General Motors Corporation, Milford, MI**

May 1979 – April 1985

***Project Engineer***

I performed all of the job functions described above while with Electronic Data Systems. In addition to these, I also coordinated the design and implementation of Vehicle Emission Test systems using FORTRAN and assembly language on Hewlett Packard minicomputers. I was also responsible for coordinating the maintenance and enhancement of emission test systems at General Motors plants throughout the United States for California emission audits and verifying that these systems met current requirements of the Environmental Protection Agency.

**Detroit Edison Company, Detroit, MI**

June 1976 – May 1979

***Associate Engineering Analyst***

I was responsible for designing and testing supervisory control and data acquisition software used on minicomputers. The software was written in FORTRAN and assembly language. The systems monitored and controlled the transmission and distribution of electrical power in southeastern Michigan. I also wrote specifications and selected software and hardware for minicomputer systems as required by engineering departments, and implemented FORTRAN and PL/I software on IBM mainframes.

## **Professional Affiliations**

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Senior Member, Institute of Electrical and Electronics Engineers (IEEE)

- member of the Computer Society
- member of the Robotics and Automation Society
- member of the Systems, Man, and Cybernetics Society

Senior Member, Association for Computing Machinery (ACM)

- member of the Artificial Intelligence Special Interest Group (SIGART)
- member of the Genetic and Evolutionary Computation Special Interest Group (SIGEVO)
- member of the Computer Science Education Special Interest Group (SIGCSE)

Life Member, Tau Beta Pi – International Engineering Honors Society

Member, Upsilon Pi Epsilon – International Honors Society for the Computing Sciences

## Publications

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### Invited Conference Papers

- Terrence P. Fries and James H. Graham, “Fusion of Soft and Hard Computing for Fault Diagnosis in Manufacturing Systems,” *IEEE Conference on Systems, Man, and Cybernetics*, Washington, D.C., October 2003.

*Invited track on Fusion of Hard and Soft Computing*

- Terrence P. Fries, “Consensus Development in Fuzzy Intelligent Agents for Decision Making,” *Second International Conference on Advances in Infrastructure for Electronic Business, Science, and Education on the Internet*, L’Aquila, Italy, August 2001.

### Book Chapters

- Terrence P. Fries, “Reengineering Structured Legacy System Documentation to UML Object-Oriented Artifacts.” In: Raul Valverde and Malleswara Talla (Eds.), *Information systems reengineering for modern business systems: ERP, SCM, CRM and E-Commerce Management Solutions*, IGI Publishing, Hershey, PA, 2012, pp. 30-53.
- Terrence P. Fries, “Evolutionary Terrain-Based Navigation of Autonomous Mobile Robots.” In: Dikai Liu, Lingfeng Wang, and Kay Chen Tan (Eds.), *Design and Control of Intelligent Robotic Systems*, Springer-Verlag, Berlin, 2008, pp. 209-226.
- Terrence P. Fries, “Evolutionary Path Planning for Robot Navigation Under Varying Terrain Conditions.” In: Hongwei Mo (Ed.), *Artificial Immune Systems and Natural Computing: Applying Complex Adaptive Technologies*, IGI Publishing, Hershey, PA, 2008, pp. 361-382.
- Terrence P. Fries, “Evolutionary Navigation of Autonomous Robots Under Varying Terrain Conditions.” In: Nadia Nedjah, Leandro dos Santos Coelho, and Luiza de Macedo Mourelle (Eds.), *Mobile Robots: The Evolutionary Approach*, Springer-Verlag, Berlin, 2007, pp. 47-62.
- Terrence P. Fries and James H. Graham, “An Agent-Based Approach to Robust Switching Between Abstraction Levels for Fault Diagnosis in Manufacturing Systems.” In: Berthe Choueiry and Toby Walsh (Eds.), *Abstraction, Reformulation, and Approximation: Lecture Notes in Computer Science*, Springer-Verlag, Berlin, 2000.

## Journal Papers

- Muhammad Younas, Dayang N. A. Jawawi, Imran Ghani, Terrence Fries, Rafaqat Kazmi. "Agile development in the cloud computing environment: A systematic review," *Information and Software Technology*, Volume 103, November 2018, pp. 142-158.
- Terrence P. Fries, "Conflict Resolution and Consensus Development among Inherently Contradictory Agents Using Fuzzy Linguistic Variables," *Journal of Systemics, Cybernetics and Informatics*, Volume 12, Number 2, 2014, pp. 41-48.
- Joseph Gibson, Thomas Taylor, Zachary Seymour, David T. Smith, Terrence P. Fries, "Educational Aspects of Undergraduate Research on Smartphone Application Development," *Journal of Systemics, Cybernetics and Informatics*, Volume 11, Number 8, 2013, pp. 7-13.
- Terrence P. Fries, "Navigation of Autonomous Robots Using a Genetic-Fuzzy Approach," *WSEAS Transactions on Systems*, Volume 5, Issue 2, November 2005, pp. 353-359.
- Terrence P. Fries, "A Multiple Agent Framework Utilizing Fuzzy Reasoning for Fault Diagnosis in Manufacturing Systems," *WSEAS Transactions on Systems*, Volume 3, Issue 3, May 2004, pp. 1054-1059.

## Conference Papers

- Terrence P. Fries, "Autonomous Robot Navigation in Diverse Terrain Using a Fuzzy Evolutionary Technique," 44th Annual Conference of the IEEE Industrial Electronics Society (IECON), Washington D.C, October 2018.
- Terrence P. Fries, "A Fuzzy Framework for System Diagnosis," 2018 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications (CIVEMSA), Ottawa, Ontario, Canada, June 2018.
- Terrence P. Fries, "Classification of Network Traffic Using Fuzzy Clustering for Network Security," Industrial Conference on Data Mining, New York, NY, July 2017.
- Terrence P. Fries, "Fuzzy Clustering of Network Traffic Features for Security," 5<sup>th</sup> IEEE Symposium on Large Data Analysis and Visualization, Chicago, IL, October 2015.
- Terrence P. Fries, "A Computationally Efficient Approach to Ranking Fuzzy Numbers," IEEE 2014 Conference on Norbert Wiener in the 21<sup>st</sup> Century, Waltham, MA, June 2014.
- Terrence P. Fries, "Automation of Rapid Fault Diagnosis in Manufacturing Systems Using Multiple Fuzzy Agents," 9th IEEE International Conference on Automation Science and Engineering, Madison, WI, August 2013.
- Terrence P. Fries, "Fuzzy Evolutionary Classification of TCP Packets for Network Intrusion Detection," Industrial Conference on Data Mining, New York, NY, July 2013.

- Terrence P. Fries, “Conflict Resolution and Consensus Development Among Inherently Contradictory Agents Using Fuzzy Linguistic Variables,” 10th International Conference on Cybernetics and Information Technologies, Systems and Applications, Orlando, FL, July 2013.

*Session’s Best Paper Award*

- Joseph Gibson, Thomas Taylor, Zachary Seymour, David T. Smith, Terrence P. Fries, “Educational Aspects of Undergraduate Research on Smart Phone Application Development,” Second International Symposium on Integrating Research, Education, and Problem Solving, Orlando, FL, July 2012.

*Session’s Best Paper Award*

- Terrence P. Fries, “Autonomous Robot Navigation in Varying Terrain Using a Genetic Algorithm,” Second IASTED International Conference on Robotics, Pittsburgh, PA, November 2011.
- Terrence P. Fries, “Network Intrusion Detection Using an Evolutionary Fuzzy Rule-Based System,” Conference on Systematics, Cybernetics and Informatics, Orlando, FL, July 2011.

*Session’s Best Paper Award*

- Terrence P. Fries, “Evolutionary Optimization of a Fuzzy Rule-Based Network Intrusion Detection Systems,” North American Fuzzy Information Processing Society Annual Conference, Toronto, Canada, July 2010.
- Terrence P. Fries, “A Fuzzy-Genetic Approach to Network Intrusion Detection,” Genetic and Evolutionary Computation Conference (GECCO-2008), Atlanta, GA, July 2008.
- Terrence P. Fries, “Current Research on the Use of Genetic Algorithms in Intrusion Detection Systems,” 2008 Computer Security Conference, Myrtle Beach, SC, April 2008.
- Terrence P. Fries, “Multi-Agent Fault Diagnosis in Manufacturing Systems Using Soft Computing,” 2007 IEEE International Conference Integration of Knowledge Intensive Multi-Agent Systems, Waltham, MA, April 2007.
- Terrence P. Fries, “A Framework for Transforming Structured Analysis and Design Artifacts to UML,” 24th ACM International Conference on the Design of Communication (SIGDOC 2006), Conway, SC, October 2006.
- Terrence P. Fries, “Autonomous Robot Motion Planning in Diverse Terrain Using Soft Computing,” 2006 IEEE SMC Workshop on Adaptive and Learning Systems, Logan, UT, July 2006.
- Terrence P. Fries, “Evolutionary Robot Navigation Using Fuzzy Terrain Conditions,” 2006 Conference of the North American Fuzzy Information Processing Society, Montreal, Canada, June 2006.



- Terrence P. Fries, "A Fuzzy Agent Approach to Fault Diagnosis in Manufacturing Systems," 2006 Conference of the North American Fuzzy Information Processing Society, Montreal, Canada, June 2006.
- Terrence P. Fries, "Navigation of Autonomous Robots Using Genetic Algorithms," 4<sup>th</sup> WSEAS International Conference on Computational Intelligence, Man-Machine Systems and Cybernetics, Miami, FL, November 2005.
- Terrence P. Fries, "Autonomous Robot Motion Planning in Diverse Terrain Using Genetic Algorithms," Genetic and Evolutionary Computation Conference (GECCO-2005), Washington, D.C., June 2005.
- Terrence P. Fries, "Fuzzy Genetic Motion Planning Under Diverse Terrain Conditions For Autonomous Robots," IASTED International Conference on Circuits, Signals, and Systems, Clearwater Beach, Florida, November 2004.
- Terrence P. Fries, "Fuzzy Genetic Motion Planning for an Autonomous Mobile Robot," 8th World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, Florida, July 2004.
- Terrence P. Fries, "A Multiple Agent Framework Utilizing Fuzzy Reasoning for Fault Diagnosis in Manufacturing Systems," 4th WSEAS International Conference on Soft Computing, Optimization, Simulation and Manufacturing, Miami, Florida, April 2004.
- Terrence P. Fries, "Conflict Resolution Among Inherently Contradictory Agents Using Fuzzy Linguistic Variables," Seventh WSEAS International Conference on Systems, Corfu, Greece, July 2003.
- Terrence P. Fries and James H. Graham, "A Fuzzy Intelligent Agent Approach to Fault Diagnosis," IASTED International Conference on Intelligent Systems and Control, Salzburg, Austria, June 2003.
- Terrence P. Fries, "Emulation of Switching Between Human Diagnostic Reasoning Modes," Sixth International Conference on Cognitive and Neural Systems, Boston, MA, May 2002.
- Chika Ekeji and Terrence Fries, "Evaluation of Fuzzy Set Ranking Methods for Decision Making in Intelligent Systems," 2002 National Council on Undergraduate Research Conference, Whitewater, WI, April 2002.
- Terrence P. Fries, "Fault Diagnosis in Manufacturing Systems Using Multiple Intelligent Agents," Third International World Manufacturing Congress, Rochester, NY, April 2002.
- Terrence P. Fries, "Resolution of Obstacle Distance Inconsistencies in Mobile Robotics using Fuzzy Linguistic Variables," 2001 International Conference on Artificial Intelligence, Las Vegas, NV, June 2001.
- Terrence P. Fries and James H. Graham, "A Multi-Agent Architecture for Fault Diagnosis in Manufacturing Systems," 2001 International Conference on Artificial Intelligence 2001, Las Vegas, NV, June 2001.

- Terrence P. Fries and James H. Graham, “An Agent-Based Approach to Robust Switching Between Abstraction Levels for Fault Diagnosis in Manufacturing Systems”, Symposium on Abstraction, Reformulation, and Approximation, Horseshoe Bay, TX, July 2000.
- Terrence P. Fries, “Accommodation of Fuzzy Outliers in a Multi-agent System”, 9th International Conference on Intelligent Systems, Louisville, KY, June 2000.
- Terrence P. Fries and James H. Graham, “Fuzzy Aggregation and Ranking in a Multiple-Agent System,” 8th International Conference on Intelligent Systems, Denver, Colorado, June 1999.
- James H. Graham and Terrence P. Fries, “Hybrid, Agent-Based Fault Diagnosis for Computer Integrated Manufacturing,” 2nd International Conference on Engineering Design and Automation, Maui, Hawaii, August 1998.
- Terrence P. Fries and James H. Graham, “An Agent-Based Approach for Fault Diagnosis in Manufacturing Applications,” Proceedings of the 10th International Conference on Computer Applications in Industry and Engineering, San Antonio, Texas, December 1997.

## **Invited Panel Discussion**

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- “Computer Based Intelligence: Where Is It Going?” 2006 IEEE SMC Workshop on Adaptive and Learning Systems, Logan, UT, July 2006.

## **Professional Activities**

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### Workshop Publicity Chair

- 2007 IEEE SMC Workshop on Soft Computing in Industrial Applications, Passau, Germany

### Program Committee member

- 2019 23<sup>rd</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2018 22<sup>nd</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2017 21<sup>st</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2016 20<sup>th</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2015 19<sup>th</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2014 18<sup>th</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2013 17<sup>th</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL

- 2012 16<sup>th</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2011 15<sup>th</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2010 ACM Genetic and Evolutionary Computation Conference (GECCO), Portland, OR
- 2009 ACM Genetic and Evolutionary Computation Conference (GECCO), Montreal, Canada
- 2009 Computer Security Conference, Myrtle Beach, SC
- 2008 IEEE SMC Workshop on Soft Computing Industrial Applications, Muroran, Japan
- 2007 IEEE SMC Workshop on Soft Computing Industrial Applications, Passau, Germany
- 2006 IEEE SMC Workshop on Adaptive and Learning Systems, Logan, UT

#### Reviewer Panel member

- *IEEE Transactions on Systems, Man, and Cybernetics: Part C*

#### Conference Reviewer

- 2013 17<sup>th</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2012 16<sup>th</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2011 15<sup>th</sup> World Multi-Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2010 ACM Genetic and Evolutionary Computation Conference, Portland, OR
- 2009 ACM Genetic and Evolutionary Computation Conference, Montreal, Canada
- 2008 IEEE Workshop on Soft Computing Industrial Applications, Muroran, Japan
- 2007 IEEE Workshop on Soft Computing Industrial Applications, Passau, Germany
- 2006 IEEE SMC Workshop on Adaptive and Learning Systems, Logan, UT
- 2003 IASTED International Conference on Intelligent Systems and Control
- 2005 Southeastern Small College Computing Conference
- 2004 Southeastern Small College Computing Conference
- 2003 Southeastern Small College Computing Conference

#### Book Chapter Reviewer

- *Information systems reengineering for modern business systems: ERP, SCM, CRM and E-Commerce Management Solutions*, IGI Publishing
- *Artificial Immune Systems and Natural Computing*, Springer-Verlag
- *Mobile Robots: The Evolutionary Approach*, Springer-Verlag

#### Text Book Reviewer

- *AI in the New Millennium*, by Danny Kopec & Stephen Lucci, Thompson Publishing
- *Data Structures in Java, Second Edition*, by Adam Drozdek, Thompson Publishing
- *A Comprehensive Introduction to Object-Oriented Programming with Java*, by Thomas Wu, McGraw-Hill Publishing

#### Journal Reviewer

- *IEEE Transactions on Neural Networks*
- *IEEE Transactions on Industrial Electronics*

- *International Journal of Electronic Business*
- Elsevier Journals

#### Conference Session Chair

- 9th IEEE International Conference on Automation Science and Engineering, Madison, WI, August 2013
- 2013 Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2011 Conference on Systematics, Cybernetics and Informatics, Orlando, FL
- 2010 North American Fuzzy Information Processing Society Annual Conference, Toronto, Canada
- 2004 International Conference on Circuits, Signals, and Systems, Clearwater Beach
- 8<sup>th</sup> World Multi-Conference on Systematics, Cybernetics & Informatics, Orlando, FL
- Third International World Manufacturing Congress, Rochester, NY
- Ninth International Conference on Intelligent Systems, Louisville, KY

Head Judge, FIRST® LEGO® League Tournament, South/Central PA Championship, Johnstown, PA, February 2014

Judge, FIRST® LEGO® League Tournament, South/Central PA Championship, St. Francis University, Loretto, PA, December 2012

#### Community Service

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- Den Leader, Webeloes 2, Cub Scouts Pack 29, Indiana, PA, 2011-2012
- Coach, youth soccer team, Western PA Soccer Boosters, 2009
- Coach, youth coach pitch baseball team, Horry County Parks and Recreation, 2009
- Coach, youth basketball team, Horry County Parks and Recreation, 2008-2009
- Coach, youth soccer team, Horry County Parks and Recreation, 2008
- Assistant coach, Little League baseball team, 2008
- Member, Steering Committee, Carolina Forest Community Playground Project, 2008
- Chair, Board of Directors, Christian World Adoption, Flat Rock, NC, 2006 - 2008
- Member, Board of Directors, Christian World Adoption, Flat Rock, NC, 2003 - 2008
- Member, Board of Directors, Christian World Foundation, Charleston, SC, 2003 - 2008
- Member, Rainbow Youth Conference Organizing Committee, Detroit Catholic Youth Organization, 1990-1993
- Volunteer Youth Minister, Holy Family Catholic Church, 1985-1993

## University Service prior to IUP

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Member of Faculty Senate, 2005 – 2009, and 2000 – 2003

### University-level committee memberships

- Web Oversight Committee, 2006 – 2008
- Big South Undergraduate Research Symposium Organizing Committee, 2006
- Chair, Big South Undergraduate Research Symposium Evaluation Team, 2006
- Ad Hoc Committee on Textbook Prices, 2006
- Buildings and Grounds Committee, 2004 – 2005
- Faculty Welfare and Development Committee, 2005
- NCAA Self-Study Fiscal Integrity Committee, 2002
- Distance Learning Implementation Committee, 2001 – 2002
- Distance Education Task Force, 2000 – 2001

### College-level committee memberships

- Curriculum Committee of College of Natural & Applied Sciences, 2001 – 2009
- Faculty Handbook Committee for the College of Natural & Applied Sciences, 2006

### Department-level committee memberships

- Chair, Computer Science Curriculum Committee, 2001 – 2009
- Chair, Internship Committee, 2005 – present
- ABET Accreditation Self-Study Committee, 2007 – 2009
- ABET Accreditation Self-Study Committee, 2001 – 2002
- South Carolina Council on Higher Education Self-Study Committee, 2000
- Faculty Search Committees

### Department-level service

- Coordinator for ABET accreditation report Curriculum Section, 2007 – 2009
- Developing proposal for M.S. in Computer Science, 2007 – 2009
- Library Liaison, 2001 – 2009

## Community Service Awards

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- Administrative Service Award, Catholic Youth Organization, Detroit, MI, 1992