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EDUCATION

PhD Computer Science, Wayne State University, Detroit, Michigan, 1985.
MSc Computer Science, Wayne State University, Detroit, Michigan, 1983.
MSc Computer Science and Engineering, Technical University of Wroclaw, Poland, 1980.

ACADEMIC EXPERIENCE

University Distinguished Professor, The University of Arizona, Tucson, Arizona, 2009 - present.
Raymond J. Oglethorpe Endowed Professor, Department of Electrical and Computer Engineering, The University of Arizona, Tucson, Arizona, 2006 - present.
Professor of Surgery, College of Medicine, The University of Arizona, 2007 - present.
Department Head, Department of Electrical and Computer Engineering, The University of Arizona, Tucson, Arizona, 2003 - 2011.
Professor, Department of Electrical and Computer Engineering, The University of Arizona, Tucson, Arizona, 1998 - present.
Associate Professor, Department of Electrical and Computer Engineering, The University of Arizona, Tucson, Arizona, 1992 - 1998.
Assistant Professor, Department of Electrical and Computer Engineering, The University of Arizona, Tucson, Arizona, 1986 - 1992.
Visiting Assistant Professor, Department of Computer Science and Engineering, Oakland University, Rochester, Michigan, 1984 - 1985.

OTHER

Visiting Professor, University of Perugia, Italy, 2007, 2008, and 2010.
Visiting Professor, University of Bundeswehr, Munich, Germany, 2010.
Fulbright Senior Specialist, Technical University of Cracow, Poland, 2004.
Visiting Scientist, Infineon Technologies AG, Central Research and Development, Munich, 1999, 2000, 2001, 2002, 2003.
Visiting Professor, Technical University of Munich, Germany, 1999, 2000, 2001.
Visiting Scientist, Siemens AG, Central Research Laboratories, Munich, Germany, 1984, 1995, 1996, 1997, 1998.
Research Fellow, US Army Research Laboratories, Ft. Huachuca, Arizona, 1994.
Fulbright Senior Scholar, Johannes Kepler University, Austria, 1994.
Visiting Professor, Johannes Kepler University, Austria, 1993.
Research Fellow, US Army Research Institute, Ft. Huachuca, Arizona, 1992.

PROFESSIONAL INTERESTS

Design and analysis of complex systems, modeling and computer simulation, visualization, computer assisted surgical training, computer-aided minimally invasive surgery, applications of computer-based technologies to clinical and academic medicine.

COURSES TAUGHT AND DEVELOPED

Artificial intelligence, engineering of computer-based systems, real-time systems, programming languages, software engineering, data structures and algorithms, error control coding, advanced motion control, honors seminar: “The art, science, and human impact of technology: from basic principles to ultra-complex systems.”

PUBLICATIONS

Volumes and Monographs

J.W. Rozenblit (Ed.), *Proceedings of the 20th IEEE International Conference and Workshop on the Engineering of Computer Based Systems*, IEEE Computer Society Press, 2013

J. Leany, J.W. Rozenblit, and J. Peng (Eds.), *Proceedings of the 2007 IEEE International Conference and Workshop on the Engineering of Computer Based Systems*, IEEE Computer Society Press, 2007.

A.G. Bruzzone, A. Guasch, M.A. Piera, and J.W. Rozenblit (Eds.), *Proceedings of the 2006 International Mediterranean Modeling Multiconference*, Piera: LogiSim Press, 2006.

J.W. Rozenblit, T. O’Neil and J. Peng (Eds.), *Proceedings of the 2005 IEEE International Conference and Workshop on the Engineering of Computer Based Systems*, IEEE Press, 2005.

H.S. Sarjoughian, F. Cellier, M. Marefat, and J.W. Rozenblit (Eds.), *Proceedings of the 2000 AI, Simulation and Planning in High Autonomy Systems Conference*, SCS International, 2000.

J.W. Rozenblit, T. Ewing and S. Schulz (Eds.), *Proceedings of the 1997 IEEE Conference and Workshop on Systems Engineering of Computer Based Systems*, IEEE Press, 1997.

B. Melhart and J.W. Rozenblit (Eds.), *Proceedings of the 1995 IEEE Symposium and Workshop on Systems Engineering of Computer Based Systems*, IEEE Press, 1995.

J.W. Rozenblit and K. Buchenrieder (Eds.), *Codesign: Computer-Aided Software/Hardware Engineering*, 452 pages, IEEE Press, 1994.

B.P. Zeigler and J.W. Rozenblit (Eds.), *Proceedings of the First International Conference on AI, Simulation and Planning in High Autonomy Systems*, IEEE Computer Society Press, 1990.

Book Chapters

J.W. Rozenblit, “Models and Techniques for Computer Aided Surgical Training,” in *Lecture Notes in Computer Science, No. 6928, Part 2*, pp. 233-241, Springer-Verlag, 2012.

- A. Wytyczak-Partyka, J. Nikodem, R. Klempous, J. Rozenblit, Ra. Klempous and I. Rudas, "Safety oriented laparoscopic surgery training system," in *Lecture Notes in Computer Science No. 5717*, pp. 889-896, Springer-Verlag, 2009
- A. Wytyczak-Partyka, J. Nikodem, R. Klempous and J. Rozenblit, "Surgical training system with a novel approach to human-computer interaction," in *Human-computer systems interaction: background and applications (Advances in Intelligent and Soft Computing)* (Eds. Z. S. Hippe and J.L. Kulikowski), pp. 383-393, Springer-Verlag, 2009
- A. Wytyczak-Partyka, J. Nikodem, R. Klempous, J. Rozenblit and C. Feng, "Computer-guided Laparoscopic Training with Applications of a Fuzzy Expert System," in *Lecture Notes in Artificial Intelligence No. 5317* (Eds. A. Gelbukh and E.F. Morales), pp. 965-972, Springer-Verlag, 2008
- C. Talarico, J.W. Rozenblit, and J. Peng, "Power Aware System-Level Design for Embedded Systems-on-Chip," in *Diversitas Cybernetica, Lecture Notes in Communication Series*, (Ed. R. Klempous), pp. 179-191, Warsaw, 2005.
- W. Jacak, K. Pröll, J.W. Rozenblit, "Knowledge Base for Evidence Based Medicine with Bioinformatics Components" in *Lecture Notes in Computer Science No. 2809*, (Eds. F. Pichler and R. Moreno-Diaz), pp. 163-173, Springer-Verlag, 2003
- J.W. Rozenblit, "Systems Design: A Simulation-Based Modeling Framework," in *Discrete Event Modeling and Simulation: A Tapestry of Systems and AI-based Theories and Methodologies*. (Eds. F. Cellier and H. Sarjoughian), pp. 107-127, Springer Verlag, 2001.
- J.W. Rozenblit and S. Schulz, "Simulation-Based Design of Heterogeneous Systems," in *Hardware/ Software Codesign for Embedded Systems*. (Ed. K. Buchenrieder), IT Press, pp. 94-111, 1999.
- W. Jacak, G. Jahn, and J. W. Rozenblit, "System Theoretical Approach to Control and Synchronization of Tele-education in an Open, Distributed Environment," *Lecture Notes on Computer Science No. 1333* (Eds. F. Pichler and R. Moreno-Diaz), pp. 549-560, Springer Verlag, 1997.
- T.C. Ewing and J.W. Rozenblit, "Simulation-Based Verification in HW/SW Codesign: An FPGA Approach," in *Reconfigurable Architectures - High Performance by Configware*. (Eds. R. Hartenstein and V. Prasanna), pp. 49-54, IT Press, 1997.
- K. Buchenrieder and J.W. Rozenblit, "Codesign: An Overview," in *Codesign: Computer-Aided Software/Hardware Engineering*, (Eds. Rozenblit, J. and K. Buchenrieder), pp. 1-15, IEEE Press, 1994.
- W. Jacak and J.W. Rozenblit, "CAST Tools for Intelligent Control in Manufacturing Automation," in: *Lecture Notes in Computer Science No. 763*, (Eds. F. Pichler and R. Moreno-Diaz), pp. 203-219, Springer-Verlag, 1994.
- T. Cho, J.W. Rozenblit, and B.P. Zeigler, "Knowledge-Based Simulation Environment Techniques: A Manufacturing System Example," in *Control and Dynamic Systems: Advances in Theory and Applications*, vol. 49. (Ed. C.T. Leondes), pp. 191-240, Academic Press, 1992.
- J.W. Rozenblit, J.F. Hu, T.G. Kim, and B.P. Zeigler, "Knowledge-Based Design and Simulation

Environment (KBDSE): Foundational Concepts and Implementation,” in: *Artificial Intelligence in Operational Research*, (Ed. G.I. Doukidis and R.J. Paul), pp. 261-275, MacMillan, 1992.

W. Jacak and J.W. Rozenblit, “Automatic Robot Programming in CAST,” in *Lecture Notes in Computer Science No. 585*, (Ed. F. Pichler), pp. 634-647, Springer-Verlag, 1992.

Y.M. Huang and J.W. Rozenblit, “Architectures for Distributed Knowledge Processing,” in *Neural and Intelligent Systems Integration*. (Ed. B. Soucek), pp. 437-455, John Wiley & Sons, New York, 1991.

J.F. Hu and J.W. Rozenblit, “Knowledge Acquisition Based on Representation (KAR) for Design Model Development” in *Knowledge Based Simulation: Methodology and Applications*. (Eds. P. Fishwick and R. Modejeski), pp. 77-94, Springer-Verlag, New York, 1991.

J.W. Rozenblit and B.P. Zeigler, “Design and Modeling Concepts,” in *Concise Encyclopedia of Robotics*. (Ed. R. Dorf), pp. 213-220, John Wiley and Sons, New York, 1990.

J.W. Rozenblit and H. Praehofer, “Computer Aided Systems Theory and Knowledge-Based System Design and Simulation; Directions to Explore,” in *Lecture Notes in Computer Science No. 410*. (Eds. F. Pichler and R. Moreno Diaz), pp. 322-335, Springer-Verlag, 1990.

J.W. Rozenblit and J.F. Hu, “Experimental Frame Generation in a Knowledge-Based System Design and Simulation Environment,” in *Modeling and Simulation Methodology: Knowledge System Paradigms*. (Eds. M. Elzas et.al.), North Holland, pp. 451-466, Amsterdam, 1989.

J.W. Rozenblit and B.P. Zeigler, “Design and Modeling Concepts,” in *International Encyclopedia of Robotics*. (Ed. R. Dorf), pp. 308-322, John Wiley and Sons, New York, 1988.

J.W. Rozenblit and B.P. Zeigler, “Entity-Based Structures for Model and Experimental Frame Construction,” in *Modeling and Simulation Methodology in the Artificial Intelligence Era*. (Ed. M. Elzas et al.), pp. 78-100, North Holland, Amsterdam, 1986.

M.M. Rizki and J.W. Rozenblit, “Experimental Frame Specification Module,” in *Simulation and Model-Based Methodologies: An Integrative View*. (Eds. T.I. Oren et al.), pp. 598-600, Springer-Verlag, New York, 1984.

Journals

H. Qiao, J. Rozenblit, and F. Szidarovszky, “A Special Learning Process with Time Delay,” *Pure Mathematics and Applications* 23(1), pp 49-60, 2012.

M. Riojas, S. Lysecky and J.W. Rozenblit, “Educational Technologies for Precollege Engineering Education,” *IEEE Transactions on Learning Technologies*, 5(1), pp. 20-37 [doi:10.1109/TLT.2011.16](https://doi.org/10.1109/TLT.2011.16), March 2012.

M. Riojas, C. Feng, A.J. Hamilton and J.W. Rozenblit, “Knowledge Elicitation for Performance Assessment in a Computerized Surgical Training System,” *Applied Soft Computing*, 11(4), pp. 3697-3708, 2011.

C. Feng, L. Yang and J. W. Rozenblit, “Adaptive Tracking in Energy Sensitive Distributed

- Wireless Sensor Networks*,” *Ad Hoc and Sensor Wireless Networks*, 12(1-2), pp. 55-77, 2011.
- C. Feng, J.W. Rozenblit, and A.J. Hamilton, “A computerized assessment to compare the impact of standard, stereoscopic and high definition laparoscopic monitor displays on surgical technique,” *Surgical Endoscopy*, DOI 10.1007/s00464-010-1038-6, 24(11), pp. 2743-2748, 2010.
- P. Śliwiński, J.W. Rozenblit, M.W. Marcellin and R. Klempous, “Wavelet amendment of nonlinearities in Hammerstein models.” *IEEE Transactions on Automatic Control* 54(4), pp. 820-825, April 2009.
- H. Qiao and J.W. Rozenblit, “Agent-based Simulation in Market and Production Systems,” *Intl. Journal of Internet and Enterprise Management (IJIEM)* 6(1), pp. 31-40, 2009.
- J. Olson, J.W. Rozenblit, C. Talarico, and W. Jacak, “Hardware/Software Partitioning using Bayesian Belief Networks” *IEEE Transactions on Systems, Man and Cybernetics*, 37(5), pp. 665-668, Sept. 2007.
- F. Momen and J.W. Rozenblit, “Dynamic Decision Support in the Advanced Tactical Architecture for Combat Knowledge System,” *Journal of Defense Modeling and Simulation*, 3(1), pp. 11-26, Jan. 2006.
- C. Talarico, J.W. Rozenblit, V. Malhotra, and A. Stritter, “A New Framework for Power Estimation of Embedded Systems,” *IEEE Computer*, 38(2), pp. 71-78, Feb. 2005.
- S. Cunning and J.W. Rozenblit, “Automating Test Generation for Discrete-Event Oriented Real-Time Embedded Systems,” *Journal of Intelligent and Robotic Systems*, 41, pp. 87-112, 2004.
- S. Schulz, J.W. Rozenblit, and K. Buchenrieder, “Multi-Level Testing for Design Verification of Embedded Systems,” *IEEE Design and Test*, 19, pp. 60-69, Mar.-Apr., 2002.
- J.W. Rozenblit and S. Kumar, “Integrated Engineering: Looking Back and Moving Ahead.” *IEEE Computer*, 34 (12), pp. 164-165, 2001.
- W. Chapman, J.W. Rozenblit, and A.T. Bahill, “System Design is an NP-Hard Process,” *Systems Engineering Journal*, 4(3), pp. 222-229, 2001.
- R. Martinez, J.W. Rozenblit, J. Cook, and C. Cole, “Common Object Request Broker Architecture (CORBA)-based Security Services for the Virtual Radiology Environment,” *Journal of Digital Imaging*, 13(2), pp. 59-70, 2000.
- R. Martinez, J. Cook, J. Rozenblit, A. Chacko, and H. Timboe, “Virtual Management of Radiology Examinations in the Virtual Radiology Environment Using Common Object Request Broker Services,” *Journal of Digital Imaging*, 12(2), pp. 181-185, 1999.
- J. Cook, R. Martinez, A. Chaco, and J. Rozenblit, “Meta-Manager: A Requirements Analysis,” *Journal of Digital Imaging*, 12(2), pp. 186-188, 1999.
- S. Cunning, S. Schulz, and J.W. Rozenblit, “An Embedded System’s Design Verification Using Object-Oriented Simulation Techniques,” *Simulation*, 72(4), pp. 238-249, 1999.

- S. Schulz, J.W. Rozenblit, M. Mrva, and K. Buchenrieder, "Model-Based Codesign," *IEEE Computer*, 32(8), pp. 60-68, 1998.
- W. Jacak, and J.W. Rozenblit, "Model-Based Workcell Task Planning and Control," *Transactions of the Society for Computer Simulation*, , 15(4), pp. 31-44, Dec. 1998.
- J.W. Rozenblit and S. Kumar, "Toward Synergistic Engineering of Computer Systems," *IEEE Computer*, 30(2), pp. 126-127, 1997.
- T. Simunic, J.W. Rozenblit, and J. Brews, "VLSI Interconnect Design Automation Using Quantitative and Symbolic Techniques," *IEEE Trans. on Components, Packaging, and Manufacturing Technology*, 19(4), pp. 803-812, Nov. 1996.
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- B.P. Zeigler, T.H. Cho, and J.W. Rozenblit, "A Knowledge-Based Simulation Environment for Hierarchical Flexible Manufacturing," *IEEE Transactions on Systems, Man, and Cybernetics*, 26(1), pp. 80-91, Jan 1996.
- J.W. Rozenblit, "Intelligent Control and Planning: Introduction to the Special Issue," *Applied Artificial Intelligence*, 9(5), pp. iii-iv, 1995.
- P. Hsu and J.W. Rozenblit, "A Computer-Aided Design Framework for Modeling and Simulation of VLSI Interconnections and Packages," *Journal of VLSI Integration*, 17(2), pp. 163-187, 1994.
- P. Hsu, R. Senthenthathan, J.W. Rozenblit, and J.L. Prince, "A Knowledge-Based Simulation Environment for the Early Design of Multichip Modules," *Microelectronics Journal*, 25(5), pp. 47-59, 1994.
- B.P. Zeigler, H. Praehofer, H. and J.W. Rozenblit, "Integrating Systems Formalisms: How Object-Oriented Programming Supports Cast for Intelligent System Design," *Journal of Systems Engineering*, 3, pp. 209-219, 1993.
- J.W. Rozenblit and J.F. Hu, "Integrated Knowledge Representation and Management in Simulation Based Design Generation," *IMACS Journal of Mathematics and Computers in Simulation*, 34(3-4), pp. 262-282, 1992.
- J.W. Rozenblit, "Design for Autonomy: An Overview," *Applied Artificial Intelligence*, 6(1), pp. 1-18, 1992.
- W. Jacak and J.W. Rozenblit, "Automatic Simulation of a Task-Oriented Robot Program for a Sequential Technological Process," *Robotica*, 34, pp. 45-56, 1992.
- J.W. Rozenblit, "Experimental Frame Specification Methodology for Hierarchical Simulation Modeling," *Intl. Journal of General Systems*, 19(3), pp. 317-336, 1991.
- J.W. Rozenblit and Y.M. Huang, "Rule-Based Generation of Model Structures in Multifaceted Modeling and System Design," *ORSA Journal on Computing*, 3(4), pp. 330-344, 1991.
- J.W. Rozenblit and P. Jankowski, "An Integrated Framework for Knowledge-Based Modeling and

Simulation of Natural Systems,” *Simulation*, 57(3), pp. 317-336, 1991.

J. Hu and J.W. Rozenblit, “Knowledge Acquisition Based on Explicit Representation,” *Expert Systems with Applications*, 3(3), pp. 303-315, 1991.

B.P. Zeigler, J.W. Rozenblit, and E.R. Christensen, “Reducing the Validation Bottleneck with a Knowledge-Based, Distributed Simulation Environment,” *Expert Systems with Applications*, 3(3), pp. 329-342, 1991.

J.W. Rozenblit and B.P. Zeigler, “Knowledge-Based Simulation Design Methodology: A Flexible Test Architecture Application,” *Transactions of the Society for Computer Simulation*, 7(3), pp. 195-228, 1990.

J.W. Rozenblit, J.F. Hu, T.G. Kim, and B.P. Zeigler, “Knowledge-Based Design and Simulation Environment (KBDSE): Foundational Concepts and Implementation,” *Journal of the Operational Research Society*, 42(2), pp. 475-489, 1990.

P. Jankowski and J.W. Rozenblit, “DEVS-Scheme Simulation of Stream Water Quality,” *ACM Simulation Digest*, 21(1), pp. 20-28, 1990.

B.P. Zeigler, F.E. Cellier, and J.W. Rozenblit, “Design of a Simulation Environment for Laboratory Management by Robot Organizations,” *Journal of Intelligent and Robotic Systems*, 1(1), pp. 299-309, 1988.

W. Jacak and J.W. Rozenblit, “Modeling of Eventistic Systems,” *Progress in Cybernetics*, 3(81), pp. 65-73, 1981.

Conference Proceedings

G. Hwang and J.W. Rozenblit, “Implementation of computer-guided navigation in surgical training,” *Proc. of the 20th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '13)*, pp. 174-180, Scottsdale, Arizona, 2013.

A. Shankaran and J.W. Rozenblit, “Augmented Reality Visualization for Computer Assisted Surgical Training,” *Proc. of the 14th Intl. Conference on Computer Aided Systems Theory*, pp. 122-125, Las Palmas, Spain, February 2013.

M. L. Valenzuela, L. Suantak and J.W. Rozenblit, “Decision Support using Deterministic Equivalents of Probabilistic Game Trees,” *Proc. of the 19th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '12)*, pp. 142-149, Serbia, 2012.

S. Whitsitt, A. Gopalan, S. Cho, J. Sprinkle, S. Ramasubramanian, L. Suantak and J.W. Rozenblit, “On the Extraction and Analysis of a Social Network with Partial Organizational Observation,” *Proc. of the 19th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '12)*, pp. 249-256, Serbia, 2012.

J. Nikodem, G. Hwang, J.W. Rozenblit, L. Napalkova and P. Czapiewski, “Technical Realization of the Optimal Motion Planning Method for Minimally Invasive Surgery,” *Proc. of the 19th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems*

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J. Drain, M. Riojas, S. Lysecky, J. Rozenblit, "First Experiences with eBlocks as an Assistive Technology for Individuals with Autistic Spectrum Condition". *Frontiers In Education*, Rapid City, South Dakota, USA, pp. 1-7, October, 2011.

T. A. Hoffman, J.W. Rozenblit, A. Akoglu, and L. Suantak, "Queral Networks: Toward an Approach for Engineering of Large Artificial Neural Networks," *Proc. of the 18th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '11)*, pp. 81-88, Las Vegas, April 2011.

S. Mahadevan, V.S. Gopinath, R. Lysecky, J. Sprinkle, J. Rozenblit, and M. Marcellin, "Hardware/Software Communication Middleware for Data Adaptable Embedded Systems," *Proc. of the 18th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '11)*, pp. 34-43, Las Vegas, April 2011.

J.W. Rozenblit, "Models and Techniques for Computer Aided Surgical Training," *Proc. of the 13th Intl. Conference on Computer Aided Systems Theory*, pp. 370-373, Las Palmas, Spain, February 2011.

E. Chan, J. Ginsburg, B. Ten Eyck, J.W. Rozenblit, and M. Dameron, "Text Analysis and Entity Extraction in Asymmetric Threat Response and Prediction," *Proc. of the 2010 IEEE International Conference on Intelligence and Security Analytics*, pp. 202-207, Vancouver, Canada, May 2010.

M. Riojas, S. Lysecky, and J.W. Rozenblit, "Adapting Engineering Education to Resource-Constrained Middle Schools: Teaching Methodologies and Computer Technologies," *Proc. of the 17th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '10)*, pp. 258-262, Oxford, March 2010

M. L. Valenzuela, C. Feng, P. Reddy, F. Momen, J. W. Rozenblit, B. Ten Eyck, and F. Szidarovszky, "A Non-Numerical Predictive Model for Asymmetric Analysis," *Proc. of the 17th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '10)*, pp. 311-315, Oxford, UK, March 2010

C. Feng, J.W. Rozenblit, A.J. Hamilton, and A. Wytyczak-Partyka, "Defining Spatial Regions in Computer-assisted Laparoscopic Surgical Training," *Proc. of the 16th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '09)*, pp. 176-183, San Francisco, April 2009.

R. Al-Motlak, F. Momen and J.W. Rozenblit, "A Distributed Computing Framework for Parallelization of Coevolution in Multi-sided Conflicts," *Proc. of the 16th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '09)*, pp. 215-224, San Francisco, April 2009.

A. Wytyczak-Partyka, J. Nikodem, R. Klempous, J. Rozenblit, R. Klempous and I. Rudas, "Laparoscopic surgery training based on image processing," *Proc. of the 12th International Conference on Computer Aided Systems Theory, EuroCAST 2009*, pp. 301-303, Las Palmas de Gran Canaria, Spain, Feb. 2009.

A. Wytyczak-Partyka, J. Nikodem, R. Klempous, and J. Rozenblit, "A novel interaction method for laparoscopic surgery training," *Proc of the 2008 Conference on Human Systems Interaction*, pp. 858-861, Krakow, Poland, May 2008.

C. Feng, J.W. Rozenblit, and Allan J. Hamilton, "Fuzzy Logic-Based Performance Assessment in the Virtual, Assistive Surgical Trainer (VAST)," *Proc. of the 15th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '08)*, pp. 203-209, Belfast, Ireland, March 2008.

J.W. Rozenblit, A.G. Bruzzone, F. Momen and S. Saetta, "Modeling and Simulation of Course of Action (COA) Consequences in Stability and Support Operations," *Proc. of the 2007 European Simulation Interoperability Workshop (EURO-SIW)*, (electronic publication), Genoa, Italy, June 2007.

E. D'Mello and J.W. Rozenblit, "Design For a Patient-Centric Medical Information System Using XML Web Services," *Proc. of the 2007 International Conference on Information Technology (ITNG'07)*, pp. 562-567, Las Vegas, Nevada, April 2007.

C. Feng, J.W. Rozenblit, PhD and A.J. Hamilton, MD, "A Hybrid View in a Laparoscopic Surgery Training System," *Proc. of the 14th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '07)*, pp. 339-348, Tucson, Arizona, March 2007.

C. Feng, J. Peng, H. Qiao, and J.W. Rozenblit, "Alert Fusion for a Computer Host Based Intrusion Detection System," *Proc. of the 14th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '07)*, pp. 433-440, Tucson, Arizona, March 2007.

C. Feng, L. Yang, J.W. Rozenblit, and P. Beudert, "Design of A Wireless Sensor Network Based Automatic Light Controller in Theater Arts," *Proc. of the 14th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '07)*, pp. 161-170, Tucson, Arizona, March 2007.

J. Peng, C. Feng, H. Qiao, and J.W. Rozenblit, "An Event-driven Architecture for Fine Grained Intrusion Detection and Attack Aftermath Mitigation," *Proc. of the 14th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '07)*, pp. 55-62, Tucson, Arizona, March 2007.

H. Qiao, J. Peng, C. Feng, and J.W. Rozenblit, "Behavior Analysis Based Learning Framework for Host Level Intrusion Detection," *Proc. of the 14th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '07)*, pp. 441-447. Tucson, Arizona, March 2007.

H. Haniffa , J.W. Rozenblit, J. Peng, A.J. Hamilton and M. Salkini, "Motion Planning System for Minimally Invasive Surgery," *Proc. of the 14th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '07)*, pp. 609-610, Tucson , Arizona , March 2007

H. Qiao, J.W. Rozenblit, F. Szidarovszky, and L. Yang, "Multiagent Learning with Bargaining," *Proc. of the 2006 Winter Simulation Conference (WSC '06)*, pp. 934-940, Monterey, California, December 2006.

C. Feng, H. Haniffa, J.W. Rozenblit, PhD, J. Peng, A.J. Hamilton, MD, and M. Salkini, MD, "Surgical Training and Performance Assessment Using a Motion Tracking System," *Proc. of the*

2nd European Modeling and Simulation Symposium. EMSS 2006, pp. 647-652, Piera: LogiSim, Barcelona, Spain, October 4-6, 2006

H. Qiao, J.W. Rozenblit, and F. Szidarovszky, "Asymmetric Multiagent Learning Modeling and Analysis," *Proc. of the 2nd European Modeling and Simulation Symposium. EMSS 2006*, pp. 231-237, Piera: LogiSim, Barcelona, Spain, October 2006.

Z. Chaczko, R. Klempous, J. Nikodem, M. Nikodem, and J. Rozenblit, "An improvement of energy aware routing in a wireless sensors network," *Proc. of the 2nd European Modeling and Simulation Symposium. EMSS 2006*, pp. 599-604, Piera: LogiSim, Barcelona, Spain, October 2006.

Z. Chaczko, R. Klempous, J. Nikodem and J. Rozenblit, "24/7 Software development in Virtual Student Exchange Groups: Redefining the Work and Study week," *Proc. of the 7th International Conference on Information Technology Based Higher Education and Training. ITHET '06*, Electronic publication: 8 pages, IEEE Press, Sydney, July 2006

Z. Chaczko, H. Dobler, W. Jacak, R. Klempous, H. Maciejewski, J. Nikodem, M. Nikodem, J. Rozenblit, A. Suarez, P. Carmen, and P. Sliwinski, "Assessment of the quality of teaching and learning based on data driven evaluation methods," *Proc. of the 7th International Conference on Information Technology Based Higher Education and Training. ITHET '06*, Electronic publication: 14 pages, IEEE Press, Sydney, July, 2006.

L. Yang, C. Feng, J. Peng, and J. W. Rozenblit, "A Multi-modality Framework for Energy Efficient Tracking in Large Scale Wireless Sensor Networks," *Proc. of the 2nd IEEE International Conference on Networking, Sensing and Control*, pp. 916-921, Ft. Lauderdale, FL, USA, April 2006.

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GRANTS AND CONTRACTS

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Asymmetric Threat Assessment and Analysis Program IV, US Army GSA, (with A. Akoglu, Co-PI and J. Sprinkle, Co-PI), \$1,708,807, 2010- 2011.

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Pilot Testing and Conduction of Human Subject Experimentation with Advanced Battlespace Tactical Information Selection (ABATIS) Software. US Army Research Laboratories, \$10,000, 1999.

Human Cognitive Issues for Course of Action Analysis (COA) in Uncertain Environments, US Army Research Laboratories, \$24,893, 1999.

Soldier Performance for Course of Action (COA) Visualizations, US Army Research Laboratories, \$46,000, 1998-1999.

Specification and Development of the Virtual Radiology Environment Meta-Manager, US Army, (with R. Martinez, PI), \$249,993, 1998-1999.

Generation of Visualization Concepts for Battlefield Reasoning Algorithms, US Army Research Laboratories, \$55,000, 1998.

Object-Oriented Design and Implementation of an Advanced Battlefield Visualization Architecture, US Army Research Laboratories, \$100,000, 1997-1998.

Experimental Frames for C3I Human Performance Modeling and Analysis, US Army Research Laboratories, \$40,000, 1997 - 1998.

Intelligence Production Modeling, US Army Research Laboratories, \$25,000, 1995-1996.

Development of C2I Human Performance Models and Integration Techniques, US Army Research Laboratories, \$20,000, 1996-1997.

Advanced Methods for Battlefield Visualization, US Army Research Laboratories, \$20,000, 1996.

VLSI Packaging and Interconnection Research, Semiconductor Research Corporation, \$5,030,000 (with J.L. Prince, PI, and four other co-investigators), 1987 - 1995.

Sponsorship of the 4th Annual AI, Simulation and Planning in High Autonomy Systems Conference, The Rand Corporation and The University of Arizona (Conference General Chairman) \$10,000, 1993.

Packaging Design Support Environment, Research Equipment Grant, National Science Foundation and Digital Equipment Corporation, (with J.L. Prince, Co-PI), \$136,589, 1992.

Intelligent Factory Automation, Siemens Corporate Research and Support, \$65,000, 1988-1992.

Metrics for Performance Evaluation of Telecommunication Systems Designs, Advanced Telecommunications Research Project, University of Arizona and U.S. West Corp., \$16,500, 1991-1992.

Knowledge Based Support of Modular, Hierarchical Simulation Model Management, McDonnell Douglas Corporation, (with B.P. Zeigler, Co-PI), \$70,000, 1989-1990.

Sponsorship of AI, Simulation and Planning in High Autonomy Systems Conference, Martin Marietta, McDonnell Douglas, and Bell Canada, (Conference Co-Chairman with B.P. Zeigler), \$7,500, 1990.

Computer Equipment Research Grant, National Science Foundation, (with B.P. Zeigler, Co-PI), \$24,640, 1988.

A Simulation Environment for Laboratory Management of Robot Organizations (with B.P. Zeigler, PI and F. Cellier, Co-PI), NASA, \$394,000, 1988-1991.

Computer Equipment Research Grant, Apollo Computers Inc., (with J.L. Prince, Co-PI), \$56,870, 1988.

VLSI Packaging Simulation System (with J.L. Prince, PI), Equipment Grant, Digital Equipment Corporation, \$39,754, 1987.

MAJOR INVITED ADDRESSES

Computer-Assisted Surgical Training: Enhancing Patients' Safety through High Technology and Human Skill, TEDx Tucson, February 2013

Simulation-based Surgical Training: concepts, foundations, and modeling issues. Keynote Lecture, Autumn Simulation Conference, San Diego, October 2012.

Cyber-Physical Systems in medicine: from training to a clinical, surgical setting. Invited presentation, Dagstuhl Seminar: Science and Engineering of Cyber-Physical Systems, November 2011, Germany.

Model and Techniques for Computer-Aided Surgical Training, Keynote Lecture, 13th International Conference on Computer Aided Systems Theory, EuroCAST, Spain, February 2011.

Model and Techniques for Computer-Aided Surgical Training, Invited Lecture, University of Las Palmas de Gran Canaria, Spain, February 2011.

Model and Techniques for Computer-Aided Surgical Training, Invited Lecture, Universidad Politecnica de Madrid, Spain, February 2011.

Computer Assisted Surgical Training (CAST), Wroclaw University of Technology, Poland, July 2010

Computer Assisted Surgical Training (CAST), FORTIS, Munich, Germany, July 2010

Computer Assisted Surgical Training (CAST), University of North Carolina, Chapel Hill, April 2010.

Computer Assisted Surgical Training: Concepts, Foundations, and Model-based Techniques, Invited Lecture, University of Bologna, Forli, Italy, June 2008.

Computer Assisted Surgical Training: Concepts, Foundations, and Model-based Techniques, Invited Lecture, University of Perugia, Italy, June 2008.

Virtually Assisted Minimally Invasive Surgical Training: A Simulation Modeling Approach, Invited presentation, The XXI National Congress of Junior Surgeons, Perugia, Italy, June 2008.

Predicting the Unpredictable, The Salon, www.spiritofthesenses.org, Phoenix, December 2007.

Virtually Assisted Surgical Training: Concepts, Foundations, and Sensor-based Technique, Invited Joint Lecture with Allan J. Hamilton, MD, The 2007 MEPTEC Medical Electronics Symposium, Phoenix, September 2007.

Complex Systems Design: A Cognitive Approach, Invited Luncheon Keynote Speaker, The 2007 ADM-INGEGRAF Joint International Congress, Perugia, Italy, June 2007

Virtually Assisted Surgical Training: Concepts, Foundations, and Model-based Techniques, Invited Lecture Speaker, University of Perugia, June 2007

Virtually Assisted Surgical Training: A Model-Based Approach. Invited Speaker, Universitat Autònoma de Barcelona, Spain, October 2006.

Graduate Training in the Electrical and Computer Engineering at the University of Arizona, Invited Speaker, Universitat Autònoma de Barcelona, Spain, October 2006.

From Artificial Intelligence to Cognitive Computing: Can we Build Very Smart Systems?, Invited Distinguished Seminar Speaker, Department of Electrical and Computer Engineering, Wayne State University, Detroit, September, 2006.

From Artificial Intelligence to Cognitive Computing: Can we Build Very Smart Systems?, The University Faculty Fellows Lecture Series, October 2005.

Cognitive Computing: Principles, Architectures, and Applications. Plenary Keynote Address, 2005 European European Conference on Modelling and Simulation, ECMS 2005, Riga, Latvia, June 2005.

Complex Systems Design: A Cognitive Approach. Invited Plenary Speaker, Raytheon Corporation Technology Symposium, September 2004.

Lectures on Systems Design and Modeling. Technical University of Barcelona and The German Military Academy, Munich, June and July, 2004.

Complex Systems Design: A Simulation Modeling Approach. Plenary Keynote Address, Intl. Workshop on Harbour, Maritime, and Multimodal Logistics Modeling and Simulation, Riga, Latvia, Sept. 2003.

Model-Based Design and Testing of Embedded Systems, Invited Seminar Presentation, Dept. of Modeling and Simulation, Riga Technical University, Latvia, Sept. 2003.

Model-Based Design and Testing of Embedded Real-Time Systems, Invited Lecture, Vanderbilt University, 2002.

Model-Based Design and Testing of Embedded Real-Time Systems, Invited Lecture, Bundeswehr University, Munich, 2001.

Model-Based Design of Embedded Real-Time Systems, Invited Lecture, Technical University of Darmstadt, Germany, 2001.

Requirements Based Testing of Real-Time Embedded Systems, Invited Lecture, Raytheon Missile Systems Division, Tucson, Jan 2001.

Engineering of Computer Based Systems, Invited Lecture Series, Polytechnic University of Upper Austria, May 2001.

Model-Based Codesign, Invited Seminar Presentation, University of Central Florida, Orlando, FL, 2000.

Engineering of Computer Based Systems, Invited Lecture Series at the Technical University of Munich, Germany, 1999, 2000, 2001.

Embedded Systems Design, Invited Lecture, Polytechnic of Upper Austria, 1999.

Model-Based Codesign, Invited Seminar Presentation, Systems and Industrial Engineering Department, The University of Arizona, 1998.

Model-Based Codesign, Invited Plenary Lecture, Wroclaw University of Technology, Poland, 1998.

Model-Based Codesign: The Framework and its Application to Intelligent, Cruise Control System Design, Invited Seminar Presentation, Siemens Central Research Laboratories, Munich, 1997.

An Integrative Model-Based Approach to Design of Complex Systems. Invited Seminar Presentation, C-Lab, Paderborn, Germany, Aug. 1996.

An Integrative Model-Based Approach to Design of Complex Systems. Seminar Presentation, Siemens Research Laboratories, Erlangen, Aug. 1996.

Model Based Codesign: A Report on Work in Progress. Colloquium Address, Siemens Central Research Laboratories, Munich, Aug. 1996.

Concepts for Computer Assisted Engineering Process Management. Seminar Presentation, Siemens Central Research Laboratories, Munich, July 1996.

An Integrative Model-Based Approach to Design of Complex Systems. Invited Speaker. Model Integrated Computing Workshop, Nashville, TN, June 1996.

An Integrative Approach to Engineering Design. Invited Speaker, Daimler Benz, AG Research Laboratories, Berlin, June 1994.

An Integrative Approach to Engineering Design. Invited Speaker, University of Linköping, Sweden, May 1994.

An Integrative Approach to Engineering Design. Invited Speaker, Siemens Central Research Laboratories, Munich, May 1994.

Virtual Process Design Techniques in Intelligent Manufacturing. Plenary Address, The 4th Annual Conference on AI, Simulation and Planning in High Autonomy Systems, Tucson, AZ, Sept. 1993.

A Note On Codesign and Computer Aides Software/Hardware Engineering. Opening Address, 2nd Intl. IFIP Workshop on Hardware/Software Co-Design, Innsbruck, Austria, May 1993.

Towards Design and Control of Intelligent Manufacturing Systems. Invited Seminar Speaker, University of Sydney, Australia, July 1992.

The Role of Methodology in Design. Opening Address, 1st Intl. IFIP Workshop on Hardware/Software Co-Design, Grassau, Germany, May 1992.

Artificial Intelligence: What it is and What it is not. University of Arizona Homecoming '91, November, 1991.

Knowledge-Based Design: A Framework for Flexible Manufacturing CAD, Advanced Tutorial, Intl. Symposium on Industrial Robots, Detroit, MI, Oct. 1991.

Knowledge-Based System Design. Invited Seminar Speaker, The Aerospace Corporation, Oct. 1991.

Knowledge-Based Design: A Simulation Modeling Framework. Invited Colloquium Speaker, Knowledge Systems Laboratory, Stanford University, May 1991.

Knowledge-Based Design: A Simulation Modeling Framework. 1991 Colloquium Series Speaker, Wright State University, Dayton, OH, January 1991.

Model Development in Knowledge-Based Simulation and Design. Advanced Tutorial, 1990 Artificial Intelligence and Simulation Conference, Nashville, TN, Apr. 1990.

Design Modeling of Hierarchical, Modular Systems: Concepts, Implementation and Case Studies. Invited Seminar Speaker, Department of Computer Science and Engineering, University of Louisville, KY, Mar. 1990.

Hierarchical, Modular Modeling in DEVS-Scheme. Advanced Tutorial, 1989 Winter Simulation Conference, Washington, DC, December 1989.

Guest Lectures on Simulation and Design. Technical University of Wrocław, Poland, November 1989.

Model-Based System Design: Fundamental Concepts and Methods. Guest Seminar Series Speaker, Dept. of Computer Science, Virginia Tech., March 1989.

Knowledge-Based System Design. Invited lecture presented to Mitre Corp., Bedford, MA., September 1988.

Knowledge-Based System Design. Invited lecture presented to Martin Marietta Corp., Denver, CO, July 1988.

A Modeling Approach to Design of Modular, Hierarchically Structured Systems. Guest Lecturer, Central Research Laboratories, Siemens Corp., Munich, April 1988.

System Design Modeling Framework. Guest Lecturer, The University of Linz, Linz, Austria, April 1988.

Concepts for Knowledge-Based System Design. Invited lecture presented to S-Cubed; Research Division of Maxwell Laboratories Inc., San Diego, CA, February 1988.

Concepts for Knowledge-Based System Design. Invited lecture presented for Research and New Product Development Group, Teknowledge Inc., Palo Alto, CA, April 1987.

Knowledge-Based Simulation and Hierarchical Modeling. Invited lecture presented at an IEEE Computer Society Workshop: A Current Look at Discrete Event Simulation, Tampa, FL, March 1987.

Design for Fault Detection and Management in Hardware Realization of Data Abstraction Modules. Invited presentation at the 8th European Meeting on Cybernetics and Systems Research, University of Vienna and at the System Design Automation Workshop, Johannes Kepler University, Linz, Austria, April 1986.

PROFESSIONAL SERVICE

Conference Organization

- *Program Chair*, The 20th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '13), Phoenix, AZ, 2013.
- *Workshop Co-Chair*, Computer Based Methods in Clinical and Academic Medicine, 14th International Conference on Computer Aided Systems Theory, EuroCAST 2011, Spain, 2013.
- Program Committee Member, EuroCast 2013, Spain.
- *Program Committee Member*, 2nd Intl. Conference on Simulation and Modeling Methodologies, Rome, Italy 2012.
- *Program Committee Member*, The 19th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '12), Novi Sad, Serbia, April 2012.
- *Steering Committee Member*, The 19th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '12), Serbia, April 2012.
- *Workshop Co-Chair*, Computer Based Methods in Clinical and Academic Medicine, 13th International Conference on Computer Aided Systems Theory, EuroCAST 2011, Spain, February 2011.
- Program Committee Member, EuroCast 2011, Spain.

- *Program Committee Member*, The 18th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '11), Las Vegas, Nevada, April 2011.
- *Steering Committee Member*, The 17th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '10), Oxford, England, March 2010.
- *Program Committee Member*, The 4th International Conference on Broadband Communications, Information Technology and Biomedical Applications, Wroclaw, Poland, July 2009.
- *Steering Committee Member*, The 16th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '09), San Francisco, April 2009.
- *Steering Committee Member*, The 15th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '08), Belfast, Ireland, March, 2008.
- *Program Committee Member*, 2nd Australian Conference on Wireless Broadband and Ultra Wideband Communications, Sydney, Australia, August 2007.
- *General Chair*, The 14th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '07), Tucson, Arizona, March 2007.
- *Program Chair*, The 2nd European Modeling and Simulation Symposium. EMSS 2006, Barcelona, Spain, October 4-6, 2006.
- *US Chair*, The 13th IEEE Intl. Conference and Workshop on the Engineering of Computer Based Systems (ECBS '06), Potsdam, Germany, March 2006.
- *Panel Moderator*, The 13th IEEE Intl. Conference and Workshops on the Engineering of Computer Based Systems (ECBS '06), Potsdam, Germany, March 2006.
- *Member, Scientific Committee*, The 17th European Simulation Symposium, Marseilles, France, October 2005.
- *Program Chair*, The 12th IEEE Intl. Conference and Workshops on the Engineering of Computer-Based Systems, Greenbelt, MD, April 2005.
- *Program Committee Member*, The 11th IEEE Intl. Conference on Engineering of Computer-Based Systems, Brno, Czech Republic, May 2004.
- *Steering Committee Member*, The 11th IEEE Conference on Engineering of Computer-Based Systems, Brno, Czech Republic, May 2004.
- *Co-Chair*, IEEE Workshop on Formal Specifications of Computer-Based Systems (ECBS '04), Brno, Czech Republic, May 2004.
- *Program Committee Member*, The 2005 IEEE Intl. Conference on Systems, Man and Cybernetics, Washington, DC, October 2005.
- *Program Committee Member*, The 10th IEEE Conference on Engineering of Computer-Based Systems, Huntsville, AL, Apr. 2003.
- *Co-Chairman*, 3rd Formal Specifications of Computer-Based Systems Workshop, Alabama, April 2002.
- *Co-Chairman*, 2nd Formal Specifications of Computer-Based Systems Workshop, Lund, Sweden, April 2002.
- *Program Committee Member*, The 2002 IEEE Conference on Engineering of Computer-Based Systems, Lund, Sweden, April 2002.
- *Program Committee Member*, The 2002 Conference on AI, Simulation and Planning in High Autonomy Systems, Lisbon, Portugal, April 2002.
- *Program Committee Member*, DATE 2002, Design, Automation and Test Conference Europe, Paris, March 2002.
- *Co-Chairman*, 1st Formal Specifications of Computer-Based Systems Workshop, Washington, DC, April 2001.

- *Program Committee Member*, The 2001 IEEE Intl. Conference on Systems, Man and Cybernetics, Tucson, AZ, October 2001.
- *Program Committee Member*, DATE 2001, Design, Automation and Test Conference Europe, Munich, Mar. 2001.
- *Program Committee Member*, The 2001 IEEE Conference on Engineering of Computer-Based Systems, Washington, DC, Apr. 2001.
- *Program Committee Member*, The 2000 IEEE Intl. Conference on Systems, Man and Cybernetics, Nashville, TN, October 2000.
- *Program Co-Chair*, The 2000 Conference on AI, Simulation and Planning in High Autonomy Systems, Tucson, AZ, March 2000.
- *Program Committee Member*, The 2000 IEEE Conference on Engineering of Computer-Based Systems, Edinburgh, Apr. 2000.
- *US Co-Chair*, 1999 IEEE Intl. Conference on Engineering of Computer-Based Systems, Nashville, TN, March 1999.
- *Program Committee Member*, 13th European Simulation Multiconference, June 1999.
- *Program Advisory Committee Member*, 7th Intl. Workshop on Computer Aided Systems Theory and Technology, September 1999.
- *Steering Committee Member*, The 1998 IEEE Conference on Engineering of Computer-Based Systems, Jerusalem, March 1998.
- *Program Committee Member*, The 14th European Meeting on Cybernetics and Systems Research, Vienna, Austria, April 1998.
- *Program Chair*, 1997 IEEE Conference on Engineering of Computer-Based Systems, Monterey, CA, March 1997.
- *Program Committee Member*, Communication Networks and Distributed Systems Modeling, 1997 SCS Winter Simulation Multiconference., Phoenix, AZ, December 1997.
- *Program Committee Member*, Object-Oriented Simulation, 1997 SCS Winter Simulation MultiConference, Phoenix, AZ, 1997.
- *Program Committee Member*, EUROCAST '97, Spain, 1997.
- *Co-Chairman*, Design and Analysis of Complex Systems Symposium, The 13th European Meeting on Cybernetics and Systems Research, Vienna, Austria, 1996.
- *Program Committee Member*, The 13th European Meeting on Cybernetics and Systems Research, Vienna, Austria, April 1996.
- *US General Chair*, 1996 IEEE Conference. on Engineering of Computer-Based Systems, Germany, March 1996.
- *Organizing and Program Committee Member*, 1996 IFIP Working Conference on Hardware/Software Codesign, Zakopane, Poland 1996.
- *Organizing Committee Member*, 6th Intl. Conference on AI, Simulation, and Planning in High Autonomy Systems Conference, San Diego, CA, March 1996.
- *General Chairman*, 1995 IEEE Symposium and Workshop on Engineering of Computer Based Systems, Tucson, AZ, March 1995.
- *Organizing Committee Member*, 5th Intl. Conference on AI, Simulation, and Planning in High Autonomy Systems Conference, Orlando, FL, December 1994.
- *Program Committee Member*, IMACS European Simulation Congress, Hungary, 1995.
- *Organizing Committee Member*, 5th Intl. Conference on AI, Simulation, and Planning in High Autonomy Systems Conference., Orlando, FL, Dec. 1994.
- *US Chairman*, 3rd Intl. IFIP Workshop on Hardware/Software CoDesign, Grenoble, France, September 1994.

- *Program Committee Member*, IEEE Workshop on Systems Engineering of Computer Based Systems, Stockholm, Sweden, May 1994.
- *Co-Chairman*, Intelligent Autonomous Systems Symposium, The 12th European Meeting on Cybernetics and Systems Research, Vienna, Austria, April 1994 .
- *General Chairman*, 4th Intl. Conference on AI, Simulation, and Planning in High Autonomy Systems Conference, Tucson, AZ, September 1993.
- *US Chairman*, 2nd Intl. IFIP Workshop on Hardware/Software CoDesign, Innsbruck, Austria, May 1993.
- *US Chairman*, 1st Intl. IFIP Workshop on Hardware/Software Co-Design, Grassau, Germany, 1992.
- *Organizing Committee Member*, 14th Intl. Conference on Information Technology Interfaces, Croatia, 1992.
- *Executive Committee Member - Publications Chair*, 11th IEEE Intl. Phoenix Conference on Computers and Communications, Phoenix, AZ, March 1992.
- *Co-Chairman*, Intelligent Autonomous Systems Symposium, The 11th European Meeting on Cybernetics and Systems Research, Vienna, Austria, April 1992 .
- *Organizing Committee Member*, 3rd International Conference on AI, Simulation and Planning in High Autonomy Systems, Perth, Australia, July 1992.
- *Co-Chairman*, 2nd International Conference on AI, Simulation and Planning in High Autonomy Systems, Cocoa Beach, FL, April 1991.
- *Executive Committee Member and University Liaison*, 10th IEEE Intl. Phoenix Conference on Computers and Communications, Phoenix, AZ, March 1991.
- *Program Committee Member*, The 5th Artificial Intelligence and Simulation Workshop, The 1990 American Association of Artificial Intelligence Conference, Boston, MA, July 1990.
- *General Co-Chairman*, 1st Intl. Conference on AI, Simulation and Planning in High Autonomy Systems, Tucson, AZ, March 1990.
- *Chairman*, The 4th Artificial Intelligence and Simulation Workshop, The 11th Intl. Joint Conference on Artificial Intelligence, Detroit, MI, August 1989.
- *Co-Director*, Knowledge-Based System Design and Simulation, Professional Development Seminar Series, University of Arizona, Tucson, AZ. January 1988, May 1988, December 1988, and May 1989.
- *Chairman*, VLSI Packaging CAD Technology Transfer Workshop, Tucson, AZ, April 1989.

Editorial Duties

- *Editorial Board Member*, Journal of Computing and Information Technology, 1992-present
- *Associate Editor*, ACM Transactions on Computer Modeling and Simulation, 1990-2007
- *Associate Editor*, IEEE Transactions on Systems, Man and Cybernetics, 1995-2006
- *Adviser*, IEEE Computer, 2002-2004
- *Department Editor: Integrated Engineering*, IEEE Computer, 1997-2001
- *Guest Editor*, Applied Artificial Intelligence, 1994
- *Guest Editor*, Applied Artificial Intelligence, 1991
- *Founding Editorial Committee Member*, ACM Transactions on Computer Modeling and Simulation (Tomacs), 1990

Other Service to the Profession

- *Reviewer*, Fulbright Scholars Grants Commission, 2008 – present.
- *Member*, Advisory Board, Department of Electrical Engineering, Arizona State University, 2008 – 2011.
- *Member*, Advisory Board, Department of Electrical and Computer Engineering, University of New Mexico, 2006 – 2011.
- *Member*, Board of Directors, The Society for Modeling and Simulation International, 2005 – 2008.
- *Executive Committee Member*, IEEE Technical Committee on the Engineering of Computer-Based Systems (ECBS), 1994 – 2012.
- *Vice-Chair*, IFIP Hardware/Software Codesign Working Group, 1994 – 1998.
- *Founding Chair and Program Chair*, IEEE International Conference and Workshop on the Engineering of Computer-Based Systems. 1995
- *Founding Co-Chairman*, International Conference on AI, Simulation and Planning in High Autonomy Systems, 1990
- *Founding Associate Editor*, ACM Transactions on Modeling and Computer Simulation (1988)

Principal University of Arizona Service

- Regents Professorship Selection Advisory Committee (Fall 2012 – present)
- CIO and UITS Executive Director 5-year Review Committee (Fall 2012 – present)
- UA Capital Planning Committee (Fall 2012 – present)
- Global Initiatives Institute Founding Committee (Fall 2012 – present)
- University Distinguished Outreach Professor Awards Committee (2011 – present)
- Academic Program Review Committee Member, Dept. of Management Information Science, Eller College of Business, March 2013.
- 2012 Student Technology Innovation Award Selection Committee (Spring 2012)
- Budget Governance Committee, 2011- 2012.
- Co-Chair, 5-year Review Committee for the Vice President for Research, Graduate Studies and Economic Development, The University of Arizona, 2011.
- Co-Chair, Planning for the Future Working Team, University of Arizona, NCA Accreditation Process, 2008 – 2010.
- Member, Department Heads Advisory Committee to the President, 2008 – present.
- Member, Provost Strategic Advancement Committee, 2008.
- Member, Executive Vice President and Provost Search Committee, 2007 – 2008.
- Member, Simulation Committee, College of Medicine, 2006 – present.
- Chair, Department Head Search Committee, System and Industrial Engineering, 2006 – 2007.
- Member, International Affairs College Advisory Committee, 2003 – present.
- Member, Joint Review Committee for Sponsored Projects Services and Research Contracts Analysis Offices, 2007.
- Member, Computer Science Department Academic Program Review, 2007
- Member, Graduate Student Support Committee, 2005 – 2006.
- Member, Employment Policies Review Team, 2005.
- Member, Optical Sciences Academic Program Review, 2005.
- Member, Cognitive Science Academic Program Review, 2004.
- Advisor, Focused Excellence Study Team, Cognitive and Neuroscience, 2003, 2004.
- Chair and Member, Promotion and Tenure Committee, ECE Dept, University of Arizona,

1999-2002.

- Post-tenure Audit Committee, College of Engineering and Mines, University of Arizona, 2000-2002.
- Member, Graduate Council, University of Arizona, 1996-present.
- Interviewer, Premed Health Admissions Assessment Committee, 1995-present.
- Chairman, Computer Engineering Group, ECE Dept., University of Arizona, 1993-1994.
- Chairman, Computer Policy Committee, ECE Dept., University of Arizona, 1993-1994.
- Member, Research Computing Advisory Committee, University of Arizona, 1988-1991.

Service to the State of Arizona and community outreach

- Mentor to San Pueblo High School Student, Tucson, 2012 - present
- Invited Speaker, Tucson Senior Academy, 2005.
- Professional Internship Program, Tucson Unified School District, 1996.
- National Merit Scholar Mentor, 1995.
- Member of the Working Group to develop Arizona Strategic Plan for Economic Development, 1991-1993.
- Flinn Scholar Mentor, 1989-1991.
- High School Summer Apprentice Program Mentor, 1990.

Reviewing and Refereeing (journals and funding agencies only)

Journals

IEEE Computer, IEEE Expert, IEEE Transactions on Communications, IEEE Transactions on Systems, Man and Cybernetics, IEEE Transactions on VLSI, IEEE Transactions on Computers, ACM Transactions on Modeling and Computer Simulation, ORSA Journal on Computing, Journal of the Operational Research Society, Management Science, Simulation Journal, International Journal of General Systems, International Journal of Modeling and Simulation, Transactions of the Society for Computer Simulation.

Funding Agencies

National Science Foundation, Research Council of Canada, Australian National Research Council, Austrian National Science Foundation, Czech National Science Foundation, Czech Ministry of Higher Education.

STUDENT ADVISING

Directed 16 PhD dissertations and 34 MSc theses.

MAJOR HONORS AND AWARDS

- *IEEE Certificate of Recognition* for contributions and service to the Region 6 Southwest Area

- Named *University Distinguished Professor*, The University of Arizona, 2009.
- *Award for Excellence at Student Interface (Best Teaching Award)*, College of Engineering, The University of Arizona, May 2006.
- *Fulbright Senior Specialist Award* for research collaboration with The Cracow Technical University, Cracow, Poland, June 2004.
- *Award for Excellence at Student Interface (Best Teaching Award)*, College of Engineering, The University of Arizona, May 2003.
- *Recognition Award "For Years of Support as Advisor to the High Level Design Department,"* Infineon Technologies AG, Munich, April 2002.
- *Best Paper Award* for a technical article at the 22nd Army Science Conference, Baltimore, MD, December, 2000.
- *Certificate of Appreciation* for superior performance in support of the Army Research Laboratory 4th Annual Federated Laboratories Symposium, College Park, MD, Mar. 21-23, 2000.
- *IEEE Computer Society Certificate of Appreciation* for service as Editor of *Integrated Engineering*, 2000.
- *IEEE Computer Society Certificate of Appreciation for service to the computing profession as Editor of Integrated Engineering*, 1999.
- *IEEE Computer Society Certificate of Appreciation for service to the computing profession as Editor of Integrated Engineering*, 1998.
- *IEEE-Eta Kappa Nu Best Teaching Award*, University of Arizona, ECE Department, 1998.
- *IEEE Computer Society Certificate of Appreciation for service to the computing profession as Editor of Integrated Engineering*, 1997.
- *IEEE Certificate of Appreciation for dedicated service as the Program Chair of the 1997 Conference and Workshop Engineering of Computer-Based Systems*.
- *IEEE Computer Society Certificate of Appreciation* for organizing and co-chairing the 1996 IEEE Intl. Symposium and Workshop on Systems Engineering of Computer Based Systems, Germany, March 1996.
- *IEEE Computer Society Certificate of Appreciation* for organizing and chairing the 1995 IEEE Intl. Symposium and Workshop on Systems Engineering of Computer Based Systems, Tucson, AZ, March 1995.
- *Fulbright Certificate* for increasing the mutual understanding between the people of Austria and the United States through Academic Achievement, 1994.
- *Research Fellow*, US Army Research Institute, Ft Huachuca, AZ, 1994.
- *Fulbright Senior Scholar Fellowship* for a sabbatical leave to Austria, 1993.
- *Summer Research and Engineering Fellowship*, U.S. Army Research Laboratories, 1992.
- *Travel Grant* to present VLSI Packaging Design Support Software at TECHON '90, Semiconductor Research Corporation, 1990.
- *Travel Stipend* awarded by WE-Heraeus Foundation (Germany) to present a lecture at Design Methods and Technologies for Multi-Chip Modules Workshop, West Berlin, 1990.
- *NSF Research Assistantship*, Department of Computer Science, Wayne State University, September 1983 - August 1984.
- *Graduate Teaching Assistantship*, Department of Computer Science, Wayne State University, September 1981-August 1983.
- *NATO Fellowship*, Advanced Study Institute, University of Ottawa, Canada (2 weeks), July 1982.
- *Research Fellowship*, Technical University of Wroclaw, Poland, March 1980 - August 1981.

- *Undergraduate Fellowship*, Technical University of Wroclaw, Poland, September. 1979 - March 1980.
- *Graduated Summa Cum Laude*, Technical University of Wroclaw, President's Award, March 1980.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- Society for Simulation in Healthcare, Member.
- IEEE, Senior Member
- Society for Computer Simulation, Senior Member (1985 – 2001)
- Association for Computing Machinery, Member

CITIZENSHIP

U.S.A.

REFERENCES

Available upon request.

February 28, 2013