

Aleksander Malinowski

PERSONAL DATA

Address: ECE Department; Bradley University, Peoria, IL 61625
Phone: office: (309) 677 2776, fax: (309) 677 3670
E-mail: olekmali at bradley dot edu
URL: <http://gdansk.bradley.edu/olekmali/>
Languages: Polish (native), English (excellent), German and Russian (some)
Hobby: digital amateur photography, traveling, hiking, computers, electronic music, fresh water aquarium
Membership: The Institute of Electrical and Electronic Engineers (IEEE), since 1992, Senior Member;
IEEE Industrial Electronics Society since 1998
Volunteering: IEEE Industrial Electronics Society: Administrative Committee Member,
Founding Member of IES Web and Information Committee

SKILLS

- Programming: C/C++ (embedded, console, GUI, client-server, 8051), JAVA, PERL, PHP, CGI
- Operating Systems: FreeRTOS, Linux, ucLinux, Silicon Labs TCP/IP Stack, MS-Windows, UNIX/Solaris
- Design and Analysis: Analog and digital electronic circuits, VHDL, FPGA, basics of VLSI
- Desktop Publishing: Microsoft Office, Open Office, Dream Weaver, XHTML, Apache, MySQL (LAMP)

EMPLOYMENT

09.2004-present Associate Professor, Bradley University, Peoria, IL

- Research in the areas of networked small embedded systems and autonomous mobile agent navigation
- John Andrews Award for excellence in service to profession, March 5, 2008
- Developed new courses: C and RTOS for Embedded Systems, Linux for Embedded Systems, Networked Embedded Systems, and a laboratory for Linux and Networked Embedded Systems courses, Mobile Navigation

09.1998-08.04 Assistant Professor, Bradley University, Peoria, IL

- Research in the areas of network computing, computer networks and Web based control
- John Andrews Award for excellence in service to profession, February 17, 2004
- Developed new courses: Web programming, Network Computing, and Computer Networks

08.1997-07.98 Visiting Postdoctoral Research Associate, University of Wyoming, Laramie, WY

- Taught software and digital design courses in the Department of Electrical Engineering
- Research in the area of computer engineering, computer networks and web programming

01-08.1997 Assistant, Technical University of Gdansk, Poland

- Director of the Introduction to Electronics and Semiconductor Devices Laboratory
- Coordinated work of six faculty and staff members teaching in the laboratory

05.1995-12.96 System Programmer II, Kidney Disease Program, Baptist Hospital, Louisville, KY

- Developed software in C++/Borland OWL (Windows applications) and for palmtop computers

07.1996-12.96 Postdoctoral Researcher, Department of Electrical Engineering, University of Louisville

- Developed a software package for "Manufacturing Yield Optimization with Design Centering", application of inverse modeling and artificial neural network technology

08.1992-06.96 University Fellow and Research Assistant, Computer Science and Engineering Program, University of Louisville, Louisville, KY

- Research in the area of computational intelligence and artificial neural networks
- J. R. Binford Memorial Award given for excellence in the doctoral program, May 1997

09.1989-08.1992 Teaching and Research Assistant, Gdansk University of Technology, Gdansk, Poland

EDUCATION

07-12.1996 Postdoctoral study, University of Louisville, Louisville, KY

08.1996 **Doctor of Philosophy in Computer Science and Engineering, with highest honors,**
University of Louisville, Louisville, KY

05.1990 **Master of Science in Electronics,** Gdansk University of Technology, Gdansk, Poland

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SELECTED AWARDS

- John Andrews Award for Excellence in Service awarded by Bradley University: 2/17/2004, and 3/5/2008
- **2003 Anthony J. Hornfeck Service Award of the IEEE Industrial Electronics Society**, Roanoke, VA, November 4, 2003, given for excellence in service to the Society
- Elected for Senior Member of the Institute of Electrical and Electronics Engineers (IEEE), May 6, 2000
- **John Richard Binford Memorial Award**, given for excellence in the doctoral program, University of Louisville, Louisville, KY, May 9, 1997
- Graduate School Dean's Citation, University of Louisville, Louisville, KY, May 1997.
- Awarded University of Louisville Fellowship for academic years 1992-1996
- Yearly Awarded "The President of Technical University of Gdansk Outstanding Student" 1985-1990

TEACHING EXPERIENCE

Bradley University (1998-present, updated in summer 2009)

- EE 102 Computers and Programming in EE (13 times, 1998-2008)
- EE 221 Structured Programming with C (14 times, 1998-2005)
- EE 221 Data Structures and OOP (7 times, 2006-2009)
- EE 311 Digital Design (6 times, 2001-2007)
- EE 409/EE 691 C and RTOS for small Embedded Systems (1 time, 2008)
- EE 409/EE 691 Web Programming for EE (5 times, 1999-2003)
- EE 409/EE 691 TCP/IP Network Programming for Embedded Systems (3 times, 2005-2009)
- EE 409 Introduction to PamOS Programming (1 time, 2002)
- EE 409 Fuzzy Cellular Modeling (1 time, 2005)
- EE 410/EE 692 Autonomous Mobile Agents (1 time, 2008)
- EE 410/EE 692 Computer Networks (5 times, 2000-2004)
- EE 410/EE 692 Web Based Control (5 times, 2005-2008)
- EE 691 Network Computing (1 time, 1999)
- Supervised 20+ senior capstone projects and 21+ M.S.E.E. students (1998-2009)

University of Wyoming (1997-1998)

- EE 2390 Digital System Design (1 time, 1997)
- ES 3070 C with Numerical Methods for Engineers (2 times, 1997-1988)
- EE 5390 Microprocessors and Finite State machines (1 time, 1998)
- EE 5880 Advanced Network Programming (1 time, 1998)

Gdansk University of Technology (1989-1992, 1997)

- Programming in C/C++ Languages (1997)
- Operating Systems Principles (1997)
- Introduction to Electronics (1989-1992, 1997)
- Physics of Semiconductor Devices (1989-1992, 1997)
- Devices Modeling and Circuit Simulation (1990-1992)

FUNDED PROJECTS

- Network-Based Communication and Telepresence; Principal Investigator in the project sponsored by Motorola, \$100,000; June 1999-May 2001. Specific information cannot be disclosed.
- Remote monitoring of a PointSix network of electronic sensors over Internet using client-server architecture implemented in Java; partially sponsored by Bradley University Graduate School grant for summer research, \$600; June-September 2000

CONSULTING

- Consulted for local start up company in Peoria, and for a global law firm with a regional office in Chicago

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PARTICIPATION IN OR SUPERVISION OF SELECTED PROJECTS

- USB connected Human Interface Devices (eye tracking and hand movement); 2 senior projects ; See URL: <http://cegt201.bradley.edu/projects/proj2008/iralar/> and <http://cegt201.bradley.edu/projects/proj2009/usbhid/>
- Motorola ColdFire based Industry Controller with Networked Embedded System with Web Interface. See URL: <http://cegt201.bradley.edu/projects/proj2006/netsys/>
- Self-Mapping and Navigation of Mobile Robots; supervised 2 senior projects; See complete list of autonomous and telerobotic projects at URL <http://gdansk.bradley.edu/olekmali/projects/telebot/>
- WISENET - TinyOS Based Wireless Network of Sensors; 2 student projects dedicated to porting of Berkeley's TinyOS to 8051 family of microprocessors with RF com link; sensors interfaced to an SQL database with Web interface. See URL: <http://cegt201.bradley.edu/projects/proj2003/wisenet/>
- Web-Controlled Robots; supervisor of 8 senior student capstone projects; client-server programming in Java and C; motor control using 8051 family embedded system interfaced to PC-104; real-time control over low-bandwidth Internet; interfacing networked computer to moving robots and small vehicles, navigation; September 1998-present; See URL <http://gdansk.bradley.edu/olekmali/projects/telebot/>
- Web-based Document Collection System; Developed a custom system to support document collection and review for the Annual Conference of Industrial Electronics Society; CGI programming in PERL and dynamic HTML, automated mass email, February-August 2001; See URL <http://gdansk.bradley.edu/submit/>
- Extension Spring Design Calculator - internet accessible CAD tool for Mechanical Engineers; project consultant supervising work of 3 students; Web programming in Java and JavaScript; December 1997-August 1998; See URL <http://wwweng.uwyo.edu/commend/>
- Intranet and Internet Software Access: Compilers and other software accessible through WWW pages; Web programming in PERL, Java, and Java Scripts; running a web server in WinNT environment; September-December 1997, July-September 1998; URL: no longer available.
- Porting of Berkeley source code of SPICE3 and NUTMEG for 32-bit protected mode PC-DOS and WinNT environments; joint project; February 1997, January 1998. The spice engine is powering "Spice Intranet Package" located at <http://gdansk.bradley.edu/sip/>
- "APRW - Multilayer Feedforward Neural Network Developer"; Package for NN development; code in C++ for Windows, OWL; October-December 1996
- "DES-CENT - Software Package for Process Modeling and Design Centering"; Application of neural networks to nonlinear modeling and optimization; 7050 lines of code in generic C++; July-December 1996
- "GENTDOSE - Neural Network Predicted Peak and Trough Gentamicin Concentrations"; Application of neural networks to pharmacology; 4500 lines of code in Borland C++ for Windows, OWL; March-July 1996; Developed earlier for HP palmtop; 8000 lines of code in Turbo C++; April'95-February'96
- "RECON - Typists' Identification Using Their Typing Style and Habits"; Engineering Day's Project, February 1993; Application of neural networks; 1000 lines of code in Pascal/DOS; 1993. First Prize Winner, Student Paper Contest, organized by the Louisville Section of IEEE
- "NEWMARK4 - Numerical solver for up to four nonlinear differential equations given in the analytical way"; 6800 lines of code in Pascal; Part of a larger joint project of 12600 lines of code on Calculus Package for Mechanical Engineers ; 1991
- "Computer-Aided Verification of Mask Design and Device Parameter Extraction for MOS Technologies Analog and Digital Integrated Circuits"; M.Sc. Thesis; 5000 lines of code in Pascal/DOS; 1988-'89
- "VIENA - Software Package for Inventory Tracking for the Merchandise Company La Panther, Vienna, Austria", joint project; 15000 lines of code in Pascal and assembly language/DOS; 1988
- "SUC - Timing Simulations in Hybrid Analog-Digital IC "; joint project; 4000 lines of code in Pascal; 1987-'88
- "FM-Band Stereo Tuner with PLL Stereo Decoder"; factory-provided VHF input circuit with two bi-gate MOS, application of MC1200 and MC1310 PLL stereo decoder
- "Hi-fi Band Stereo Amplifier with 2x40W Output"; no ICs in the power output circuit, graphic equalizer with negative impedance converters, class AB output amplifier with enhanced slew rate and current compliance
- "Electronic Timer with Automatic Exposure Calculator for B&W Photography"; analog integrator, NE555 application, SCR controlled output

RECENT PROFESSIONAL SERVICE

Recent Volunteer Work

- Administrative Committee Member for IEEE Industrial Electronic Society (2005-07, reelected 2008-10)
- Associate Editor for IEEE Transactions on Industrial Electronics (2007-)
- Associate Editor for IEEE Transactions on Industrial Informatics (2005-2006)
- Associate Editor of the IEEE Industrial Electronics Society Newsletter (1998-2001)
- Chair of the Web and Information Committee of the IEEE Industrial Electronics Society (2005-2007)
- Officer for IEEE Industrial Electronic Society, Editor of the Society Newsletter (2002-2004)
- Member of the Conference Board of the IEEE Industrial Electronics Society (2004-2007)
- Member of the Publications Board of the IEEE Industrial Electronics Society (2006-2007)
- Web Page Editor for the IEEE Industrial Electronics Society (IES) (1999-2007)

Recent Volunteer Work for Professional Conferences

- Conference Technical or Program Chair or Co-Chair
 - Annual Conference of the IEEE Industrial Electronics Society: IECON 2005
 - IEEE International Symposium on Industrial Electronics: ISIE 2006
 - IEEE Conference on Human System Interaction: HSI 2008
- Technical Track Chair (arranging paper reviews and deciding about acceptance/rejection)
 - Annual Conference of the IEEE Industrial Electronics Society: IECON 2002, '03, '04
 - IEEE International Symposium on Industrial Electronics: ISIE 2004
 - IEEE International Conference on Industrial Technology: ICIT 2006, '05, '04
 - IEEE International Conference on Industrial Informatics: INDIN 2007
- Special Session Chair at many IES sponsored conferences

Recent Service as Reviewer for Journals

- IEEE Transactions on Education (1998-present)
- IEEE Transactions on Neural Networks (2001, 2003, 2006)
- IEEE Transactions on Industrial Electronics (2006-)
- IEEE Transactions on Robotics and Automation (2002)
- IEEE Transactions on Control Systems Technology (2002)

Recent Service as Reviewer for Conferences

- The Annual Conference of the IEEE Industrial Electronics Society (2000-2003, 2005-2006)
- IEEE International Conference on Industrial Technology: (2004)
- International Joint Congress on Neural Networks (2002-2003)
- IEEE Conference on Decision and Control (2003)
- IEEE/ASME International Conference on Advanced Intelligent Mechatronics (2002)

Recent University Committee Work at Different Levels

- Member of the Bradley University Senate (2007-)
- Member of the Faculty Search Committee ECE Department at Bradley University (1999-2005, 2007-08)
- Member of the advisory committee for Bradley University Web Site (2002-)
- Member of the advisory subcommittee for Internet2 at Bradley University (2004)
- Member of the advisory committee for Bradley University Interdisciplinary Innovation Institute (1998-00)

PUBLICATIONS

- Journal Papers: 5
- Book Contributions: 3
- Dissertations: 2
- Conference Papers: 45
- Major Grant or Technical Reports: 4
- Tutorials: 1
- Newsletter Publications: 2

Revised on October 21, 2008

Aleksander Malinowski

PUBLICATIONS

Journal Papers

1. Wilamowski, B., Malinowski, A., Regnier, J., "Internet as a New Graphical User Interface for Electronic Design Automation Tools," *IEEE Transactions on Industrial Electronics*, vol. 48, No. 6, Dec. 2001, pp. 1266-1268.
2. Zurada, J. M., Malinowski, A., Usui, S., "Perturbation Method for Deleting Redundant Inputs of Perceptron Networks," *Neurocomputing*, vol. 14, No. 2, February 1997, pp. 177-193.
3. Kozma, R., Malinowski, A., Zurada, J. M., Kitamura, M., "Evaluating the Performance of Artificial Neural Networks Trained by Structural Learning," *Australian Journal of Intelligent Information Processing Systems*, vol. 3, No. 2, Winter 1996, pp. 10-15.
4. Zurada, J. M., Malinowski, A., "Multilayer Perceptron Networks: Selected Aspects of Training Optimization," *Applied Mathematics and Computer Science*, 1994, vol. 4, No. 3, pp. 281-307.
5. Janke, W., Malinowski, A., "The Modified Method for Fast Calculations of Convolution and Deconvolution," *Advances in Modeling and Analysis*, B, vol. 26, No 4, 1993, pp.31-41.

Book Chapter Contribution

1. Malinowski, A., Wilamowski, B.M., "TCP/IP Protocol" for *Handbook on Industrial Information Technology* edited by R. Zurawski; Invited chapter, CRC Press, 2005, pp. 16.1-16.14.
2. Malinowski, A., Wilamowski, B.M., "UDP Protocol" for *Handbook on Industrial Information Technology* edited by R. Zurawski; Invited chapter, CRC Press, 2005, pp. 17.1-17.5.
3. Co-author of the Solution Manual for Introduction to *Artificial Neural Systems*, by J. M. Zurada, PWS, 1992.

Dissertations

1. Malinowski, A., *Reduced Perceptron Networks and Inverse Modeling Control*, Ph.D. Dissertation, University of Louisville, Computer Science and Engineering, August 1996, pp. 126.
2. Malinowski, A., *Computer aided verification of mask design of MOS integrated circuits*, M.Sc. Thesis, Technical University of Gdansk, Department of Electronics, Gdansk, May 1990.

Conference Papers

1. Heidenburg, B., Lenisa, M., Wentzel, D., Malinowski, A., "Data Mining for Gaze Tracking System," *Proc. of Conference on Human System Interaction (HSI08)*, Krakow, Poland, May 25-27, 2008, pp. 680-683.
2. Kommineni, J. devi, Malinowski, A., "Study of Time Delay Distribution in IP Protocol Family for IP-Network Based Control Applications," *Proc. of the 31th Annual Conference of the IEEE Industrial Electronics Society (IECON'05)*, Raleigh, North Carolina, USA, November 6-10, 2005, pp. 2423-2426.
3. Dunne, J., Patnode, D., Malinowski, A., Schertz, D., "WISENET - TinyOS Based Wireless Network of Sensors" *Proc. of the Annual Conference of the IEEE Industrial Electronics Society (IECON'03)*, Roanoke, Virginia, November 2-6, 2003, pp. 2363-2368.
4. Wilamowski, B. M., Hunter, D., Malinowski, A., "Solving Parity-N Problems with Feedforward Neural Networks," *Proc. of the International Joint Conference on Neural Networks (IJCNN'03)*, Portland, Oregon, July 20-24, 2003, pp. 2546-2551.
5. Anakwa, W. K.N., Roca, H. P., Lopez, Jo., Malinowski, A., "Environments for Rapid Implementation of Control Algorithms And Hardware-in-the-Loop Simulation," *Proc. of the Annual Conference of the IEEE Industrial Electronics Society (IECON'02)*, Sevilla, Spain, November 5-8, 2002, pp. 2288-2293.
6. Manic, M., Wilamowski, B., Malinowski, A., "Internet based Neural Network Online Simulation Tool," *Proc. of the Annual Conference of the IEEE Industrial Electronics Society (IECON'02)*, Sevilla, Spain, November 5-8, 2002, pp. 2870-2874.
7. Malinowski, A., Booth, T., Grady, S., Huggins, B., "Real Time Control of a Robotic Manipulator via Unreliable Internet Connection," *Proc. of the Annual Conference of the IEEE Industrial Electronics Society (IECON'01)*, Denver, CO, November 29-December 2, 2001, pp. 170-175.

8. Malinowski, A., "Networked Home Automation Projects," *Proc. of the Annual Conference of the IEEE Industrial Electronics Society (IECON'01)*, Denver, CO, November 29-December 2, 2001, pp. 1758-1762.
9. Moscibrodzki, W. St. , Kwiatkowski, S. , Malinowski, A. , "A Reference Implementation of the Internet-supported Home Security System," *Proc. of the Annual Conference of the IEEE Industrial Electronics Society (IECON'01)*, Denver, CO, November 29-December 2, 2001, pp. 1838-1843.
10. Malinowski, A., Wilamowski, B., "Paper Collection and Evaluation Through the Internet," *Proc. of the Annual Conference of the IEEE Industrial Electronics Society (IECON'01)*, Denver, CO, November 29-December 2, 2001, pp. 1868-1873.
11. Malinowski, A., Dahlstrom, J., Febles Cortez, P., Dempsey, G., Mattus, C., "Web-based Remote Active presence," *Proc. of the 2000 ASEE Annual Conference*, Saint Louis, MO, June 91-21, 2000.
12. Wilamowski, B., Malinowski, A., "GradeWatch - the Software Package Displaying on Web Pages Student Grades," *Proc. of the 2000 ASEE Annual Conference*, Saint Louis, MO, June 91-21, 2000.
13. Malinowski, A., Wilamowski, B., "Web-based C++ Compilers," *Proc. of the 2000 ASEE Annual Conference*, Saint Louis, MO, June 91-21, 2000.
14. Wilamowski, B., Malinowski, A., Regnier, J., "SPICE based Circuit Analysis using Web Pages," *Proc. of the 2000 ASEE Annual Conference*, Saint Louis, MO, June 91-21, 2000.
15. Malinowski, A., Konetski, T., Davis, B., Schertz, D., "Web-Controlled Robotic Manipulator using Java and Client-Server Architecture," *Proc. of the Annual Conference of the IEEE Industrial Electronics Society (IECON'99)*, San Jose, CA, November 29-December 3, 1999, vol. 2, pp. 827-830.
16. Malinowski, A., Wilamowska, K., "Grade Info-line: A Web-based Grade Information System," *Proc. of the Annual Conference of the IEEE Industrial Electronics Society (IECON'99)*, San Jose, CA, November 29-December 3, 1999, vol. 1, pp. 11-115.
17. Wilamowski, B. M., Chen, Y., Malinowski, A., "Efficient Algorithm for Training Neural Networks with one Hidden Layer," *Proc. of the International Joint Conference on Neural Networks (IJCNN'99)*, Washington, D.C., USA, July 10-16, 1999.
18. Malinowski, A., Cretti, S., Smith, D. A., Wilamowska, K., "A Web-based Extension Spring Design program," *Proc. of SMI Spring Industry 1999 Technical Symposium*, Chicago, IL, May 18-20, 1999, pp. 9-12.
19. Malinowski, A., Wilamowski, B. M., "Internet Accessible Compilers in Software and Computer Engineering," *Proc. of the ICSEE/Western Multiconference*, San Francisco, CA, January 17-20, 1999, pp. 221-224.
20. Malinowski, A., D. Smith, K. Wilamowska, S. Cretti, " Extension Spring Design Calculator: a Web-based Mechanical Engineering CAD Tool," *Proc. of the ICSEE/Western Multiconference*, San Francisco, CA, January 17-20, 1999, pp. 493-496.
21. Regnier J., Malinowski A., Wilamowski B., "SIP - Spice Intranet Package," *Proc. of IEEE International Symposium on Industrial Electronics (ISIE'98)*, Pretoria, South Africa, July 7-10, 1998, pp. 493-496.
3. Zurada, J. M., Lozowski, A., Malinowski, A., "Yield Improvement in GaAs IC Manufacturing using Neural Network Inverse Modeling," *Proc. of the International Joint Conference on Neural Networks (IJCNN'97)*, Houston, Texas, USA, June 9-12, 1997.
4. Zurada, J. M., Lozowski, A., Malinowski, A., "Design Centering in GaAs IC Manufacturing," *Proc. of the IEEE Aerospace Conference*, Snowmass, Colorado, USA, February 1-8, 1997, vol. 2, pp. 435-447.
5. Malinowski, A., Miller, D. A., Zurada, J. M., "Reduction of Neural Network Models for Identification and Control of Nonlinear Systems," *Proc. of the IEEE International Conference on Neural Networks*, Washington, D.C., June 3-6, 1996, vol. 4, pp. 2250-2254.
6. Malinowski, A., Cholewo, T. J., Zurada, J. M., Aronhime, P. B., "Inverse Mapping with Neural Network for Control of Nonlinear Systems," *Proc. of the 1996 IEEE International Symposium on Circuits and Systems*, Atlanta, Georgia, May 12-15, 1996, vol. 3, pp. 453-456.
7. Malinowski, A., Zurada, J. M., Lilly, J. H., "Inverse Control of Nonlinear Systems Using Neural Network Observer and Inverse Mapping Approach," *Proc. of the 1995 IEEE International Conference on Neural Networks*, Perth, Australia, November 27 - December 1, 1995, pp. 2513-2518.
8. Kozma, R., Malinowski, A., Kitamura, M., Zurada, J. M., "On Performance Measures of Artificial Neural Networks Trained by Structural Learning Algorithms," *Proc. of the Artificial Neural Networks and Expert Systems Conference*,

University of Otago, Dunedin, New Zealand, November 20 - 23, 1995, pp. 22-25, IEEE Computer Society Press, Los Alamitos, California, Editors: N.K. Kasabov, G. Coghill.

9. Malinowski, A., Miller, D. A., Zurada, J. M., "Reconciling Training and Weight Suppression: New Guidelines for Pruning-Efficient Training," *Proc. of the World Congress on Neural Networks*, Washington, D. C., July 17-21, 1995, vol. 1, pp. 724-728.
10. Yasui, S., Malinowski, A., Zurada, J. M., "Convergence Suppression and Divergence Facilitation: New Approach to Prune Hidden Layer and Weights of Feedforward Neural Networks," *Proc. of the 1995 IEEE International Symposium on Circuits and Systems*, Seattle, Washington, April 30 - May 3, 1995, vol. 1, pp. 121-124.
11. Malinowski, A., Cholewo, T. J., Zurada, J. M., "Capabilities and Limitations of Feedforward Neural Networks with Multilevel Neurons," *Proc. of the 1995 IEEE International Symposium on Circuits and Systems*, Seattle, Washington, April 30 - May 3, 1995, vol. 1, pp. 131-134.
12. Wilamowski, B. M., Zurada, J. M., Malinowski, A., "Steepest Descent Retrieval Algorithm for Autoassociative Neural Memory," *Proc. of the IEEE International Conference on Neural Networks*, Orlando, Florida, June 28 - July 2, 1994, pp. 1125-1129.
13. Malinowski, A., Zurada, J. M., "Minimal Training Set Size Estimation for Sampled-Data Function Encoding," *World Congress on Neural Networks*, San Diego, California, June 5-9, 1994.
14. Zurada, J. M., Malinowski, A., Cloete, I., "Sensitivity Analysis for Minimization of Input Data Dimension for Feedforward Neural Networks," *Proc. of the 1994 International IEEE Symposium on Circuits and Systems*, London, England, May 28 - June 1, 1994, vol. 6, pp. 447-450.
15. Zurada, J. M., Malinowski, A., "Minimal Training Set Size Estimation for Neural Network - Based Function Approximation", *Proc. of the 1994 International IEEE Symposium on Circuits and Systems*, London, England, May 28 - June 1, 1994, vol. 6, pp. 403-406.
16. Zurada, J. M., Malinowski, A., Cloete, I., "Sensitivity Analysis for Pruning of Training Data in Feedforward Neural Networks," *Proc. of the First Australian and New Zealand Conference on Intelligent Information Systems*, Perth, Australia, December 1-3, 1993, pp. 288-292.
17. Zurada, J. M., Malinowski, A., "Minimal Training Set Size Estimation for Neural Network-Based Function Encoding," *Proc. of the Artificial Neural Networks in Engineering Conference*, St. Louis, Missouri, November 14-17, 1993, pp. 149-154.
18. Zurada, J. M., Malinowski, A., "Sampling Rate for Information Encoding Using Multilayer Neural Networks," *Proc. of the International Joint Conference on Neural Networks*, Nagoya, Japan, October 25-29, 1993.
19. Zurada, J. M., Malinowski, A., Przestrzelski, P., "Modified Hebbian Learning Rule for Single Layer Learning", *IEEE International Symposium on Circuits and Systems*, Chicago, Illinois, May 3-6, 1993, pp. 2407-2410.
20. Desai, M., Malinowski, A., "Neural Network Model for Time- Series Data Prediction," *Proc. of International Fuzzy Systems and Control Conference*, Louisville, Kentucky, March 1993, pp. 241-247.
21. Janke, W., Malinowski, A., "The Modified Method for Fast Calculations of Convolution and Deconvolution," *Proc. of AMSE Conference Signals and Systems*, Geneva, June 17-19, 1992.
22. Janke, W., Malinowski, A., "Semi-analytical Algorithms for Convolution and their Usage In Simulation of Dynamical Systems", Zakopane, Poland, June 1992 (in Polish).
23. Janke, W., Malinowski, A., "Algorithms for Calculations of Thermal Transients in Electron Devices Working in Switching Conditions," *Proc. of the Symposium on Principles of Electrotechnics and Circuit Theory*, Wisla, Poland, April 1992 (in Polish).
24. Malinowski, A., Wilamowski, B., "Circuit Oriented Extractor of Bipolar Integrated Circuits," *Proc. of the National Conference on Circuits Theory and Electronic Circuits*, Rzeszow-Myczkowce, Poland, October 17-20, 1989, vol. 2, pp. 31-38 (in Polish).
25. Kalman, W., Malinowski, A., Piwakowski, K., Wilamowski, B., "Digital Integrated Circuits Simulating Program for Microcomputers," *Proc. of National Conference on Telecommunication KST'89*, Bydgoszcz, Poland, September 6-8, 1989, vol. E, pp. 13-21 (in Polish).
26. Malinowski, A., "Computer Methods of Verification for Projects of Integrated Circuits," *Proc. of International Conference of Students and Young Researchers*, Zielona Gora, Poland, April 10-13, 1989, vol. Elektronika, pp. 26-30 (in Polish).

Major Grants and Technical Reports

1. Malinowski, A., Dempsey G., "Teleconferencing Robot", Funded grant for \$96,000 sponsored by Motorola, ECE Department; Bradley University, June 1999-May 2001.
2. Zurada, J. M., Creech, G. L., Malinowski, A., Lozowski, A., "Neural Networks for Inverse Parameter Modeling of IC Fabrication Stages," Final Report, ONR Grant (N00014-93-1-0855), Department of Electrical Engineering, University of Louisville, July 1, 1995 - Dec. 31, 1996.
3. Zurada, J. M., Creech, G. L., Malinowski, A., Lozowski, A., "Neural Networks Modeling for Yield Enhancement in Semiconductor Manufacturing," Final Report, ONR Grant, Department of Electrical Engineering, University of Louisville, July 1, 1993 - Sep. 30, 1995.
4. Malinowski, A., as one of four co-authors: *Development of CAD Tools for ASIC Design, Simulation and Verification*, Technical University of Gdansk, 1988, for Research Center for Specialized Electronic Circuits MERA-OBREUS in Torun, Poland (in Polish).

Tutorials

1. Malinowski, A., Wilamowski, B., "Internet Technology as a Tool for Solving Engineering Problems," *Proc. of the Annual Conference of the IEEE Industrial Electronics Society (IECON'01)*, Denver, CO, November 29-December 2, 2001, pp. 1622-1630.

Newsletter Publications

1. Malinowski, A., "Portable Document Format - How to create a file? How portable it really is?," *Newsletter of IEEE Industrial Electronic Society*, vol. 1-2, June 2002.
2. Malinowski, A., "CORBA - the New Technology for Industrial and Telecommunication Network-Distributed Applications," *Newsletter of IEEE Industrial Electronics Society*, vol. 2, June 1998.

Presentations

1. Malinowski, A., "Web-based control using Java and client-server architecture," presented at ECE Colloquium at Bradley University, Peoria, IL, October 28, 1999.
2. Davis, B., Konetski, T., Malinowski, A., "Web Controlled Robot," presented at Bradley University Technology Expo'99, Peoria, IL, March 24, 1999.
3. Malinowski, A., "Internet Accessible Software," presented at Bradley University Technology Expo'99, Peoria, IL, March 24, 1999.
4. Malinowski, A. Wilamowski, B. M., "Internet C and C++ Compiler," presented at special panel "Vision of industrial network computing" at the 23rd Annual International Conference of the IEEE Industrial Electronics Society (IECON'97), New Orleans, Louisiana, November 9-14, 1997.

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