BOGDAN HOANCA
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AREAS OF INTEREST

Teaching Management Information Systems, Information Security, Data Networking, Telecommunications, Computer Programming, Project Management

Research Information Security and Privacy, Societal Implications of Technology

2. FORMAL EDUCATION

Sept. 1994-May1999: Ph.D. in Electrical Eng, Univ. of Southern California, **GPA 3.95/4.00**
Ph. D. dissertation title: Optoelectronic enhancements to single instruction multiple data computing architectures

Sept. 1992-June 1994: MS in Electrical Engineering, Syracuse University, **GPA 4.00/4.00**
MS Project: Routines for Computing Capacitances of Structures with Cylindrical Symmetry (large computer program written in C/C++)

Sept. 1987-June 1992: Electronics Engineer Degree (5 year program, including a thesis)
Polytechnic Institute of Bucharest, Romania, **GPA 9.86/10.00,** Class rank **2/350**
Diploma Thesis: Integrated Programming Environment for Emulating Motorola DSP 56000 on IBM Personal Computers (more than 30,000 lines of code written in C)

3. PROFESSIONAL CERTIFICATIONS

4. TEACHING AND RESEARCH EXPERIENCE

June 2002 - present: Professor of Management Information Systems, University of Alaska Anchorage, College of Business and Public Policy, Computer and Information Systems Department
- Promoted to Professor July 2011
- Tenured and promoted to Associate Professor July 2007
- Full tripartite teaching load, graduate, upper-division and lower-division classes
- Courses taught:

- o CIS A692 Management Information Systems Seminar
- o BA A656 Management Project
- o BA A690 Business Environment and Systems
- o BA A695 Graduate Internship
- o BA A698 MBA Individual Research
- o CIS A110 Computer Concepts in Business
- o CIS A305 Managerial Presentations
- o CIS A345 Managing Data Communications and Computer Networks
- o CIS A376 Management Information Systems
- o CIS A410 Project Management
- o CIS A445 Advanced Computer Networks
- o EE A241 Computer Hardware Concepts
- o EE A694 Design and Architecture of Fiber Optic Systems

June 1999 – Sept. 2000: Research Associate, Optical Communications Laboratory, Department of Electrical Engineering-Systems, **University of Southern California**
- Devised and performed experiments in fiber optic telecommunications.
- Helped write research papers and proposals.
- Trained and supervised several researchers and Ph.D. candidates.
- Worked closely with the Technology Licensing Office in applying for and licensing out patents for the research group.

Sept. 1995 - May 1999: Research Assistant, Optical Information Processing Laboratory, Department of Electrical Engineering-Systems, **University of Southern California**
- Performed graduate level research work, including writing proposals to DARPA and NSF, writing and reviewing research papers. Part of the work included writing software to interface computers to novel, custom designed integrated circuits.

Sept. 1994 - May 1995: Teaching Assistant, Department of Electrical Engineering-Electrophysics, **University of Southern California**
- Taught undergraduate level courses in electrical engineering
  - o Semiconductor Devices
  - o Electromagnetics
  - o Circuit Design

Sept. 1992 – Aug. 1994: Teaching Assistant, Department of Electrical and Computer Engineering, **Syracuse University**
- Taught undergraduate and graduate level courses in electrical engineering. Very highly rated in the student evaluations. Nominated for Best Teaching Assistant.
  - o Infrared engineering (graduate)
  - o Adaptive antennas (graduate)
  - o Signal processing
  - o Electromagnetics
  - o Introduction to electronic circuits

5. PUBLICATIONS

5. a. Journal papers
5. a. 1 Refereed journal papers

5. a. 1. i Invited journal papers (peer-reviewed)

- C. H. Chen, **B. Hoanca**, C.B. Kuznia, A.A. Sawchuk and J. M. Wu, "TRANslucent Smart Pixel ARray (TRANSPAR) Chips for High Throughput Networks and SIMD Signal Processing" (Invited Paper), *IEEE Journal on Special Topics on Quantum Electronics Special Issue on Smart Pixels*, vol. 5(2), pp. 316 -329, 1999.

5. a. 1. ii Contributed journal papers (peer-reviewed)

- B. **Hoanca**, "Teaching Management Information Systems as a General Education Requirement (GER) Capstone," Information Systems Education Journal, vol. 10(5), pp. 15-29, 2012. Available online at http://isedj.org/2012-10/N5/ISEDJv10n5p15.pdf
  Editor's Note:
  This paper was selected for inclusion in the journal as the ISECON 2011 Best Paper. The acceptance rate is typically 2% for this category of paper. This is based on blind reviews from six or more peers, including three or more former best papers authors who did not submit a paper in 2011.
- A. M. Desai, D. Fitzgerald and **B. Hoanca**, "Offering a Digital Forensics Course in Anchorage, Alaska," Information Systems Education Journal, vol. 7(35), pp. 1-14, April 27, 2009. Available online at http://isedj.org/7/35/.
- **B. Hoanca**, "Freedom of silence vs. freedom of speech: technology, law and information security," *IEEE Technology and Society Magazine*, vol. 25(3), Fall 2006, pp. 8-15.
- **B. Hoanca**, "How good are our weapons in the spam wars? – a systems analysis of spam fighting techniques," *IEEE Technology and Society Magazine*, vol. 25(1), Spring 2006, pp. 22 – 30.
- C. B. Kuznia, J. M. Wu, C. H. Chen, **B. Hoanca**, L. Cheng, A. G. Weber, and A. A. Sawchuk, "Two-dimensional Parallel Pipeline Smart Pixel Array Cellular Logic (SPARCL) Processors: Chip Design and System Implementation," *IEEE Journal on Special Topics on Quantum Electronics Special Issue on Smart Pixels*, vol. 5(2), pp. 376-386, 1999.
- J. M. Wu, C.B. Kuznia, **B. Hoanca**, C. H. Chen, and A.A. Sawchuk, "Demonstration and architectural analysis of complementary metal-oxide semiconductor/multiple-quantum-well smart-pixel array cellular logic processors for single-instruction multiple-data parallel-pipeline processing," *Applied Optics*, vol. 38(11), pp. 2270-2281, 1999.
- T. Sangsiri, S. Havstad, C. Kim, X. Jiang, **B. Hoanca**, and A. E. Willner, "Bit synchronization using subcarriers for control signaling," *IEEE Photonics Technology Letters*, vol. 11(5), pp. 602-604, 1999.
- R. Khosravani, M. I. Hayee, **B. Hoanca**, and A. E. Willner, "Reduction of coherent crosstalk in WDM add/drop multiplexing nodes by bit pattern misalignment," *IEEE Photonics Technology Letters*, vol. 11(1), pp. 134-136, 1999.

- **B. Hoanca**, S. Dubovitsky, D. X. Zhu, A. A. Sawchuk, W. H. Steier, and P. D. Dapkus, "All-Optical Routing Using Wavelength Recognizing Switches," *IEEE Journal of Lightwave Technology*, Special Issue on Photonic Packet Switching Systems, Technologies and Techniques, vol. 16(12), pp. 2243-2254, 1998.

- **B. Hoanca** and A. A. Sawchuk, "Cellular Interconnects Optimization Algorithm for Optoelectronic Single Instruction Multiple Data Arrays," *Applied Optics*, vol. 37(5), pp. 871-883, 1998.

- X-P Chen, **B. Hoanca**, K-M Feng, J-X Cai, and A-E Willner, "Experimental demonstration of fast simultaneous wavelength switching and time demultiplexing using a nonlinear-optical loop mirror, " *IEEE Photonics Technology Letters*, vol. 9(7), pp. 919-921, July 1997.

5. a. 2 Non-refereed journal papers

- A. E. Willner, **B. Hoanca**, and T. Day, "Dynamically Reconfigurable WDM Networks Remain a Challenging Goal," **Invited Paper**, **Lightwave Magazine**, June Issue, pp. 54-57, Pennwell Publishers, 1997

5. b. Book chapters

- E. Forest and **B. Hoanca**, *Artificial Intelligence: Marketing's Game Changer*, under review for publication as a chapter in Handbook of Research on Innovations in Marketing Information Systems, edited by Dr. Theodosios Tsiakis, IGI Global, 2015.
- R. Anthony, **B. Hoanca** and K. Mock, *Biometric authentication – challenges and human rights*, in Akrivopoulou, C. M., & Garipidis, N. (2012). Human Rights and Risks in the Digital Era: Globalization and the Effects of Information Technologies (pp. 125-141).
- **B. Hoanca** and K. Mock, *Effects of Digital Convergence on Social Engineering Attack Channels*, in Social Computing: Concepts, Methodologies, Tools, and Applications, edited by Subhasish Dasgupta, IGI-Global, 2010, pp 1764-1777 (reprint of same title below).
- **B. Hoanca** and K. Mock, *Social implications of distance education in Alaska*, chapter in Electronic Business: Concepts, Methodologies, Tools, and Applications, Chapter 5.12, Volume III, edited by In Lee, the IDEA Group, 2009, pp. 1576-1589 (reprint of same title below)
- Several contributed pieces for Start Talking: A Handbook for Engaging Difficult Dialogues, edited by Kay Landis, University of Alaska Anchorage, 2008.
    - **B. Hoanca**, *Classroom Debate*, pp 62-63.
    - **B. Hoanca** & Tracy Stewart, *Using Film to Spark a Community Discussion*, pp. 162-166.
    - **B. Hoanca**, *Emerging Controversies in Business and Technology*, pp. 167-169.
- **B. Hoanca** and K. Mock, *Effects of Digital Convergence on Social Engineering Attack Channels*, in Social and Human Elements of Information Security: Emerging Trends and Countermeasures, edited by Manish Gupta and Dr. Raj Sharman, IDEA Group, 2008, pp 133-147.
- **B. Hoanca** and K. Mock, *Passive Eye Monitoring in Information Security*, invited chapter in Passive Eye Monitoring: Algorithms, Applications and Experiments," edited by Dr. Riad I. Hammoud, Springer Verlag, 2008, pp. 265-284.

- **B. Hoanca** and K. Mock, *Implications of phishing attacks on enterprise security* in <u>Advances in Enterprise Information Technology Security</u>, edited by Dr. Djamel Khadraoui and Dr. Francine Herrmann, IDEA Group, 2007, pp. 221-238.
- **B. Hoanca** and K. Mock, *Social implications of distance education in Alaska*, chapter in <u>Social Implications and Challenges of E-Business</u>, edited by Prof. Feng Li, the IDEA Group, 2007, pp. 28-41.
- A. E. Willner, Y. -W. Song, J. Mcgeehan, Z. Pan and **B. Hoanca**, *Dispersion management*, in the <u>Encyclopedia of Modern Optics</u>, edited by R. D. Guenther, D. G. Steeland and L Bayvel, Elsevier, Oxford 2005, ISBN 0-12-227600-0, Vol. 1, pp 353-365.
- A. E. Willner and **B. Hoanca**, *Fixed and tunable management of fiber chromatic dispersion*, in <u>Optical Fiber Telecommunications IV</u>, Ivan P. Kaminow and Tingye Li, Editors, Academic Press 2002, pp. 642-724.

5. c. i. Patents

- US 7,986,816, "Methods and systems for multiple factor authentication using gaze tracking and iris scanning," issued Jul 26, 2011. Inventors: **Hoanca; Bogdan (Anchorage, AK)** and Mock; Kenrick (Anchorage, AK).
- US 7,194,211, "Method and system for 80 and 160 gigabit-per-second QRZ transmission in 100 GHz optical bandwidth with enhanced receiver performance," issued March 20, 2007. Inventors: Schemmann; Marcel F. C. (Maria-Hoop, NL), Maricevic; Zoran (Manlius, NY), **Hoanca; Bogdan (Anchorage, AK)**
- US 7,082,268, "Method and system for 80 and 160 gigabit-per-second QRZ transmission in 100 GHz optical bandwidth with enhanced receiver performance," issued July 25, 2006. Inventors: Schemmann; Marcel F. C. (Maria-Hoop, NL), Maricevic; Zoran (Manlius, NY), **Hoanca; Bogdan (Anchorage, AK)**

5. c. ii. Book reviews

- **B. Hoanca**, Review of <u>Fiber Optic Communications Systems</u>, by Govind P. Agrawal, in *Optics and Photonics News*, June 2011, p. 45
- **B. Hoanca**, Review of <u>WiMAX Networks: Techno-Economic Vision and Challenges</u>, by Ramjee Prasad and Fernanceo J. Velez, in *Optics and Photonics News*, May 2011, p. 50
- **B. Hoanca**, Review of <u>Fast Fourier Transform - Algorithms and Applications</u>, by K.R. Rao, D.N. Kim and J.-J. Hwang, in *Optics and Photonics News*, April 2011, p. 50
- **B. Hoanca**, Review of <u>The Silicon Web: Physics for the Internet Age</u>, by Michael Raymer, in *Optics and Photonics News*, January 2011, p. 51.
- **B. Hoanca**, Review of <u>Heterogeneous Wireless Access Networks: Architectures and Protocols</u>, by Ekram Hossain, in *Optics and Photonics News*, April 2010, p. 40
- **B. Hoanca**, Review of <u>Introduction to Ultra Wideband for Wireless Communications</u>, by Homayoun Nikookar and Ramjee Prasad, in *Optics and Photonics News*, December 2009, p. 49
- **B. Hoanca**, Review of <u>Analysis of Computer and Communication Networks</u>, by Fayez Gebali, in *Optics and Photonics News*, May 2009, p. 50

- **B. Hoanca**, Review of Electric Power System Basics for the Nonelectrical Professional, by Steven W. Blume, in *Optics and Photonics News*, October 2008, p. 56
- **B. Hoanca**, Review of Handbook of Optoelectronics, by J. Dakin and R.G.W. Brown, eds., in *Optics and Photonics News*, May 2008, p. 56
- **B. Hoanca**, Review of Digital Television: Technology and Standards, by John F. Arnold, Michael R. Frater and Mark R. Pickering, in *Optics and Photonics News*, April 2008, p. 47.
- **B. Hoanca**, Review of Analog Design Essentials, by Willy M.C. Sansen, in *Optics and Photonics News*, February 2008.
- **B. Hoanca**, Review of Broadband Circuits for Optical Fiber Communication, by Eduard Säckinger, in *Optics and Photonics News*, January 2007, p. 48
- **B. Hoanca** – review of MIMO Signals and Systems, by Horst Bessai, in *Optics and Photonics News*, June 2006, p. 46.
- **B. Hoanca** – review of High-Performance Backbone Network Technology, edited by Naoaki Yamanaka, in *Optics and Photonics News*, December 2005, p. 48.
- **B. Hoanca** – review of: Photonic Crystal Fibers, by Anders Bjarklev, Jes Broeng, and Araceli Sanchez Bjarklev, in *Optics and Photonics News*, January 2005, p. 43.
- **B. Hoanca** – review of: Biomedical Photonics Handbook, edited by Tuan Vo-Dinh, in *Optics and Photonics News*, December 2004, p. 50.
- **B. Hoanca** – review of IP Over WDM: Building the Next Generation Optical Internet, edited by Sudhir Dixit, in *Optics and Photonics News*, April 2004, p. 50
- **B. Hoanca** – review of International Encyclopedia of Environmental Politics, edited by John Barry and E. Gene Frankland, *Optics and Photonics News*, p.47, October 2003.
- **B. Hoanca** – review of Fundamentals of Microfabrication, by Marc J. Madou (2nd edition), in *Optics and Photonics News*, April 2003.
- **B. Hoanca** – review of Frequency Measurement and Control, by Andre N. Luiten, *Optics and Photonics News*, p. 51, October 2002.
- **B. Hoanca**– review of DWDM Fundamentals, Components, and Applications, *Journal of Optical Networks*, vol. 1, pp. 184-185, May 2002.

5. d. i. Invited conference papers (peer-reviewed)

- Alan E. Willner and **B. Hoanca**, "Wavelength-Division Multiplexing for High-Capacity Optical Interconnections," *Hot Interconnects*, Session 4, Optical Networks, paper 4.1, Stanford University, August 18-20, 1999.

- A. E. Willner and **B. Hoanca**, "Fiber-based components for WSM systems," (invited paper), *International Workshop on Fiber Optic Passive Components*, Pavia, Italy, September 19, 1998.

5. d. ii. Contributed conference papers

- **B. Hoanca**, T. C. Smith and K. J. Mock, "Machine-extracted eye gaze features: how well do they correlate to sight-reading abilities of piano players?" Proceedings of the Symposium on Eye Tracking Research and Applications (ETRA 2014), pp.279-282, ACM, Safety Harbor, Florida, March 26-28, 2014.

- **B. Hoanca**, "Using clickers to enhance learning in Management Information Systems classes," *Proceedings of the Information Systems Educators Conference (ISECON 2013)*, November 7-9, 2013, San Antonio, Texas.
- P. Jolly, J. Reed and **B. Hoanca**, "A Big Change at Get-You-There Air" critical incident presented at the *2013 Annual Meeting of the Society of Case Research*, February 27-28, 2013, Chicago, IL. The first two authors are my former students, taking the lead on the publication of a case originally developed in my CIS A692 class.
- K. Mock, **B. Hoanca**, M. Milton and J. Weaver. Real-time continuous iris recognition for authentication using an eye tracker, *Proceedings of the 19th ACM Conference on Computer and Communications Security (ACM CCS'12)*, October 16-18, Raleigh, NC, 2012.
- **B. Hoanca**, "Teaching Management Information Systems as a General Education Requirement (GER) Capstone," *Information Systems Educators Conference (ISECON 2011)*, November 3-6, 2011, Wilmington NC, **best paper for the conference**.
- **B. Hoanca** and K. Mock, "Using Market Basket Analysis to Estimate Potential Revenue Increases for a Small University Bookstore," *Conference on Information Systems Applied Research (CONISAR 2011)*, November 3-6, 2011 - Wilmington NC.
- J. Weaver, K. Mock and **B. Hoanca**, "Gaze-Based Password Authentication through Automatic Clustering of Gaze Points," *IEEE Systems Man and Cybernetics (SMC'2011)*, October 9-12, 2011, Anchorage, AK.
- **B. Hoanca** and K. Mock, "A Theoretical Framework for Assessing Eavesdropping-Resistant Authentication Interfaces," in *Proceedings 42st Hawaii International Conference on Systems Science (HICSS-42 2009)*, January 5-8, 2009, Waikoloa, Big Island, HI, USA (nominated for Best Paper Award).
- Y. Kanamori, **B. Hoanca** and S.-M.Yoo, "Three-party Quantum Authenticated Key Distribution with Partially Trusted Third Party," *GLOBECOM 2008*, Nov 30-Dec 4, 2008, New Orleans, LA, pp 1831-1835.
- Piccard, L., Ayers, M., **Hoanca, B.**, Hoffman, D., Martin, S., Mock, K. (2008). Alaska's Election Security: a Systems Approach. The 4th *International Project Management Conference*, September 15-18, 2008, Anchorage, AK.
- **B. Hoanca,** and K. Mock, "Password entry scheme resistant to shoulder surfing," in *Security and Management, SAM 08*, July 12-16, 2008, Las Vegas, NV.
- Desai, A. M., D. Fitzgerald, and **B. Hoanca,** "Offering a Digital Forensics Course in Anchorage, Alaska" in *Proceedings of ISECON 2006*, (Dallas): §5114, ISSN: 1542-7382.
- **B. Hoanca** and K. Mock, "Secure graphical password system for high traffic public areas," presented as a Late Breaking Result paper (upgraded to full oral presentation and awarded **Best Late Breaking Result Paper** award), presented at the *Eye Tracking Research and Applications Conference ETRA'06*, San Diego, CA, March 27-29, 2006.
- **B. Hoanca** and K. Mock, "Screen oriented technique for reducing the incidence of shoulder surfing," in *Security and Management (SAM'05)*, CSREA Press, pp. 334-340, Las Vegas, NV, June 20-23, 2005.
- **B. Hoanca**, "Freedom of silence vs. freedom of speech: technology, law and information security," presented at the *IEEE International Symposium on Technology and Society (ISTAS'05)*, Los Angeles, CA, June 8-10, 2005.
- A. L. Lovecraft, S. Haley, **B. Hoanca**, "Applications of Experimental Social Science to Perceptions of Fairness in Fiscal Policy," presented at *ESA 2004*, Tucson AZ, October 2004

- **B. Hoanca**, S. Haley, A. Lovecraft, "Applications of Experimental Social Science to Alaska Fiscal Policy," presented at *ESA 2003*, Tucson, AZ, October 30, 2003.
- **B. Hoanca**, A.E. Willner, R. Khosravani, and S. Lee, "Challenges of Coping with Polarization Mode Dispersion (PMD) in WDM Optical Systems," Society of Photo-Instrumentation Engineers (SPIE), *IT Com 2001*, Technical Digest, paper 4532-37, July, 2001, Denver, CO (SPIE, Bellingham, Wash., 2001)
- R. Khosravani and **B. Hoanca**, "Tolerance to amplitude and group-delay ripple for systems using chirped fiber Bragg gratings," *Lasers and Electro-Optics Society (LEOS) 14th Annual Meeting*, pp. 22 -23, 2001.

- C.B. Kuznia, A.A. Sawchuk, L. Zhang, **B. Hoanca**, S. Hong, C. Min, D. Pansatiankul, and Z.Y. Alpaslan, "A Modular Test System for Smart Pixel Optical Interconnections and Pipeline Processing Using Field Programmable Gate Arrays (FPGAs)," *Optical Society of America Annual Meeting*, Providence, RI; *OSA Annual Meeting Program*, (Optical Society of America, Washington, DC, 2000), paper WK4, October 22-26 2000.

- **B. Hoanca**, C.B. Kuznia, C. Min, D. Pansatiankul, A.A. Sawchuk, L. Zhang, "Parallel Pipeline Networking and Signal Processing with Field Programmable Gate Arrays (FPGAs) and VCSEL-MSM Smart Pixels," *Optics in Computing 2000*, Quebec City, Canada, July 2000.

- **B. Hoanca** and A.A. Sawchuk, "Optimal sorting algorithms on single instruction multiple data machines with cellular interconnections," *Optical Society of America Annual Meeting*, Santa Clara, CA; *OSA Annual Meeting Program 1999*, (Optical Society of America, Washington, DC, 1999), paper WLL34, September 1999.

- C.B. Kuznia, C. H. Chen, **B. Hoanca**, D. Pansatiankul, L. Zhang and A.A. Sawchuk, "Parallel Pipeline Networking and Signal Processing with VCSEL-MSM Smart Pixels," *Optical Society of America Annual Meeting*, Santa Clara, CA; *OSA Annual Meeting Program 1999*, (Optical Society of America, Washington, DC, 1999), paper TuEE3, September 1999.

- C.B. Kuznia, C.H. Chen, **B. Hoanca**, L. Zhang, D. Pansatiankul, J.M. Wu, A.A. Sawchuk, "Modular system demonstrator for hybrid VCSEL/MSM smart pixel networking, "CMOS-VCSEL-MSM modular optoelectronic chips (Transpar-VM) transfer three-dimensional optical data packets among high throughput photonic network nodes using multiple access/collision detection (CSMA/CD) or token ring protocols," *Optics in Computing 1999*, Snowmass, Colorado, paper OThB5, April 12-16, 1999.

- **B. Hoanca**, S. Dubovitsky, D. X. Zhu, A. A. Sawchuk, W. H. Steier, and P. D. Dapkus," All-optical routing schemes for networks using wavelength recognizing switches," paper 3632-21, *SPIE Optoelectronics '99*, pp.192-200, January 1999.

- J.M. Wu, **B. Hoanca**, C. B. Kuznia, C. H. Chen, A. A. Sawchuk, "Multistage pipeline optoelectronic systems using translucent smart pixel array chips," *Optical Society of America Annual Meeting*, Baltimore, MD; *OSA Annual Meeting Program 1998*, (Optical Society of America, Washington, DC, 1998), paper ThSS1, September 1998.

- C.H. Chen, **B. Hoanca**, C. B. Kuznia, J.M. Wu, A. A. Sawchuk, "TRANslucent Smart Pixel Array (TRANSPAR) Chips for High Throughput Networks and SIMD Signal Processing,"

Proceedings of the Fifth International Conference on Massively Parallel Processing Using Optical Interconnections (MPPOI '98), IEEE Computer Society, pp. 42-49, Las Vegas, Nevada, June 1998.

- J.M. Wu, C.H. Chen, **B. Hoanca**, C. B. Kuznia, A.A. Sawchuk, "Networking with Free Space Optical Data Packets Using Carrier-Sense Multiple-Access with Collision Detection (CSMA/CD) Protocol," *Proc. 1998 IEEE/LEOS Summer Topical Meeting on Smart Pixels*, Monterey, CA, pp. 51-52, July 1998.

- C.H. Chen, **B. Hoanca**, C. B. Kuznia, J.M. Wu, A.A. Sawchuk, "Architecture and Optical System Design for TRANslucent Smart Pixel ARray (TRANSPAR) Chips," *Proceedings of the 1998 International Topical Meeting on Optical Computing, OC'98*, Bruges, Belgium, pp. 316-319, June 1998.

- C.B. Kuznia, J.M. Wu, C.H. Chen, **B. Hoanca**, A.A. Sawchuk, "Parallel Processing and Networking Using TRANslucent Smart Pixel ARray (TRANSPAR) Optically Linked VLSI Chips," *Proc. Ninth Annual Workshop on Interconnections Within High Speed Digital Systems*, Santa Fe, NM, May 1998.

- R. Khosravani, M. I. Hayee, **B. Hoanca**, and A. E. Willner, "Reduction in coherent cross talk in WDM add/drop multiplexing nodes by path-length misalignment," *Conference on Lasers and Electro-Optics (CLEO '98)*, Conference Edition, *OSA Technical Digest Series*, vol.6, pp. 26-27, 1998.

- T. Sangsiri, S. Havstad, C. Kim, X. Jiang, **B. Hoanca**, and A. E. Willner, "Bit synchronization using subcarriers for control signaling in optical networks," *Optical Fiber Communication Conference (OFC '98), 1998 OSA Technical Digest Series*, vol.2, pp. 221-222, 1997.

- **B. Hoanca** and A. A. Sawchuk, "Wavelength Recognizing Switches: Architectures and System Applications," *Proceedings of the Fourth International Conference on Massively Parallel Processing Using Optical Interconnections (MPPOI '97)*, pp. 102-107, Montreal, Canada, 1997.

- J.M. Wu, C.B. Kuznia, **B. Hoanca**, C.H. Chen, A.A. Sawchuk, "Digital video motion estimation with use of CMOS/MQW smart pixel array cellular logic processors," *OSA Annual Meeting* '97, Long Beach, paper WD4, September 1997.

- C.H. Chen, C.B. Kuznia, **B. Hoanca**, J.M. Wu, A.A. Sawchuk, "Design and demonstration of smart pixel array network interface for 2D parallel data packet networks," *OSA Annual Meeting* '97, Long Beach, paper WS1, September 1997.

- **B. Hoanca** and A. A. Sawchuk, "Optimization of Optoelectronic Cellular Interconnections," in *Optics in Computing*, OSA Technical Digest Series, vol. **8**, *OSA Spring Topical Meeting* '97, paper OWC4, pp. 121-123, 1997.

- C.H Chen, **B. Hoanca**, C. B Kuznia, J.M. Wu, and A. A. Sawchuk, "Smart Pixel Array Network Interface (SAPIENT) for 2d Parallel Data Packet Networks," in *Optics in Computing, OSA Technical Digest Series*, vol. **8**, *OSA Spring Topical Meeting*, paper OThD11, pp. 218-220, 1997.

- J.M. Wu, C.B. Kuznia, **B. Hoanca**, C.H. Chen, L. Cheng, A. Weber, and A.A. Sawchuk, "Smart Pixel Array Cellular Logic (SPARCL) Processor for Eliminating SIMD I/O Bottlenecks: System Demonstration and Performance Scaling," in *Optics in Computing, OSA Technical Digest Series*, vol. **8**, *OSA Spring Topical Meeting*, paper OThA5, pp. 152-155, 1997.

- T. Sangsiri, M.I Hayee, **B. Hoanca**, W. Shieh, and A. E. Willner, "Stability and Dynamic Range of a Mach-Zehnder Wavelength Shifter," in *Optical Fiber Communications (OFC '97), OSA Technical Digest Series*, vol. **6**, OFC'97, paper WL52, pp. 218-219, February 1997.

- X. P. Chen, **B. Hoanca**, K.M. Feng, J.X. Cai, and A. E. Willner, "Experimental Demonstration of Fast Simultaneous Wavelength Switching and Time Demultiplexing Using a Nonlinear Optical Loop Mirror," *Conference on Lasers and Electro-Optics (CLEO'97)*, paper CThP2, pp. 413-414, 1997.

- C. B. Kuznia, J.M. Wu, C.H. Chen, **B. Hoanca** and A. A. Sawchuk," Smart pixel devices for image processing and network applications," in *OSA Annual Meeting '96, OSA Technical Digest Series*, pp. 112 (presented at OSA Annual Meeting in Rochester, NY), paper TuX6, 1996.

5. e. Published cases (peer reviewed)

- **B. Hoanca** and D. Fitzgerald, "Outage at UAA: A Week Without Critical Information Systems," *Journal of Cases on Information Technology*, vol. 15(2), IGI Global, 2013, pp. 34-41.
- P. Jolly, J. Reed and **B. Hoanca**, "A Big Change at Get-You-There Air" *Journal of Critical Incidents*, vol. 6, pp. 85-87, 2013. Society for Case Research. The first two authors are my former students, taking the lead of the publication of a case originally developed in my CIS A692.
- **B. Hoanca** and R. Whitney, "Taking a Byte of Telephony Costs: UAA Migrates to VoIP," *Journal of Cases on Information Technology*, 12(4), IGI-Global, 2010, pp. 18-34.
- A. Kell, S. Pierre and **B. Hoanca**, "Adoption of a New Online Travel Management System for FED-AK," *Journal of Cases on Information Technology*, vol. 12(1), IGI-Global, 2009, pp. 1-16.
- **B. Hoanca**, *Alaska Federal Health Care Access Network: Deploying Telemedicine Services in the 49th State*, in Case Studies on Digital Government, edited by Prof. Bruce Rocheleau, IDEA Group, 2007, pp. 201-216.

5. f. Research in progress

- Secure authentication and communications protocols
- Security and privacy in information systems
- Technology introduction in rural areas – the impact of collaboration networks
- Applications of eye tracking hardware in information security

6. SERVICE
6. a. University service
6. a. 1. CBPP Service
- Established 1+1 program with Nankai University in China to have students complete two master's degrees (one an MBA at UAA) based on taking courses at both institutions, AY 2013-2014
- Chair, Search committee for Finance faculty, PCN 301199 (hosted three candidates for campus visit, three offers made, two faculty hired)
- Chair, Graduate Programs committee, Fall 2012-present
- Member, Steering Committee, Fall 2012-present
- Member, AACSB Committee, Fall 2012-present
- Member, Leadership Initiative Board, Fall 2012-Spring 2014
- Member, Search Committee for Leadership faculty, PCN 301103, Spring 2013
- Member, Search Committee for Communications faculty, PCN 301556, Spring 2013
- External member on Promotion and Tenure review for one CIS faculty member, Fall 2012, Fall 2013, Fall 2014
- Member, CIS Faculty Search Committee, Spring 2010, PCN 301574
- Member, search committee for eMedia Director (PCN 305728), Spring 2007
- Outside member, Accounting Faculty Search Committee, Spring 2006, PCN 301243
- Member, CIS Faculty Search Committee, Spring 2006, PCN 301574
- Program director for the UAA Business Plan Competition (2003-2009)
- Member, Academic Decision Review Committee – Fall 2004 – Spring 2011
- Member, MBA committee 2002-Spring 2011
- Member, search committee for PCN 300680 (Administrative Coordinator) (Summer 2003)
- Point contact for Conoco-Philips computer equipment donation (coordinated to have donation delivered and distributed to CIS, Arts, and CTC)
- Member, CBPP Native Outreach Committee – research component; Spring 2003-present
- Chair CIS Advisors search committee Spring 2003-Spring 2004
- Member, CBPP Native Outreach Committee – developed program for the research component, Spring 2003
- Faculty organizer for student volunteers for Entrepreneur University 2003 (February 2003)

6. a. 2. UAA SERVICE
- UAA Graduate Council, Fall 2012-present
    - o Member Interdisciplinary Studies Subcommittee, AY 2013-2014
- External member, Search Committee for Education Leadership faculty (College of Education)
- Member, Graduate Academic Dispute Committee (one case in early May, 2013)
- Chair, Search Committee for Associate Dean of the Graduate School, Fall 2010
- Accreditation Leadership Committee (May 2008 to October 2010)
- Student Success Task Force (2007-2009) (name changed to Advisory Council for Enhancing Student Success in 2009-2010)
- Advisory Council for Enhancing Student Success (member 2009-2010)
    - o Member, First Year Instruction and Curriculum subgroup (2009-2010)

- UA Faculty Alliance
  - Chair 2007-2008
  - Alliance Representative on the Statewide Academic Council 2007-2008
  - UAA Representative 2006-2007
  - Alliance representative on the Human Resources Council 2006-2007
  - Faculty Alliance representative on the MacTaggart review of Statewide Administration
  - Faculty Alliance representative on the Statewide Student Success Task Force (later renamed Student Goal Achievement Task Force)
  - Faculty Alliance representative at the Distance Education Executive Meeting, May 28, 2008
- UAA Faculty Senate
  - Immediate Past President 2008-2009
  - President 2007-2008
  - First Vice-President (President-elect) 2006-2007
  - CBPP representative 2004-2006
- UAA Faculty Senate Committees:
  - Graduate Academic Board, Member, AY 2010-2011
  - Academic Computing, Distance Learning and Instructional Technology (ACIDLT) Committee
    - Co-Chair, Fall 2005-2007
    - Member, Fall 2004-2007
  - Library Advisory Committee of the UAA Faculty Senate (AY 2004-2005)
    - Member, AY 2004-2005
  - Faculty Senate Awards Committee
    - Co-Chair, AY 2005-2011
    - Member, 2004-2005
  - Faculty Grants and Leaves Committee
    - Member, 2012-present (elected until 2015)
- University Technology Council Workgroups
  - Smart Classroom Technologies Workgroup
    - Member, Fall 2004-Spring 2006
  - eLearning Workgroup
    - Member, Spring 2006
- Center for Advancement of Faculty Excellence (CAFE)
  - Faculty Associate for Technology (Spring 2006-Spring 2007)
  - CAFE Advisors Committee, Fall 2005-present
- Undergraduate Scholarship Task Force
  - Member, Fall 2005 – Spring 2006
- Other Learning Technologies related work:
  - Member, Distance Education Policy Workgroup, Summer 2007
  - Member, UAA Faculty Technology Survey Committee (Fall 2005)
  - Member, Technology Fellows Program Planning Committee (Spring 2005)
  - Blackboard 6 introduction team, Spring 2003 – Fall 2004
  - Blackboard 6 testing – Summer 2003 while teaching EE 694A

6. b. Professional and community service

- Keynote speaker at the Model United Nations of Alaska on the topic of Ethics of Emerging Technologies, February 27, 2014
- Presenter and facilitator at the December 1, 2010 Northwest Commission on Colleges and Universities (NWCCU) evaluator workshop in Seattle (for training NWCCU evaluators on the new accreditation standards)
- Member of a site review team for the Northwest Commission on Colleges and Universities (NWCCU) November 2-5, 2010. Reviewed the institution's report, traveled to the university under review and wrote part of the site visit report (60 hrs).
- Presenter at the February 2010 Northwest Commission on Colleges and Universities Annual Meeting (talked about the UAA experience with the new accreditation standards); gave two plenary talks and facilitated two breakout sessions
- Presenter at the February 2009 Northwest Commission on Colleges and Universities Annual Meeting (talked about the UAA experience with the new accreditation standards); gave one plenary talk and facilitated one breakout session
- IEEE Alaska Section
  - Immediate Past Chair, 2006
  - Chair, 2005
  - Vice-Chair, 2004
  - Member of the Executive Committee, 2002-2006
  - Webmaster and Media Chair 2003, interim 2004-April 2006
  - Government Activities Chair 2003, interim 2004-May 2006
- Reviewer for academic journals: *Applied Optics, IEE Electronics Letters, IEEE Technology and Society Magazine, Journal of Optical Networks, Optical Communications* and *Optics Express*
- Board membership
  - Anchorage Literacy Project – May 2004 – October 2005
  - Advisory board member for the Alaska Humanities Forum Rose Urban Rural Exchange Program, 2004 - 2007
- Faculty advisor for Engineering Explorers (Fall 2002)
- UAA representative on the International Communications Conference (ICC) 2003 Planning Committee (Spring 2003, conference help May 2003)
- Volunteer – Voluntary Tax Assistance Program (every March, 2003-present)
- Anchorage Literacy Project fundraising event, World's Fare (sic), 2003 (volunteer), 2004 (volunteer), 2005 (organizer)

7. HONORS AND RECOGNITION
- Listed in *Top 40 under 40 in Alaska in 2006*
- *Teacher of the Year 2005*, College of Business and Public Policy
- *Meeting Champion for March 2005* for the Anchorage Conventions and Visitors Bureau, March 2005 (for bringing to Anchorage the 2010 International Conference on Robotics and Automation)
- Rose Urban Rural Fellowship – 2003, 2012
- Graduate research scholarship funding at the University of Southern California, through the National Science Foundation 1995-1999

- Best Student Presentation award at the 3rd IMSC Student Retreat, 1999
- Graduate Student Academic Achievement award, USC, 1998
- Graduate teaching scholarship funding at the University of Southern California, 1994-1995
- Teaching Scholarship at Syracuse University, 1992-1994 (several scholarships, one for each semester, including Summer)
- Nomination for Best Teaching Assistant, Syracuse University, 1993
- TEMPUS European scholarship for writing the thesis for the Electronics Engineer degree, Turin, Italy, 1992
- 2nd prize at the Balkan Physics Olympiad, Sofia, Bulgaria, 1986

7.1. Media appearances and stories:
- Research on machine extracted ratings of sight-reading ability for piano players: April 30, 2014, on KTUU Channel 2: UAA Professors Develop Eye-Tracking Software for Music Students, http://www.ktuu.com/news/news/uaa-professors-develop-eyetracking-software-for-music-students/25747070, video story at http://www.ktuu.com/news/news/uaa-professors-develop-eyetracking-software-for-music-students/25747300
- Research on machine extracted ratings of sight-reading ability for piano players: April 6, 2014, in the *Anchorage Daily News*, http://www.adn.com/2014/04/06/3411317/kathleen-mccoy-training-better.html
- Story on the UAA's Patent Wall, December 20, 2011, in the *Anchorage Daily News*, http://www.adn.com/2011/12/20/2226510/uaa-launches-awards-program-supporting.html
- Research on using eye tracking as a biometric for authenticating users on computers: September 24, 2011, in the *Anchorage Daily News*, http://www.adn.com/2011/09/24/2086497/uaa-professors-awarded-scanning.html

8. PERSONAL PROFESSIONAL DEVELOPMENT

Conferences and workshops
- Team Based Learning January 2014
- Fellow, Ford Foundation Workshop on *Encountering Controversy in the Classroom*, May 2006
- UAA Technology Faculty Fellow, May 2006
- Participated in the *Digital Forensics and Information Assurance Workshop*, December 16-18, 2005, Tulsa, OK, in preparation for the Masters of Science in Information Security
- Northwest Commission on Colleges and Universities (NWCCU) evaluator training workshop – 2/27-2/28/04
- UAA 8-week on-line training course for distance education instructors (Fall 2003)
- Training course on "UAA Human Subjects Research Training"
- Native Cultures Building Educational Success, 12/9/03
- Entrepreneur University, 2/6/03
- KPMG workshop for members of boards of directors, Spring 2003
- Workshop on Experimental Economics, George Mason University 7/30-8/6/03

Executive Roundtables (organized by the Dean's Office of the College of Business and Public Policy)
- Economic Development in Alaska, 3/26/04

- Growing Entrepreneurs in Alaska, 1/14/04
- Energy Roundtable 8/27/03

CAFE series
- New Faculty Series – seminars to disseminate best practices in teaching among new faculty (Spring 2005)
- SUCCESSFUL GRANT WRITERS 9/20/03

Media Center
- Blackboard II (Summer 2005)
- Photoshop (Summer 2005)
- Windows Movie Maker (Summer 2005)
- Macromedia Captivate (Summer 2005)
- Macromedia Flash 11/20/03
- Adobe Photoshop II 11/18/03
- Adobe Photoshop I 11/6/03
- Microsoft Access 10/28/03
- Dreamweaver II 10/21/03
- Macromedia Fireworks 10/17/03
- Dreamweaver I 10/9/03

Fellowships
- Educator Cross Cultural Immersion (ECCI) program – culture camp in Wainwright, Alaska, June 2012
- Rose Cultural Exchange Fellow – hosted by the Council of Athabascan Tribal Government, 8/7-8/14/03

9. NON-ACADEMIC WORK EXPERIENCE

March 2002- Dec 2002: Consultant
- Systems simulations for high speed (10-40 Gb/s) fiber optic systems.
- Signal integrity analysis for high speed electronic (10 Gb/s) communications boards.

July 2001- May 2002: Vice President and Lead Optical Engineer, **Teradvance Communications, LLC** – transmission equipment for fiber optic communications
- Involved with writing the technology and marketing overview.
- Instrumental in testing and simulating the prototype transmission system.

Aug. 1999-July 2001: Co-founder and Engineering Manager New Product Development, **Phaethon Communications, Inc** – R&D of high performance equipment for fiber optic communications
- Wrote the business plan (including market analysis and financial forecasts), which raised $7.5 million of VC funding in the first round. Helped raise the second round of $22 million.

- Equipped and staffed the Optical Testing Laboratory, with capabilities for testing long-distance fiber optic transmission at data rates of 10 Gigabit/s.
- Supervised and directed three optical and electrical engineers and several technicians in developing and testing fiber optic equipment.
- Developed the architecture of two new products in the Phaethon portfolio.
- Led the staffing efforts in building the core team of 20 engineers.
- Negotiated several patent licensing agreements.
- Served as customer contact point, providing technical marketing help

Last updated on September 8, 2014. Printed on September 8, 2014