Urcun (John) Tanik

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CITIZENSHIP: U.S.

EDUCATION

Ph.D. Computer Engineering, 2006, University of Alabama at Birmingham (UAB)
Support: *National Aeronautical and Space Administration (NASA)*
Fellowship Training Grant (Marshall Space Flight Center) /UAB Teaching Assistantship
Trustworthy Cyber-physical system design automation with cloud data analytics: "Artificial Intelligence Design Framework for Optical Backplane Engineering" chair by Dr. Gary Grimes, published as book *Architecting Automated Design Systems* emphasizing systems development through comprehensive validation and verification of process and cyberinfrastructure (http://www.axiomaticdesign.com/about/press02102009.asp)

M.S.   Electrical and Computer Engineering, 2001, UAB
Support: *National Collegiate Inventors and Innovators Alliance (NCIIA), University of Alabama at Birmingham (UAB), Kauffman Internship, and IC^2(Innovation, Creativity, Capital) Institute of the University of Texas at Austin, founded by George Kozmetzky,*
V&V of Systems/Enterprise Engineering: Implementation of profitable e-business case study

B.S.   Electrical Engineering, 1997, University of Texas at Austin (UT)
Support: *Scholarship and industry internships Network Simulation Center (Alcatel Network Systems)*
Industrial fabrication processes and practice in laser electronics and integrated circuits: Foundational courses and laboratory with two internships rounds

PROFESSIONAL EXPERIENCE

2014- 2018: Assistant Professor and co-director of the Computational Science Program, CSCI Department, Texas A&M University-Commerce, TX
Teaching/research/service advancing Industrial internet applications with cyber-physical system (CPS) and Big Data components as it relates to IOT; Co-director of Design and Process Lab; continuous STEM and CPS/IOT course development, Faculty senator, 2nd successful ABET accreditation experience after Purdue FW, Search Committee Chair (5 hires)

2009-2013: Assistant Professor, Computer Science Department, Purdue University - Fort Wayne, IN (IPFW)
Worked at IPFW campus on software/systems engineering teaching, research, and service, 1st ABET accreditation experience, student team project management, graduate student guidance, Associate Director of Information Analytics and Visualization Center of Excellence (www.ipfw.edu)

2007-2008: Software System Architect, Distance Education Instructor, UAB, Birmingham, AL
Gained experience teaching *Managing a Digital Firm* to 40 MBA students online, continued enterprise management, and published book with VDM Verlag (http://www.vdm-publishing.com/)

2002-2006: NASA Fellowship Training during PhD work, Teaching Assistant at UAB, Birmingham, AL

Dissertation work completed in area of software/systems engineering and decision support. (www.nasa.gov) Established and managed development of UAB technology entrepreneurship organization; assisted in course teaching and worked on dissertation; Laboratory instructor in the Department of Electrical & Computer Engineering, UAB; Tutoring in Department of Mathematics, UAB (www.uab.edu)

2001-2002: Software System Architect, Kauffman technology researcher, Birmingham, AL

Started venture based on enterprise engineering case study; provided research support at the biotech incubator: Office for the Advancement of Developing Industries (OADI), (http://www.innovationdepot.net/#)

2000-2001: Technology Researcher, IC² Institute of the University of Texas, Austin, TX

Developed profitable e-business in language technologies; Prepared technical reports in technology entrepreneurship and university-based technology transfer (www.ic2.org)

1998-2000: Technology Researcher, M. F. Smith & Associates, Inc., Morristown, NJ

Prepared technology reports and assessments for various national and international corporations

1994-1995: Network Simulation Center Intern, Alcatel Network Systems, Dallas, TX

Provided CAD quality control analysis, testing, and trouble-shooting as hardware/software support for network simulations laboratory (2 terms) (www.alcatel.com)

GRANTS

(Funded $100K/5K contribution) We-Teach CS Collaborative Grant activity: Monthly presentations to 25 area high school teachers for STEM in Cyber-physical Systems and Software Engineering (March-August). P.I.: Isaac Gang, U. J. Tanik teaching contributor

(In progress resubmission after "fair" feedback, 2nd submission - not funded $128, 723) Convergence Center for Continuous Innovation advancing STEM Research and Development: Training a Data-Capable Workforce at the Human-Technology Frontier, NSF, July 2018. P.I.: U. J. Tanik, co-P.I: Dr. Sang Suh

(in progress) AI/ML/CDSS translational research in applied intelligent systems (e.g. KidneyX project)

PUBLICATIONS

Referred Journals

Muhammad Attique Khan, Tallha Akram, Muhammad Sharif, Tanzila Saba, Kashif Javed, Ikram Ullah Lali, **U. John Tanik**, Amjad Rehman, 2019 Feb 15. doi: 10.1002/jemt.23220. "Construction of Saliency Map and Hybrid Set of Features for Efficient Segmentation and Classification of Skin Lesion," *Microscopy Research and Technique*

Mohammad Shoeb Khan, **U. John Tanik**, Yuehua Wang, Wiley, 2019, Hybrid-vehcloud for Real-Time IOT: A Robust Approach for Reliable Dissemination of Critical Messages in Connected Vehicles.

(Accepted 2018) Muhammad Sharif, Muhammad Attique Khan, Muhammad Zeeshan Tahir, Mussarat Yasmin, Tanzila Saba, **U. John Tanik** "A Machine Learning Method with Threshold Based Parallel Feature Fusion and Feature Selection for Automated Gait Recognition", *Journal of Organizational and End User Computing* (JOEUC), #270718-010751

(Accepted 2018) Isra Naz, Nazeer Muhammad, Mussarat Yasmin, Muhammad Sharif, Jamal Hussain Shah, Steven Lawrence Fernandes, **U. John Tanik**, "Robust Discrimination of Leukocytes Protuberant Types for Early Diagnosis of Leukemia", *Journal of Mechanics in Medicine and Biology*, JMMB-D-18-00101

Gurupur, Varadraj P; Sakoglu, Unal; Jain, Gyanchand; **Tanik, U. J.**, 2014, "Semantic Requirements Sharing Approach to Develop Software Systems Using Concept Maps and Information Entropy: A Personal Health Information System Example", Advances in Engineering Software, Elsevier: DES-D-13-00288R1

Tanik, U. J., 2013, "Cyber-physical system Design Automation," Journal of Innovation Management, 158-178.

Xiong, Fan; **Tanik U. J.**; Tanik, Murat, 2011, "An Evolutionary Circuits Model for Cardiovascular System: An FPGA Approach," International Journal of Computers, Information Technology and Engineering (IJCCITAE), Vol.5 No.2, pp. 41-53.

Tanik, U. J.; Rauniyar, Deep, 2011, "Integrated Product Development Approach Utilizing Standardized Modeling Language and Methodologies," Journal of Integrated Design & Process Science, Volume 15, Issue 1, Nov. 2011.

Tanik, **U. J.**, 2011, "Synergistic Validation Methodology for Knowledge-Based Engineering Systems," Journal of Integrated Design and Process Science, Vol. 14, No. 4, pp. 1–24.

Togay, C.; Dogru, A. H.; **Tanik**, **U. J.**, 2008, "Systematic Component-Oriented Development with Axiomatic Design," Journal of Systems and Software, Elsevier: JSS-D-07-00191R1.

Tanik, U. J.; Grimes, G. J.; Gurupur, V. ; Sherman, C. J., 2005, "An Intelligent Design Framework Proposal leveraging Axiomatic design and the Semantic Web," *Transactions of the SDPS, Journal of Integrated Design and Process Science*, Vol. 9, No.1, pp. 41-53.

Tanik, U. J.; Abe, K.; Mangalvedhekar, A.; Deshpande, J., 2000, "The Japanese-American Handshake: The Internet Dimension," *Transactions of the SDPS, Journal of Integrated Design and Process Science*, Vol. 4, No. 4, pp. 57-72.

Submitted journal papers/in progress

(Submitted) Ayush Dogra, Bhawna Goyal, Sunil Agrawal, **U. John Tanik**, Sanjeev Kumar, Ramesh Sunder Nayak, "Enhanced Vascular and Osseous Information Fusion: Disagreement of Quantitative and Qualitative Analysis" (manuscript ID - NCAA-D-18-02609, *Neural Computing and Applications*, 2019.

(Submitted) Steven Lawrence Fernandes, **U. John Tanik,** V. Rajinikanth, K. Arvind Karthik, A Reliable Framework for Accurate Brain Image Examination and Treatment Planning based on Early Diagnosis Support for Clinicians, *Neural Computing and Applications*, 2019.

(Submitted) K. Palani Thanaraj , B. Parvathavarthini , **U. John Tanik** , Seifedine Kadry , V. Rajinikanth1, K. Kamalanand, "Implementation of Deep Neural Network to Classify EEG Signals using Gramian Angular Summation Field", Elsevier's *Cognitive Systems Research* journal, 2019.

(In progress) Kidney X Clinical Decision Support System and Health Informatics CPS/IOT Framework for STEM teaching trustworthy systems and application development, TBD, 2019, U. John Tanik.

(In progress) Examination of Alzheimer Disease using Brain MRI – A Study with Various Feature Extraction Techniques, 2019 U. John Tanik.

Editorships and technical program committee work

1. (Accepted) invitation 2019: Technical program committee (reviewer) for IEEE Globecom 2019 Workshop – Artificial Intelligence on Internet of Things. https://globecom2019.ieee-globecom.org/

2. (Accepted) invitation 2018: Special issue Co-Guest Editor on Deep Learning and Evolutionary Intelligence in *Journal of Evolutionary Intelligence* (EVIN http://www.springer.com/journal/12065/)

3. (Accepted) invitation 2018: Special issue Co-Guest Editor on Recent advances in Deep Learning, Biometrics, Health Informatics and Data Science in *Expert Systems: The Journal of Knowledge Engineering* (Impact Factor: 1.43) https://onlinelibrary.wiley.com/journal/14680394

Book Chapters

Tanik U. J., 2018 Special issue Co-Guest Editor on Deep Learning and Evolutionary Intelligence
Journal of Evolutionary Intelligence (EVIN http://www.springer.com/journal/12065/)

Tanik, U.J., Wang, Yuehua, 2017, Book Chapter, *Big Data and Visual Analytics*, "Rapid Alert System for Enhanced Night Vision (RASEN) for Rescue Operations using Swarm Intelligence", Springer.

Tanik, U.J., Darrell Fielder, 2017, Book Chapter, *Big Data and Visual Analytics, "*Transdisciplinary Convergence Applications"

Tanik U.J., Fielder D. (2017) Transdisciplinary Benefits of Convergence in Big Data Analytics. In: Suh S., Anthony T. (eds) Big Data and Visual Analytics. Springer, Cham; DOI: https://doi.org/10.1007/978-3-   319-63917-8_9, **Print ISBN** 978-3-319-63915-4; **Online ISBN** 978-3-319-63917-8: First Online: 17 January 2018.

Tanik U.J., Wang Y., Güldal S. (2017) Swarm Intelligence Applied to Big Data Analytics for Rescue Operations with RASEN Sensor Networks. In: Suh S., Anthony T. (eds) Big Data and Visual Analytics. Springer, Cham; DOI https://doi.org/10.1007/978-3-319-63917-8_2; **Print ISBN** 978-3-319-63915-4; **Online ISBN** 978-3-319-63917-8; First Online: 17 January 2018, pp 23-54

Suh, Sang; **Tanik, U. J.**; Carbone, John; Eroglu, Abdullah, 2013, Book Co-editor*: Applied Cyber-physical Systems*, Springer.

Tanik, U. J., 2013, *Applied Cyber-physical Systems*, Book Chapter: "Cyber-physical Systems and STEM Development: NASA Digital Astronaut Project", Springer, pp. 33-50.

Tanik, U. J., Begley, Angelyn, 2013, *Applied Cyber-Physical Systems* Book Chapter: "An Adaptive Cyber-physical system Framework for Cyber-physical system Design Automation, Springer, pp. 125-140.

Tanik, U. J., 2011, *Biomedical Engineering: Health Care Systems, Technology and Techniques* Book Chapter: "Implementing a Transdisciplinary Education and Research Program", S. Suh et al. (eds), DOI 10.1007/978-1-4614-0116-2_5, copywrite: Springer Science + Business Media, LLC.

Tanik, U. J., 2008, Book Author: *Architecting Automated Design Systems*, VDM Verlag.

Refereed Conference Proceedings

(Accepted 2018)   Mohammad Alhefdi, Anthony Winchester, Karthikeyan Lingasubramanian, Murat M. Tanik, **U. John Tanik**, Mohammad S. Khan, Bologna, "An information theoretical model of autonomous vehicle system in smart city setting." SDPS Conference workshop, Bologna, Italy 2018.

Tanik, U. J., Poster presentation: Cyber-physical systems and STEM: CCSC South Central Conference 2018 Schedule, Friday, April 6, 2018, Location: Texas Christian University, Ft. Worth, Texas

Tanik, U. J., Suh, Sang; Arslan, Abdullah; Bandi, Hemanth, 2017, "International Convergence on the Transdisciplinary Resource Correlation Platform", SDPS Conference, Birmingham Alabama.

Tanik, U. J., Fielder, Darrell; "Mobile Healthcare Delivery: A Dynamic Environment Where Healthcare, Mobile Technology, Engineering, and Individual Lifestyles Converge", Proceedings IEEE Southeastcon 2017.

Tanik, U. J., Fielder, Darrell 2017, "Transdisciplinary convergence - a vital consideration in engineering solutions", Proceedings IEEE Southeastcon.

Tanik, U. J; Suh, Sang; Baugh,Veronica; Arkün-Kocadere, Selay; Gattaz, Cristiani, 2015"Design and Process Science Lab: STEM Virtual Platform for Transdisciplinary Device Innovation Promoting Venture Development", SDPS Conference, Fort Worth.

Güldal, Serkan; Allehaibi, Saleh;Alshehri, Hussain; Alharthi,Abdulrahman; Baugh, Veronica;Shabnam, Shimin; Gattaz, Cristiane C.; **Tanik, U. John**; Suh, Sang, 2015, "Transdisciplinary Convergence on the DPSL Platform: STEM Development with IOT Mobile Applications in Wolfram Framework", SDPS Conference, Fort Worth.

Zhang, Zheng; Kumar, Ranveer;Lingasubramanian, Karthikeyan; **Tanik, Urcun John**, 2015,"DPSL Virtual Platform Module: SDPS Student Membership Web Database Development with Python, MySQL, and Apache Server" SDPS Conference, Fort Worth,

Baugh, Veronica L.; Tanik, Murat M.; Gattaz, Cristiane C.; **Tanik, U. John**; Suh, Sang, 2015, "SDPS Mobile Application Module for DPSL Virtual Platform: Enabling Next Generation Collaboration and Convergence for SDPS Student Chapter Network"; SDPS Conference, Fort Worth.

Veronica L. Baugh, Selay Arkün-Kocadere, Cristiane C. Gattaz**, U. John Tanik**, and Sang Suh, 2015,"DPSL Platform Advancing Rapid-Prototyping Capability in IOT Product Design: Value Driven Modeling and Simulation Approach with the P3Tech Advantage"; SDPS Conference, Fort Worth, USA.

Tanik, U. J., 2012, "Cyber-physical Systems and STEM development: NASA Digital Astronaut Project," Society for Design and Process Science, Berlin Germany.

Tanik, U. J.; Moradi, Lee; Gurupur, Varadraj, 2011, "Information architecture of a clinical decision support system for NASA Life Support Project Advancing STEM," Society for Design and Process Science, Software Engineering Society, Jeju Island, South Korea.

Tanik, U. J.; Marghitu**,** Daniela, 2011, **"**Architecting and Implementation of an enhanced web platform for the software engineering society," Society for Design and Process Science, Software Engineering Society, Jeju Island, South Korea.

Tanik, U. J.; Robinson, David; Gurupur, Varadraj, 2010, "Information Architecture of a Clinical Decision Support System," IEEE SoutheastCon.

Tanik, U. J.; Rauniyar, Deep, 2010, "Integrated Product Development Approach Utilizing Standardized Modeling Language and Methodologies," held at Dallas, TX (May 2010) SDPS Conference Proceeding, Omni Press.

Prabhu, D.; Gurupur, V.; **Tanik, U. J.**, 2009, "Abstract Software Design Framework: An Artificial Intelligence-Based Framework for Building Software Systems," MAICS 2009, held at IPFW, Fort Wayne, Indiana.

Tanik, U. J.; Ertas, A., 2008, "Transdisciplinary Healthcare Engineering: Implementing a Transdisciplinary Education and Research Program," *World Conference on Integrated Design & Process Technology*, Taichung, Taiwan, Available: in IDPT-CD proceedings, pp. 314-322.

Tanik, U. J.; Grimes, G. J., 2006, "Architectural Models for the Artificial Intelligence Design Framework," *World Conference on Integrated Design & Process Technology*, San Diego, CA, Available: in IDPT-CD proceedings, pp. 507-517.

Tanik, U. J.; Gurupur, V., 2006, "Software Cultivation using the Artificial Intelligence Design Framework, ACM Southeast Regional Conference," *Proceedings of the 44th annual southeast regional conference*, Melbourne, FL, pp. 786 – 787.

Prabhu, D.; Gurupur, V.; **Tanik, U. J.**, 2006, "Leveraging Web Services for Software Cultivation using the Artificial Intelligence Design Framework," *World Conference on Integrated Design & Process Technology*, San Diego, CA, Available: in IDPT-CD proceedings, pp. 483-489.

Togay, C.; Dogru, A. H.; **Tanik U. J.**; G. J. Grimes, 2006, "Component Oriented Simulation Development with Axiomatic Design," *World Conference on Integrated Design & Process Technology*, San Diego, CA, Available: in IDPT-CD proceedings, pp. 695-702.

Tanik, U. J.; Grimes, G. J., 2005, "Intelligent Design Framework for Optical Backplane Engineering," *IEEE Southeastcon*, Ft. Lauderdale, FL, pp. 462-467.

Tanik, U. J.; Grimes, G. J.; Gurupur, V.; Sherman, C. J., 2005, "An Intelligent Design Framework for Optical Backplane Engineering Leveraging Axiomatic Design and the Semantic Web," *World Conference on Integrated Design & Process Technology*, Beijing, China, Available: in IDPT-CD proceedings, pp. 41-53.

Tanik, U. J.; Sadasivam, R. S.; Giles, R.; Tanik, M. M., 2003, "Building Cross-Disciplinary Partnerships Through Entropy Reduction Techniques," *World Conference on Integrated Design & Process Technology*, Austin, TX, Available: in IDPT-CD proceedings, pp. 596-601.

Tanik, U. J.; Sadasivam, R.; Tanik, M. M., 2002, "A Test-bed for the Correlation Center of Digital Services," *IEEE Southeastcon*, Clemson, SC, pp. 381-386.

Tanik, U. J.; Tanik, M. M.; Jololian, L., 2001, "Internet Enterprise Engineering: 'A Zero Time' Framework based on 'T-Strategy'," *IEEE Southeastcon*, Clemson, SC, pp. 263-270.

PROFESSIONAL MEETINGS AND PRESENTATIONS

- **STEM Convergence Center for Continuous Innovation:** Leading 21 senior members at SDPS on refining NSF proposal to develop STEM virtual platform for students, faculty, and industry for trustworthy design automation and innovation in Cyber-physical Systems and IOT based on standards such as SWEBOK, PMBOK, and NICE Cybersecurity Workforce Framework.

- **Grant: Instructor STEM We-Teach CS collaborative** (spring /summer 2018) Taught 25 area high-school teachers cyber-physical systems in STEM, including covering areas in SWEBOK and PMBOK.

- **Poster presentation Meeting on** Convergence in STEM Education for Cyber-physical Systems and Industrial IOT Applications**:** Travel to Texas Christian University (TCU) for conference April 2018

- **SDPS IOT co-chair Florida 2017:** Served as co-chair of Internet of Things session.

- **SDPS conference attendance/support (annual)** Presenting publications and developing STEM work and SDPS student chapters advancing topics in transdisciplinary convergence in trustworthy design automation and innovation in cyberphysical systems and IOT..

- **Cyber-physical systems in Education and Research** (Berlin, Germany, Summer 2012) as part of SDPS conference (http://www.sdpsnet.org/sdps/index.php/sdps-2012-workshops/183-cyber-physical-systems-in-education-and-research)

- **NSF invitation as Cyber-physical systems panelist (**Washington DC, Summer 2011) Evaluated grant applications to NSF in cyber-physical systems area for next generation information systems applications

- **IBM invitation to Healthcare Leadership Exchange,** (Chicago, Summer 2011) Observing demo on Watson technology applications for intelligent medical decision support

- **Cyber-physical systems and Ipad cohort meetings at IPFW:** (Fort Wayne, fall 2011-present). Grant writing experience

- **NASA meetings** (UAB, Summer 2010-11) Medical CPS guidance system (CDSS) analysis for various NASA applications presented to Lee Moradi, Director of Engineering at UAB Center for Biophysical Science and Engineering (CBSE)

- **Purdue Fort Wayne Professional Advisory Board** (Fort Wayne, 2009-10**)** Presentations on trustworthy healthcare informatics and visual analytics STEM meetings

- **NASA Fellowship** (UAB, 2004-2006): Reporting to Marshall Space Flight Center on software systems engineering and Artificial Intelligence Design Framework (AIDF) utilizing Semantic Web/Concept-map tools technology and Synergistic Validation Methodology (SVM) (Huntsville, AL)

- **Integrated Design & Process Technology (IDPT) Conference publications/presentations/support**

    - **SDPS 2019 (Taichung, Taiwan)**
    - SDPS 2017 (Birmingham, AL, USA)
    - SDPS 2016 (Orlando, Florida)
    - SDPS 2015 (Dallas, Texas)
    - SDPS 2012 (Berlin, Germany)

- o SDPS 2011 (Jeju, Korea)
- o SDPS 2010 (Dallas, Texas)
- o SDPS 2008 (Taichung, Taiwan)
- o SDPS 2007 (Antalya, Turkey)
- o SDPS 2006 (San Diego, CA, USA)
- o SDPS 2002 (Pasadena, CA, USA)
- o SDPS 2000 (Dallas, TX, USA)
- o SDPS 2000 (Kusadasi, Turkey)
- o SDPS 1998 (Berlin, Germany)

- **Assorted IEEE, CEO, NCIIA Conference publications/presentations**
  - o ACM 2006 Southeast Regional Conference (Melbourne, Florida)
  - o IEEE 2005 SoutheastCon (Ft. Lauderdale, FL)
  - o IEEE 2002 SoutheastCon (Clemson, SC)
  - o NCIIA 2001 *National Collegiate Inventors and Innovators Alliance* (Washington, DC) www.nciia.org
  - o CEO 2000 *Collegiate Entrepreneurship Organization* (Chicago, IL) (www.c-e-o.org)

COMPUTER AND RELATED EXPERIENCE
Familiar with integrated system analysis/design methods for technical proposal development:
- Translational research expertise for product development in medical, business, and engineering domains
- Artificial Intelligence (KBE, Inference engine, Machine Learning/Deep Learning/Neural Networks)
- Course Development: Cyberphysical Systems and Industrial IOT with SWEBOK, PMBOK, and NICE
- National Initiative in Cybersecurity Education (NICE) for STEM CPS/IOT platform development,
- CPS/Big Data/AI/ML/IOT architecture demo (e.g. Wolfram, Python, Raspberry Pi, Modelica),
- Best practices for system development, verification, and validation (e.g. SWEBOK, RUP, PMBOK),
- Software Engineering and agile dev with Rational unified Process SDLC (RUP within IEEE 12207)
- Web-enabled requirements analysis and elicitation (e.g. Cmaptools, Wiki),
- Internet technologies (e.g. HTML, XML, OWL, Flash, Photoshop, Joomla)
- Axiomatic design of model-driven architecture (e.g. Acclaro Design for Six Sigma)
- UML/SysML hardware/software modeling (e.g. Telelogic, C++),
- IBM alliance software (e.g. Rational Team Concert, Visio)
- Microsoft alliance software (e.g. MS.NET Framework)
- Sun alliance software (e.g. Java, Jena, JESS)
- Risk mitigation and reliability/quality assurance techniques (e.g. DSM, FMEA, QFD, FTA, RBD),
- Artificial intelligence/decision support applications (e.g. Machine learning, Data mining),
- Requirements planning and project management (e.g. MS Project, Process-Edge, Basecamp),
- Service Oriented Architecture (SOA) (e.g. Web Services, Semantic Web, Intelligent agents),
- Knowledge management and database software (e.g. CommonKADS, MySQL)
- Circuit Design (e.g. PSPICE, Verilog, Matlab)
- Enterprise rapid prototyping strategies and techniques (e.g. credit card processing, web marketing)

AWARDS, HONORS, and other RECOGNITION

- STEM We-Teach CS Collaborative Grant 2018 (Spring/Summer): Served as instructor for 25 area high school teachers to advance teaching and research interests in Cyberphysical systems and IOT
- Selected to help improve key capstone course during ABET at two universities: Contributing to ABET continuous improvement at Texas A&M-University –Commerce and Purdue University- Fort Wayne (Both universities focused on developing capstone senior design project teams course to meet standards)
- Recognized by ABET accreditation with highest marks; part of team awarded $500K to CS department to build Information Analytics and Information (IAV) Center of Excellence (2010).
- Society for Design and Process Science Service Award (2009)

TEACHING EXPERIENCE

Teaching summary since 2009 to present: Teaching 3-4 courses/semester nearly a decade in the areas of Software/Systems Engineering (Special interest in AI), Project Management, Rapid Prototyping, R&D industry practice, Cyber-physical Systems and IOT, Analysis and Design, Systems Architecture, Capstone Senior Design and professional practice, Operating systems, RUP Software project implementation, Independent study in industrial internet of things and Industry 4.0 innovation, Team-based projects, including various graduate projects in the area of software engineering, Cyber physical systems, IOT, and cyber security. (All courses supported with online technology, e.g. Blackboard, D2L, IHMC Cmaptools)