

Updated 8/5/2021

University of Central Florida

WALDEMAR KARWOWSKI

Pegasus Professor and Chair, Department of Industrial
Engineering & Management Systems

Waldemar Karwowski CV Contents

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WALDEMAR KARWOWSKI**Pegasus Professor and Chairman**

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I. PERSONAL**1. Degree and Professional Registration Information**

Doctor of Science (dr hab.) in Management Science, State Institute for Organization and Management in Industry, Warsaw, Poland, June 2004.

Ph.D. in Industrial Engineering, Department of Industrial Engineering, Texas Tech University, Lubbock, Texas, December 1982.

Doctor of Science (Honoris Causa), South Ukrainian State Pedagogical University, Odessa, Ukraine, 2004.

Doctorate in Engineering (Honoris Causa), Technical University of Kosice, Kosice, Slovakia, 2006.

Doctorate in Engineering (Honoris Causa), Moscow State Institute of Radio, Electronics and Automation (MIREA Technical University), Moscow, Russia, 2007.

M.Sc. in Production Engineering (with highest honors), School of Management and Information Sciences, Technical University of Wroclaw, Wroclaw, Poland, 1978.

CPE, Certified Professional Ergonomist, Certificate N 341, Board of Certification in Professional Ergonomics

P.E., Registered Professional Engineer (State of Texas, License No 61616)

2. Employment

Professor and Chairman, Department of Industrial Engineering and Management Systems, University of Central Florida, Orlando, Florida (8/1/2007-present).

Executive Director, Institute for Advanced Systems Engineering, University of Central Florida, Orlando, Florida (8/1/2008-present).

Professor, Department of Industrial Engineering, J. B. Speed School of Engineering, University of Louisville, Louisville, Kentucky (7/1/1993 – 7/31/2007).

Director, Center for Industrial Ergonomics, J. B. Speed School of Engineering, University of Louisville, Louisville, Kentucky (7/1/1987 – 7/31/2007).

Senior Graduate Faculty, Graduate School, University of Louisville, Louisville, Kentucky (1985 - 2007).

Associate Faculty, Department of Bioengineering, J. B. Speed School of Engineering, University of Louisville, Louisville, Kentucky (7/1/2006 – 7/31/2007).

Research Fellow, ASSE Foundation / Liberty Mutual Research Institute for Safety, Hopkinton, Massachusetts (Fall 2006).

J. B. Speed School of Engineering *Alumni Scholar for Research*, University of Louisville, Louisville, Kentucky (2004-2006).

Distinguished Visiting Scholar and Assistant Director for International Cooperation, Central Institute of Labor Protection, Warsaw, Poland (8/15/1998 –12/31/1998).

Associate Professor, Department of Industrial Engineering, J. B. Speed School of Engineering, University of Louisville, Louisville, Kentucky (7/1/1987 - 6/31/1993). Award of Tenure: 7/1/1988

Fulbright Scholar and Visiting Professor, Occupational Safety Engineering, Tampere University of Technology, Tampere, Finland (9/1/1990-4/30/1991).

Visiting Assistant Professor, Department of Industrial Engineering, Iowa State University, Ames, Iowa (8/1/1982 - 5/30/1983).

Assistant Professor, Department of Industrial Engineering, J. B. Speed School of Engineering, University of Louisville, Louisville, Kentucky (6/1/1983 - 5/30/1987).

Associate in the Department of Psychology, University of Louisville, Kentucky (1985 - 1991).

Research Assistant, Department of Industrial Engineering, Texas Tech University, Lubbock, Texas (9/1/1979 - 7/30/1982).

Research Associate and Teaching Assistant, Institute of Production Engineering and Systems Management, Technical University of Wroclaw, Wroclaw, Poland (10/1978 - 8/1979).

3. Other Professional Training

Industrial Trainee, ELWRO: Computer Manufacturing Company, Wroclaw, Poland (Summer of 1976).

Industrial Trainee, DOLMEL: Electrical Machines Factory, Wroclaw, Poland (Summer of 1977).

II. PROFESSIONAL ACTIVITIES

1. Scientific and Honor Societies

- Fellow, The European Academy of Industrial Management (AIM), 2012.
- Fellow, International Ergonomics Association (IEA), 2003.
- Fellow, The Ergonomics Society-The Chartered Institute of Ergonomics and Human Factors (United Kingdom): F.Erg.S, 2002.
- Fellow, Institute of Industrial (and Systems) Engineers (IIE), 2001.
- Fellow, Human Factors and Ergonomics Society (HFES), 1995.
- Full Academic Member, The Academy of Management (USA)
- Member, American Psychological Association (APA)
- Member, American Society for Engineering Education (ASEE)
- Member, IEEE / Systems, Man & Cybernetics Society
- Professional Member, American Association for the Advancement of Science (AAAS)
- Member, International Society for Industrial Ergonomics and Safety (ISOES)
- Member, Society for Chaos Theory in Psychology & Life Sciences
- Member, Committee on Ergonomics, Polish Academy of Science (2003-2006)

- Listed in *Who's Who in America*, 57th Edition, 2002
- Listed in *The Roll of Honour of the Polish Science*, 2002, 2020
- Listed in *Empire Who's Who in Education*, 2005-2006: Executive and Professional Registry
- Listed in *Marquis Who's Who in American Education*, 7th edition, 2006-2007
- Listed in Academic Keys *Who's Who in Engineering Education* (WWEE), 2006-2007
- Listed in *Marquis Who's Who in the World*, 2007, 2008, 2009.

2. Professional Distinctions and Awards

- *Arnold M. Small President's Distinguished Service Award*, Human Factors and Ergonomics Society, October 2021.
- Recognized in "UCF Researchers in Top 2% of Their Field, 2021" (see journal PLOS Biology): https://www.research.ucf.edu/documents/PDF/2021/UCF_researchers_top_list.pdf
- Elected Member of the *Academy of Science, Engineering and Medicine of Florida* (ASEMFL), Orlando, Florida, USA, November 2020.
- *The David F. Baker Distinguished Research Award*. Institute of Industrial and Systems Engineers, Atlanta, GA, May 2020.
- University of Central Florida Scroll & Quill Society. "*In recognition of the sustained and outstanding achievements in research and creative activities at UCF.*" 2018.
- William Floyd Award "*For Outstanding And Innovative Contributions To Ergonomics And Human Factors*" from the Chartered Institute of Ergonomics & Human Factors, United Kingdom, April 2017.
- *Pegasus Professor Award*, the highest academic honor at the University of Central Florida, 2016.
- *National Professorship Award* by the President of the Republic of Poland, 2012.
- *Member, Board on Human Systems Integration*, National Research Council: National Academy of Sciences, USA (2009-2011).
- *Member, Committee on Human Factors*, National Research Council: National Academy of Sciences, USA (2007-2009).
- *Vice-President, Committee of Ergonomics of the Polish Academy of Science*, Warsaw, Poland (2008-2010).
- *Member, Board of Directors, Council of Scientific Society Presidents*, Washington, D.C. (2007-2009).
- *Research Fellow*, ASSE Foundation and Liberty Mutual Research Institute For Safety - Research Fellowship Program, Hopkinton, MA, Fall 2006.
- *Alumni Scholar for Research 2004-2006*, J. B. Speed School of Engineering, University of Louisville.
- *Jack. A. Kraft Award*, Human Factors and Ergonomics Society, USA, 2004.
- *Honorary Academician*, Member of the *International Academy of Human Problems*, No, 47, Moscow, Russia, November 27, 2003.
- *Best Reference Award for 2002*, Engineering Libraries Division, American Society of Engineering Education (for the *International Encyclopedia of Ergonomics and Human Factors*).

- *Outstanding Academic Title for 2002* by Choice Magazine (for the *International Encyclopedia of Ergonomics and Human Factors*, 2001).
- *Distinguished Achievement Award*, 2002, International Society for Occupational Ergonomics and Safety.
- President's Award, 2001, *Distinguished Service* (International Category), University of Louisville.
- *Pro Labore Securo*, 2000; CIOP, Warsaw, Poland (the highest recognition for contributions to occupational safety and health in Poland).
- *Alumni Scholar for Research*, 2000-2003, Speed School of Engineering, University of Louisville.
- *Wojciech Jastrzebowski Medal for Lifetime Achievements*, 1995, Polish Ergonomics Society, Poland.
- President's Award, 1995, *Outstanding Scholarship, Research and Creative Activity in the Category of Basic and Applied Science*, University of Louisville.
- *Certificate of Nomination*, 1992, Speed Scientific School of Engineering for the Presidential Award for Outstanding Scholarship, Research and Creative Activity, University of Louisville.
- Fulbright Scholar and Visiting Professor, 1990-1991, Tampere University of Technology, Tampere, Finland.
- *Outstanding Young Engineer of the Year Award*, 1989, Institute of Industrial Engineers, Atlanta.
- *Outstanding Industrial Engineer Award*, 1988, Louisville Chapter 18 of the Institute of Industrial Engineers, Louisville, Kentucky.

3. Professional Leadership Activities

- President, Orlando Chapter, International Council on Systems Engineering (INCOSE) 2015-2016
- Vice-President, Orlando Chapter, International Council on Systems Engineering (INCOSE) 2014-2015
- Member, Board of Directors, Orlando Chapter, International Council on Systems Engineering (INCOSE) 2012-2013
- Member, Board of Directors, Foundation for Professional Ergonomics, 2014-present
- Chair, HFES Blue Ribbon Task Force on HFES 2025 and Beyond (2013-2015)
- President, Human Factors and Ergonomics Society (HFES), 2007.
- Member, Board of Directors, *American Association of Engineering Societies* (AAES), 2006-2007.
- Member, Board of Directors, *Board of Certification in Professional Ergonomics* (BCPE), 2003-2006.
- President, International Ergonomics Association, 2000 - 2003.
- Secretary-General, International Ergonomics Association, 1997 - 2000.
- Chair, Council of Technical Groups, Human Factors and Ergonomics Society, 1996-1997.
- Chair, Human Factors and Ergonomics Society (HFES) Sub-Committee for the HFES Distinguished Foreign Colleague Award, 1995 – 2005.
- Member, Accreditation Review Committee for Graduate HF/E University Programs, Human Factors and Ergonomics Society, 1999-2002.
- Chair, Promotion and Publication Committee, International Ergonomics Association, 1994 - 1997.

- Representative of the Human Factors Society to the International Ergonomics Association, and voting USA member of the IEA Council, 1991-1994 and 1994-1997.
- Member, Awards Committee, Human Factors and Ergonomics Society, 1993-1997.
- Member, Human Factors and Ergonomics Society (HFS) Sub-Committee for the HFES Distinguished Foreign Colleague Award, 1991-1994.
- President, International Foundation for Industrial Ergonomics and Safety Research, 1992-1993.
- Chair and US Tag Representative for TC159/ SC-3: Committee on Anthropometry and Biomechanics,
- International Standards Organization, Human Factors and Ergonomics Society, 1994-1996.
- Member, Alpha Pi Mu (Industrial Engineering Honorary).
- Member, Tau Beta Pi (Engineering Honorary).

4. Journal Editorship and Board Membership

- Field Chief Editor, Frontiers in Neuroergonomics,, 2020- present
- Editor-in-Chief, Human-Intelligent Systems Integration (Springer), 2019-present.
- Associate Editor, Specialty Section Neural Technology, Frontiers in Neuroscience, 2018-present.
- Founder and Co-Editor-in-Chief, Theoretical Issues in Ergonomics Science, 2000 – present.
- Co-Editor, International Journal of Occupational Safety and Ergonomics, 1994 - present
- Co-Editor, The Open Cybernetics and Systemics Journal, 2007- present.
- Associate Editor, International Journal of Learning and Intellectual Capital, 2006 - present.
- Member, Editorial Board, International Journal of Industrial Ergonomics, 2019 - present.
- Member, Editorial Board, Applied Ergonomics, 1998 - present.
- Member, Editorial Board, International Journal of Human-Computer Interaction, 1989 – present.
- Member, Editorial Board, Universal Access to the Information Society, 2000 - 2018.
- Member, Editorial Board, Control & Cybernetics (Systems Research Institute, Poland) 2018 – present.
- Member, Editorial Board, International Journal of Human Factors Modelling and Simulation, 2017 – present.
- Member, Editorial Board, Fuzzy Sets and Systems, 2002 – 2018.
- Consulting Editor, Occupational Ergonomics, 1997 - 2002; Editorial Board: 2003 – 2017.
- Member, Advisory Board, Management and Production Engineering Review (Poland), 2010 - present.
- Member, Editorial Board, ISRN Industrial Engineering, 2013 – present

- Member, Editorial Board, The Open Industrial & Manufacturing Engineering Journal, 2012 - present.
- Member, Editorial Board, International Journal of Strategic Change Management, 2010 - present.
- Member, Editorial Board, Economics and Business Administration Journal (Poland), 2010 - present.
- Member, Editorial Board, The Open Ergonomics Journal, 2007-present
- Member, Editorial Board, The Open Industrial and Manufacturing Engineering Journal, 2007 - present
- Member, Editorial Board, Foundations of Control and Management Sciences (Poland), 2004 – present.
- Member, Editorial Board, The Polish Journal of Aviation Medicine, Bioengineering and Psychology (in English), 2014 – present.
- Member, Editorial Board, Ergonomia (Italy), 2005 - present.
- Member, Editorial Board, Industrial Engineering Research: (Hong Kong, in English), 1997 – present.
- Co-Editor, Human Factors and Ergonomics in Manufacturing & Service Industries, Wiley, 2009 - 2015.
- Co-Editor, Human Factors and Ergonomics in Manufacturing, Wiley, 1997 - 2009.
- Senior Editor, Ergonomia: An International Journal of Ergonomics and Human Factors (in English; published by the Polish Academy of Science), 2003- 2012.
- Member, Editorial Board, Economics and Organization of an Enterprise (in Polish, ORGMASZ, Warsaw), 2002 – 2015.
- Member, Editorial Board, Human Factors, 1997 - 2014.
- Consulting Editor, Ergonomics, 1996 - 2006.
- Member, Editorial Team, Ergonomics, 1995 - 1996.
- Editor, Rapid Communications of Ergonomics, 1991 - 1995.
- Associate Editor, International Journal of Industrial Ergonomics, 1986 - 1989.
- Member, Editorial Board, Journal of Intelligent & Fuzzy Systems, 1996 - 1999.

5. Keynote and Plenary Addresses and Guest Lectures

- Invited Plenary Speaker, 21st International Conference on Occupational Risk Prevention, ORP, Cartagena, Colombia, July 13-15th 2021.
- Invited Plenary Speaker, International Symposium on Occupational Safety and Hygiene, SHO2020, Porto, Portugal, July 16-17th, 2020.
- Invited Plenary Speaker, 20th International Conference on Occupational Risk Prevention, ORP, Cartagena, Colombia, September 16-18, 2020.

- Invited Keynote Address, National Congress of Ergonomics Society OF China, XI'an, China, September 1-3, 2019.
- Invited Keynote Address, 1st International Conference on Applied Informatics, Bogota, Colombia, November 1-3, 2018.
- Invited Keynote Address, 20th World Congress on Ergonomics International Ergonomics Conference, IEA 2018, Florence, August 26-30, 2018.
- Invited Plenary Speaker, 17th International Conference on Occupational Risk Prevention, ORP, Buenos Aires, Argentina, 30 October- 1 November, 2017.
- Invited Plenary Speaker, 16th International Conference on Occupational Risk Prevention, Cartagena, Colombia, October 5-7, 2016.
- Invited Plenary Speaker, 14th International Conference on Occupational Risk Prevention, ORP, Zaragoza, Spain, May 21-23, 2014.
- Invited Plenary Speaker, 11th International Conference on Occupational Risk Prevention, Santiago, Chile, 3-5 April, 2013.
- Invited Keynote Address, The challenges of Human-Systems Integration in a complex world: understanding emergent properties of Human-Systems Interactions, IEA 2012 18th World Congress on Ergonomics International Ergonomics Conference, Recife, Brazil 2012.
- Invited lecture at Auburn University, Department of Industrial and Systems Engineering, April 14, 2011: Understanding Complex Human-Systems Interactions: A System of Systems Engineering Perspective.
- Invited Keynote Speaker, Annual Meeting of the Ergonomics Society of Taiwan, Taipei, Taiwan, October 5-7, 2011.
- Invited Plenary Speaker, 7th International Conference on Occupational Risk Prevention, Santiago, Chile, November 24-27, 2009.
- Invited Workshop Speaker, NEW OSH ERA Forum on new and emerging risks at work: Towards a sustainable working life, European Union OSH Agency, Brussels, Belgium, October 29-30, 2009.
- Invited Plenary Speaker, 6th International Conference on Occupational Risk Prevention, Coruna, Spain, May 14-17, 2008.
- Invited Plenary Speaker, 55th Annual Congress of the German Work Science Society (GfA), Munich, Germany, April 9-11, 2008.
- Invited Plenary Address, 11th International Conference on Human Aspects of Advanced Manufacturing Agility and Hybrid Automation - HAAMAH 2007, jointly with the 3rd International Conference on Managing Enterprise of the Future, Poznan, Poland, July 9-12, 2007.
- Invited Plenary Speaker, Intranet Russia 2007, Global Forum, Moscow, Russia, April 25-27, 2007.
- Invited Plenary Lecture, International Symposium on Human Factors and Comprehensive Management Concepts as Precondition for Corporate Sustainability, University of Kaiserslautern, Germany, March 16, 2007.
- Invited Plenary Speaker, 38th Annual Congress of the Nordic Ergonomics Society (NES), Hämeenlinna, Finland, September 24-27, 2006.

- Invited Plenary Speaker, 4th International Conference on Occupational Risk Prevention, Sevilla, Spain, May 10-12, 2006.
- Invited Keynote Address, International Conference on Computer-Aided Ergonomics, Human Factors and Safety: Information Technology, Knowledge Management and Engineering, Technical University of Kosice, Slovakia, May 25-28, 2005.
- Invited Plenary Address, International Conference on Ergonomics of Health Care and Patient Safety, Florence, Italy, April 1, 2005.
- Invited Distinguished Lecture Speaker, WKF Research Colloquium, University of Siegen, Siegen, Germany, December 20, 2004.
- Invited Distinguished Speaker, Guest Lecture Series, The Institute for Ergonomics, Ohio State University, Columbus, Ohio, December 2, 2004.
- Plenary Address, 9th International Conference on Human Aspects of Advanced Manufacturing and Virtual Enterprise, HAAMAHA 2004, Dublin, Ireland, August 24-28, 2004.
- Invited Plenary Speaker, 3rd International Conference on Occupational Risk Prevention, Santiago de Compostela, Galicia, Spain, June 2-4, 2004.
- Invited Lecture, Inyong Ham Distinguished Lecture Series, Penn State University, PA, October 30, 2003.
- Presidential Address, XV- th Triennial Congress of the IEA and The 7th Joint Conference of Ergonomics Society of Korea/Japan Ergonomic Society, Seoul, Korea, August 24-29, 2003.
- Invited Keynote Address, 8th International Conference on Human Aspects of Advanced Manufacturing and Hybrid Automation, HAAMAHA 2003, Rome, Italy, June 27-30, 2003.
- Invited Opening Address, IEA Symposium on Ergonomics, Santiago, Chile, September 2-4, 2002.
- Invited Keynote Address, International Symposium on Ergonomics as a Science and the Subject of University Studies, Polish Academy of Science, Committee on Ergonomics, Poznan, Poland, June 21, 2002.
- Invited Keynote Address, Annual Meeting of the Japan Ergonomics Society, Hiroshima, Japan, June 1-4, 2002.
- Invited Plenary Address, 2nd International Conference on Occupational Risk Prevention, Gran Canaria Island, Spain, February 20-22, 2002.
- Invited Opening Plenary Address, International Conference on Affective Human Factors Design, Singapore, June 27, 2001.
- Invited Plenary Address, International Conference on Ergonomics and Safety for Global Business Quality and Productivity, Central Institute for Labour Protection, Warsaw, Poland, May 16, 2000.
- Invited Plenary Address, International Symposium: Strengths and Weaknesses, Threats and Opportunities of Ergonomics in Front of 21st Century, Athens, Greece, September 1, 1999.
- Invited Plenary Address, Global Ergonomics Conference, September 9, 1998, Cape Town, South Africa.
- Invited Plenary Address, ASEAN Ergonomics 1997 Annual Conference, November 6, 1997, Kuala Lumpur, Malaysia.

- Invited Plenary Address, Anniversary Conference of the Ergonomics Committee, Polish Academy of Sciences, Krakow, Poland, October 21, 1997.
- Chairman and Speaker, Invited Plenary Session, The 4th Pan-Pacific Conference on Occupational Ergonomics, Taipei, Taiwan November 11, 1996.
- Invited Plenary Address, IEA World Conference 1995 on Ergonomic Design and 3rd Latin American Ergonomics Congress, Rio de Janeiro, Brazil, October 16, 1995.
- Invited Plenary Address, Fourth International Scientific Conference on Work with Display Units, Milan, Italy, October 2-4, 1994.
- Invited Keynote Address, *The 8th Annual Conference of Japanese Society for Fuzzy Theory and Systems*, Hiroshima, Japan, May 26-28, 1992.
- Invited Plenary Address, *International Conference on Computer-Aided Ergonomics, Safety and Health*, Tampere, Finland, May 18-20, 1992.
- Invited Plenary Address, *SRE Symposium on Reliability & Safety of Processes and Manufacturing Systems*, Tampere, Finland, October 1-3, 1991.
- Invited Keynote Address, 11th Congress of the International Ergonomics Association, Paris, France, July 15-18, 1991.

III. EDUCATION

1.1. Educational Leadership

- Dual BSIE degree program with Universidad San Ignacio de Loyola (USIL) in Lima, Peru; the ***first international dual degree for any program at UCF***. The first cohort graduated in August 2016.
- MS in Healthcare Systems Engineering Track, University of Central Florida, fully online program started in Fall 2018.
- Northrop Grumman/UCF collaboration to create a pipeline of graduates with master planning and scheduling skills. Northrop Grumman would initiate an UG intern program (CWEP) and participate in the graduate cohort engineering management program (MSEM)
- IdeaLab / Innovation Lab supported the efforts by Dr. Kotnour, IEMS Professor, who secured UCF's technology grant in the amount of \$287,778.00 , with additional funding from a grant from Texas Instruments of over \$500,000. The Gathering Lab, IdeaLab, and Innovation Lab concepts have been fully implemented and successfully running since opening in fall 2014.
- Continuing Education workshops, Workplace Safety and Columbian - Logistics Program; taught by IEMS instructors, Dr. Gene Lee and Luis Rabelo, for a cohort of Columbian working professionals one in the area of occupational safety and health and one in logistics. Summer 2015.

1.2. Teaching

Department of Industrial Engineering and Management Systems, UCF

- ESI 6891 Research Methods (Graduate)

Department of Industrial Engineering, University of Louisville

- IE 340, Work Measurement and Methods (Undergraduate)
- IE 480, Human Factors Engineering (Undergraduate)

- IE 530, Industrial Safety Engineering (Undergraduate)
- IE 570, Engineering Design Economics (Undergraduate)
- IE 575, Fuzzy Sets and Systems (Graduate/Professional)
- IE 680, Human Factors Engineering (Graduate)
- IE 681, Human Performance (Graduate)
- IE 683, Design of Human-Machine Systems (Graduate)
- IE 683, Cognitive Systems Engineering (Graduate)
- IE 685, Human Reliability (Graduate)
- IE 687, Human Aspects of Advanced Manufacturing (Graduate).

IV. RESEARCH

As of 8/5//21: > 13,950 citations, with Google Scholar h-index of 60 and i10-index of 248.

Research profile on Google Scholar: <http://scholar.google.com/citations?user=G01IsFAAAAAJ&hl=en>

Recognized as: UCF Researchers in Top 2% of Their Field, 2021 (see journal PLOS Biology)
https://www.research.ucf.edu/documents/PDF/2021/UCF_researchers_top_list.pdf

1a. Publications: peer-review journals

1. Karwowski, W. and Ayoub, M. M., 1984, Fuzzy Modeling of Stresses in Manual Lifting Tasks, *Ergonomics*, 27 (6), 641-649.
2. Karwowski, W., Ayoub, M. M., Alley, L. R. and Smith, J. L., 1984, Fuzzy Approach in Psychophysical Modeling of Human Operator-Manual Lifting System, *Fuzzy Sets and Systems*, 14 (1), 65-76.
3. Karwowski, W. and Evans, G.W., 1986, Fuzzy Concepts in Production Management Research - A Review, *International Journal of Production Research*, 24 (1), 129-147.
4. Karwowski, W. and Yates, J. W., 1986, Reliability of the Psychophysical Approach to Manual Lifting of Liquids by Females, *Ergonomics*, 29 (2), 237-248.
5. Karwowski, W. and Mital, A., 1986, Development of a Safety Index for Manual Lifting Tasks, *Applied Ergonomics*, 17 (1), 58-64.
6. Mital, A. and Karwowski, W., 1986, Towards the Development of Human Work-Performance Standards in Human-machine Systems: A Fuzzy Modeling Approach, *Fuzzy Sets and Systems*, 19 (2), 133-147.
7. Karwowski, W. and Mital, A., 1986, Potential Applications of Fuzzy Sets in Industrial Safety Engineering, *Fuzzy Sets and Systems*, 19 (2), 105-120.
8. Mital, A., Karwowski, W., Mazouz, A. and Orsarh, E., 1986, Prediction of Lifting Capabilities in the Horizontal and Vertical Planes Using Simulated Job Dynamic Strengths, *American Industrial Hygiene Association Journal*, 47 (5), 288-292.
9. Karwowski, W. and Mital, 1986, A., Isometric and Isokinetic Testing of Lifting Strength of Males in Teamwork, *Ergonomics*, 29, 869-878.
10. Karwowski, W., Mulholland, N. O., Ward, T. L., Jagannathan, V. and Kirchner, R. L., 1986, LIFTAN: An Experimental Expert System for Analysis of Manual Lifting Tasks, *Ergonomics*, 29, 1213-1234.
11. Mital, A., Aghazadeh, F. and Karwowski, W., 1986, Relative Importance of Isometric and Isokinetic Lifting Strengths in Estimating Maximum Lifting Capabilities, *Journal of Safety Research*, 17, 65-71.

12. Karwowski, W., Mulholland, N. O., Ward, T. L. and Jagannathan, V., 1987, A Fuzzy Knowledge Base of an Expert System for Analysis of Manual Lifting Tasks, *Fuzzy Sets and Systems*, 21, 363-374.
13. Mital, A., Karwowski, W. and Chalaka, A., 1987, Laboratory Simulation of Self-Paced and Force-Paced Industrial Stacking and Palletizing Tasks, *Journal of Human Ergology*, 16, 20-34.
14. Karwowski, W., Mital, A., Palenque, L. E. and Ward, T. L., 1987, Development of the Microcomputer-based Expert System for Analysis of Manual Materials Handling Tasks in Industrial Settings, *International Journal of Industrial Ergonomics*, 2, 49-59.
15. Yates, J. W. and Karwowski, W., 1987, Maximum Acceptable Lifting Loads During Seated and Standing Work Positions, *Applied Ergonomics*, 18, 239-243.
16. Evans, G.W., Wilhelm, M.R. and Karwowski, W., 1987, A Layout Design Heuristics Employing the Theory of Fuzzy Sets, *International Journal of Production Research*, 25, 1431-1450.
17. Karwowski, W. and Pongpatanasuegsa, N., 1988, Testing of Isometric and Isokinetic Lifting Strengths of Untrained Females in Teamwork, *Ergonomics*, 31, 291-301.
18. Marek, T., Noworol, C. and Karwowski, W., 1988, Mental Fatigue at Work and Pain Perception, *Work and Stress*, 2, 133-137.
19. Karwowski, W., Rahimi, M. and Mihaly, T., 1988, Effects of Computerized Automation and Robotics on Safety Performance of a Manufacturing Plant, *Journal of Occupational Accidents*, 10, 217-233.
20. Mital, A. and Karwowski, W., 1989, Prediction of Isometric and Isokinetic Strengths of Males in Teamwork: Further Applications of GMDH, *International Journal of Computers in Industrial Engineering*, 16, 145-159.
21. Karwowski, W. and Rahimi, M., 1989, Work Design and Work Measurement: Implications for Advanced Production Systems, *International Journal of Industrial Ergonomics*, 4, (4), 185-194.
22. Rahimi M. and Karwowski, W., 1990, A Research Paradigm in Human-Robot Interaction, *International Journal of Industrial Ergonomics*, 5 (1) 59-72.
23. Karwowski, W., Kosiba, E., Benabdallah, S. and Salvendy, G., 1990, A Framework for Development of Fuzzy GOMS Model for Human-Computer Interaction, *International Journal of Human-Computer Interaction*, 2(4), 287-305.
24. Rahimi, M. and Karwowski, W., 1990, Human Perception of Safe Speed and Idle Time of Industrial Robots, *Behaviour and Information Technology*, 9 (5), 381-389.
25. Karwowski, W., Rahimi, M., Parsaei, H., Amarnath, B. and Pongpatanasuegsa, N., 1991, The Effect of Simulated Accident on Worker Safety Behavior Around Industrial Robots, *International Journal of Industrial Ergonomics*, 7 (3), 229-240.
26. Karwowski, W., 1991, Psychophysical Acceptability and Perception of Load Heaviness by Females, *Ergonomics*, 34 (4), 487-496.
27. Karwowski, W. and Rahimi, M., 1991, Worker Selection of Safe Speed and Idle Condition in Simulated Monitoring of Two Industrial Robots, *Ergonomics*, 34 (5), 531-546.
28. Karwowski, W., 1991, Complexity, Fuzziness and Ergonomic Incompatibility Issues in the Control of Dynamic Work Environments, *Ergonomics*, 34 (6), 671-686.
29. Ward, T. L., Ralston, P., Karwowski, W. and Hall, W. D., 1991, ITONUS: Expert System for Machining on a Lathe, *Journal of Intelligent Manufacturing*, 2, 353-363.

30. Karwowski, W., 1991, New Perspectives on Human Factors in the Design and Management of Advanced Manufacturing Systems: A Review, *The Japanese Journal of Ergonomics*, 27 (6), 301-312.
31. Yates, J. W. and Karwowski, W., 1992, An Electromyographic Analysis of Seated and Standing Lifting Tasks, *Ergonomics*, 35 (7-8), 889-898.
32. Genaidy, A., Hidalgo, J. and Karwowski, W., 1992, A Comparative Study of the Myoelectric Amplitude Characteristics for Weight-Holding Tasks, *Journal of Human Ergology*, 21 (4), 35-48.
33. Karwowski, W., Shumate, C., Yates, J. W., and Pongpatana, N., 1992, Discriminability of Load Heaviness in Manual Lifting: Implications for the Psychophysical Approach, *Ergonomics*, 35 (7-8), 729-744.
34. Genaidy, A., Karwowski, W., Guo, L., Hidalgo, J. and Garbutt, G., 1992, Physical Training: A Tool for Increasing Work Tolerance Limits of Employees Engaged in Manual Handling Tasks, *Ergonomics*, 36 (9), 1081-1102.
35. Marek, T., Noworol, C., Wos, H., Karwowski, W. and Hamiga, K., 1992, Muscular Loading and Subjective Ratings of Muscular Tension Experienced by Novices When Typing with Standard and Split-Design Computer Keyboards, *International Journal of Human-Computer Interaction*, 4 (4), 387-394.
36. Karwowski, W., 1992, The Human World of Fuzziness, Human Entropy, and the Need for General Fuzzy Systems Theory, *Journal of Japan Society for Fuzzy Theory and Systems*, 4 (5), 825-841.
37. Guo, L., Genaidy, A., Warm, J., Karwowski, W. and Hidalgo, G., 1992, Effects of Job Simulated Flexibility and Strength-Flexibility Training Protocols on Maintenance Employees Engaged in Manual Handling Tasks, *Ergonomics*, 36 (9), 1103-1117.
38. Karwowski, W., Ostaszewski, K. and Zurada, J., 1992, Applications of the Catastrophe Theory in Modeling the Risk of Low Back Injury in Manual Lifting Tasks, *La Travail Humain*, (in English), 55 (3), 259-275.
39. Mattila, M., Karwowski, W. and Vikki, M., 1993, Analysis of Working Postures in Hammering Tasks at Building Construction Sites Using the Computerized OWAS-Method, *Applied Ergonomics*, 24 (6), 405-412.
40. Genaidy, A. and Karwowski, W., 1993, The Effects of Neutral Posture Deviations on Perceived Joint Discomfort Ratings in Sitting and Standing Postures, *Ergonomics*, 36 (7), 785-792.
41. Mital, A., Garg, A., Karwowski, W., Kumar, S., Smith, J. L. and Ayoub, M. M., 1993, Status in Human Strength Research and Application, *IIE Transactions*, 25 (6), 57-69.
42. Karwowski, W. et al., 1994, Integrating People, Organizations, and Technology in Advanced Manufacturing: A Position Paper Based on the Joint View of Industrial Managers, Engineers, Consultants, and Researchers, *International Journal of Human Factors in Manufacturing*, 4 (1), 1-19.
43. Karwowski, W., Eberts, R., Salvendy, G. and Noland, S., 1994, The Effects of Computer Interface Design on Human Postural Dynamics, *Ergonomics*, 37 (4), 703-724.
44. Genaidy, A., Al-Shedi, A. and Karwowski, W., 1994, Postural Stress Analysis in Industry, *Applied Ergonomics*, 25 (2) 77-87.
45. Ukita, A., Karwowski, W. and Salvendy, G., 1994, Aggregation of Evidence in A Fuzzy Knowledge-Based Method for Automated Tuning of Microwave Electric Circuits, *Journal of Intelligent & Fuzzy Systems*, 2(4), 299-313.

46. Jarvinen, J. and Karwowski, W. 1995, Analysis of Self-Reported Accidents Attributed to Advanced Manufacturing Systems, *International Journal of Human Factors in Manufacturing*, 5 (3), 251-266.
47. Grobelny, J., Karwowski, W. and Zurada, J., 1995, Application of Fuzzy-Based Linguistic Patterns for the Assessment of Computer Screen Design Quality, *International Journal of Human-Computer Interaction*, 7 (3), 193-212.
48. Hidalgo, J., Genaidy, A., Karwowski, W., Christensen, D., Huston, R. and Stambough, J. A., 1995, Cross-Validation of the NIOSH Limits for Manual Lifting, *Ergonomics*, 38 (12), 2455-2464.
49. Ukita, A., Karwowski, W., Salvendy, G., Lee, W.-G. and Zurada, J., 1996, Automated Tuning of an Electronic Circuit Board Using the Artificial Neural Network Approach, *Journal of Intelligent Manufacturing*, 7, 329-339.
50. Zurada, J., Graham, J. and Karwowski, W., 1996, Application of an Artificial Neural Network for Decision Making in a Robot Safety System, *Journal of Intelligent & Fuzzy Systems*, 4 (3), 177-191.
51. Dempsey, P., Ayoub, M.M., Bernard, T. M., Endsley, M.R., Karwowski, W., Joe Lin C., and Smith, J.L, 1996, Ergonomic Investigation of Letter-Carrier Satchels: Part I. Field Study Applied Ergonomics, 27 (5), 303-313.
52. Jarvinen, J. Vannas, V., Mattila, M. and Karwowski, 1996, W. Causes and Safety Effects of Production Disturbances in FMS Installations: A Comparison of Field Studies in the USA and Finland, *International Journal of Human Factors in Manufacturing*, 6 (1), 57-72.
53. Zurada, J., Karwowski, W. and Marras, W. S., 1997, A Neural Network-Based System for Classification of Industrial Jobs with Respect to the Risk of Low Back Disorders, *Applied Ergonomics*, 28 (1), 49-58.
54. Hidalgo, J., Genaidy, A., Karwowski, W., Christensen, D., Huston, R. and Stambough, J. A., 1997, A Comprehensive Lifting Model: Beyond the Lifting Equation, *Ergonomics*, 40 (9), 916-927.
55. Shoaf, C., Genaidy, A., Karwowski, W., Waters, T. and Christensen, D., 1997, Comprehensive Manual Handling Limits for Lowering, Pushing, Pulling and Carrying Activities, *Ergonomics*, 40 (11), 1183-1200.
56. Genaidy, A., Karwowski, W., Christensen, D., Vogiatzis, C. and A. Prins, 1998, What is heavy? *Ergonomics*, 41 (4), 420-432.
57. Yang, Y. N, Karwowski, W. and Lee Y.H., 1998, Load Heaviness and Perceived Weight Lifted: Implications of Human Cognition For Setting Design Limits In Manual Lifting Tasks. *Occupational Ergonomics*, 1 (4): 291-303.
58. Zurada, J., Karwowski, W. and Graham, J., 1998, Sensory Integration and Management of Uncertainty in Robot Safety Systems: A Review, *International Journal of Computer-Integrated Manufacturing*, 11(3): 262-273.
59. Karwowski, W., 1998, Selected Directions And Trends In Development Of Ergonomics In USA (in Polish), *Ergonomia*, 21 (1-2): 141-155.
60. Karwowski, W., Lee, W. G, Jamaldin, B., Gaddie, P. and R. Jang, 1999, Beyond Psychophysics: A Need for Cognitive Modeling Approach to Setting Limits in Manual Lifting Tasks, *Ergonomics*, 42 (1) 40-60.
61. Genaidy, A., Karwowski, W., Christensen, D, 1999, Principles of Work System Performance Optimization: A Business Ergonomics Approach. *Human Factors and Ergonomics In Manufacturing*, 9 (1), 105-128.

62. Karwowski, W., *Symvatology: The Science of an Artifact-Human Compatibility*, 2000, *Theoretical Issues in Ergonomics Science*, 1 (1): 76-91.
63. Genaidy, A., Karwowski, W., Young, K-Guk, Succop, P. and Goyal, D., 2000, A Classification System for Characterization of Physical and Non-Physical Work Factors, *International Journal of Occupational Safety and Ergonomics*, 6 (4), 535-555.
64. Genaidy, A., Beltran, J., Yeung, S., Karwowski, W., Succop, P., Huston, R. and Stambough, J., 1999/2000, Use of Human Expertise in the Evaluation of Manual Lifting Activities, *Occupational Ergonomics*, 2 (2), 105-124.
65. Shoaf, A. Genaidy, R. Shell, W. Karwowski, T. Waters, P. A. Hancock, and R. Huston, 2001, An Adaptive Control Model for Assessment of Work-Related Musculoskeletal Hazards and Risks, *Theoretical Issues in Ergonomics Science*, 1 (1), 34-61.
66. Kee, D. and Karwowski, W., 2001, LUBA: An Assessment Technique For Postural Loading Based On Joint Motion Discomfort And Maximum Holding Time, *Applied Ergonomics*, 32 (4), 357-366.
67. Kee, D. and Karwowski, W., 2001, The Boundaries for Joint Angles of Isocomfort for Sitting and Standing Males Based on Perceived Comfort of Static Joint Postures, *Ergonomics*, 44(6), 614-648.
68. Bedny, G., Karwowski, W. and M.H. Seglin, 2001, A Heart-Rate Evaluation Approach to Determine the Cost-Effectiveness of an Ergonomics Intervention, *International Journal of Occupational Safety and Ergonomics*, 7 (2) 121-134.
69. Yeung, S. S., Genaidy, A., Karwowski, W., Houston, R., and Beltran J, 2001, Assessment of Manual Lifting Activities using Worker Expertise: A comparison of two worker populations, *Asian Journal of Ergonomics*, 2 (1) 11-24.
70. Bedny, G., Karwowski, W. and Young-Guk Kwon, 2001, A Methodology for Systemic-Structural Analysis and Design of Manual Manufacturing Operations, *Human Factors and Ergonomics in Manufacturing*, 11 (3) 233-254.
71. Bedny, G., Karwowski, W., Bedny, M., 2001, The Unity of Cognition and Behavior as a Basic Principle of Activity Theory, *International Journal of Cognitive Ergonomics*, 5 (4), 401-420.
72. Genaidy, A., Karwowski, W. and Shoaf, C, 2002, The Fundamentals of Work System Compatibility Theory: An Integrated Approach to Optimize Human Performance at Work, *Theoretical Issues in Ergonomics Science*, 3 (4), 346-368.
73. Yeung, S. S., Genaidy, A., Karwowski, W. and Leung, P.C., 2002, Reliability and Validity of Self-Reported Assessment of Exposure and Outcome Variables for Manual Lifting Tasks: A Preliminary Investigation, *Applied Ergonomics*, 33 (5), 463-469.
74. Karwowski, W. and Gielo-Perczak, K., 2002, A Theory Of Human Ecological Control Networks: The Role Of Affordation, Emotion And Intuition In The Design Of Human Environments. *The Japanese Journal of Ergonomics*, Vol. 38 (Supplement), pp.26-33.
75. Yeung, S. S., Genaidy, A., Houston, R. and Karwowski, W., 2002, An Expert Cognitive Approach for Evaluation of Physical effort and Injury Risk in Manual Lifting: Technical Note of a Pilot Study, *Human Factors and Ergonomics in Manufacturing*, 12 (2) 227-234.
76. Stuebbe, P., Genaidy, A., Karwowski, W. and Young, G. K., 2002, The Relationships Between Biomechanical And Postural Stresses, Musculoskeletal Injury Rates, and Perceived Body Discomfort Experienced by Industrial Workers: A Field Study, *International Journal of Occupational Safety and Ergonomics*, 2002; 8(2):259-280.
77. Kee, D. and Karwowski, 2002, W, Analytically Derived Three-Dimensional Reach Volumes in a Sitting Posture for Upper and Lower Body, *Human Factors*, 44 (4), 530-544.

78. Hernandez, L., Alhemoood, A., Genaidy, A., M. and Karwowski, W., 2002, Evaluation Of Different Scales For Measurement Of Perceived Physical Strain During Performance Of Manual Tasks. *International Journal of Occupational Safety and Ergonomics*, 8 (4), 413-432.
79. Karwowski, W., Gielo-Perczak, K, Moxley, D., and Rodrick, D., 2002, The Effects of Task Conditions On Subjects' Physical Ability And Willingness To Lift Loads: An Ecological Approach, *Occupational Ergonomics*, 3 (1), (2002/2003), 109–119.
80. Chase, B. and Karwowski, W., Benedict, M. E., Quesada, P. M., And H. M. Irwin-Chase, 2003, A Study of Computer-Based Task Performance Under Thermal Stress, *International Journal of Occupational Safety and Ergonomics*, 9 (1), 5-16.
81. Genaidy, A., and Karwowski, W., 2003. Human Performance in Lean Production Environment: Critical Assessment and Research Framework. *Human Factors and Ergonomics in Manufacturing*, 13, 317–330.
82. Karwowski, W., P.M. Quesada, M. Mattila, Y. G. Kwon and D. James, 2002/2003, Experimental Studies of Manual Hammering Tasks, *Occupational Ergonomics*, 3 (1), 45-54.
83. Lee, W., Karwowski, W. and Marras, W.S., D. Rodrick, 2003, A Neuro-Fuzzy Modeling of Myoelectrical Activity of Trunk Muscles Due to Manual Lifting Tasks, *Ergonomics*, 15 (1-3), 285-309.
84. Gielo-Perczak, K. and Karwowski, W., 2003, Ecological Models of Human Performance Based on Affordances, Emotion and Intuition, *Ergonomics*, 15 (1-3), 310-326.
85. Karwowski, W., Siemionow, W. and Gielo-Perczak, K., 2003, Physical Neuroergonomics: The Human Brain in Control of Physical Work Activities, *Theoretical Issues in Ergonomics Science*, 4 (1-2), 175-199.
86. Kee, D. and Karwowski, W., 2003, Ranking Systems for Evaluation of Joint and Joint Motion Stressfulness Based on Perceived Discomforts. *Applied Ergonomics*, 34 (2), 167-176.
87. Daraiseh, N., Genaidy, A., Karwowski, W Stambough, J., Davis, L. S. and Huston, R.L., 2003, Musculoskeletal Outcomes in Multiple Body Regions and Work Effects Among Nurses: The Effects of Stressful and Stimulating Working Conditions. *Ergonomics*, 46 (12), 1178-1199.
88. Wallace, S., Shoaf, C., Genaidy, A. and W. Karwowski, 2003, Assessing the Compatibility of Work System Factors through an Integrative Model: A Case Study. *International Journal of Occupational Safety and Ergonomics*, 9 (1), 27-36.
89. Bedny, G.Z. and Karwowski, W., 2003, Systemic-Structural Analysis and Design of Performance on Computer-Based Tasks, *International Journal of Human-Computer Interaction*, 16 (2), 235-260.
90. Shoaf, C., Genaidy, A. and W. Karwowski, 2004, Improving Performance and Quality of Working Life: A Model for Organizational Health Assessment in Emerging Enterprises, *Human Factors and Ergonomics Manufacturing*, 14 (1), 81–95.
91. Bedny, G. and Karwowski, W., 2004, Activity Theory as a Basis for the Study of Work, *Ergonomics*, 47 (2), 134-153.
92. Karwowski, W., Rodrick, D., and Boratyn, G. M., 2004, Experimental Evaluation of Pressure Distribution Changes When Using Clinical Support Surfaces, *Occupational Ergonomics*, 4 (1), 41-50.
93. Dul, J. and Karwowski, W., 2004, An Assessment System for Rating Scientific Journals in the Field of Ergonomics and Human Factors, *Applied Ergonomics*, 35 (3), 301-310.

94. Kee, D. and Karwowski, W., 2004, Joint Angles of Isocomfort for Females Based on the Psychophysical Scaling of Static Joint Postures, *Ergonomics*, 47 (4), 427-445.
95. Sherehiy, B., Karwowski, W., and Marek, T., 2004, Risk Factors for Work-Related Musculoskeletal Disorders in the Nursing Profession: A Review. *Ergonomia: An international Journal of Ergonomics and Human Factors*, 26 (1), 19-48.
96. Abdallah S, Genaidy A, Salem O, Karwowski W, Shell R. The Concept of Work Compatibility: An Integrated Work Design Criterion for Improving Workplace Human Performance in Manufacturing Systems. *Human Factors and Ergonomics in Manufacturing 2004*; 14(4): 379-402.
97. Bedny, G. and Karwowski, W., 2004, A Functional Model of the Human Orienting Activity. *Theoretical Issues in Ergonomics Science*, 5 (4), 255-274.
98. Paez, O., J. Dewees, A. Genaidy, S. Tuncel, Karwowski, W. and J. Zurada, 2004, The Lean Manufacturing Enterprise: An Emerging Sociotechnological System Integration. *Human Factors and Ergonomics in Manufacturing*, 14 (3), 285-306.
99. Zurada, J., Karwowski, W. and Marras, W. S., 2004, Classification of Jobs With Risk of Low Back Disorders by Applying Data Mining Techniques, *Occupational Ergonomics*, 4 (4), 291-305.
100. Bedny, G. and Karwowski, W., 2004, The Situational Reflection of Reality in Activity Theory and the Concept of Situation Awareness in Cognitive Psychology. *Theoretical Issues in Ergonomics Science*, 5 (4), 275-296.
101. Sherehiy, B., Karwowski, W. and Marek, T., 2004, Evaluation of Strength and Consistency of the Reported Association between the Risk Factors and Musculoskeletal Disorders in the Nursing Profession: A Systematic Review. *Occupational Ergonomics*, 4 (4), 241-279.
102. Grobelny, J., Karwowski, W. and Drury, C., 2005, Usability of Graphical Icons in the Design of Human-Computer Interfaces. *International Journal of Human-Computer Interaction*, 18 (2), 167-182.
103. Dzissah, J., Karwowski, W., S., Rieger, J., and Stewart, D. 2005, Measurement of Management Efforts With Respect to Integration of Quality, Safety and Ergonomics Issues in Manufacturing Industry. *Human Factors and Ergonomics in Manufacturing*, 15 (2), 213-232.
104. Karwowski, W., 2005, *Ergonomics and Human Factors: The Paradigms for Science, Engineering, Design, Technology, and Management of Human-Compatible Systems*. *Ergonomics*, 48 (5), 436 – 463.
105. Genaidy A., Karwowski W., Shell, R., A., Khalil, S. Tuncel, S. Cronin and R, Salem O., 2005. Work Compatibility: An Integrated Diagnostic Tool for Evaluating Musculoskeletal Responses to Work and Stress Outcomes. *International Journal of Industrial Ergonomics*, 35 (12), 1109-1131.
106. Karwowski, W., Ren-Liu Jang, David Rodrick, D., P., M. Quesada, and S. N. Cronin, 2005, Self-Evaluation of Biomechanical Task Demands, Work Environment And Perceived Risk of Injury by Nurses:A Field Study. *Occupational Ergonomics*, 5 (1), 13-27.
107. Dul, J. and Karwowski, W., 2005, Technical Note: Objective and Subjective Rankings of Scientific Journals in the Field of Ergonomics: 2004-2005. *Human Factors and Ergonomics in Manufacturing*, 15 (3), 327-332.
108. Abdallah, S., Genaidy, A., Karwowski, W., Shell, R., Sonbol, A., Ravelo, E. and Holly, M.B., 2005, Theoretical Basis For General Lifting Equations Based On Total Mechanical Work Performed During Manual Lifting. *Theoretical Issues in Ergonomics Science*, 6 (6), 551-564.
109. Beregowda, S.C. and Karwowski, W., 2005, Modeling of Human Physiological Stresses: A Thermodynamics-Based Approach. *Occupational Ergonomics*, 5 (4), 235-248.

110. Chase, B., Karwowski, W., Benedict, M. E. and Queseda, P. M. 2005, Effects of Thermal Stress on Dual Task Performance and Attention Allocation," *Journal of Human Performance in Extreme Environments*: Vol. 8: Issue 1-2, 29-37. DOI: <http://dx.doi.org/10.7771/2327-2937.1039>
111. Kantola, J., Karwowski, W., Vanharanta, H., 2005, Creative Tension in Occupational Work Roles: A Dualistic View of Human Competence Management Technology Based on Soft Computing. *Ergonomia: An International Journal of Ergonomics and Human Factors*, 27 (4), 273–286.
112. Salem, S., O. Paez, M. Holley, S. Tuncel, A. Genaidy, W. Karwowski, 2006, Performance Tracking Through the Work Compatibility Model, *Human Factors and Ergonomics in Manufacturing*, 16 (2), 133–153.
113. Rodrick, D. and Karwowski, W., 2006, Nonlinear Dynamical Behavior Of Surface Electromyographical Signals Of Biceps Muscle Under Two Simulated Static Work Postures, *Nonlinear Dynamics, Psychology, and Life Sciences*, 10 (1), 21-35.
114. Genaidy, A. and Karwowski, W., 2006, Nanotechnology Occupational and Environmental Health and Safety: Education and Research Needs for the Emerging Interdisciplinary Field of Study. *Human Factors and Ergonomics in Manufacturing*, 16 (3), 247-254.
115. Genaidy, A. and W. Karwowski, 2006, The Emerging Field of Health Engineering. *Theoretical Issues in Ergonomics Science*, 7 (2), 169-179.
116. Sherehiy, B and Karwowski, W., 2006, Knowledge Management for Occupational Safety, Health and Ergonomics. *Human Factors and Ergonomics in Manufacturing*, 16 (3), 309-320.
117. Sequeira, R., A. Genaidy, R. Shell, W. Karwowski, G. Weckman and S. Salem, W., 2006, A Nano-Enterprise: A Survey of Health and Safety Concerns, Considerations, and Proposed Improvement Strategies to Reduce Potential Adverse Effects. *Human Factors and Ergonomics in Manufacturing*, 16 (4), 343-368.
118. Paajanen, P., Kantola, J., Karwowski, W. and Vanharanta, H., 2006, Applying Systems Thinking in the Evaluation of Organizational Learning and Knowledge Creation. *Journal of Systemics, Cybernetics and Informatics*, 3 (3), 79-84.
119. Paez, O., T. Uahinui, A. Genaidy, W. Karwowski, L. Sun and N. Daraiseh, 2006, Estimating Uninsured Costs Of Work-Related Accidents. Part II: An Incidence-Based Model. *Theoretical Issues in Ergonomics Science*, 7 (3), 211-225.
120. Bedny, G. and Karwowski, W., 2006, The Self-Regulation Concept of Motivation at Work. *Theoretical Issues in Ergonomics Science*, 7 (4), 413-436.
121. Genaidy, A., Karwowski, W., Ravelo, E., S. Abdallah, and R. Shell, M.B. Holly, 2006, Theoretical Basis For General Mixed Object Handling Equations Based On Mechanical Work Required. *Theoretical Issues in Ergonomics Science*, 7 (5), 469-490.
122. Michalski, R., Grobelny, J. and Karwowski, W., 2006, The Effects of Graphical Interface Design Characteristics on Human-Computer Interaction Task Efficiency. *International Journal of Industrial Ergonomics*, 36 (11), 959-977.
123. Yeung, S., Deddens, J, Genaidy, A., Karwowski, W. and Leung, P.C, 2006, Theoretical and Experimental Evaluation of the Multiplicative Lifting Equation and the General Lifting Index. *Occupational Ergonomics*, 6 (1), 13-24.
124. Karwowski, W., Gaweda, A., Marras, W. S., Davis, K., Zurada, J., and Rodrick, D., 2006, A Fuzzy Relational Rule Network Modeling Of Electromyographical Activity of Trunk Muscles in Manual Lifting Based On Trunk Angles, Moments, Pelvic Tilt And Rotation Angles. *International Journal of Industrial Ergonomics*, 36 (10), 847-859.

125. Genaidy, A., Karwowski, W., Ravelo, E., S. Abdallah, and R. Shell, M.B. Holly, 2006, Theoretical Basis For General Mixed Object Handling Equations Based On Mechanical Work Required. *Theoretical Issues in Ergonomics Science*, 7 (5), 469 - 490.
126. Kantola, J., Vanharanta, H., Karwowski, W., 2006, Operators' Creative Tension and Shift Performance. *Paper and Timber*, 88 (4), 225-229.
127. Genaidy, A., W., Karwowski, W., Salem, S., Jarrel, J., Paez, O., Tuncel, S., 2007, The Work Compatibility Improvement Framework: Defining and Measuring the Human-At-Work System. *Human Factors and Ergonomics in Manufacturing*, 17 (2), 163-226.
128. Hou, Y., Zurada, J.M., Karwowski, W., Marras, W.S., and Davis, K., 2007, Estimation of the Dynamic Spinal Forces Using a Recurrent Fuzzy Neural Network. *IEEE Transactions on Systems, Man and Cybernetics, Part B: Cybernetics*, 37 (1), 100-109.
129. Genaidy, A., Salem, W., Karwowski, W., Paez, O., Tuncel, S., 2007, The Work Compatibility Improvement Framework: An Integrated Perspective of The Human-At-Work System, *Ergonomics*, 50 (1), 3-25.
130. Kee, D. and Karwowski, W., 2007, A Comparison of Three Observational Techniques for Assessing Postural Loads in Industry. *International Journal of Occupational Safety and Ergonomics*, 13 (1), 3-14.
131. Sherehiy, B., Karwowski, W. and Layer, J. K., 2007, A Review of Enterprise Agility: Concepts, Frameworks and Attributes. *International Journal of Industrial Ergonomics*, 37(5), 445-460.
132. Hou, Y., Zurada, J.M., Karwowski, W., Marras, W.S. and Davis, K., 2007, Identification of Key Fuzzy Variables Using Fuzzy Average with Fuzzy Cluster Distribution. *IEEE Transactions on Fuzzy Systems*, 15(4), 673-685.
133. Jang, R.L., Karwowski, W., Quesada, P.M., Rodrick, D., Sherehiy, B., Cronin, S.N. and Layer, J. K., 2007, Biomechanical Evaluation Of Nursing Tasks In A Hospital Setting. *Ergonomics*, 50 (11) 1835-1855.
134. Karwowski, W., Gaddie, P., Sherehiy, B., Khalaf, T., and P. Quesada, 2007, The Effects of Lifting Instructions on The Psychophysically Selected Lifting Load Limits: A Need For Reappraisal. *Occupational Ergonomics*, 7(1), 3-10.
135. A. Genaidy, A., Karwowski, W., and A-Rehim, A., 2007, The Work Compatibility Improvement Framework: Preliminary Findings of a Case Study for Defining and Measuring the Human-At-Work System. *Ergonomics*, 50 (11), 1771-1808.
136. Khalaf, T., Karwowski, W., Quesada, P. and Sherehiy, B., 2007, Effects of Three Computer Keyboards on Wrist and Forearm Postures and Typing Task Performance. *Occupational Ergonomics*, 7(2), 115-123.
137. Genaidy A. and W. Karwowski, 2008, A Roadmap for a Methodology to Assess, Improve and Sustain Intra- and Inter-Enterprise System Performance With Respect to Technology-Product Life Cycle in Small and Medium Manufacturers. *Human Factors and Ergonomics in Manufacturing*, 18 (1), 70-84.
138. Rinder, M.M., Genaidy, A., Salem, S., Shell, R. and Karwowski, W., 2008, Interventions in the construction industry: A systematic review and critical appraisal. *Human Factors and Ergonomics in Manufacturing*, 18(2), 212-229.
139. Tuncel, S., Genaidy, A., Shell, R., Karwowski, W., Darwish, M., Noel, F. and Singh, D., 2008, Research to Practice: Effectiveness of Controlled Workplace Interventions to Reduce Musculoskeletal Disorders in the Manufacturing Environment- Critical Appraisal and Meta-Analysis. *Human Factors and Ergonomics in Manufacturing*, 18 (2), 93-124.

140. Viruet, H.B., Genaidy, A., Shell, R., S., and Karwowski, W., 2008, Effect of Forklift Operation on Lower Back Pain: An Evidence-Based Approach. *Human Factors and Ergonomics in Manufacturing*, 18 (2), 125-151.
141. Kara, K., Kothari, A. Genaidy, G. Weckman, Shell, R. and W. Karwowski, 2008, Factors That Affect Healthcare Costs in Manufacturing. *Human Factors and Ergonomics in Manufacturing*, 18 (2), 212-229.
142. Sequeira, R., Genaidy, A., Weckamn, G., Shell, R., Karwowski, W. and A. Acosta-Leon., 2008, Health Effects of Nanomaterials: A Critical Appraisal Approach and Research to Practice. *Human Factors and Ergonomics in Manufacturing*, 18 (3), 293-341.
143. Bedny, G., Karwowski, W. and Sengupta, T., 2008, Application of Systemic-Structural Theory of Activity in the Development of Predictive Models of User Performance, *International Journal of Human-Computer Interaction*, 24:3, 239 - 274
144. Maudgalya, T., Genaidy, A., Weckamn, G., Shell, R., Karwowski, W. and Wallace, S., 2008, A Critical Appraisal of Epidemiological Studies Investigating the Effects of Ultrafine Particles on Human Health. *Human Factors and Ergonomics in Manufacturing*, 18 (3), 358-373.
145. Layer, J. K., Karwowski W. and Furr, A., 2009, The Effect of Cognitive Demands And Perceived Quality Of Work Life on Human Performance in Manufacturing Environments. *International Journal of Industrial Ergonomics*, 39 (2), 413-421.
146. Gielo-Perczak, K. and Karwowski, W. and Rodrick, D., 2009, Nonlinear Behavior of the Center of Pressure in Simulated Standing on Elevated Construction Beams. *Work: International Journal*, 34 (2), 195-203.
147. Karwowski, W., Ahram, T. Z., 2009, Interactive Management of Human Factors Knowledge For Human Systems Integration Using Systems Modeling Language. *Information Systems Management*, 26 (3), 262-274.
148. Daraiseh, N., Cronin, S.N, Davis, L.S., Shell R.L. and W. Karwowski, 2010, Low Back Symptoms Among Hospital Nurses, Associations To Individual Factors And Pain In Multiple Body Regions *International Journal of Industrial Ergonomics*, 40 (1), 19-24.
149. Bedny, I.S., W. Karwowski, and G. Z. Bedny, 2010, A Method of Human Reliability Assessment Based on Systemic-Structural Activity Theory. *International Journal of Human-Computer Interaction*, 26 (4), 1-26.
150. Reid, C.R., McCauley-Bush, P., Karwowski, W. and Durani, S. K., 2010, Occupational Postural Activity and Lower Extremity Discomfort: A Review. *International Journal of Industrial Ergonomics*, 40 (3), 247-256.
151. Jaworek, M., Marek, T., Karwowski, W., Andrzejczak, C., and Ash M. Genaidy, 2010, Burnout Syndrome As A Mediator For The Effect Of Work-Related Factors On Musculoskeletal Complaints Among Hospital Nurses. *International Journal of Industrial Ergonomics*, 40 (3), 368-375.
152. Ahram, T.Z., McCauley-Bush, P., and W. Karwowski, 2010, Multi-criteria Weighted Model to Estimate Document Collections Intrinsic Dimensionality and Enhance Information Retrieval Performance, *Journal of Information Sciences*, 180 (15), 613-630.
153. Vanharanta, H., Kantola, J. and Karwowski, W., 2010, Boosting Student Entrepreneurship with Intellectual Capital. *Global Partnership Management Journal*, 1 (1-2), 45-54.
154. Ahram, T., Karwowski, W., and B. Amaba, 2011, Collaborative Systems Engineering and Social-Networking Approach to Design and Modeling of Smarter Products. *Behaviour and Information Technology*, 30 (1), 13-26.

155. Philippart, M. F. and Karwowski, W., 2011, Development Of Human Factors Ontology For Business Knowledge Management. *International Journal of Asian Business and Information Management (IJABIM)*, 2(2), pp.1-17.
156. Karunanont, T. and Karwowski, W., 2011. Learning Environment, Professional Competencies and Corporate Safety Culture Perceived by Workers and Managers in Manufacturing Settings. *International Journal of Learning and Intellectual Capital*, 8 (4), 459-483.
157. Wells, W. H., Karwowski, W., Sala-Diakanda, S., Williams, K. and Pharmer, J.A., 2011, Application of Systems Modeling Language (SySML) for Cognitive Work Analysis in Systems Engineering Design Process. *Journal of Universal Computer Science*, 17 (9), 1261-1280.
158. Zurada, J.M. and Karwowski, W., 2011. Knowledge Discovery through Experiential Learning from Business and Other Contemporary Data Sources: A Review and Reappraisal. *Information Systems Management*, 28 (3), 258-274.
159. Bedny, G., Karwowski, W. and Bedney, I., 2012, Complexity Evaluation of Computer-Based Tasks, *International Journal of Human-Computer Interaction*, 28 (4), 236-257.
160. Rebelo, F., Correia da Silva, K. and Karwowski, W., 2012, A Whole Body Postural Loading Assessment Model for Workplace Analysis and Design, *International Journal of Occupational Safety and Ergonomics*, 18 (4), 509-519.
161. Karwowski, W., 2012, A Review of Human Factors Challenges of Complex Adaptive Systems Discovering and Understanding Chaos in Human Performance. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 54 (6), 983-995.
162. Bedny, G. Z., Karwowski, W., Bedny, I., 2012, Complexity Evaluation of Computer-Based Tasks. *International Journal of Human-Computer Interaction* 28(4): 236-257.
163. Dylag, A., Jaworek, M., Karwowski, W., Kożusznik, M., Marek, T., 2013, Discrepancy between individual and organizational values: Occupational burnout and work engagement among white-collar workers, *International Journal of Industrial Ergonomics*, 43 (3), 225-231.
164. Bedny, G. and Karwowski, W., 2013, Analysis Of Strategies Employed During Upper Extremity Positioning Actions. *Theoretical Issues in Ergonomics Science*, 14(2), 175-194.
165. Ahram, T. and Karwowski, W., 2013, Engineering Sustainable Complex Systems. *Management and Production Engineering Review*, 4(4), 4-14.
166. Andrzejczak, C., Karwowski, W. and Thompson, W., 2014, The Identification of Factors Contributing to Self-Reported Anomalies in Civil Aviation, *International Journal of Occupational Safety and Ergonomics (JOSE)*, 20(1), 3–18.
167. Sherehiy, B. and W. Karwowski, W., 2014, The Relationship Between Work Organization And Workforce Agility In Small Manufacturing Enterprises. *International Journal of Industrial Ergonomics*, 44(3), 466-473.
168. Garg, A., Waters, T., Kapellusch, J. and Karwowski, W., 2014. Psychophysical basis for maximum pushing and pulling forces: A review and recommendations. *International Journal of Industrial Ergonomics*, 44(2), pp.281-291.
169. Çakıt, E., Karwowski, W., Bozkurt, H., Ahram, T., Thompson, W., Mikusinski, P., and Lee, G., 2014, Investigating The Relationship Between Adverse Events And Infrastructure Development In An Active War Theater Using Soft Computing Techniques, *Applied Soft Computing*, 25, 204-214.
170. Bedny, G., Karwowski, W. and Voskoboynikov, F. 2015. Application of Standardized Motions in Temporal Analysis of Work Activity. *Human Factors and Ergonomics in Manufacturing & Service*

- Industries, 25(4), 469-483.
171. Khalaf, T., Karwowski, W., & Sapkota, N., 2015, A Nonlinear Dynamics of Trunk Kinematics During Manual Lifting Tasks. *Work: A Journal of Prevention, Assessment and Rehabilitation*, 51(3), 423-437.
 172. Sapkota, N, Karwowski, W. and Ahram, T., 2015. Application of Evolving Self Organizing Maps for Analysis of Human Adverse Events in the Context of Complex Socio-Economic Infrastructure Interactions, *IEEE Transactions on Human-Machine Systems*, 45(4), 500-509.
 173. Cakit, E., & Karwowski, W., 2015, Assessing the Relationship between Economic Factors and Adverse Events in an Active War Theater Using Fuzzy Inference System Approach. *International Journal of Machine Learning and Computing*, 5 (3), 252-257.
 174. Çakit, E. and Karwowski, W., 2015. Fuzzy Inference Modeling with the Help of Fuzzy Clustering for Predicting the Occurrence of Adverse Events in an Active Theater of War, *Applied Artificial Intelligence*, 29 (10), 945-961, DOI: 10.1080/08839514.2015.1097140
 175. Murata, A., Nakamura, T., and Karwowski, W., 2015. Influence of Cognitive Biases in Distorting Decision Making and Leading to Critical Unfavorable Incidents. *Safety*, 1 (1), 44-58.
 176. Wachowicz, B., Lewandowska, K., Popek, Karwowski, W., and Mark, T., 2016. Empathy and Modern Technology: A Neuroergonomics Perspective. *Human Factors and Ergonomics in Manufacturing and Service Industries*. 26 (2) 266–28. DOI: 10.1002/hfm.20627
 177. Çakit, E. and Karwowski, W., 2016. Potential Applications of Soft-Computing Techniques for Human Socio-Cultural Behavior Modeling. *Journal of Computers*, 12 (4), 284-290.
 178. Karwowski, W. and Ahram, T., 2016, An Information Theory-Based Framework for Development of the Human-Centered System Sustainability Index. *Acta Mechanica Slovaca*, 29 (4), 42-53, 204-214.
 179. Sawyer, B. D., Karwowski, W., Xanthopoulos, P., & Hancock, P. A., 2017. Detection of Error Related Negativity In Complex Visual Stimuli: A New Neuroergonomic Arrow in the Practitioner's Quiver. *Ergonomics*, 60 (2), 234-240.
 180. Murata, A., Kuroda, T. and Karwowski, W., 2017. Effects of Auditory and Tactile Warning on Response to Visual Hazards Under a Noisy Environment. *Applied Ergonomics*, 60, 58-67.
 181. Çakit, E. and Karwowski, W., 2017. Predicting the Occurrence Of Adverse Events Using An Adaptive Neuro-Fuzzy Inference System (ANFIS) Approach With The Help of ANFIS Input Selection, *Artificial Intelligence Review*, 48 (2), 139-155.
 182. Murata, A., Naitoh, K. and Karwowski, W., 2017. A Method for Predicting the Risk of Virtual Crashes in a Simulated Driving Task using Behavioral and Subjective Drowsiness Measures. *Ergonomics*, 60 (5), 714-730,
 183. Genaidy, A. M., Huston, R. L., Dionysiou, D. D., & Karwowski, W. 2017. A System-of-Systems Framework for Improved Human, Ecologic and Economic Well-Being. *Sustainability*, 9(4), 616.
 184. Sönmez, S., Apostolopoulos, Y., Lemke, M.K., Hsieh, Y. and Karwowski, W., 2017. Complexity of Occupational Health in the Hospitality Industry: Dynamic Simulation Modeling To Advance Immigrant Worker Health. *International Journal of Hospitality Management*, 67, 95-105,
 185. Kern, D. and Karwowski, W., Franco, E. G., & Murata, A., 2018. Evidence of Chaos in a Routine Watchstanding Task. *Nonlinear Dynamics, Psychology, and Life Sciences*, 22 (1), 153-171.
 186. Muhs, K., Karwowski, W. and Kern, D., 2018, Temporal Variability in Human Performance; A Systematic Literature Review, *International Journal of Industrial Ergonomics*, 64, 31-50.

187. Mazur, L.M., Marks, L.B., McLeod, R., Karwowski, W., Mosaly, P., Tracton, G., Adams, R.D., Hoyle, L., Das, S. and Chera, B., 2018. Promoting Safety Mindfulness: Recommendations For The Design And Use Of Simulation-Based Training In Radiation Therapy. *Advances in Radiation Oncology*, 3, 197–204; <https://doi.org/10.1016/j.adro.2018.01.002>
188. Murata, A., Doi, T., Karwowski, W., 2018. Enhanced Performance For In-Vehicle Display Placed Around Back Mirror By Means Of Tactile Warning. *Transportation Research Part F: Traffic Psychology and Behaviour*, 58, 605-618.
189. Çakıt, E., & Karwowski, W., 2018. A fuzzy overlay model for mapping adverse event risk in an active war theatre, *Journal of Experimental & Theoretical Artificial Intelligence*, 30:5, 691-701, DOI: 10.1080/0952813X.2018.1467494.
190. Murata A., Kita, I. and Karwowski W., 2018. Assessment of Driver's Drowsiness Based on Fractal Dimensional Analysis of Sitting and Back Pressure Measurements. *Frontiers in Psychology*, 9:2362. doi: 10.3389/fpsyg.2018.02362; 9, 2362.
191. Murata, A., & Karwowski, W., 2018. Automatic lock of cursor movement: Implications for an efficient eye-gaze input method for drag and menu selection. *IEEE Transactions on Human-Machine Systems*, 49(3), 259-267.
192. Çakıt, E., Karwowski, W. and Servi., L., 2019. Application of Soft-Computing Techniques For Estimating Emotional States Expressed In Twitter Time Series Data. *Neural Computing and Applications*, 1-14.
193. Shi, D., Zurada, J., Karwowski, W., Guan, J., & Çakıt, E., 2019. Batch and data streaming classification models for detecting adverse events and understanding the influencing factors. *Engineering Applications of Artificial Intelligence*, 85, 72-84.
194. Rahman, M, Karwowski, W., Fafrowicz, M. and Hancock, P. 2019. Neuroergonomics Applications of Electroencephalography in Physical Activities: A Systematic Review. *Frontiers in Neuroscience*. 13:182 doi: 10.3389/fnhum.2019.00182.
195. Karwowski, W., Kern, D., Murata, A., Ahram, T., Franco, E. G., Sapkota, and N., Marek, T., 2019. The Complexity of Human Performance Variability on Watchstanding Task. *Applied Ergonomics*, 79, 169-177.
196. Farahani, F.V., Karwowski W. and Lighthall N. R., 2019. Application of Graph Theory for Identifying Connectivity Patterns in Human Brain Networks: A Systematic Review. *Frontiers in Neuroscience*. 13:585. doi: 10.3389/fnins.2019.00585; 13, 585.
197. Farahani, F., Fafrowicz, M., Karwowski, W., Douglas, P., Domagalik, A., Beldzik, E., ... & Marek, T., 2019. Effects Of Chronic Sleep Restriction On The Brain Functional Network, As Revealed By Graph Theory. *Frontiers in Neuroscience*, 13, 1087.
198. Çakıt, E., Olak, A. J., Murata, A., Karwowski, W., Alrehaili, O., & Marek, T. 2019. Assessment Of The Perceived Safety Culture In The Petrochemical Industry In Japan: A Cross-Sectional Study. *PloS One*, 14(12).
199. Hejduk, I., Olak, J.A., Karwowski, W., Tomczyk, P., Fazlagić, J., Gac, P., ... & Cakit, E. 2020. Safety Knowledge And Safe Practices At Work: A Study Of Polish Industrial Enterprises. *WORK*, 1-11.
200. Çakıt, E., Olak, A. J., Karwowski, W., Marek, T., Hejduk, I., & Taiar, R. 2020. Assessing Safety At Work Using An Adaptive Neuro-Fuzzy Inference System (ANFIS) Approach Aided By Partial Least Squares Structural Equation Modeling (PLS-SEM). *International Journal of Industrial Ergonomics*, 76, 102925.
201. Jaworek, M. A., Marek, T., & Karwowski, W., 2020. The Scale of Work-Related Affective Feelings (WORAF). *Applied Ergonomics*, 82, 102945.

202. Davahli, M. R., Karwowski, W., & Taiar, R. 2020. A System Dynamics Simulation Applied to Healthcare: A Systematic Review. *International Journal of Environmental Research and Public Health*, 17(16), 5741.
203. Fiok, K., Karwowski, W., Gutierrez, E., & Reza-Davahli, M. 2020. Comparing the Quality and Speed of Sentence Classification with Modern Language Models. *Applied Sciences*, 10(10), 3386.
204. Çakıt, E., Karwowski, W., Murata, A., & Olak, A. J. 2020. Application of Structural Equation Modeling (SEM) And An Adaptive Neuro-Fuzzy Inference System (ANFIS) For Assessment Of Safety Culture: An Integrated Modeling Approach. *Safety*, 6(1),14.
205. Ismail, L. E., & Karwowski, W. 2020. A Graph Theory-Based Modeling of Functional Brain Connectivity Based on EEG: A Systematic Review in the Context of Neuroergonomics. *IEEE Access*, 8, 155103-155135.
206. Karwowski, W., Sapkota, N., Servi, L. D., Schmorow, D., & Gutierrez, E., 2020. Evidence of Chaos in Human Emotions Expressed in Tweets. *Nonlinear Dynamics, Psychology, And Life Sciences*, 24(4), 475-497.
207. Davahli, M. R., Karwowski, W., Sonmez, S., & Apostolopoulos, Y., 2020. The Hospitality Industry In The Face Of The COVID-19 Pandemic: Current Topics and Research Methods. *International Journal of Environmental Research and Public Health*, 17(20), 7366.
208. Dehais, F., Karwowski, W. and Ayaz, H. 2020, Brain at Work and in Everyday Life as the Next Frontier: Grand Field Challenges for Neuroergonomics. *Frontiers in Neuroergonomics*. doi: 10.3389/fnrgo.2020.583733.
209. Alhujaili, A., Karwowski, W., Wan, T. and Hancock, P. 2020. Affective and Stress Consequences of Cyberbullying. *Symmetry*, 12(9), 1536.
210. Fiok, K., Karwowski, W., Gutierrez, E., & Ahram, T., 2020. Predicting the Volume of Response to Tweets Posted by a Single Twitter Account. *Symmetry*, 12(6), 1054.
211. Davahli, M. R., Karwowski, W., Gutierrez, E., Fiok, K., Wróbel, G., Taiar, R., & Ahram, T., 2020. Identification and Prediction of Human Behavior through Mining of Unstructured Textual Data. *Symmetry*, 12(11), 1902.
212. Çakıt, E., Karwowski, W., Marek, T., Jaworek, M., & Wrobel, G., 2020. A Cross-Sectional Study of the Relationships between Work-Related Affective Feelings Expressed by Workers in Turkey. *International Journal of Environmental Research and Public Health*, 17(24), 9470.
213. Farahani, F. V., Fafrowicz, M., Karwowski, W., Bohaterewicz, B., Sobczak, A. M., Ceglarek, A. and Marek, T., 2021. Identifying Diurnal Variability of Brain Connectivity Patterns Using Graph Theory. *Brain Sciences*, 11(1), 111.
214. Davahli, M. R., Karwowski, W., Fiok, K., Wan, T., & Parsaei, H. R., 2021. Controlling Safety of Artificial Intelligence-Based Systems in Healthcare. *Symmetry*, 13(1), 102.
215. Murata A. and Karwowski W., 2021. Development of an Eye-Gaze Input System with High Speed and Accuracy through Target Prediction based on Homing Eye Movements. *IEEE Access*. 9, 22688-22697. DOI: 10.1109/ACCESS.2021.3055514.
216. Fiok, K., Karwowski, W., Gutierrez, E., Liciaga, T., Belmonte, A., & Capobianco, R., 2021. Automated Classification of Evidence of Respect in the Communication through Twitter. *Applied Sciences*, 11(3), 1294.
217. Murata, A., & Karwowski, W., 2021. On the Root Causes of the Fukushima Daiichi Disaster from the Perspective of High Complexity and Tight Coupling in Large-Scale Systems. *Symmetry*, 13(3), 414. <https://doi.org/10.3390/sym13030414>.

218. Azyabi A, Karwowski W, Davahli MR. Assessing Patient Safety Culture in Hospital Settings, 2021. *International Journal of Environmental Research and Public Health*. 18(5), 2466. <https://doi.org/10.3390/ijerph18052466>
219. Davahli, M.R., Fiok, K., Karwowski, W., Aljuaid, A.M., Taiar, R., 2021. Predicting the Dynamics of the COVID-19 Pandemic in the United States Using Graph Theory-Based Neural Networks. *International Journal of Environmental Research and Public Health*, 18 (7), 3834. <https://doi.org/10.3390/ijerph18073834>.
220. Fiok, K, Karwowski, W., Gutierrez-Franco, E., et al., 2021, Automated Detection of Leadership Qualities Using Textual Data at the Message Level, *IEEE Access*, 9, 57141-57148, 2021, doi: 10.1109/ACCESS.2021.3072372.
221. Fiok, K., Karwowski, W., Gutierrez, E., Saeidi, M., Aljuaid, A. M., Davahli, M. R., ... & Sawyer, B. D., 2021. A Study of the Effects of the COVID-19 Pandemic on the Experience of Back Pain Reported on Twitter® in the United States: A Natural Language Processing Approach. *International Journal of Environmental Research and Public Health*, 18(9), 4543.
222. Murata, A., & Karwowski, W., 2021. Asymmetry of Authority or Information Underlying Insufficient Communication Associated with a Risk of Crashes or Incidents in Passenger Railway Transportation. *Symmetry*, 13(5), 803. <https://doi.org/10.3390/sym13050803>.
223. Sapkota, N., Karwowski, W., Davahli, M. R., Al-Juaid, A., Taiar, R., Murata, A., ... & Marek, T. 2021. The Chaotic Behavior of the Spread of Infection During the COVID-19 Pandemic in the United States and Globally. *IEEE Access*. <https://ieeexplore.ieee.org/abstract/document/9445063>
224. Fiok, K., Farahani, F. V. Karwowski and Ahram, T., 2021. Explainable Artificial Intelligence For Education And Training. *Journal of Defense Modeling and Simulation*. 1–12. DOI: 10.1177/15485129211028651.
225. Clapp, S., McCauley, P., Karwowski, W. and Hancock, P., 2021. The Seat of Happiness? The Effect of Seat Comfort on the Achievement of Psychological Flow During Transactional Work, *Applied Ergonomics*, 96, 103508, <https://doi.org/10.1016/j.apergo.2021.103508>.
226. Davahli, M.R., Karwowski, W., Fiok, K., 2021. Optimizing COVID-19 Vaccine Distribution Across The United States Using Deterministic And Stochastic Recurrent Neural Networks. *PLoS ONE* 16(7): e0253925; <https://doi.org/10.1371/journal.pone.0253925>.
227. Gutierrez, E., Karwowski, W., Fiok, K.; Davahli, M.R.; Liciaga, T. and Ahram, T. 2021. Analysis of Human Behavior by Mining Textual Data: Current Research Topics and Analytical Techniques. *Symmetry*, 13, 1276. <https://doi.org/10.3390/sym13071276>

1b. Publications: Authored Books

1. Bedny, G. and Karwowski, W., 2007, *A Systemic-Structural Theory of Activity: Applications to Human Performance and Work Design*, CRC Press, Taylor & Francis, London.
2. Karwowski, W., 2010, *Management of Human Factors Knowledge in an Organization* (in Polish), Warsaw School of Economics, Warsaw, Poland, ISBN978-83-7378-570-0.
3. Bedny, G., Karwowski, W., Bedny, I., 2014. *Self-Regulation in Activity Theory: Applied Work Design for Human-Computer and Human-Machine Systems* (Ergonomics Design & Mgmt. Theory & Applications). CRC Press, Boca Raton, ISBN9780429188145
4. Bedny, G. Z., Karwowski, W., & Bedny, I., 2015, *Applying Systemic-Structural Activity Theory to Design of Human-Computer Interaction Systems*. CRC Press, Taylor & Francis, London.

1c. Publications: Edited Books

1. Karwowski, W. (Editor), 1986, Trends in Human Factors/Ergonomics, Vol. III, North Holland, Amsterdam.
2. Karwowski, W. and Mital, A. (Editors), 1986, Applications of Fuzzy Set Theory in Human Factors, Elsevier Science Publishers, Amsterdam.
3. Mital, A. and Karwowski, W. (Editors), 1988, Ergonomics in Rehabilitation, Taylor & Francis, London.
4. Karwowski, W., Parsaei, H. R. and Wilhelm, M. R. (Editors), 1988, Ergonomics of Hybrid Automated Systems I, Elsevier Science Publishers, Amsterdam.
5. Evans, G. W., Karwowski, W. and Wilhelm, M. R. (Editors), 1989, Applications of Fuzzy Set Methodologies in Industrial Engineering, Elsevier Science Publishers, Amsterdam.
6. Karwowski, W., Genaidy, A. and Asfour, S. S. (Editors), 1990, Computer-Aided Ergonomics, Taylor & Francis, London.
7. Parsaei, H. R., Ward, T. L. and Karwowski, W. (Editors), 1990, Justification Methods for Computer-Integrated Manufacturing Systems, Elsevier, Amsterdam.
8. Karwowski, W. and Rahimi, M. (Editors), 1990, Ergonomics of Hybrid Automated Systems - II, Elsevier Science Publishers, Amsterdam.
9. Mital, A. and Karwowski, W. (Editors), 1991, Work, Equipment and Handtool Design, Elsevier Science Publishers, Amsterdam.
10. Karwowski, W. and Yates, J. W. (Editors), 1991, Advances in Industrial Ergonomics and Safety III, Taylor and Francis, London.
11. Rahimi, M. and Karwowski, W. (Editors), 1992, Human-Robot Interaction, Taylor & Francis, London.
12. Mattila, M. and Karwowski, W. (Editors), 1992, Computer Applications in Ergonomics and Occupational Safety and Health, Elsevier Science Publishers, Amsterdam.
13. Brodner, P. and Karwowski, W. (Editors), 1992, Ergonomics of Hybrid Automated Systems - III, Elsevier Science Publishers, Amsterdam.
14. Peacock, B. and Karwowski, W. (Editors), 1993, Automotive Ergonomics, Taylor & Francis, London.
15. Marras, W., Karwowski, W., Smith, J. and Pacholski, L. (Editors), 1993, The Ergonomics of Manual Work, Taylor & Francis, London.
16. Karwowski, W. and Salvendy, G. (Editors), 1994, Organization and Management of Advanced Manufacturing, John Wiley and Sons, New York.
17. Salvendy, G. and Karwowski, W. (Editors), 1994, Design of Work and Development of Personnel in Advanced Manufacturing, John Wiley and Sons, New York.
18. Kidd, P.T. and Karwowski, W. (Editors), 1994, Advances in Agile Manufacturing, IOS Press, Amsterdam.
19. Koubek, R. and Karwowski, W. (Editors), 1996, Human Factors in Agile Manufacturing, IEA Press, Santa Monica, California.

20. Das, B. and Karwowski, W. (Editors), 1997, *Advances in Occupational Ergonomics and Safety I*, IOS Press, Amsterdam.
21. Karwowski, W., Wogalter, M. and Dempsey, P.G. (Editors), 1997, *Ergonomics and Musculoskeletal Disorders*, Human Factors and Ergonomics Society, Santa Monica, California.
22. Karwowski, W. and Salvendy, G. (Editors), 1998, *Ergonomics in Manufacturing: Raising Productivity through Workplace Improvement*, SME Press and IIE Press, Michigan.
23. Karwowski, W. and Goonetilleke, R. (Editors), 1998, *Manufacturing Agility and Hybrid Automation II*, IEA Press: HKUST, Hong Kong.
24. Bishu, R. R., Karwowski, W. and Goonetilleke, R. (Editors), 1998, *ERGON-AXIA 98: Proceedings of the First World Congress on Ergonomics for Global Quality and Productivity*, HKUST, Hong Kong, July.
25. Karwowski, W. and Marras, W.S (Editors), 1999, *The Occupational Ergonomics Handbook*, CRC Press, Boca Raton.
26. Mondelo, P., Mattila, M. and Karwowski, W. (Editors), 1999, *Proceedings of the International Conference on Computer-Aided Ergonomics and Safety*, Barcelona, Spain, May, CD-ROM, ISBN: 84-699-0852-9.
27. Karwowski, W. and Salvendy, G. (Editors), 1999, *Design of Work and Organization*, Wiley & Sons: New York.
28. Mondelo, P., Mattila, M. and Karwowski, W. (Editors), 2000, *Proceedings of the International Conference on Occupational Risk Prevention*, Spain, February, CD-ROM, ISBN: 84-699-1242-9.
29. Marek, T. and Karwowski, W. (Editors), 2000, *Manufacturing Agility and Hybrid Automation III*, Jagiellonian University Press, Krakow, Poland, ISBN: 83-908842-6-7.
30. Podgorski, D. and Karwowski, W. (Editors), 2000, *Ergonomics and Safety for Global Business Quality and Productivity*, Central Institute for Labour Protection, Warsaw, Poland, ISBN: 83-87354-54-6.
31. Karwowski, W., (Editor), 2001, *International Encyclopedia of Ergonomics and Human Factors*, Taylor & Francis, London.
32. Karwowski, W. and Marras, W.S (Editors), 2003, *Occupational Ergonomics: Principles of Work Design*, CRC Press, Boca Raton.
33. Karwowski, W. and Marras, W.S (Editors), 2003, *Occupational Ergonomics: Engineering and Administrative Controls*, CRC Press, Boca Raton.
34. Karwowski, W. and Marras, W.S (Editors), 2003, *Occupational Ergonomics: Design and Management of Work Systems*, CRC Press, Boca Raton.
35. Mondelo, P., Mattila, M. and Karwowski, W. and A. Hale (Editors), 2004, *Proceedings of the International Conference on Occupational Risk Prevention*, Spain, June, CD-ROM, ISBN: 84-933328-2-8.
36. Noy, I. and Karwowski, W. (Editors), 2005, *Handbook of Human Factors in Litigation*, CRC Press, Boca Raton.
37. Sinay, J. Mondelo, P., Karwowski, W. and Mattila, M. (Editors), 2005, *Proceedings of the International Conference on Computer-Aided Ergonomics and Safety*, Kosice, Slovakia, May, CD-ROM, ISBN: 84-9342256-1-3.

38. Karwowski, W. (Editor), 2006, Handbook of Standards and Guidelines in Human Factors and Ergonomics, Lawrence Erlbaum Publishers, Mahwah: New Jersey.
39. Marras, W.S and Karwowski, W. (Editors), 2006, Fundamentals and Assessment Tools for Occupational Ergonomics. CRC Press, Boca Raton.
40. Marras, W.S and Karwowski, W. (Editors), 2006, Interventions, Controls, and Applications in Occupational Ergonomics. CRC Press, Taylor & Francis, London.
41. Karwowski, W., (Editor), 2006, International Encyclopedia of Ergonomics and Human Factors, 2nd Edition, CRC Press, Taylor & Francis, London.
42. Bedny, G. and Karwowski, W., 2006, A Systemic Structural Theory of Activity, CRC Press, Taylor & Francis, London.
43. Karwowski, W. and Trzcielinski, S. (Editors), 2007, Value Stream Activities Management, IEA Press, Madison, Wisconsin, USA.
44. Chebbykin, O., Bedny, G. and Karwowski, W. (Editors), 2008, Ergonomics and Psychology: Developments in Theory and Practice, CRC Press, Taylor & Francis, London.
45. Mondelo, P. Karwowski, W., Saarela, K.L. (Editors), 2008, Proceedings of the 6th International Conference on Occupational Risk Prevention ORP 2008, May 14-16, 2008, Coruña, Spain. CD-ROM.
46. Salvendy, G. and Karwowski, W. (Editors), 2010, Introduction to Service Engineering, John Wiley & Sons, New York.
47. Karwowski, W., and Salvendy, G., (Editors), 2011, Advances in Human Factors, Ergonomics, and Safety in Manufacturing and Service Industries, CRC Press, Taylor & Francis: London.
48. Marek, T., Karwowski, W., and Rice, V., (Editors), 2011, Advances in Understanding Human Performance: Neuroergonomics, Human Factors Design, and Special Populations, CRC Press, Taylor & Francis: London.
49. Ordóñez de Pablos, P., M. Lytras, W. Karwowski, and R.W. B. Lee, (Editors), 2011, Electronic Globalized Business and Sustainable Development through It Management: Strategies and Perspectives, Business Science Reference, IGI Global: Hershey, Pennsylvania.
50. Bedny, G. and Karwowski, W. (Editors), 2011, Human-Computer Interaction and Operators Performance: Optimizing Work Design with Activity Theory, CRC Press, Taylor & Francis, London.
51. Karwowski, W., Stanton, N. and Soares, M., (Editors), 2011, Handbook of Human Factors in Consumer Product Design: Methods and Techniques, CRC Press, Taylor & Francis: London.
52. Karwowski, W., Stanton, N. and Soares, M., (Editors), 2011, Handbook of Human Factors in Consumer Product Design: Applications. CRC Press, Taylor & Francis: London.
53. Kantola, J. and Karwowski, W., (Editors), 2012, Knowledge Service Engineering Handbook. CRC Press, Taylor & Francis: London.
54. Szopa, A., Karwowski, W. and Ordóñez de Pablos, P. (Editors), 2012, Academic Entrepreneurship and Technological Innovation: A Business Management Perspective, IGI Global.
55. Ordóñez de Pablos, P., Nigro, H.O, Tennyson, R, Gonzalez Cisaro, S.E. and Karwowski, W. (Editors), 2012, Advancing Information Management through Semantic Web Concepts and Ontologies. IGI Global: Hershey, Pennsylvania.

56. Fafrowicz, M., Marek, T., Karwowski, W. and Schmorow, D. (Editors), 2012, Neuroadaptive Systems: Theory and Applications, CRC Press, Taylor & Francis: London.
57. Trzcielinski, S., Karwowski, W. (Editors), 2013, Advances in Ergonomics in Manufacturing, CRC Press, Taylor & Francis: London.
58. Salvendy, G. and Karwowski, W. (Editors), 2013, Advances in Physical Ergonomics and Safety, CRC Press, Taylor & Francis: London.
59. Ahram, T. and Karwowski, W. (Editors) 2013, Advances in Physical Ergonomics and Safety, CRC Press, Taylor & Francis: London.
60. Trzcielinski, S., & Karwowski, W. (Eds.). (2014, July). Advances In The Ergonomics In Manufacturing: Managing The Enterprise Of The Future. AHFE Conference. ISBN 978-1-4951-2103-6.
61. Goonetilleke, R. and Karwowski, W. (Eds.), 2016. Advances in Physical Ergonomics and Human Factors . Proceedings of the AHFE 2016 International Conference on Physical Ergonomics and Human Factors, July 27-31, 2016, Walt Disney World®, Florida, USA, ISBN 978-3-319-41694-6, Springer, New York.
62. Ahram, T. Z. and Karwowski, W. (Eds.), 2017. Advances in The Human Side of Service Engineering. Proceedings of the AHFE 2016 International Conference on The Human Side of Service Engineering, July 27-31, 2016, Walt Disney World®, Florida, USA, Springer ISBN 978-3-319-41947-3, Springer, New York.
63. Ahram, T. Z. and Karwowski, W. (Eds.), 2017. Advances in Human Factors, Software, and Systems Engineering. ISBN 978-3-319-60010-0, Springer.
64. Goonetilleke, R. and Karwowski, W. (Eds.), 2017. Advances in Physical Ergonomics and Human Factors . Proceedings of the AHFE 2018 International Conference on Physical Ergonomics and Human Factors. July 21-25, 2018, Loews Sapphire Falls Resort at Universal Studios, Orlando, Florida, USA. DOI10.1007/978-3-319-94484-5. ISBN: 9783319944845, Springer.
65. Karwowski, W. and Ahram, T. (Eds.), 2018. Intelligent Human Systems Integration: Proceedings of the 1st International Conference on Intelligent Human Systems Integration (IHSI 2018): Integrating People and Intelligent Systems, January 7-9, 2018, Dubai, United Arab Emirates (Vol. 722). Springer.
66. Goonetilleke, R. and Karwowski, W. (Eds.), 2018. Advances in Physical Ergonomics and Human Factors . Proceedings of the AHFE 2017 International Conference on Physical Ergonomics and Human Factors. ISBN 978-3-319-60824-2, Springer, New York.
67. Ahram, T., Karwowski, W. and Taiar (Eds.), 2019. Human Systems Engineering and Design: Proceedings of the 1st International Conference on Human Systems Engineering and Design (IHSED2018): Future Trends and Applications, October 25-27, 2018, CHU-Université de Reims Champagne-Ardenne, France. ISBN 978-3-030-02052-1, Springer.
68. Karwowski, W., Trzcielinski, S., Mrugalska, B., Di Nicolantonio, M., Rossi, E. (Eds.), 2019. Advances in Manufacturing, Production Management and Process Control. Joint proceedings of the AHFE 2018 International Conference, July 21-25, 2018, Loews Sapphire Falls Resort at Universal Studios, Orlando, Florida, USA. DOI10.1007/978-3-319-94196-7. ISBN: 9783319941950, Springer.
69. Ahram, T., Karwowski, W. (Eds.), 2019. Intelligent Human Systems Integration 2019: Proceedings of the 2nd International Conference on Intelligent Human Systems Integration (IHSI 2019): Integrating People and Intelligent Systems, February 7–10, 2019, San Diego, California, USA. ISBN: 9783030110505, Springer.
70. Ahram, T., Karwowski, W., Vergnano, A., Leali, F., & Taiar, R. (Eds.), 2020. *Intelligent Human Systems Integration 2020: Proceedings of the 3rd International Conference on Intelligent Human*

Systems Integration (IHSI 2020): Integrating People and Intelligent Systems, February 19-21, 2020, Modena, Italy (Vol. 1131). Springer Nature.

71. Mrugalska, B., Trzcieliński, S., & Karwowski, W., 2020. *Advances in Manufacturing, Production Management and Process Control: Proceedings of the AHFE 2019 International Conference on Human Aspects of Advanced Manufacturing, and the AHFE International Conference* Springer.
72. Mrugalska, B., Trzcielinski, S., Karwowski, W., Di Nicolantonio, M., & Rossi, E. (Eds.). (2020). *Advances in Manufacturing, Production Management and Process Control: Proceedings of the AHFE 2020 Virtual Conferences on Human Aspects of Advanced Manufacturing, Advanced Production Management and Process Control, and Additive Manufacturing, Modeling Systems and 3D Prototyping, July 16–20, 2020, USA* (Vol. 1216). Springer Nature.
73. Karwowski, W., Szopa, A. and Soares, M., (Eds.), 2021, *Handbook of Standards and Guidelines in Human Factors and Ergonomics*, 2nd ed., CRC Press, Boca Raton.
<https://doi.org/10.1201/9780429169243>
74. Russo, D., Ahram, T., Karwowski, W., Di Bucchianico, G., & Taiar, R., 2021. *Intelligent Human Systems Integration 2021*. Springer. <https://doi.org/10.1007/978-3-030-68017-6>
75. Salvendy, G. and Karwowski, W. (Eds.), 2022, *Handbook of Human Factors and Ergonomics*, 5th ed. Wiley& Sons: New York.

1d. Publications: Chapters of Books

1. Evans, G. W. and Karwowski, W., 1986, A Perspective on Mathematical Modeling in Human Factors, in *Applications of Fuzzy Set Theory in Human Factors*, W. Karwowski and A. Mital, Eds., Elsevier, Amsterdam, pp. 3-27.
2. Karwowski, W. and Mital, A., 1986, Fuzzy Concepts in Human Factors/Ergonomics Research, in *Applications of Fuzzy Set Theory in Human Factors*, W. Karwowski and A. Mital, Eds., Elsevier, Amsterdam, pp. 41-53.
3. Karwowski, W. and Mital, A., 1986, Applications of Approximate Reasoning in Risk Analysis, in *Applications of Fuzzy Set Theory in Human Factors*, W. Karwowski and A. Mital, Eds., Elsevier, Amsterdam, pp. 227-243.
4. Mital, A. and Karwowski, W., 1986, Development of Acceptable Work Limits for Cognitive Tasks, in *Applications of Fuzzy Set Theory in Human Factors*, W. Karwowski and A. Mital, Eds., Elsevier, Amsterdam, pp. 301-313.
5. Kulkarni, J. and Karwowski, W., 1986, Research Guide to Applications of Fuzzy Set Theory in Human Factors, in *Applications of Fuzzy Set Theory in Human Factors*, W. Karwowski and A. Mital, Eds., Elsevier, Amsterdam, pp. 395-451.
6. Karwowski, W., Parsaei, H. R., Campbell, S. L. and Nash, D. L., 1988, Perception of the Computerized Steel-Collar Workers: Some Critical Human Factors for Implementing Robotic Technology, in *Success Factors for Implementing Change: A Manufacturing Viewpoint*, K.L. Blache, Ed., SME, pp. 191-207.
7. Mital, A. and Karwowski, W., 1988, Applications of Fuzzy Mathematics to Mental Stress Quantification, in *Fuzzy Computing*, M. Gupta and T. Yamakawa, Eds., North-Holland, Amsterdam, pp. 285-297.
8. Karwowski, W. and Kasdan, M. L., 1988, The Partnership of Ergonomics and Medical Intervention in Rehabilitation of Workers with Cumulative Trauma Disorders of the Hand, in *Ergonomics in Rehabilitation*, A. Mital and W. Karwowski, Eds., Taylor & Francis, London, pp. 35-53.

9. Mital, A. and Karwowski, W., 1988, Rehabilitation: A Dire Need?, in *Ergonomics in Rehabilitation*, A. Mital and W. Karwowski, Eds., Taylor & Francis, London, 1-9.
10. Karwowski, W., 1989, Perception of Load Heaviness by Males, in *Manual Material Handling: Understanding and Preventing Back Trauma*, K.H.E. Kroemer, J.D. McGlothlin and T. G. Bobick, Eds., American Industrial Hygiene Association, Akron, Ohio, pp. 9-14.
11. Karwowski, W., Marek, T., Noworol, C. and Ostaszewski, K., 1989, Fuzzy Modeling of Risk Factors for Industrial Accident Prevention, in *Applications of Fuzzy Set Methodologies in Industrial Engineering*, G. W. Evans, W. Karwowski and M. R. Wilhelm, Eds., Elsevier, Amsterdam, pp. 141-153.
12. Mital, A. and Karwowski, W., 1989, A Framework of the Fuzzy Linguistic Approach to Facilities Location Problem, in *Applications of Fuzzy Set Methodologies in Industrial Engineering*, G. W. Evans, W. Karwowski and M. R. Wilhelm, Eds., Elsevier, Amsterdam, pp. 323-329.
13. Karwowski, W., Parsaei, H. R., Amarnath, B. and Rahimi, M., 1991, Worker Intrusion Into Robot Work Envelope Under Simulated Hazardous Task Operations, in *Safety, Reliability, and Human Factors in Robotic Systems*, J. Graham, Ed., Van Nostrand, New York, pp. 148-162.
14. Karwowski, W. and Salvendy G., 1992, Fuzzy-Set-Theoretic Applications in Modeling of Man-Machine Interactions, in *An Introduction to Fuzzy Logic Applications in Intelligent Systems*, R. R. Yager and L. A. Zadeh, Eds., Kluwer Academic Publishers, Boston, pp. 201-220.
15. Jarvinen, J., Karwowski, W., Lepisto, J. and Rahimi, M., 1992, Industrial Robot-Related Accidents in Finland, in *Human-Robot Interaction*, M. Rahimi and W. Karwowski, Eds., Taylor and Francis, London, pp. 108-120.
16. Karwowski, W., 1992, Occupational Biomechanics, in *Handbook of Industrial Engineering*, G. Salvendy, Editor, John Wiley, New York, pp. 1005-1046.
17. Karwowski, W., Yates, J. W. and Pongpatana, N., 1993, Ergonomic Guidelines for design of Passenger Car Trunk, in *Peacock, B. and Karwowski, W. (Editors), Automotive Ergonomics*, Taylor & Francis, London, pp. 117-139.
18. Wilson, J. R., Koubek, R., Salvendy, G., Sharit, J. and Karwowski, W., 1994, Human Factors in Advanced Manufacturing: A Review and Reappraisal, in *W. Karwowski and G. Salvendy, Eds., Organization and Management of Advanced Manufacturing*, John Wiley, New York, pp. 379-415.
19. Karwowski, W., Jarvinen, J. and Rahimi, M., 1994, Human Aspects of Industrial Robotics, in *G. Salvendy and W. Karwowski, Eds., Design of Work and Development of Personnel in Advanced Manufacturing Systems*, John Wiley and Sons, New York, pp. 493-534.
20. Karwowski, W., 1995, A General Modeling Framework for the Human-Computer Interaction Based on the Principles of Ergonomic Compatibility Requirements and Human Entropy, in *A. Grieco, G. Molteni, E. Occhipinti and B. Piccoli, Eds., Work with Display Units 94*, North-Holland, Amsterdam, 473-478.
21. Karwowski, W. and Jamaldin, B., 1996, Ergonomics and Human Factors, in *C. Dorf, Ed., The Engineering Handbook*, CRC Press, pp. 1756-1766.
22. Ayoub, M. M., Dempsey, P. G. and Karwowski, W., 1997. Manual Materials Handling, in *Handbook of Human Factors and Ergonomics*, G. Salvendy, Ed., John Wiley, New York, pp. 1085-1123.
23. Karwowski, W. and Marras, W. S., Cumulative Trauma Disorders, in *G. Salvendy, Ed., Handbook of Human Factors & Ergonomics*, John Wiley, New York, 1997, 1124-1173.

24. Karwowski, W. Warnecke, H., Hueser, M. and Salvendy, G., 1997, Human Factors in Manufacturing, in G. Salvendy, Ed., Handbook of Human Factors and Ergonomics, John Wiley, New York, 1865-1921.
25. Karwowski, W. and Zurada, J., 1998, Software and Computers: Hybrid Automated Systems, in: The ILO Encyclopaedia of Occupational Health and Safety, ILO, Geneva, Switzerland, pp. 58.35-58.41.
26. Karwowski, W., 1998, Human Factors and Ergonomics in C. Dorf, (Ed.), The Technology Management Handbook, CRC Press, pp. 21: 12 - 21.
27. Karwowski, W, Lee, W. G. and Cho, K. K. 1998, Application of fuzzy system methodologies in manufacturing. In: Ruspini, E., P. Bonissone and Pedrucz, W. (Editors): Handbook of Fuzzy Computation, Institute of Physics Publishing, Bristol, pp. 8.1 : 1-20.
28. Karwowski, W., Gaddie, P., Jang, R. and Lee, W.-G., 1999, A Population-Based Load Threshold Limit (LTL) for Manual Lifting Tasks Performed by Males and Females, in: Karwowski, W. and Marras, W. S. (Editors), The Occupational Ergonomics Handbook, CRC Press, Boca Raton, pp. 1063-1074.
29. Karwowski, W., Grobelny , J., Yang, Y. and Lee. W.-G., 1999, Applications of Fuzzy Systems in Human Factors, in: H. Zimmerman (Ed.), Handbook of Fuzzy Sets and Possibility Theory, Kluwer Academic Publishers, Boston, 589-621.
30. Grobelny, J and Karwowski, W., 2000, Apolinx: A human model and computer-aided approach for ergonomics workplace design in open CAD environment, in: K. Landau (Ed.), Ergonomics Software Tools in Product and Workplace Design, Verlag Ergon GmbH, Stuttgart, Germany, pp. 121-131.
31. Karwowski, W. and Rodrick, D. 2001, Physical Tasks: Analysis, Design and Operation, In: G. Salvendy (Ed), Handbook of Industrial Engineering, 3rd ed, John Wiley & Sons, New York, pp. 1041-1110.
32. Karwowski, W., Kantola, J., Rodrick, D. and Salvendy, G., 2002, Macroergonomics Aspects of Manufacturing. In: H. W. Hendrick and B. M. Kleiner (Eds.), Macroergonomics: An Introduction to Work System Design, Lawrence Erlbaum Associates, Mahwah, N. J., pp. 223-248.
33. Karwowski, W., Rizzo, F., and Rodrick, D., 2002, Ergonomics in Information Systems, in: H. Bidgoli (Ed), Encyclopedia of Information Systems, Academic Press: San Diego, pp. 185-201
34. Karwowski, W., 2002. Achieving compatibility in human-computer interface design and evaluation. In, J. A. Jacko and A. Sears (Eds), The Human-Computer Interaction Handbook. Lawrence Erlbaum Associates: Mahwah, NJ, 1226-1238.
35. Chase, B. and Karwowski, W., 2003, Advanced Manufacturing Technology, in: Holman, D., Wall, T. D., Clegg, C. W., Sparrow, P. and Howard, A. (Eds), The New Workplace: A Guide to the Human Impact of Modern Working Practices, John Wiley & Sons, Chichester, pp. 55-70.
36. Karwowski, W., 2005, Ergonomics and Human Factors, in C. Dorf (Ed.), The Engineering Handbook, 2nd Edition, CRC Press: Boca Raton, 187-1:187-17.
37. Karwowski, W., 2006, The Discipline of Ergonomics and Human Factors, in: Handbook of Human Factors & Ergonomics 3rd edition, G. Salvendy, (Ed.), John Wiley, New York, pp. 1-25 .
38. Rodrick, D. and W. Karwowski, W., 2006, Manual Materials Handling, in: Handbook of Human Factors and Ergonomics 3rd edition, G. Salvendy, (Ed.), John Wiley, New York, pp. 818-854 .
39. Sommerich, C. M., Marras, W.S. and W. Karwowski, W., 2006, Work-Related Upper Extremity Musculoskeletal Disorders, in: Handbook of Human Factors and Ergonomics 3rd edition, G. Salvendy, (Ed.), John Wiley, New York, pp. 855-888.

40. Sherehiy, B. Rodrick, D. and Karwowski, W., 2006, An Overview of Standardization Efforts in Human Factors and Ergonomics, in: Karwowski, W. (Ed.), Handbook of Human Factors and Ergonomics Standards and Guidelines, Lawrence Erlbaum Publishers, pp. 3-46.
41. Rodrick, D. and Karwowski, W., 2006, Sources and Bibliography of Selected Human Factors and Ergonomics Standards, in: Karwowski, W. (Ed.), Handbook of Human Factors and Ergonomics Standards and Guidelines, Lawrence Erlbaum Publishers, pp. 569-590.
42. Sherehiy, B., Rodrick, D., Karwowski W. and Wogalter, M.S., 2006, Design of Warnings for Physical Tasks: Slips, Trips, Falls, and Manual Materials Handling, in: M. S. Wogalter. (Ed.), Handbook of Warnings, Lawrence Erlbaum Publishers, pp. 655-667.
43. Sherehiy, B. and Karwowski W., 2006, Subjective Scales of Effort and Workload Assessment, in: Marras, W.S and Karwowski, W. (Eds), The Handbook of Occupational Ergonomics Handbook: Fundamentals and Assessment Tools for Occupational Ergonomics, 2nd Edition CRC Press, Boca Raton, pp. 37-1 – 37-17.
44. Kee, D. and Karwowski W., 2006, An Assessment Technique for Postural Loading on the Upper Body (LUBA) , in: Marras, W.S and Karwowski, W. (Eds), The Handbook of Occupational Ergonomics Handbook: Fundamentals and Assessment Tools for Occupational Ergonomics, 2nd Edition CRC Press, Boca Raton, pp. 43-1 – 43-8.
45. Rodrick, D., Karwowski, W. and Quesada, P.M., 2006, Job Rotation, in: Marras, W.S and Karwowski, W. (Eds), The Handbook of Occupational Ergonomics Handbook: Interventions, Controls and Applications in Occupational Ergonomics, 2nd Edition. CRC Press, Boca Raton, pp. 31-1 – 31.12.
46. Hou, Y, J. M. Zurada, W. Karwowski, and W. S. Marras, 2006, The Application of Neural Fuzzy Approaches to Modeling of Musculoskeletal Responses in Manual Lifting Tasks. In: C. Kahraman (Ed.) Studies in Fuzziness and Soft Computing: Fuzzy Set Techniques in Industrial Engineering, Springer Verlag: Heidelberg, 201, pp. 323-337.
47. Karwowski, W., Sherehiy, B., Siemionow, W. and K. Gielo-Perczak, 2007, Physical Neuroergonomics, in: R. Parasuraman & M. Rizzo (Eds.) Neuroergonomics: The Brain at Work. Cambridge, MA: Oxford University Press, pp. 221-235.
48. Bedny, G. and Karwowski, W., 2008, Application of Systemic-Structural Theory of Activity to Design and Management of Work Systems, in: W. Gasparski (Ed). Praxiology and the Philosophy of Technology. Transaction Publishers: New Brunswick, pp. 97-144.
49. Karwowski, W., 2008, Building Sustainable Human-Centered Systems: A Grand Challenge for the Human Factors and Ergonomics in the Conceptual Age. In: K. Zink (Ed.), Corporate Sustainability as a Challenge for Comprehensive Management; Physica- Verlag: Heilderberg, pp.117-126.
50. Karwowski W., Salvendy, G. and Ahram, T., 2010, A Human-Centered Approach To Design And Modeling Of Service Systems, G. Salvendy and W. Karwowski (Eds), Introduction to Service Engineering, John Wiley & Sons, pp. 179-206.
51. Ahram, T.Z. and W. Karwowski, and Andrzejczak, C., 2011, Interactive Management of Human Factors Knowledge for Human Systems Integration. In: Ordóñez de Pablos, P. (Eds.), Electronic Globalized Business and Sustainable Development through IT Management: Strategies and Perspectives, Business Science Reference: IGI-Global: Pennsylvania, pp. 35-53.
52. Kantola, J., Karwowski, W., and Vanharanta, H., 2011, Managing Managerial Mosaic: The Evolute Methodology. In: Ordóñez de Pablos, P. (Ed.), Electronic Globalized Business and Sustainable Development through IT Management: Strategies and Perspectives, Business Science Reference, IGI-Global: Pennsylvania, pp. 77-89.

53. Bedny, G., Karwowski, W., 2012, Positioning Actions' Regulation Strategies. In: Stanney, K., Hale, K. (Eds.) *Advances in Cognitive Engineering and Neuroergonomics*, CRC Press, Boca Raton, 16, pp. 116-124
54. Rodrick, D., W. Karwowski, Quesada, P., 2012, Work-Related Upper Extremity Musculoskeletal Disorders. In: Salvendy, G. (Ed.), *Handbook of Human Factors and Ergonomics*, Wiley, New York, pp. 826-867.
55. Bedny, I., W. Karwowski, G. Bedny, 2012, Computer Technology at the Workplace and Errors Analysis. In: Stanney, K. and Hale, K. (Eds.), *Advances in Cognitive Engineering and Neuroergonomics*, CRC Press, Boca Raton, 16, pp.167-176.
56. Karwowski, W., Voskoboynikov, F., Bedny, G., 2012, On the Relationship between External and Internal Components of Activity. In: Stanney, K. and Hale, K. (Eds.), *Advances in Cognitive Engineering and Neuroergonomics*, CRC Press 16, pp.109-115.
57. von Brevern, H. and Karwowski, W. , 2012, Emotional-Motivational Aspects of a Browsing Task. In: Stanney, K. and Hale, K. (Eds.), *Advances in Cognitive Engineering and Neuroergonomics*, CRC Press, Boca Raton, 16, pp.125-134.
58. von Brevern, H. and Karwowski, W., 2012, Qualitative Facets of the Problem Statement. In: Stanney, K. and Hale, K. (Eds.), *Advances in Cognitive Engineering and Neuroergonomics*, CRC Press, Boca Raton 16, pp. 33-42.
59. Trzopek, J., Fafrowicz, M., Marek, T., and Karwowski, W., 2012, Psychological Constructs versus Neural Mechanisms: Different Perspectives for Advanced Research of Cognitive Processes and Development of Neuroadaptive Technologies. In: Fafrowicz, M., Marek, T., Karwowski, W. and Schmorow, D. (Eds.), *Neuroadaptive Systems: Theory and Applications*, CRC Press, Taylor & Francis: London, pp. 3-26.
60. Karwowski, W., Ahram, T., Andrzejczak, C., Fafrowicz, M., and Marek, T., 2012, Potential Applications of Systems Modeling Language and Systems Dynamics to Simulate and Model Complex Human Brain Functions. In: Fafrowicz, M., Marek, T., Karwowski, W. and Schmorow, D. (Eds.), *Neuroadaptive Systems: Theory and Applications*, CRC Press, Taylor & Francis: London, pp. 311-332.
61. Rodrick, D., Karwowski, W. and Marras, W., 2012, Work-Related Upper Extremity Musculoskeletal Disorders. In: Salvendy, G. (Ed.), *Handbook of Human Factors and Ergonomics*, Fourth Edition, John Wiley and Sons, New York, pp. 826-867.
62. Ahram, T. and Karwowski, W., 2013, Application of Systems Engineering to Safety and Risk Management: A Human–Systems Integration Perspective. In: Haight, J. (Ed.). *Handbook of Loss Prevention Engineering*, Volume 1&2, John Wiley and Sons, New York, pp. 681-699.
63. Bedny, G., Karwowski, W. and Bedny, I., 2014, Task and Its Complexity. In: Marek, T., Karwowski, W. Frankowicz, M., Kantola, J., Zgaga, P. (Ed.) *Human Factors of a Global Society: A System of Systems Perspective*, CRC Press, Boca Raton, pp. 203-209
64. Seklecka, L., Wachowicz, B., Lewandowski, K., Marek, T., and Karwowski, W., 2014, Trauma in Modern Society. In: Marek, T., Karwowski, W. Frankowicz, M., Kantola, J., Zgaga, P. (Ed.) *Human Factors of a Global Society: A System of Systems Perspective*, CRC Press, Boca Raton, pp. 421-428
65. Mykoniatis, K., Angelopoulou, A., Proctor, M. D., & Karwowski, W., 2014, Virtual Humans for Interpersonal and Communication Skills' Training in Crime Investigations. In *Virtual, Augmented and Mixed Reality. Designing and Developing Virtual and Augmented Environments*. Springer International Publishing, pp. 282-292.
66. Ahram, T., Karwowski, W., & Sapkota, N., 2013, Modeling consumer sensitivity for product design

and perceived usability. In *Design, User Experience, and Usability. Web, Mobile, and Product Design* (pp. 325-333). Springer Berlin Heidelberg.

67. Ahram, T., Karwowski, W., Amaba, B., & Fechtelkotter, P., 2013. Power and energy management: a user-centered system-of-systems engineering approach. *Human Interface and the Management of Information. Information and Interaction for Health, Safety, Mobility and Complex Environments* (pp. 3-12). Springer Berlin Heidelberg.
68. Elsaesser, C., Glazner, C., James, J., Koehler, M., Mathieu, J., Servi, L., Alicia Ruvinsky, A. Timothy Siedlecki, T., James Starz, J., Ahram, T., Karwowski, W., Carley, C. and Irvine, J., 2014. Computational sociocultural models used for forecasting, pp. 269-315.. *Contract*, 14(12-C), 0053.
69. Ahram, T. Z., Karwowski, W., Falcão, C., 2015, Applications of Systems Engineering for Testing and Evaluation: A Human-Systems Integration Perspective” *APA Handbook of Human Systems Integration*, Deborah A. Boehm-Davis, Frank Durso, and John D. Lee (Eds.), Washington , DC.
70. Goel, A., Rivera, W. A, Montgomery, M., Kincaid J. P., Karwowski, W., & Finkelstein, N., 2016. Ethics in Virtual World Environments Research. In: *Emerging Tools and Applications of Virtual Reality in Education*. Hershey, PA: IGI Global.
71. Çakıt, E., Karwowski, W., 2016. Gaining Insight By Applying Geographical Modeling. In: Joseph V. Cohn, Sae Schatz, Hannah Freeman, David J. Y. Combs (Eds.), *Modeling Sociocultural Influences on Decision Making: Understanding Conflict, Enabling Stability*. CRC Press (September 2016; ISBN 9781498736695), pp. 243-267.
72. Sawyer, B. D., Karwowski, W., Xanthopoulos, P. and Hancock, P. A., 2016. Applied Potential: Neuroergonomic Error Detection in Single Electrode Electroencephalography, in: R. Parasuraman & C. Mitchell (Eds.), *Neuroergonomics*, New York, NY.: Columbia University Press.
73. Sawyer B. D., Miller, D., Canham, M., Karwowski, W. (2021). Human Factors and Ergonomics in Design of A³: Automation, Autonomy, and Artificial Intelligence. In Salvendy, G., Karwowski, W., (Eds.) *Handbook of Human Factors and Ergonomics*, New York: Wiley.
74. Karwowski, W. and Zhang, W. (2021). Human Factors and Ergonomics. In Salvendy, G., Karwowski, W., (Eds.) *Handbook of Human Factors and Ergonomics*, New York: Wiley.
75. Karwowski, W. et all. (2021). Human Factors and Ergonomics Standards. In Salvendy, G., Karwowski, W., (Eds.) *Handbook of Human Factors and Ergonomics*, New York: Wiley.
76. Marras, W. and Karwowski, W. (2021). Occupational Biomechanics and Workplace Design. In Salvendy, G., Karwowski, W., (Eds.) *Handbook of Human Factors and Ergonomics*, New York: Wiley.
77. Marras, W. and Karwowski, W. (2021). Managing Low-Back Disorder in the Workplace. In Salvendy, G., Karwowski, W., (Eds.) *Handbook of Human Factors and Ergonomics*, New York: Wiley.

1e. Publications: In Refereed Conference Proceedings

1. Karwowski, W., 1983, A Pilot Study On the Interaction Between Physiological, Biomechanical and the Psychophysical Stresses Involved in Manual Lifting Tasks, *Proceedings of the Ergonomics Society's Conference*, Taylor & Francis Ltd., London and New York, pp. 95-100.
2. Ayoub, M. M., Selan, J. L., Karwowski, W. and Rao, P. R., 1983, Lifting Capacity Determination, *Proceedings: Back Injuries, Bureau of Mines Technology Transfer Symposia*, Pittsburgh, PA, Information Circular 8948, edited by J.M. Peay, p. 54.

3. Karwowski, W. and Mital, A., 1984, A Framework of the Rule-Based System for Manual Material Handling Jobs, Proceedings of the Annual Meeting of the Ergonomics Society, Exeter, U.K., Supplement No. 1 to Ergonomics, Vol. 27, pp. 116-121.
4. Mital, A. and Karwowski, W., 1984, A Global Model of Human Stresses Responses in a Man-Machine System, Proceedings of the Third International Conference on Systems Engineering, Wright State University, September, pp. 385-390.
5. Karwowski, W., Evans, G. W. and Ragade, R., 1984, Fuzzy Modeling Techniques in Human Factors Research, Proceedings of the 28th Annual Meeting of the Human Factors Society, pp. 403-407.
6. Karwowski, W. and Yates, J. W., 1984, The Effect of Time in the Psychophysical Study of the Maximum Acceptable Amounts of Liquid Lifted by Females, Proceedings of the Annual Meeting of the 28th Human Factors Society, September, pp. 586-590.
7. Karwowski, W. and Mital, A., 1984, Validation of the Fuzzy Model for the Assessment of Human Operator Responses to Manual Lifting Tasks, Proceedings of the 28th Annual Meeting of the Human Factors Society, September, pp. 408-412.
8. Karwowski, W. and Ayoub, M. M., 1984, Effect of Frequency on the Maximum Acceptable Weight of Lift, In: Trends in Ergonomics/Human Factors, Vol. I (North Holland: Amsterdam), A. Mital, Ed., 167-172.
9. Karwowski, W. and Mital, A., 1984, Soft Descriptions and Classifications in Human Factors Engineering, in Trends in Ergonomics/Human Factors, Vol. I (North Holland: Amsterdam), A. Mital, Ed., pp. 325-330.
10. Wilhelm, M. R., Karwowski, W. and Evans, G. W., 1985, A Fuzzy Set Approach to Layout Analysis, Proceedings of the 1985 Spring IIE Conference, May, pp. 245-253.
11. Mital, A., Chalaka, A. and Karwowski, W., 1985, The Demands and Responses of Machine-Paced and Self-Paced Material Handling Tasks, in Toward the Factory of the Future, H.J. Bullinger and H.J. Warnecke, Eds., Springer-Verlag, Berlin, pp. 524-528.
12. Karwowski, W. and Evans, G. W., 1985, Contributions of Fuzzy Methodologies to Production Management, in Toward the Factory of the Future, H.J. Bullinger and H.J. Warnecke, Eds., Springer-Verlag, Berlin, pp. 657-662.
13. Karwowski, W., 1985, Why Do Ergonomists Need Fuzzy Sets?, in Ergonomics International 85, Proceedings of the 9th Congress of the International Ergonomics Association, Bernemouth, England, I.D. Brown, R. Goldsmith, K. Coombes and M.A. Sinclair, Eds., Taylor & Francis: London, pp. 409-411.
14. Karwowski, W., Mital, A. and Yates, J. W., 1985, Additivity of Static and Dynamic Strength of Males, in Ergonomics International 85, Proceedings of the 9th Congress of the International Ergonomics Association, Bernemouth, England, I.D. Brown, R. Goldsmith, K. Coombes and M. Sinclair, Eds., Taylor & Francis: London, pp. 724-726.
15. Hafez, H., Ayoub, M. M. and Karwowski, W., 1985, Combining Stress for Manual Materials Handling Tasks, in Ergonomics International 85, Proceedings of the 9th Congress of the International Ergonomics Association, Bernemouth, England, I.D. Brown, R. Goldsmith, K. Coombes and M.A. Sinclair, Eds., Taylor & Francis: London, pp. 205-207.
16. Karwowski, W. and Mital, A., 1985, Development of Lifting Capacity Norms Based on Fuzzy Measures of Stress, Proceedings of the 29th Annual Meeting of the Human Factors Society, Baltimore, MD, pp. 1007-1011.

17. Mital, A. and Karwowski, W., 1985, Use of Simulated Job Dynamic Strength (SJDS) in Screening Workers for Manual Lifting Tasks, Proceedings of the 29th Annual Meeting of the Human Factors Society, Baltimore, MD, pp. 513-516.
18. Karwowski, W. and Mital, A., 1985, Performance Standards and Job Stress in VDU Work, in Proceedings of the International Scientific Conference: Work with Visual Display Units, Vol. I, Swedish National Board of Occupational Safety and Health, May 12-15, pp. 90-93.
19. Karwowski, W., Mital, A. and Mulholland, N., 1985, Static Strength and Maximum Lifting Capacity for a Team of Two Males, In: Trends in Ergonomics/Human Factors, Vol. II (North Holland: Amsterdam), R. Eberts and C.G. Eberts, Eds., pp. 625-632.
20. Karwowski, W. and Mulholland, N., 1985, A Microcomputer-Based System for Matching Industrial Workers to Physical Jobs in Fuzzy Environment, In: Trends in Ergonomics/Human Factors, Vol. II (North Holland: Amsterdam), R. Eberts and C.G. Eberts, Eds., pp.432-430.
21. Noonan, K. T., Karwowski, W. and Loeb, M., 1985, Perception of Challenge and Task Difficulty in a Cognitive Vigilance Task, In: Trends in Ergonomics/Human Factors, Vol. II (North Holland: Amsterdam), R. Eberts and C.G. Eberts, Eds., pp. 189-193.
22. Karwowski, W. and Mital, 1986, A., Applications of Fuzzy Set Theory in Work Measurement and Ergonomics, Proceedings of the International Industrial Engineering Conference, Dallas, TX, May 11-15, Paper #25, pp. 341-350.
23. Karwowski, W., Mulholland, N. O. and Ward, T. L., 1986, A Knowledge-Based Expert System for the Analysis of Manual Lifting Tasks, Proceedings of the 30th Annual Meeting of the Human Factors Society, Dayton, OH, pp. 101-105.
24. Karwowski, W., Ward, T. L., Palenque, L. E. and Wisman, S. E., 1986, Building an Expert System for Ergonomics Application: A LIFTAN Experience, In: Trends in Ergonomics/Human Factors, Vol. III (North Holland: Amsterdam), W. Karwowski, Ed., pp. 51-62.
25. Karwowski, W., Yates, J. W. and Pongpatanasuegsa, N., 1986, Prediction Models for Maximum Acceptable Loads Lifted While Sitting at a Workbench, In: Trends in Ergonomics/Human Factors, Vol. (North Holland: Amsterdam), W. Karwowski, Ed., pp. 777-786.
26. Primovic, J. and Karwowski, W., 1987, Effect of Automation on Safety Performance: A Case Study, in Proceedings of the IXth International Conference on Production Research, Cincinnati, OH, A. Mital, Ed., pp. 2694-2700.
27. Dressman, J. B., Karwowski, W., Ralston, P. A. S. and Ward, T., 1987, Framework for Expert System for Control of Metal Cutting, in Proceedings of the IXth International Conference on Production Research, Cincinnati, OH, A. Mital, Ed., pp. 2579-2585.
28. Parsaei, H. R., Wilhelm, M. R. and Karwowski, W., 1987, Safety Monitoring Strategies in the Design and Utilization of Robotic Workcells, in Proceedings of the IX-th International Conference on Production Research, Cincinnati, OH, A. Mital, ed., pp. 2726-2731.
29. Karwowski, W., 1987, Dynamic Lifting Strengths of Male and Female Teams: A Comparative Study, Proceedings of the 31st Annual Meeting of the Human Factors Society, New York, NY, pp. 186-190.
30. Karwowski, W., Plank, T., Parsaei, H. R. and Rahimi, M., 1987, Human Perception of the Maximum Safe Speed of Robot Motions, Proceedings of the 31st Annual Meeting of the Human Factors Society, New York, pp. 467-471.
31. Mital, A. and Karwowski, W., 1987, Human Resource Management for Productivity Optimization through a Computerized Decision Model, in Modern Production Management Systems, A. Kusiak, Ed., North Holland: Amsterdam, pp. 933-940.

32. Karwowski, W., Pongpatanasuegsa, N., Davis, C.T. and Mital, A., 1987, Isometric Strengths and Maximum Lifting Capacity for a Team of Two Females, In: Trends in Ergonomics/Human Factors, Vol. IV (North Holland: Amsterdam), S.S. Asfour, Ed., pp. 933-940.
33. Karwowski, W., 1987, Prevention of Cumulative Trauma Disorders of the Upper Extremity through Job Redesign, In: Trends in Ergonomics/Human Factors, Vol. IV (North Holland: Amsterdam), S. S. Asfour, Ed., pp. 1021-1028.
34. Mital, A. and Karwowski, W., 1987, Human Resource Management for Productivity Optimization through a Computerized Decision Model, In: Modern Production Management Systems, (North Holland: Amsterdam) A. Kusiak, Ed., pp. 689-697.
35. Karwowski, W. and Burkhardt, A., 1988, Subjective Judgment of Load Heaviness and Psychophysical Approach to Manual Lifting, In: Trends in Ergonomics/Human Factors, Vol. V (North Holland: Amsterdam), F. Aghazadeh, Ed., pp. 865-870.
36. Marek, T., Noworol, C., Pieczonka-Osikowska, W., Przetacznik, J. and Karwowski, W., 1988, Changes in Temporal Instability of Lateral and Vertical Phorias of the VDT Operators, In: Trends in Ergonomics? Human Factors, Vol. V (North Holland: Amsterdam), F. Aghazadeh, Ed., pp. 283-290.
37. Yates, J. W. and Karwowski, W., 1988, A Comparison between Isokinetic Trunk Strength and Standard Static Strength Tests, In: Trends in Ergonomics/Human Factors, Vol. V (North Holland: Amsterdam), F. Aghazadeh, Ed., pp. 803-810.
38. Mital, A., Kromodihardjo, S., Mehta, M. and Karwowski, W., 1998, Facilities Location: Quantifying Subjective Criteria Using Fuzzy Linguistic Approach, In: Recent Developments in
39. Karwowski, W., Parsaei, H. R., Nash, D. L. and Rahimi, M., 1988, Human Perception of the Work Envelope of an Industrial Robot, In: Ergonomics of Hybrid Automated Systems I, Karwowski, W., Parsaei, H. R. and Wilhelm, M. R., Eds., (Elsevier: Amsterdam), pp. 421-428.
40. Parsaei, H. R., Karwowski W., Wilhelm, M. R. and Walsh, A., 1988, A Methodology for Economic Justification of Flexible Manufacturing Systems, Computers in Industrial Engineering, 15, 1-4, pp. 117-122.
41. Parsaei, H. R., Wilhelm, M. R. and Karwowski, W., 1988, A Justification Method for Advanced Manufacturing Systems, Proceedings of the Third International Conference on Robotics and Factories of the Future, Southfield, MI, August 14-17.
42. Karwowski, W., 1988, Human-Robot Interaction: Safety Aspects of Hybrid Automated Systems, in Proceedings of the 10th Congress of the International Ergonomics Association, Sydney,
43. Karwowski, W., Marek, T. and Noworol, C., 1988, Theoretical Basis of the Science of Ergonomics, in Proceedings of the 10th Congress of the International Ergonomics Association, Sydney, Australia, Taylor & Francis, Ltd., August, pp. 756-758.
44. Karwowski, W., Rahimi, M., Nash, D. L. and Parsaei, H. R., 1988, Perception of Safety Zone Around and Industrial Robot in : Proceedings of the 32nd Annual Meeting of the Human Factors Society, Santa Monica, California, pp. 948-952.
45. Karwowski, W., 1988, Maximum Load Lifting Capacity of Males and Females in Teamwork, in: Proceedings of the 32nd Annual Meeting of the Human Factors Society, Santa Monica, California, pp. 680-682
46. Karwowski, W., Shumate, C., Pongpatana, N. and Yates, J. W., 1989, Weight Discriminability and Subjective Assessment of Load Heaviness: A Pilot Study, in: Proceedings of the 33rd Annual Meeting of the Human Factors Society, Santa Monica, California, pp. 657-661.

47. Karwowski, W. and Ostaszewski, K., 1989, Linguistic Hedges and Fuzzy Normalization Operator, Proceedings of the Third International Congress of the International Fuzzy Systems Association, Seattle, WA, pp. 528-531.
48. Karwowski, W. and Pongpatana, N., 1989, The Effect of Color on Human Perception of Load Heaviness, In: Advances in Industrial Ergonomics and Safety I, A. Mital, Ed., (Taylor & Francis, London), pp. 673-678.
49. Karwowski, W., 1990, Human Perception of Operational Characteristics of Industrial Robots: An Overview, In: Human Factors in Organizational Design and Management III, K. Noro and O. Brown, Jr., Eds, (Elsevier: Amsterdam), pp. 169-172.
50. Karwowski, W. and Pongpatanasuegsa, N., 1990, Idle Time and Safe-To-Approach Condition for Industrial Robot: Waiting Times Selected by Students and Workers, In: Advances in Industrial Ergonomics and Safety II, B. Das, Ed., (Taylor & Francis: London), p. 781.
51. Karwowski, W., 1990, Human-Robot Interaction: An Overview of Perceptual Aspects of Working with Industrial Robots, Ergonomics at Work, The Xth UOEH International Symposium and The 1st Pan-Pacific Conference on Occupational Ergonomics, Kitakyushu, Japan, July 10-13, pp.142-143.
52. Karwowski, W., 1990, Human Factors in Advanced Manufacturing and Hybrid Automation, 22nd International Congress of Applied Psychology, Kyoto, Japan, July 22-27, p.178.
53. Karwowski, W., 1990, Effects of Keying Method, Image Preview and Work/Rest Schedule on Posture of the Remote Bar Coding Operators, Proceedings of the Human Factors Society 34th Annual Meeting, Orlando, Florida, October 8-12, pp. 738-742.
54. Karwowski, W., Hancock, P., Zurada, J. M. and Ostaszewski, K., 1991, Risk of Low Back Overexertion Injury Due to Manual Load Lifting in View of the Catastrophe Theory, Proceedings of the 11th Congress of the International Ergonomics Association, (Taylor and Francis, London), pp. 66-68.
55. Mital, A. and Karwowski, W., 1991, Acceptable Lifting Capacity of Industrial Workers for Symmetrical and Asymmetrical Manual Lifting, Proceedings of the 11th Congress of the International Ergonomics Association, (Taylor and Francis, London), pp. 72-74.
56. Karwowski, W. and Pongpatanasuegsa, N., 1991, Linguistic Interpretation in Human Categorization of Load Heaviness, Proceedings of the 11th Congress of the International Ergonomics Association, (Taylor and Francis, London), pp. 425-427.
57. Jarvinen, J., Karwowski, W. and Lepisto, J., 1991, Industrial Robot-Related Accidents in Finland, Proceedings of the 11th Congress of the International Ergonomics Association, (Taylor and Francis, London), pp. 471-473.
58. Karwowski, W. and Alsabi, H., 1991, The Effect of Confined Space on the Maximum Acceptable Weight of Lift Proceedings of the 35th Annual Meeting of the Human Factors Society, San Francisco, CA, pp. 804-808.
59. Karwowski, W., 1991, Human-Robot Interaction: An Overview of Perceptual Aspects of Working With Industrial Robots In: Towards Human Work: Solutions to Problems in Occupational Health and Safety, M. Kumashiro and E. D. Megaw, Eds., (Taylor & Francis: London), pp. 68-74.
60. Jarvinen, J. and Karwowski, W., 1991, The Overexertion Injury Due to Manual Lifting: Another Irony of Automated Manufacturing, In: Advances in Industrial Ergonomics and Safety III, W. Karwowski and J. W. Yates, Eds., (Taylor & Francis: London), pp. 201-207.
61. Karwowski, W., 1991, Advanced Manufacturing Systems: A New Challenge for Human Factors Engineering, In: Advances in Industrial Ergonomics and Safety III, W. Karwowski and J. W. Yates, Eds., Taylor & Francis: London, pp. 805-812.

62. Cerrito, P., Karwowski, W. and Ostaszewski, K., 1991, Empirical Study of the Meaning of the Hedge 'Very', In: *Advances in Computing & Information*, Springer Lecture Notes in Computer Science, (Springer Verlag: Berlin), No. 497, pp. 672-674.
63. Ostaszewski, K. and Karwowski, W., 1992, Fuzzy Clustering Methods for Assessment of Population Risks in the Insurance Industry, In: *Proceedings of the International Fuzzy Systems and Intelligent Control Conference*, Louisville, KY, pp. 156-160.
64. Jarvinen, J. and Karwowski, W., 1992, Applications of Knowledge-Based Expert Systems in Industrial Ergonomics: A Review and Appraisal, In: *Computer Applications in Ergonomics, Occupational Safety and Health*, M. Mattila and W. Karwowski, Eds., (North-Holland, Amsterdam), pp. 45-54.
65. Grobelny, J., Cysewski, P., Karwowski, W. and Zurada, J., 1992, APOLIN: A 3-Dimensional Ergonomic Design and Analysis System, In: *Computer Applications in Ergonomics, Occupational Safety and Health*, M. Mattila and W. Karwowski, Eds., (North-Holland: Amsterdam), pp. 129-135.
66. Karwowski, W. and Jarvinen, J., 1992, A Framework for Neural Network-Based Diagnosis of Carpal Tunnel Syndrome: Requirements for Diagnostic Data Analysis, In: *Computer Applications in Ergonomics, Occupational Safety and Health*, M. Mattila and W. Karwowski, Eds., (North-Holland: Amsterdam), pp. 425-432.
67. Karwowski, W., Pongpatana, N. and Yates, J. W., 1992, Perception of Load Heaviness and EMG Quantification of Muscular Responses in Manual Lifting: A Pilot Study, In: *Advances in Industrial Ergonomics and Safety IV*, S. Kumar, Ed., (Taylor and Francis: London), pp. 645-650.
68. Karwowski, W., 1992, Comments on the Assumption of Multiplicity of Risk Factors in the Draft Revisions to NIOSH Lifting Guide, In: *Advances in Industrial Ergonomics and Safety IV*, S. Kumar, Ed., (Taylor and Francis: London), pp. 905-910.
69. Jarvinen, J. and Karwowski, W., 1992, Modeling of Man-Machine Interactions in FMS Using Artificial Neural Network Tools, In: *Ergonomics of Hybrid Automated Systems - III*, Brodner, P. and Karwowski, W., Eds., (Elsevier: Amsterdam), pp. 343-348.
70. Karwowski, W., 1992, Worker safety in Computer-Integrated Manufacturing Systems: Needs for Research, In: *Ergonomics of Hybrid Automated Systems - III*, Brodner, P. and Karwowski, W., Eds., (Elsevier: Amsterdam), pp. 469-474.
71. Kuivanen, R. and Karwowski, W., 1992, Experimental Study to Determine Safe Limit for Reduced Speed of Robot Motions, In: *Ergonomics of Hybrid Automated Systems - III*, Brodner, P. and Karwowski, W., Eds., (Elsevier: Amsterdam), pp. 475-480.
72. Karwowski, W. and Brokaw, N., 1992, Implications of the Proposed Revisions in a Draft of the Revised NIOSH Lifting Guide (1991) for Job Redesign: A Field Study, *Proceedings of the 36th Annual Meeting of the Human Factors Society*, Atlanta, GA, pp. 659-663.
73. Karwowski, W., Parsaei, H., Soundararajan, S. and Pongpatanasuegsa, N., 1992, Estimation of Safe Distances from the Robot Arm as a Guide for Limiting Slow Speed of Robot Motions, *Proceedings of the 36th Annual Meeting of the Human Factors Society*, Atlanta, GA, pp. 992-996.
74. Ebanks, B., Karwowski, W., Ostaszewski, K., 1992, Application of Measures of Fuzziness to Risk Classification in Insurance, in: W. Koczkodaj, Peter E. Lauer, Anestis A. Toptsis (Eds.): *Computing and Information - ICCI'92*, IEEE Computer Society Press, Los Alamitos, California, pp. 290-291.
75. Karwowski, W., Ostaszewski, K., 1992, An Analysis of Possible Applications of Fuzzy Set Theory to the Actuarial Credibility Theory. In: *Proceedings of the Annual Meeting of the North American Fuzzy Information Processing Society*, Puerto Vallarta, December.

76. Karwowski, W., 1992, The Complexity-Compatibility Paradigm in the Context of Organizational Design of Human-Machine Systems, In: Human Factors in Organizational Design and Management, V, O. Brown and H. Hendrick (Eds.), (Elsevier: Amsterdam), pp. 469-474.
77. Karwowski, W. and Marras, W. S., 1993, A Catastrophe Theory-Based Model for Quantification of Risk of Low Back Disorders at Work, in Designing for Diversity, Proceedings of the Human Factors and Ergonomics Society, Oct. 1-15, Seattle, Washington, pp. 683-687.
78. Karwowski, W., Ostaszewski, K., 1993, Towards Fuzzy Actuarial Credibility Theory. In: Proceedings of the Annual Meeting of the North American Fuzzy Information Processing Society, Allentown, Pennsylvania, August.
79. Jarvinen, J. and Karwowski, W., 1993, A Questionnaire Study of Accidents in Advanced Manufacturing Systems, in Designing for Diversity, Proceedings of the Human Factors and Ergonomics Society, Oct. 11-15, Seattle, Washington, pp. 1004-1008.
80. Karwowski, W., 1993, A Catastrophe Theory Based Model of the Cumulative Trauma Disorders Definition of Space and Control Variables, In: Advances in Industrial Ergonomics and Safety V, R. Nielsen and K. Jorgensen, Eds., (Taylor & Francis: London), pp. 79-86.
81. Karwowski, K. and Pongpatana, N., 1993, Fuzzy Modeling of Load Heaviness: A New Perspective on Acceptability and Comfortability Criteria in Manual Lifting Tasks In: The Ergonomics of Manual Work, W. Marras, W. Karwowski, J. Smith and L. Pacholski, Eds. (Taylor & Francis: London), pp. 85-88.
82. Karwowski, W., Zurada, J., Marras, W. S. and Gaddie, P., 1994, A Prototype of the Artificial Neural Network-Based System for Classification of Jobs with Respect to Risk of Low Back Disorders, in Advances in Industrial Ergonomics & Safety VI, F. Aghazadeh, Ed. (Taylor & Francis: London), pp. 19-22.
83. Karwowski, W., Gaddie, P. and Marras, W. S., 1994, A Dynamical Systems Approach for Analysis of the Relationships between Risk Factors for Low Back Disorders Using the 3-D Graphical Visualization Models, In: Advances in Industrial Ergonomics & Safety VI, F. Aghazadeh, Ed. (Taylor & Francis: London), pp. 653-656.
84. Karwowski, W., 1994, A General Modelling Framework for the Human-Computer Interaction Based on the Principles of Ergonomic Compatibility Requirements and Human Entropy, In: Fourth International Scientific Conference Book of Short Papers, Vol. 1, Molteni, G., Occhipinti, E. and Piccoli, B., Eds. Institute of Occupational Health, University of Milan, October 2-5, pp. A12-A19.
85. Karwowski, W., Marek, T. and Noworol, C., 1994, The Complexity-Incompatibility Principle in the Science of Ergonomics, In: Advances in Industrial Ergonomics & Safety VI, F. Aghazadeh, Ed. (Taylor Francis: London), pp.37-40.
86. Karwowski, W., Caldwell, M. and Gaddie, P., 1994, Relationships Between the NIOSH (1991) Lifting Index, Compressive and Shear Forces on the Lumbosacral Joint, and Low Back Injury Incidence Rate Based on Industrial Field Study, in Proceedings of the Human Factors and Ergonomics Society 38th Annual Meeting, October 24-28, Nashville, Tennessee, Human Factors Society, Santa Monica, CA, pp. 654-657.
87. Karwowski, W., Graham, J., Parsaei, H. R. and Helander, M., 1994, Concurrent Ergonomics Approach to Safety and Human Factors Issues in Design for Manufacturability, in Proceedings of the 12th Triennial Congress of the International Ergonomics Association, Volume 4 - Ergonomics and Design, Human Factors Association of Canada, Toronto, Canada, August 15-19, pp. 108-110.
88. Jarvinen, J. and Karwowski, W., 1994, Disturbance Control in FMS: A Field Study, in Proceedings of the 12th Triennial Congress of the International Ergonomics Association, Volume 4 - Ergonomics and Design, Human Factors Association of Canada, Toronto, Canada, August 15-19,

89. Karwowski, W. and Gaddie, P. R., 1995, Simulation of the 1991 Revised NIOSH Manual Lifting Equation, Proceedings of the Human Factors and Ergonomics Society Annual Meeting, Santa Monica, CA, pp. 699-701.
90. Karwowski, W. and Jamaldin, B., 1995, The Science of Ergonomics: System Interactions, Entropy, and Ergonomic Compatibility Measures, In: Advances in Industrial Ergonomics and Safety VII, A. C. Bittner, Jr. and P. C. Champney, Eds. (Taylor & Francis: London), pp. 121-126.
91. Karwowski, W. and Knizhnik, S. 1995, Ergonomic Entropy as a Basis for Classification and Investigation of the Human-Work Systems, In: Advances in Industrial Ergonomics and Safety VII, A. C. Bittner, Jr., and P. C. Champney, Eds. (Taylor & Francis: London), pp. 127-124
92. Jamaldin, B., Karwowski, W., Parsaei, H. and Graham, J., 1995, Concurrent Ergonomics Design of the Human-Robot Interaction in a Manufacturing Cell Using the SAMMIE Software, In: Proceedings of the IEA World Conference on Ergonomic Design and 3rd Latin American Ergonomics Congress, (ABERGO: Rio de Janeiro, Brazil), pp. 296-299.
93. Karwowski, W. and Allen, T. P., 1996, Application of the Draft 2-365 Standard for Prevention of Cumulative Trauma Disorders in Industry: A Feasibility Study, In: Advances in Occupational Ergonomics and Safety I, Mital (Ed.), pp. 913-198.
94. Karwowski, W., 1996, Maximum Safe Weight of Lift: A New Paradigm for Setting Design Limits in Manual Lifting Tasks Based on the Psychophysical Approach, Proceedings of the Human Factors and Ergonomics Society 40th Annual Meeting (HFES), Santa Monica, California, pp. 614-618.
95. Karwowski, W. and Jamaldin, B., 1996, New Methodological Framework for Quantifying Compatibility of Complex Ergonomics Systems, Proceedings of the 6th Pan Pacific Conference on Occupational Ergonomics, Taipei, Taiwan, 10, 676-679.
96. Karwowski, W., Jamaldin, B., Gaddie, P. and Lee, W.-G., 1996, Linguistic Magnitude Estimation: A Modeling Approach for Quantifying Human Perception of Load Heaviness in Manual Lifting Tasks, Proceedings of the 6th Pan Pacific Conference on Occupational Ergonomics, Taipei, Taiwan, pp. 380-383.
97. Zurada, J. M., Karwowski, W. and Wright, A. L. 1996, A Fuzzy Logic Based Decision Unit for a Robot Safety System, in R.J. Koubek and W. Karwowski (Eds.), Proceedings of the 5th International Conference on Human Aspects of Advanced Manufacturing: Agility and Hybrid Automation - I, IEA, Maui, Hawaii, pp. 380-383.
98. Karwowski, W., Case, B., Gaddie, P., Lee, W.-G. and Jang, R., 1997, Virtual Reality in Human Factors Research and Human Factors of Virtual Reality, in P. Seppala, T. Luopajarvi, C-H. Nygard and M. Mattila (Eds.), From Experience to Innovation: Proceedings of the 13th Triennial Congress of the International Ergonomics Association, Tampere, Finland, Vol. 2, pp. 53-55.
99. Smith, V. H. and Karwowski, W., 1997, Economic Justification of Ergonomic Interventions: An Empirical Study Approach, in P. Seppala, T. Luopajarvi, C-H. Nygard and M. Mattila (Eds.), From Experience to Innovation: Proceedings of the 13th Triennial Congress of the International Ergonomics Association, Tampere, Finland, pp. Vol. 2, 638-640.
100. Jamaldin, B. and Karwowski, W., 1997, Quantification of Human-System Compatibility (HUSYC): An Application to Analysis of the Bhopal Accident, in P. Seppala, T. Luopajarvi, C-H. Nygard and M. Mattila (Eds.), From Experience to Innovation: Proceedings of the 13th Triennial Congress of the International Ergonomics Association, Tampere, Finland, Vol. 3, pp. 46-48.
101. Karwowski, W., 1997, Ancient Wisdom and Future Technology: The Old Tradition and the New Science of Human Factors/Ergonomics in Proceedings of the Human Factors and Ergonomics Society 4th Annual Meeting, Albuquerque, New Mexico, Human Factors and Ergonomics Society, Santa Monica, CA, pp. 875-877.

102. Grobelny, J. and Karwowski, W., 1997, The Effects of Icon Size and Layout Design Configuration on Time of Menu Selection Task in Human-Computer Interaction, In: *Advances in Occupational Ergonomics and Safety*, B. Das and W. Karwowski (Eds), (IOS Press: Amsterdam), pp. 409-416.
103. Karwowski, W., 1998, *Ergonomics and Integrated Management Systems in USA* (in Polish). In *Proceedings of the Polish Forum ISO 9000 Conference on Integrated Management Systems, 1998*, (Polanica Zdroj, Poland, 21-23 September,): pp. 147-156.
104. Karwowski, W., 1998, The load of perceptual indifference in human cognition of load heaviness in manual lifting tasks. In *Proceedings of the Human Factors and Ergonomics Society 42nd Annual Meeting, Chicago, Illinois, Human Factors and Ergonomics Society, Santa Monica, CA.*, pp. 940-944.
105. 105. Kantola, J. and Karwowski, W., 1998, A fuzzy-logic based tool for the evaluation of computer-integrated manufacturing, organization and people system design. In Karwowski, W. and Goonetilleke, R. (Editors): *Manufacturing Agility and Hybrid Automation II*, IEA Press: HKUST, Hong Kong, pp. 43-46.
106. Yeung, S., Genaidy A., Karwowski, W., Huston, R. and Beltran, J., 1999, Application of the Human Expertise-Based Model for Evaluation of Manual Lifting Tasks in the Hong Kong worker Population, in: *Proceedings of the 43rd Annual Meeting of the Human Factors Society, Santa Monica, CA*, pp. 652-655.
107. Karwowski, W., Genaidy A., Huston, R., Yeung, S., and Beltran, J., 1999, Development of the Quantitative Model for Application of Workers' Expertise in Evaluating of Manual Lifting Tasks, in: *Proceedings of the 43rd Annual Meeting of the Human Factors Society, Santa Monica, California*, pp. 647- 651.
108. Kantola, J. and Karwowski, W., 1999, The CIMOP System for Integration of Technology, Organization and People, In: Mondelo, P., Mattila, M. and Karwowski, W. (Editors), *Proceedings of the International Conference on Computer-Aided Ergonomics and Safety, Barcelona, Spain, May*, ISBN: 84-699-0852-9.
109. Karwowski, W., 1999, The Science of an Artifact-Human Compatibility, In: N. Marmaras (Ed.), *Proceedings of the International Symposium: Strengths and Weaknesses, Threats and Opportunities of Ergonomics in front of 2000*, Thera, Greece, September, pp. 9-20.
110. Chase, B. and Karwowski, W., 2000, Attention Allocation under Thermal Stress, *Proceedings of the 14 th Triennial Congress of International Ergonomics Association and the 35th Annual Meeting of the Human Factors Society, San Diego, CA*, pp. 5-363 – 5-366.
111. Karwowski, W., 2000, Cognitive Ergonomics: Requisite Compatibility, Fuzziness And Nonlinear Dynamics, *Proceedings of the 14 th Triennial Congress of International Ergonomics Association and the 35th Annual Meeting of the Human Factors Society, San Diego, CA*, pp. 1-580 – 1-583.
112. Kee, D. and Karwowski, W., 2000, Evaluation of Body Joint Motion Stressfulness Based on Perceived Discomfort, *Proceedings of the 14th Triennial Congress of International Ergonomics Association and the 35th Annual Meeting of the Human Factors Society, San Diego, CA*, p. 5-595.
113. Kantola, J. and Karwowski, W., 2000, Intelligent Macroergonomics Approach for Evaluation of Integrated Manufacturing, Organization, Human Resources, and Information Systems, *Proceedings of the 14th Triennial Congress of International Ergonomics Association and the 35th Annual Meeting of the Human Factors Society, San Diego, CA*, pp. 2-582 – 2-585.
114. Lee, W.-G., Karwowski, W. and Marras, W. S., 2000, A Neuro-Fuzzy Model for Predicting EMG of Trunk Muscles Based on Lifting Task Variables, *Proceedings of the 14th Triennial Congress of International Ergonomics Association and the 35th Annual Meeting of the Human Factors Society, San Diego, CA*.

115. Bedny, G. and Karwowski, W., 2000, Theoretical and Experimental Approaches in Ergonomic Design: Towards a Unified Theory of Ergonomic Design, Proceedings of the 14th Triennial Congress of International Ergonomics Association and the 35th Annual Meeting of the Human Factors Society, San Diego, CA, pp. 5-197 – 5-200.
116. Kee, D., & Karwowski, W. (2001, October). Comparison of perceived discomfort for static joint motions between male and female subjects. In Proceedings of the Human Factors and Ergonomics Society Annual Meeting (Vol. 45, No. 14, pp. 1151-1155). Sage CA: Los Angeles, CA: SAGE Publications.
117. Bedny, G. Z., Karwowski, W. and Seglin, M. H., 2001, Activity Theory as a Basis for the Study and Redesign of Computer Based Task, Usability Evaluation and Interface Design: Cognitive Engineering, Intelligent Agents and Virtual Reality, Volume 1 of the Proceedings of HCI International 2001, New Orleans, Louisiana.
118. Bedny, G. Z and Karwowski, W., 2001, Activity Theory as a Framework of Study of Human Computer Interaction, Proceedings of HCI International 2001, New Orleans, Louisiana, CD-ROM.
119. Chase, B., Karwowski, W., and Irwin-Chase, H., 2001, Environmental Stress and Computer-Based Dual-Task Performance. Proceedings of the IIE Annual Conference, Dallas, Texas, CD-ROM.
120. Gielo-Perczak, K. and Karwowski, W., Kumar, S. and Marras, W. S., 2002, Methodological Approaches to Research on Musculoskeletal Complaints and Injuries, Proceedings of the 37th Annual Meeting of the Human Factors Society, Baltimore, MD, CD-ROM.
121. Bedny, G., Z., Karwowski. W., 2003, Functional Analysis Of Orienting Activity And Study Of Human Performance. Proceedings the XV th Triennial Congress of the IEA and The 7th Joint Conference of Ergonomic Society of Korea/Japan Ergonomic Society, pp. 573-578.
122. Gielo-Perczak, K., Z., Karwowski. W., 2003, The Potential Effect of Emotion on the Maximum Work Load at the Glenohumeral Joint During Simulated Tasks. Proceedings the X- th Triennial Congress of the IEA and The 7th Joint Conference of Ergonomic Society of Korea/Japan Ergonomic Society, pp. 443-446.
123. Karwowski, W., Gaweda, A., Marras, W. S, Davis, K. and Zurada, J., 2003, Estimation Of EMG Activity Of Trunk Muscles In Manual Lifting Tasks Based On Trunk Dynamics Using The Fuzzy Relational Rule Network, In: Proceedings of the 38th Annual Meeting of the Human Factors Society, Denver, CO, CD-ROM.
124. Hinton-Hudson, V. and Karwowski, W., 2003, Compensability of Worker's Compensation Claims for Work-Related Disorders (WRMDs) , In: Proceedings of the 38th Annual Meeting of the Human Factors Society, Denver, CO, October; CD-ROM.
125. Karwowski, W. and Rodrick, D., 2003, Is Chaos Present In Static Postures Observed At Work: A Nonlinear Dynamics-Based Analysis Of Surface EMG Signals, In: Proceedings of the 38th Annual Meeting of the Human Factors Society, Denver, CO, CD-ROM.
126. Daraiseh, N., Genaidy, A., Shell and W. Karwowski, 2004, Associations Between Lower Back Symptoms and Multiple Body Regions. Proceedings of the IIE Annual Conference, Houston, May 2004, Texas, CD-ROM.
127. Paajanen, P., Kantola, J., Karwowski, W. and Vanharanta, H., 2004, Applying Systems Thinking in the Evaluation of Organizational Learning and Knowledge Creation. In: Proceedings of the 8th World Multi-Conference on Systemics, Cybernetics and Informatics, Florida, Orlando, July 18-21.
128. Hou, Y., Zurada, J.M., Karwowski, W., Prediction of EMG Signals of Trunk Muscles in Manual Lifting Using a Neural Network Model, Proceedings of the International Joint Conference on Neural Networks, Budapest, Hungary, July 25-28, 2004, pp. 1935-1940.

129. Rodrick, D., and Karwowski, W. 2004, Nonlinear Behavior Of Muscle Responses For Four Static Postures Observed At Work, Proceedings of the 39th Annual Meeting of the Human Factors Society, New Orleans, CO, CD-ROM.
130. Hou Y., Zurada, J.M., Karwowski, W., 2004, Prediction of Dynamic Forces on Lumbar Joint Using a Recurrent Neural Network Model, In: Proceedings of the 2004 International Conference on Machine Learning and Applications (ICMLA'04), Louisville, Kentucky, December 16-17, 2004, pp. 360-365.
131. Paajanen, P., Kantola, J., Karwowski, W., Vanharanta, H., 2004, Applying Systems Thinking in the Evaluation of Organizational Learning and Knowledge Creation, In: Proceedings of the International Conference on Cybernetics and Information Technologies, Systems and Applications: CITSA 2004, 21-25 July, Orlando, USA.
132. Paajanen P, Kantola J, Karwowski W, Vanharanta H, 2004, Lituus: A System For The Development Of Learning Organizations. In: Chu H-W, Aguilar J, Ferrer J, (eds.) Proceedings of the ISAS CITSA 2004 10th International Conference On International Systems Analysis And Synthesis (July 21–25, 2004, Orlando Florida, USA), pp. 412-416.
133. Kantola, J., Vanharanta, H., Karwowski, W., 2004, Pre-Humanoid 1.0, In: Proceedings of the HAAMAHA 2004 Conference: Human & Organizational Issues in the Digital Enterprise, 25-27 August 2004, NUI, Galway, Ireland.
134. Lindqvist, J., Kantola, J., Vanharanta, H., Karwowski, W., 2005, TRIFOLIUM – A New Method for Supply and Value Chain Analysis, In: Proceedings of the 14th Annual IPSERA Conference, 20-23 March 2005, Archamps, France.
135. Hou, Y., Zurada, J.M., Karwowski, W., and W.S. Marras, 2005, A Fuzzy Approach for Key Variables Identification of EMG Evaluation System, Proceedings of the International Joint Conference on Neural Networks, (IJCNN 2005), Montreal, Canada, pp. 2520 -2525.
136. Hou, Y., J. M. Zurada, W. Karwowski and W. S. Marras, "A Hybrid Neuro-fuzzy Approach for Spinal Force Evaluation in Manual Materials Handling Tasks", Proceedings of the 2005 International Conference on Natural Computation, ICNC 2005, Changsha, China, August 27-29, 2005, Part III, pp. 1216 – 1225.
137. Kantola, J., Hurme-Vuorela, E., Karwowski, W., Vanharanta, H., 2005, Nephroid –The Self-Evaluation Application for the Competencies of Human Work. In B. Chase and W. Karwowski, W. (Ed.): Manufacturing Agility and Hybrid Automation, Proceedings of the HAAMAHA 2005 Conference, July 18-20, 2005, San Diego, California.
138. Aramo-Immonen, H., Kantola, J., Vanharanta, H., Karwowski, W., 2005, Mastering Qualitative Factors of Uncertainty in Mega Projects, EURAM' 2005 (European Academy of Management), 5th Annual International Conference. May 4-5th 2005, Munich, Germany.
139. Aramo-Immonen, H., Kantola, J., Vanharanta, H., Karwowski, W., 2005, The Web Based TRIDENT Application for Analyzing Qualitative Factors in Mega Project Management, IRMA2005 (Information Resources Management Association International Conference), Proceedings of the 16th Annual International Conference. May 15 - 18th 2005, San Diego, California.
140. Kantola, J, Karwowski, W., Vanharanta, H., 2005, A Link Between Operator's Creative Tension And The Performance Data Of Shifts, In: Sinay, J. Mondelo, P., Karwowski, W. and Mattila, M. (Editors), Proceedings of the International Conference on Computer-Aided Ergonomics and Safety, Kosice, Slovakia, May, CD-ROM, ISBN: 84-9342256-1-3.
141. Lindqvist, J., Kantola, J., Vanharanta, H. and Karwowski, W., 2005, TRIFOLIUM – A New Method for Supply and Value Chain Analysis, 14th Annual IPSERA Conference, 20-23 March, Archamps, France.

142. Kantola, J., Vesanen, T., Piirto, A., Karwowski, W., Vanharanta, H., 2005, Analysis and Simulation of Core Competencies in Human Resource Development, CD-ROM Proceedings of the HCI International 2005, 22-27 July, Las Vegas, Nevada, USA.
143. Vanharanta, H., Kantola, J., Karwowski, W., 2005, A Paradigm of Co-Evolutionary Management: Creative Tension and Brain-Based Company Development Systems, CD-ROM Proceedings of the HCI International 2005, 22-27 July, Las Vegas, Nevada, USA.
144. Kantola, J., Hurme-Vuorela, E., Karwowski, W., Vanharanta, H., 2005, Web-Based Development of Human Work Professionals' Competencies, CD-ROM Proceedings of the 10th International Conference on Human Aspects of Advanced Manufacturing: Agility and Hybrid Automation - HAAMAHA 2005, July 18th-21st, 2005, San Diego, CA, USA.
145. Hou, Y., Zurada, J. M., Karwowski, W., & Marras, W. S., 2006. Identification of low back injury from EMG signals using a neural network model. In Neural Networks, 2006. IJCNN'06. International Joint Conference on (pp. 5308-5315). IEEE.
146. Vanharanta, H., Suominen, A., Jussila, J., Kantola, J., & Karwowski, W. 2007. Constructs and Concepts in Management Decision Making. In Proceedings of the 5th International New Exploratory Technologies (NEXT 2007) Conference, Seoul, Korea.
147. Kantola, J., Czainska, K., Karwowski, W. and Vanharanta, H., 2008, International Competence Development Project for Emergency Response Personnel, In: Karwowski, W. and Trzcielinski, S. (Eds), Value Stream Activities Management, IEA Press, Madison, USA, pp. 536-543.
148. Reid, C. R., McCauley-Bush, P., Karwowski, W., & McMullin, D. L., 2009. The Need for a Lower Extremity Risk Assessment Model. In Proceedings of the Human Factors and Ergonomics Society Annual Meeting (Vol. 53, No. 14, pp. 887-891). October 2007, Sage CA: Los Angeles, CA: SAGE Publications.
149. Davis, K. G., Hou, Y., William S. Marras, W.S., Karwowski, W., J.M., and Kotowski, S, 2008, Utilization of a Hybrid Neuro-Fuzzy Engine to Predict Trunk Muscle Activity for Sagittal Lifting. In: Proceedings of the Human Factors and Ergonomics Society Annual Meeting September 2008, vol. 52 no. 15, pp. 1064-1067
150. Ahram, T. Z., Karwowski, W., 2009, Measuring Human Systems Integration Return on Investment" The International Council on Systems Engineering - INCOSE Spring 09 Conference: Virginia Modeling, Analysis and Simulation Center (VMASC), Suffolk, VA. USA.
151. Ahram, T. Z., Karwowski, W., Amaba, B., Obeid, P., Human Systems Integration: Development Based on SysML and the Rational Systems Platform", Proceedings of the 2009 Industrial Engineering Research Conference, Miami, Florida. USA, 2009, pp. 2333-2338
152. Karwowski, W., Ahram, T. Z., Model-Based Systems Engineering Approach to Sustainable Development and Human-Centered Sustainability, IEA, Proceedings of the 17th Congress of the International Ergonomics Association, Beijing, P.R. China, August 2009. CD-ROM, no page numbers. <http://www.meeting.edu.cn/webmedia/jingpin/iea2009/pic/abstract.pdf>
153. Ahram, T.Z. and W. Karwowski, 2009. Human Systems Integrations Modeling, In: Proceedings of the 53rd Annual Meeting of the Human Factors and Ergonomics Society (HFES), San Antonio, TX, USA. 2009, pp. 1849-1853.
154. Karwowski, W., Ahram, T.Z., and B. Amaba, 2010. Human-Centered Systems Engineering Applications in Service Systems, 5th IEEE International Conference on System of Systems Engineering (SoSE), June 2010, Loughborough University, United Kingdom, pp. 22-24.
155. Ahram, T. Z., Karwowski, W., Amaba, B. , 2010, User-centered Systems Engineering & Knowledge Management Framework for Design & Modeling of Future Smart Cities", Human Factors and Ergonomics Society Annual Meeting Proceedings. 54th Annual Meeting of the Human Factors and

- Ergonomics Society (HFES 2010), San Francisco, California, USA (September 27-October 1, 2010). pp. 1752-1756.
156. Ahram, T. and Karwowski, W., 2011, Social Networking Applications: Smarter Product Design for Complex Human Behaviour Modeling, Human Centered Design - Second International Conference, HCD 2011, Held as Part of HCI International 2011, Orlando, FL, USA, July 9-14, 2011. CD-ROM
 157. Sepúlveda, J., Karwowski, W., Ramis, F., Concha, P., 2011, Scheduling Patients Based on Provider's Availability, The International Conference on Modeling & Applied Simulation (MAS 2011), Rome, Italy, September 14, 2011.
 158. Sepúlveda, J., Karwowski, W., 2011, UCF-OVAMC Systems Redesign Project Overview, "MAS Conference, Gaining Success through Improved Processes, St. Petersburg, FL, August 9, 2011.
 159. Sepúlveda, J., Andrzejczak, C., Karwowski, W., Sala-Diakanda, S., Thompson, W., 2011. Ambulatory Surgery Process – A How-To Presentation, Proceedings of the 2011 Industrial Engineering Research Conference, Reno, NV, May 21-25, 2011.
 160. Ahram, T. and Karwowski, W., 2012, Framework For Human Total Ownership Cost Based On Human Performance Cost Components (UHPPCC), ISERC 2012 Annual Conference, CD-ROM, Orlando, Florida.
 161. Jiang, H., Karwowski, W. and Ahram, T., 2012, Agent-based Modeling of Human Performance Assessment, ISERC 2012 Orlando Conference, CD-ROM
 162. Sepúlveda, J., Karwowski, W., Sala-Diakanda, S., Thompson, W., 2012. Improving Ambulatory Surgery Performance at a VA Medical Center, IIE Annual Conference and Expo, Orlando, FL, May 19-23, 2012.
 163. Sepúlveda, J., Karwowski, W., Thompson, W., Bozorgi, A., 2012, Patient scheduling at outpatient specialty clinics, Healthcare Systems Process Improvement Conference 2012, Las Vegas, NV, February 18-21, 2012.
 164. Gielo-Perczak, K., Karwowski, W., Hancock, P., Marras, W., Bonato, P., 2012, Multidisciplinary Concepts in Ergonomic Design and Individual Differences in Performance, Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 56 (1), 1034-1038.
 165. Ahram, T. and Karwowski, W., 2012, A Framework for Human Total Ownership Cost Based On Universal Human Performance Cost Components, Proceeding of the Human Factors and Ergonomics Society Annual Meeting, 56 (1), 738-742
 166. Jiang, H., Karwowski, W. and Ahram, T., 2012, Application of System Dynamics Modeling for the Assessment of Training Performance Effectiveness, Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 56 (1), 1030-1033.
 167. Ahram, T. and Karwowski, W., 2012, Complex Systems Engineering for Rapid Computational Socio-Cultural Network Analysis and Decision Support Systems. SOTICS 2012, The Second International Conference on Social Eco-Informatics.
 168. Ahram, T. Z. and Karwowski, W., 2012, Visual Social Network Analysis: Effective Approach to Model Complex Human Social, Behaviour & Culture. WORK: A Journal of Prevention, Assessment and Rehabilitation 41: 3504-3510.
 169. Ahram, T. Z., Karwowski, W., Soares, M., 2012, Embedded systems engineering for products and services design. WORK: A Journal of Prevention, Assessment and Rehabilitation 41: 941-948.
 170. Andrzejczak, C., Karwowski, W., Mikusinski, P., 2012, Application of diffusion maps to identify human factors of self-reported anomalies in aviation. WORK: A Journal of Prevention, Assessment and Rehabilitation 41: 188-197.

171. Jiang, H., Karwowski, W., Ahram, T., 2012, Applications of agent-based simulation for human socio-cultural behavior modeling. *WORK: A Journal of Prevention, Assessment and Rehabilitation* 41: 2274-2278.
172. Karwowski, W. and Ahram, T., 2012, Innovation in user-centered skills and performance improvement for sustainable complex service systems. *Work: A Journal of Prevention, Assessment and Rehabilitation* 41: 3923-3929
173. Onkham, W., Karwowski, W., Ahram, T., 2012, Economics of human performance and systems total ownership cost. *WORK: A Journal of Prevention, Assessment and Rehabilitation* 41: 2781-2788.
174. Li, M., Sala-Diakanda, S., He, Y., Karwowski, W., 2013, What is a Specialty Clinic Really Capable of? *Proceedings of the 2013 Industrial and Systems Engineering Research Conference*, May 18-22, 2013.
175. Akbas, A. S., Mykoniatis, K., Angelopoulou, A., & Karwowski, W., 2014, A model-based approach to modeling a hybrid simulation platform. In *Proceedings of the Symposium on Theory of Modeling & Simulation-DEVS Integrative* (p. 31). Society for Computer Simulation International.
176. Mykoniatis, K., Angelopoulou, A., Proctor, M. D., & Karwowski, W., 2014. Virtual humans for interpersonal and communication skills' training in crime investigations. In *International Conference on Virtual, Augmented and Mixed Reality* (pp. 282-292). Springer, Cham.
177. Karwowski, W., Ahram, T., & Amaba, B., 2014. A system-of-systems engineering approach to leadership and innovation: Sustainable STEM education and workforce development through the Smart Cities initiative. In *Engineering Leaders World Congress on Engineering Education 2013* (July, Vol. 2014, No. 3, p. 12). Hamad bin Khalifa University Press (HBKU Press).
178. Karwowski, W., Peres, S., Andre, A., Cooke, N., Imada, A., Lee, J., Marras, W., 2014, The Grand Challenges for HFES and HF/E Profession The Fellows' Perspective. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, Santa Monica, California, 595.
179. Çakıt, E., Karwowski, W., 2015. Correlation analysis between the occurrence of adverse events and infrastructure development in an active war theater, *Proceedings 19th Triennial Congress of the IEA*, Melbourne 9-14 August 2015, pp. 9-14.
180. Çakıt, E., Karwowski, W., 2015. Understanding patterns of infrastructure development in the active war theater of Afghanistan over the period 2002-2010, *Proceedings of the 6th International Conference on Applied Human Factors and Ergonomics AHFE 2015*, Las Vegas, USA 26-30 July 2015.
181. Rivera, W. A., Goel, A., Kincaid, J. P., & Karwowski, W., 2015. Calculating Grid Partitioning Costs of Distributed Virtual World Simulation Systems. *Spring Simulation Multi-conference 2015*, Alexandria, VA, USA.
182. Goel, A., Rivera, W. A., Kincaid, J. P., Karwowski, W., Montgomery, M. M., & Finkelstein N. M., 2015. A Research Framework for Exascale Simulations of Distributed Virtual World Environments on HPC Clusters. *Spring Simulation Multi-conference 2015*, Alexandria, VA, USA.
183. Ahram, T. Z., Karwowski, W., Amaba, B., Fichtelkottter, P., 2015. Systems Engineering Approach For Managing Technology Complexity", *Human Factors, Instrumentation and Controls Division (HFICD) of the American Nuclear Society, Nuclear Plant Instrumentation Control and Human Machine Interface Technologies (NPIC&HMIT 2015)*, February 23–26, 2015, Charlotte, North Carolina.
184. Karwowski, W., Ahram, T., 2015. Applications of Systems Dynamics and Neuro-Fuzzy Logic and to Model Complex Human Perception, In: *Ergonomics in Design: Methods and Techniques*. Eds. Marcelo M. Soares, Francisco Rebelo, CRC Press, Boca Raton, FL.

185. Ahram, T., Falcão, C., Barros, R., Soares, M., Karwowski, W., 2015. Neurodesign: Applications of Neuroscience in Design and Human-System Interactions, In: *Ergonomics in Design: Methods and Techniques*. Eds. Marcelo M. Soares, Francisco Rebelo, CRC Press, Boca Raton, Florida.
186. Çakit, W., Karwowski, W., 2015. Understanding patterns of infrastructure development in the active war theater of Afghanistan over the period 2002-2010. *Procedia Manufacturing*, Elsevier, Vol. 3, pp. 3876-3882.
187. Ahram, T., Karwowski, W., Sala-Diakanda, S. and Jiang, H., 2016. Modeling Decision Flow Dynamics for the Reliable Assessment of Human Performance, Crew Size and Total Ownership Cost. In: V. Duffy (Ed.), *Advances in Applied Digital Human Modeling and Simulation*. Springer Series on Advances in Intelligent Systems and Computing (AISC), ISBN 978-3-319-41626-7, pp 117-129.
188. Sawyer, B. D., Karwowski, W., Xanthopoulos, P. and Hancock, P. A., 2016. Applied Potential: Neuroergonomic Error Detection in Single Electrode Electroencephalography in R. Parasuraman & C. Mitchell (Eds.), *Neuroergonomics*, New York, NY.: Columbia University Press.
189. Glaspie, H. W., and Karwowski, W. 2017. Human Factors in Information Security Culture: A Literature Review. In: D. Nicholson (ed.), *Advances in Human Factors and Cybersecurity*. Proceedings of the International Conference on Applied Human Factors and Ergonomics, pp. 269-280, Springer.
190. Ahram, T., Karwowski, W., & Muhs, K. 2017. Human Performance Variability in Task Execution Times Under Generic Human-System Integration Conditions in Naval Operations. In: R.L. Boring (Ed.), *Advances in Human Error, Reliability, Resilience, and Performance*. International Conference on Applied Human Factors and Ergonomics 2017. Springer, pp. 175-182, Springer,
191. Bedny, G., Bedny, I. and Karwowski, W., 2017, Studying Thinking in the Framework of SSAT. In: Proceedings of the International Conference on Applied Human Factors and Ergonomics, pp. 362-369, Springer.
192. Çakit, E. and Karwowski, W., 2017, Understanding the Social and Economic Factors Affecting Adverse Events in an Active Theater of War: A Neural Network Approach. Proceedings of the International Conference on Applied Human Factors and Ergonomics, pp. 215-223, Springer.
193. Bedny I., Bedny G., Karwowski W. , 2017. Complexity and Reliability as Basic Quantitative Characteristics of Computer Based Tasks. In: Hale K., Stanney K. (eds) *Advances in Neuroergonomics and Cognitive Engineering*. *Advances in Intelligent Systems and Computing*, vol 488. Springer, Cham. pp 361-373.
194. Zurada, J., Donghui, S., Karwowski, W., Guan, J., and Cakit, E., 2018. Detecting Adverse Events in an Active Theater of War Using Data Mining Techniques, Proceedings of the Eighth International Conference on Business Intelligence and Technology (BUSTECH 2018), pp. 43-44, Barcelona, Spain, Feb 18-22, 2018.
195. Sawyer, B., Karwowski, W., Xanthopoulos, P., & Hancock, P. (2018). A Comparison of ERP Data Cleaning Strategies for Neuroergonomic Error Detection. In Conference Abstract: 2nd International Neuroergonomics Conference. doi: 10.3389/conf.fnhum (Vol. 4).
196. Bedny G., Bedny I., and Karwowski W. 2018. Studying Thinking in the Framework of SSAT. In: Baldwin C. (eds) *Advances in Neuroergonomics and Cognitive Engineering*. AHFE 2017. *Advances in Intelligent Systems and Computing*, vol 586. Springer, Cham, pp 362-369.
197. Sawyer BD, Karwowski W, Xanthopoulos P and Hancock PA., 2018. A Comparison of ERP Data Cleaning Strategies for Neuroergonomic Error Detection. *Front. Hum. Neurosci. Conference Abstract: 2nd International Neuroergonomics Conference*. doi: 10.3389/conf.fnhum.2018.227.00004.

198. Zurada, J., Shi, D., Karwowski, W., Guan, J., & Çakıt, E., 2018, August. Detecting Adverse Events in an Active Theater of War Using Advanced Computational Intelligence Techniques. In International Conference on Theory and Applications of Fuzzy Systems and Soft Computing (pp. 914-921). Springer, Cham.
199. Bedny G., Bedny I., Karwowski W. 2019. Time Study in Ergonomics and Psychology. In: Ayaz H., Mazur L. (eds) Advances in Neuroergonomics and Cognitive Engineering. AHFE 2018. Advances in Intelligent Systems and Computing, vol 775. Springer, Cham.
200. Bergmann T., Karwowski W., 2019. Agile Project Management and Project Success: A Literature Review. In: Kantola J., Nazir S., Barath T. (eds) Advances in Human Factors, Business Management and Society. AHFE 2018. Advances in Intelligent Systems and Computing, vol 783. Springer, Cham.
201. Alhujaili A., Karwowski W., 2019. Emotional and Stress Responses to Cyberbullying. In: Di Bucchianico G. (eds) Advances in Design for Inclusion. AHFE 2018. Advances in Intelligent Systems and Computing, vol 776. Springer, Cham; https://doi.org/10.1007/978-3-319-94622-1_4.
202. Shi, D., Zurada, J., Karwowski, W., & Guan, J., 2019. Data Stream Models for Predicting Adverse Events in a War Theater. In Proceedings of the 52nd Hawaii International Conference on System Sciences.
203. Çakıt, E., & Karwowski, W., 2020. A Review on Applications of Soft Computing Techniques in Neuroergonomics During the Last Decade. In: International Conference on Applied Human Factors and Ergonomics (pp. 37-43). Springer, Cham.

2. GRANTS AND CONTRACTS

2a. External Research Grant Awards

1. Yates, J. W. and Karwowski, W. (Co-Principal Investigators) Maximum Acceptable Lifts in a Sitting Position, National Institute of Occupational Safety and Health (DHHS), \$14,970.00, May 1, 1986 - May 31, 1987, No. 1 R03 OH02229-01.
2. Karwowski, W. (Principal Investigator) and Yates, J.W., The Evaluation of Vehicle Trunk Dimensions, General Motors Corporation, Human Factors Canada Group, Pontiac, MI, \$14,404.00, April 1, 1987 - September 30, 1987.
3. Ward, T. L., Dressman, J. B., Karwowski, W. and Ralston, P., An Expert System for Adaptive Control of Unattended Machine Tools, The Center for Robotics and Manufacturing Systems, University of Kentucky, Lexington, KY, \$69,032.00, July 1, 1987 - June 30, 1988.
4. Karwowski, W. (Principal Investigator), Special Design Recommendations for Vehicle Trunk Design, General Motors Corporation, Human Factors Canada Group, Pontiac, MI, \$12,530.00, 05-12, 1988.
5. Karwowski, W. (Principal Investigator) Worker Perception of Hazardous Robotic Workstations, Safety and Occupational Health Study Section, National Institute of Occupational Safety and Health, (Assignment 1 R01 OH02568-01), \$26,539.00, June 1, 1988 - September 31, 1989.
6. Karwowski, W. (Principal Investigator) Reducing Repetitive Strain Injury Through Ergonomics Job Redesign, Keller Crescent, Evansville, IN, \$14,674.00, 1/15 - 5/1, 1990.
7. Thurmond, R. C. (PI), Karwowski, W., Futrell, A. W., Rude-Parkins, C., Raju, P.S., Braker, J., and Portes, P., Preliminary Study of End User Applications of 2-Way Interactive Video Services, Bell South Foundation, \$34,300.00, 10/15/1992 - 12/15/1992.

8. Karwowski, W. (Principal Investigator) and J. W. Yates, Ergonomic Review of Mail Carrier Satchel Design, United States Postal Service, Washington, D.C. (subcontract through Texas Tech University), \$126,319.00, 5/1/92-4/30/1993.
9. Karwowski, W. (Principal Investigator), Applications of Advanced Telecommunications Technology for a Distant Diagnosis of Occupational Hand Injury: A Feasibility Study, BellSouth Foundation, \$22,261.00, 7/1/1993 - 12/31/1993.
10. Karwowski, W., (Principal Investigator), Control of Low Back Injury, Liqui-Dri Foods, Inc., Louisville, KY, \$25,555.00, 5/15/1993-2/15/1994.
11. Graham, J., Karwowski, W. (Co-PI), and Parsaei, H. R., Concurrent Engineering for Occupational Safety & Health, NIOSH, \$100,000.00, 10/1/1993-9/29/94.
12. Karwowski, W., (PI), Prevention of Musculoskeletal Injury at Liqui-Dri, Inc., Liqui-Dri Foods, Inc., Louisville, KY, \$19,653.00, 8/1/94-1/31/95.
13. Graham, J., Karwowski, W. (Co-PI), and Parsaei, H. R., Concurrent Engineering for Occupational Safety & Health, NIOSH, \$99,977.00, 10/1/1994-9/29/1995.
14. Karwowski, W., (PI), Medical Ergonomics Analysis: Distribution and Delivery Work Methods Associated with Automated Mail Sortation Systems, USPS, \$220,025.00, 1/2/1996 - 6/30/1997.
15. Karwowski, W., (PI), The Effects of Thermal Environment on the Mission Critical Task Performance, US Army Research Laboratory, \$10,000.00, 5/15/1997 - 12/31/1997.
16. Karwowski, W., (PI), Validation of the Toyota process Manufacturing (UK) Procedure, Toyota Motor Manufacturing, Kentucky, Inc., \$200,000.00; 3/01/2000 - 6/31/2001.
17. Starr, T. (PI), Karwowski et al., Co-Investigator, Biometrics Signature Research Project, EWA Government Systems- GSI contract from the Department of Defense; \$510,150.00; 5/01/2005 – 4/30/2006.
18. Karwowski, W. (PI) and Zurada, J. M, Development of a Neuro-Fuzzy System to Predict Spinal Loading as a Function of Multiple Dimensions of Risk, DHHS-NIOSH / Ohio State University; \$455,609.00; 10/01/2002 - 9/31/2007. [Note: The above grant is part of the DHHS grant awarded to a consortium formed by The Ohio State University (W.S. Marras, PI) University of Louisville (W. Karwowski, PI) and University of Cincinnati (Davis, K., PI), total award for 2002-2007: \$1,438,661.00].
19. Starr, T. (PI), A. Farag, Karwowski, W., Quesada, P.M, et al., (Co-Is), Biometrics Signature Research Project: Phase II; EWA Government Systems, Inc.- Department of Defense; \$752,862.00; 19/28/2006 - 6/30/2008.
20. Nazzal, D. (PI), Karwowski, W. (Co-PI) and D. Reinhart (Co-PI), Integrating Sustainability into the Industrial Engineering Curriculum, National Science Foundation, \$98,372.00; 2010-2011.
21. *Karwowski, W. (PI), IBM Software Grant for Systems Engineering Laboratory, Institute of Advanced Systems Engineering" In-kind", (est. value \$2,000,000.00 not officially recorded by UCF), 2010.*
22. Karwowski, W. (PI) et al., System Redesign and Improvement Infrastructure in a Veterans Health Administration Medical Center, Orlando VAMC / Veterans Administration Medical Center, \$781,822.00, 2010 – 2012.
23. Karwowski, W. (PI), Characterization and Quantification of Economic Value of a Human and Human Performance and Total Ownership Cost of Naval Systems (ID: 1050886), Office of Naval Research, \$385,305.00, 2010-2012.

24. Karwowski, W. (PI), 2011 IBM Smarter Cities Outstanding Researcher, \$10,000.00; 9/30/2011 - 9/29/2012
25. Karwowski, W. (PI), IBM Community Impact Grant (STEM Education Award), \$10,000.00; 12/01/11 - 11/30/12.
26. Karwowski, W. (PI), GE Data Analysis: Modeling Consumer Sensitivity in Side by Side Refrigerators (ID: 1052528), \$16,139.00, 2012.
27. Karwowski, W. (PI), Complex Systems Engineering for Rapid Computational Socio-Cultural Network Analysis, Office of Naval Research, Award No.: N000141110934, \$266,635.00; 2011-2014.
28. Karwowski, W. (PI), Complex System Dynamics & Cost Estimation Modeling for the Reliable Assessment of Naval Systems Human Performance and Total Ownership Cost, Office of Naval Research, Award No. N000141210162, \$327,860.00, 2/01/2012-1/31/2014.
29. Karwowski, W. (PI), Modeling Human Performance in STAMPS, Office of Naval Research, Award N00014-14-1-0777, \$406,034.00, 2015-2018.
30. Salvendy, G. (PI) and Karwowski, W. (Co-PI), Empirical Testing of Library-GPIL-System (RERC on Universal Interface), University of Maryland, \$107,141.00, 1/1, 2018 – 9/29, 2018.
31. Karwowski, W. (PI), Northrop Grumman Work Experience Program (NG-WEP) For Future Master Planners and Schedulers (ID: 1061176); funding for first year: \$100,000.00; 1/20/2017 – 6/1/2023.
32. Karwowski, W. (PI), Identification and Prediction of Human Signature Behaviors Based on Textual Unstructured Data, Office of Naval Research, N000141812559; \$520,507.00; 4/15/2018 – 6/30/2021.
33. Keathley, H. (PI), Karwowski, W. (Co-PI), Vela, A. and Vela P. (Co-PI, Georgia Tech). Supervise It! Optimizing Intelligent Robot-Human Partnerships Through Feedback and Control: A Study on Supervised Work Cells. National Science Foundation (NSF): \$1,042,683.00: 10/2020 – 09/2023.

2b. Funded Internal Research Grants

1. Karwowski, W. (PI) and Yates, J. W., Analysis of Bi-manual Lifting Tasks, UofL Graduate Research Council Grant, \$3,000.00, October 1, 1983 - June 30, 1984.
2. Ward, T. L. and Karwowski, W., Initial Exploration of Work Measurement Theory, UofL Graduate Research Council Grant, \$3,977.00, 8/1/84 - 6/30/85.
3. Karwowski, W. (Principal Investigator) and Yates, J.W., A Psychophysical Study of the Maximum Acceptable Loads Lifted Horizontally and Vertically from a Sitting Position, UofL Graduate Research Council Grant, \$3,800.00, June 1, 1985 - May 31, 1986.
4. Karwowski, W. (Principal Investigator), Additivity of Isometric and Isokinetic Strengths of Females in Teamwork, University of Louisville Graduate Research Council Grant, \$2,500.00, 9/1, 1986 – 3/31, 1987.
5. Karwowski, W. (Principal Investigator) and Parsaei H. R., Human Perception of Industrial Robots: Safety Aspects, UofL Graduate Research Council Grant, \$3,280.00, May 15, 1987 - Dec 15, 1987.
6. Parsaei, H. R. and Karwowski, W., The Effectiveness of Different Robot Programming Techniques on Learning of Control Skills by Experienced and Inexperienced Operators, UofL Graduate Research Council Grant, \$3,900.00, 6/1/87 - 3/31/88.

7. Karwowski, W. (Principal Investigator), Worker Perception of Robotic Workstations, President's Research Initiative Grant, Supplement to NIOSH Grant for Support of Graduate Student, University of Louisville, \$7,702.00, June 1, 1988 - May 31, 1989.
8. Karwowski, W., President's Research Initiative Grant, Competitive Enhancement, University of Louisville, \$9,000.00, May 1993 - June 1994.
9. Karwowski, W., Special Research Incentive Fund, University of Louisville, \$2,388.00, December 1993.
10. Karwowski, W., Special Research Incentive Fund, University of Louisville, \$2,945.00, September 1994.
11. Karwowski, W., Special Research Incentive Fund, University of Louisville, \$1,040.00, November 1995.
12. Karwowski, W. (Principal Investigator), Angelopoulou, A. and Mykoniatis, K., UCF I-Corps: UTASiMo, \$2,604.00, 2015-2016.

3. PhD Dissertation Advisor and Committee Chair

As chair of Ph.D. dissertation committees, Dr. Waldemar Karwowski ranks in the top 20 at UCF and the top 3 in CECS for number of Ph.D. graduates at University of Central Florida since Fall 2012. Dr. Karwowski has also served as a member of over 50 Ph.D. committees including interdisciplinary committees for Modeling and Simulation Program.

3a. Ph.D. Dissertations completed

1. Nai Pongpatanasuegsa, Ph.D. in Industrial Engineering, EMG Evaluation and Fuzzy Scaling of Load Acceptability in Manual Lifting Tasks, Department of Industrial Engineering, University of Louisville, August 1993.
2. Jari Jarvinen, Ph.D. in Industrial Engineering, Disturbance Control and Worker Safety in Computer-Integrated Manufacturing Systems, Department of Industrial Engineering, University of Louisville, December 1993. (Director, Human Factors, Motorola Solutions, Inc.).
3. Bill Jamaldin, Ph.D. in Industrial Engineering, Mathematical Modeling of Interactions for Evaluation of Complex Ergonomic Systems Department of Industrial Engineering, University of Louisville, May 1996.
4. Paul Gaddie, Ph.D. in Industrial Engineering, Psychophysical Lifting Limits: A Comparison of Concepts, Motion Characteristics, and Effects of Noise, Department of Industrial Engineering, University of Louisville, May 1998.
5. WookGee Lee, Ph.D. in Industrial Engineering, A Fuzzy Logic-Based Model for Predicting EMG Activity of Trunk Muscles, Department of Industrial Engineering, University of Louisville, December 1998.
6. Jussi Kantola, Ph.D. in Industrial Engineering, A Design System for Integration of People, Organization and Technology in Advanced Manufacturing, Department of Industrial Engineering, University of Louisville, December 1998. (Professor, Head of the Department of Production, University of Vaasa, Finland)
7. Bradley Chase, Ph.D. in Industrial Engineering, Effects of Thermal Environments on Divided Attention Abilities, Department of Industrial Engineering, University of Louisville, August 1999. (Associate Professor, Industrial and Systems Engineering, Shiley-Marcos School of Engineering, University of San Diego)

8. Renliu Jang, Ph.D. in Industrial Engineering, Assessment of Physical Strain in Nurses, Department of Industrial Engineering, University of Louisville, August 2001.
9. John Dzissah, Ph.D. in Industrial Engineering, Integration of Ergonomics, Safety and Quality Issues in Manufacturing Environments, Department of Industrial Engineering, University of Louisville, August 2001. (Professor, Department Chair, Operations and Management Department, University of Wisconsin Stout)
10. Veronica H. Smith, Ph.D. in Industrial Engineering, An Empirical Investigation of the Relationship Between Work-Related Musculoskeletal Disorders and Self-Reported Workers' Compensation Claims Outcomes, Department of Industrial Engineering, University of Louisville, August 2002.
11. David Rodrick, (*Health Scientist at AHRQ*) Ph.D. in Industrial Engineering, Nonlinear Dynamics Phenomena in Physical Ergonomics, Department of Industrial Engineering, August 2005.
12. John Layer, Ph.D. in Industrial Engineering, Human Performance In Agile Production Systems: A Longitudinal Study In System Outcomes, Human Cognition, and Quality Of Work Life, Department of Industrial Engineering, University of Louisville, December 2005. (Associate Professor of Mechanical Engineering at the University of Evansville)
13. Tanapun Karunanont, Ph.D. in Industrial Engineering. Management of Safety Culture and Learning in Manufacturing Organizations, Department of Industrial Engineering, University of Louisville, May 2007.
14. Tamer Khaled, Ph.D. in Industrial Engineering. A Nonlinear Time Series Analysis of Four Trunk Muscles' Surface EMG and of Trunk Kinematics during Manual Lifting, Department of Industrial Engineering, University of Louisville, December 2007.
15. Bohdana Sherehiy, Ph.D. in Industrial Engineering, Relationships between Agility Strategy, Work Organization and Workforce Agility. Department of Industrial Engineering, University of Louisville, May 2008. (Director of Human Factors Research, EurekaFacts LLC)
16. Monica F. Philippart, (*Owner, Ergonomic Human Factors Solutions*) Ph.D. in Industrial Engineering. Improving Organizational Performance Through the Integration of Human Factors Engineering into Business Processes Using a Systems Engineering Approach. Department of Industrial Engineering and Management Systems, University of Central Florida, December 2008.
17. Christopher Andrzejczak, Ph.D. in Industrial Engineering. Human Factors of Self-Reported Anomalies in Civil Aviation, Department of Industrial Engineering and Management Systems, University of Central Florida, December 2010.
18. Wilfred Wells, Ph.D. in Industrial Engineering, A SysML-based Tutorial for Cognitive Work Analysis and Training. Department of Industrial Engineering and Management Systems, University of Central Florida, December 2011. (Department Head, Biomedical Sciences, US Navy).
19. Andrew Richardson, Ph.D. in Industrial Engineering. Human-Robot Teaming Through Implicit Communication, Department of Industrial Engineering and Management Systems, University of Central Florida, August 2012.
20. Hong Jiang, Ph.D. in Industrial Engineering. A System Dynamics Model for Manpower and New Technology Implementation Trade-off and Cost Estimation, Department of Industrial Engineering and Management Systems, University of Central Florida, August 2013. (*Operation Research Cost Analyst, Modeling and Simulation Engineer Navair Warfare Center Training System Division*).
21. Halil Bozkurt, Ph.D. in Industrial Engineering. Modeling of Socio-Economic/Cultural Factors and Adverse Events in an Active War Theater Using Cellular Automata, Department of Industrial Engineering and Management Systems, University of Central Florida, August 2013.

22. Erman Cakit, Ph.D. in Industrial Engineering. Investigating the Relationship between Adverse Events and Infrastructure Development in an Active War Theater Using Soft Computing Techniques, Department of Industrial Engineering and Management Systems, University of Central Florida, August 2013.
(Assistant Professor of Industrial Engineering at Aksaray University, Turkey)
23. Behzad Esmaeilian, Ph.D. in Industrial Engineering. Total Ownership Cost Modeling of Technology Adoption Using System Dynamics: Implications For ERP Systems, Department of Industrial Engineering and Management Systems, University of Central Florida, August 2013.
24. Anthony Costello, (*Senior Product Designer, Health Fidelity*) Ph.D. in Industrial Engineering. Design of Mixed Human-Computer Displays, Department of Industrial Engineering and Management Systems, University of Central Florida, August 2014.
25. Muyuan Li, Ph.D. in Industrial Engineering. A Short Window Granger Causality Approach to Identify Brain Functional Pattern Associated with Changes of Performance Induced by Sleep Deprivation, Department of Industrial Engineering and Management Systems, University of Central Florida, December 2014.
(Health System Engineer, Senior, BayCare Health System).
26. Mohammed Alsowayigh, (*Boeing 777 First Officer, Saudi Airlines*) Ph.D. in Industrial Engineering, Assessing Safety Culture Among Pilots In Saudi Airlines: A Quantitative Study Approach. Department of Industrial Engineering and Management Systems, University of Central Florida, December 2014.
27. Yiling He, (*Quality Assurance Engineer/Human Factors Engineer*), Ph.D. in Industrial Engineering. The Effects of Chronic Sleep Deprivation on Sustained Attention: A Study of Brain Dynamic Functional Connectivity. (Co-Advisor: Petros Xanthopoulos). Department of Industrial Engineering and Management Systems, University of Central Florida, May 2015.
Quality Assurance Engineer/Human Factors Engineer.
28. Barclay Brown, (*Global Solution Executive, IBM*) Ph.D. in Industrial Engineering. Modeling of Human Aspects of Complex Systems Integration, Department of Industrial Engineering and Management Systems, University of Central Florida, May 2015.
29. Muhanna Alnoaimi, (*Aircraft Maintenance Commander, Royal Bahraini Air Force*), Ph.D. in Industrial Engineering. Safety Climate and Safety Outcomes in Aircraft Maintenance: A Mediating Effect of Employee Turnover and Safety Motivation. Department of Industrial Engineering and Management Systems, University of Central Florida, August 2015.
30. Anastasia Angelopoulou, (*Postdoctoral Researcher, Institute for Simulation and Training*) Ph.D. in Modeling and Simulation, A Simulation-Based Task Analysis Using Agent-Based, Discrete Event And System Dynamics Simulation. Department of Industrial Engineering and Management Systems, University of Central Florida, December 2015.
31. Konstantinos Mykoniatis, Ph.D. in Modeling and Simulation, A Generic Framework For Multi-Method Modeling And Simulation Of Complex Systems Using Discrete Event, System Dynamics And Agent Based Approaches. Department of Industrial Engineering and Management Systems, University of Central Florida, December 2015.
32. Asli Soyler Akbas, Ph.D. in Modeling and Simulation, Agent Based and System Dynamics Hybrid Modeling and Simulation Approach Using Systems Modeling Language. Department of Industrial Engineering and Management Systems, University of Central Florida, December 2015.
33. Nelson Lerma, Ph.D. in Industrial Engineering, An Investigation Of Physiological Measures in a Marketing Decision Task. Department of Industrial Engineering and Management Systems, University of Central Florida, December 2015. (Mechanical Engineer, NAWC Training Systems Division, AIR 4.6.2.2 Weapons Training and Simulation Lab)

34. Mitchell Rabinowitz, Ph.D. in Industrial Engineering. Assessing The Effect of Social Networks on Lower Magnitude Creativity in an Environment Not Conducive to Creative Performance, Department of Industrial Engineering and Management Systems, University of Central Florida, August 2016.
35. Awad M. Aljuaid, Ph.D. in Industrial Engineering. Neuroergonomics Study: Analysis Of Brain EEG's Activity During Manual Lifting Tasks. Department of Industrial Engineering and Management Systems, University of Central Florida, May 2016 (Co-Advisor).
36. Omar A. Alrehaili, Ph.D. in Industrial Engineering. Safety Culture in Construction Industry, Department of Industrial Engineering and Management Systems, University of Central Florida, December 2016.
37. Afrifah Y. Bobbie, Ph.D. in Industrial Engineering. Investigating Scheduling Policies To Reduce Failed Medical Appointments: A Simulation Approach. Department of Industrial Engineering and Management Systems, University of Central Florida, December 2016.
38. M. Beth H. Pettitt, Ph.D. in Modeling and Simulation. Usability Assessment of Simulated Wounds, Department of Industrial Engineering and Management Systems, University of Central Florida, December 2017.
39. Kevin Muhs, Ph.D. in Industrial Engineering. An Agent-Based Model To Assess Crew Temporal Variability During U.S. Navy Shipboard Operations. Department of Industrial Engineering and Management Systems, University of Central Florida, May 2018.
40. Ashraf Alhujaili, Ph.D. in Industrial Engineering. Cyberbullying Detection using Brain Computer Interface (BCI). Department of Industrial Engineering and Management Systems, University of Central Florida, May 2018.
41. Thomas Bergmann, Ph.D. in Industrial Engineering. Project Management Agility. Department of Industrial Engineering and Management Systems, University of Central Florida, May 2018.
42. Hank Glaspie, Ph.D. in Industrial Engineering. Human Factors in Information Security Culture. Department of Industrial Engineering and Management Systems, University of Central Florida, August 2018.
43. Henriette Shoen, Ph.D. in Industrial Engineering. Modeling and Simulation of Innovation Index. Department of Industrial Engineering and Management Systems, University of Central Florida, August 2018.
44. Xu, Ziping, Ph.D. in Industrial Engineering, University. Chaotic Behavior of EMG Signals under Different Levels of Cognitive Workload. Department of Industrial Engineering and Management Systems, University of Central Florida, December 2018.
45. Joseph Garmon, Ph.D. in Industrial Engineering. Cybersecurity of Electric Power Grids. Department of Industrial Engineering and Management Systems, University of Central Florida, December 2019.
46. Denton Gibson, Ph.D. in Industrial Engineering. A Method for Evaluation Systems Engineering Practices of an Aerospace Organization, Department of Industrial Engineering and Management Systems, University of Central Florida, December 2019.
47. Maartje Hidalgo, Ph.D. in Modeling and Simulation. An Approach To Modeling Simulated Military Human-Agent Teaming., Department of Industrial Engineering and Management Systems, University of Central Florida, May 2020.
48. Farzad Vasheghani-Farahani, Ph.D. in Industrial Engineering, Modeling Brain Functional Connectivity Under Conditions of Sleep Deprivation Using Graph Theory, Department of Industrial Engineering and Management Systems, University of Central Florida, August 2020

49. Lina Ismail, Ph.D. in Industrial Engineering, Topological Changes In The Functional Brain Networks Induced By Isometric Force Exertions Using A Graph Theoretical Approach: An EEG-Based Neuroergonomics Study, Department of Industrial Engineering and Management Systems, University of Central Florida, May 2021.

3b. Ph.D. Dissertations in-progress

50. Mahjabeen Rahman, Ph.D. in Industrial Engineering, EEG Signatures of Physical Strength in Females. Department of Industrial Engineering and Management Systems, University of Central Florida, August 2021.
51. Raul Fernandez-Sumano, Ph.D. in Industrial Engineering, Neural Correlates of Physical Exertions in Males, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2021.
52. Shahed Obeidat, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in May 2022.
53. Abdulmajeed Azyabi, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in December 2022.
54. Mohammad Reza Davahli, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in May 2022
55. Jorge Flavio Sarmiento Falla, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2023
56. Sara Hejazi, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2023.
57. Ledlyne Vazquez, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2022.
58. Brian Beaton , Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2022.
59. Mostafa Saeidi , Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2022.
60. Shaida Kargarnovin, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2023.
61. Al Fatais, Abdullah, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2023.
62. Fernando, Santos Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2023.
63. Maria Gonzalez, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2023.
64. Anthony Dixon, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2023.
65. Steven Clap, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2023.

66. Christopher Hernandez, Ph.D. in Industrial Engineering, TBD, Department of Industrial Engineering and Management Systems, University of Central Florida, expected to graduate in August 2023.

3c. M.Eng / M.S.Thesis completed

1. N. Mulholland, Master of Engineering in Industrial Engineering, Development of the Rule-Based System for Evaluation and Design of Manual Materials Handling Tasks, Department of Industrial Engineering, May, 1985.
2. N. Pongpatanasuegsa, Master of Engineering in Industrial Engineering, Additivity of Isometric and Isokinetic Lifting Strength of Females in Teamwork, Department of Industrial Engineering, May 1986.
3. L. E. Palenque, Master of Engineering in Industrial Engineering, M-LIFTAN: A Microcomputer-based Expert System for Manual Materials Handling, Department of Industrial Engineering, August 1986.
4. S. E. Wisman, Master of Engineering in Industrial Engineering, An Ergonomic Analysis of Manual Mail Bag Handling: A Case Study, Department of Industrial Engineering, May 1987.
5. J. Primovic, Master of Engineering in EM, Effect of Automation on Safety Performance: Case Study Department of Industrial Engineering, August 1987.
6. T. S. Plank, Master of Engineering in Industrial Engineering, An Investigation of the Human Perception of a Robot's Motions, Department of Industrial Engineering, December 1987.
7. R. Geier, Master of Engineering in Engineering Management, Subjective Evaluation of Risk in Industrial Safety Engineering, Department of Industrial Engineering, May 1988.
8. A. Burkhardt, Master of Engineering in Industrial Engineering, Imprecision of Human Judgment in the Psychophysical Assessment of the Maximum Acceptable Weight of Lift Department of Industrial Engineering, May 1988.
9. D. L. Nash, Master of Engineering in Industrial Engineering, Human-Robot Interaction: Perception of the Robots Working Envelope, Department of Industrial Engineering, May 1988.
10. S. L. Campbell, Master of Engineering in Industrial Engineering, Robot Safety: Perception of Robot's Idle Condition as an Indicator of the Inactivity Time, Department of Industrial Engineering, May 1988.
11. B. Amarnath, Master of Science in Industrial Engineering, Workers' Perception of Operational Characteristics of an Industrial Robot, Department of Industrial Engineering, December 1989.
12. C. Shumate, Master of Engineering in Industrial Engineering, Discriminability of Load Heaviness, Department of Industrial Engineering, May 1990.
13. W. D. Moxley, Master of Engineering in Industrial Engineering, Effect of Space, Instructions, and Color on the Maximum Acceptable Weight of Lift, Department of Industrial Engineering, August 1990.
14. H. Alsabi, Master of Engineering in Industrial Engineering, The Effect of Space Confinement on Manual Lifting Tasks with Angular Displacement of Load in Non-Sagittal Plane, Department of Industrial Engineering, August 1991.
15. A. Soundararajan, Master of Science, Human Perception of Danger and Safe Distance at Slow Speed of Robot Motion, Department of Industrial Engineering, December 1991.

16. V. A. Bryant, Master of Engineering in Industrial Engineering, An Ergonomic Evaluation of Passenger Automobile Trunk Design, Department of Industrial Engineering, May 1992.
17. N. E. Perronie, Master of Engineering in Industrial Engineering, Ergonomic Analysis of Ladder Manufacturing, Department of Industrial Engineering, May 1992.
18. Nina Brokaw, Master of Engineering in Industrial Engineering, Evaluation of the Revised NIOSH Lifting Guide, Department of Industrial Engineering, December 1992.
19. M. Caldwell, Master of Science in Industrial Engineering, Control of Low Back Injury at Liqui-Dri, Inc., Department of Industrial Engineering, December 1993.
20. Gary Grieshaber, Master of Engineering in Industrial Engineering, Distant Diagnosis of Occupational Injury, Department of Industrial Engineering, August 1994
21. Khalid Alqesami, Master of Engineering in Industrial Engineering, An Examination of the Psychophysical Approach to Setting Limits in Manual Lifting Tasks, Department of Industrial Engineering, August 1995
22. Jarko Salo, Master of Engineering at Tampere University of Technology (TTU), A Fuzzy Logic-Based System for Simulating the Integration of Advanced Manufacturing Technology, Organizational Design and Human Resources, Department of Mechanical Engineering, Tampere, Finland, August 1995.
23. Kristi Owen, Master of Science in Industrial Engineering, An Examination of the Psychophysical Approach to Setting Limits in Manual Lifting Tasks for Females, December 1995.
24. Bradley Chase, Master of Science in Industrial Engineering, Dual Task Performance under Thermal Stress, Department of Industrial Engineering, December 1997.
25. Carlos Lancaster, Master of Science in Industrial Engineering, Prevention of Accidents to Children at Home Through Design Solutions, Department of Industrial Engineering, August 1998
26. Orhan Korhan, Master of Science in Industrial Engineering, Relationship Between the Emotions Associated with the Email Use and the Perceived Musculoskeletal Stress, Department of Industrial Engineering, May 2002.
27. Kim D. Carter, Master of Science Project in Industrial Engineering, Quantifying Effectiveness of Dynamic Message Signs, Department of Industrial Engineering, December 2002.
28. Tamer Khalaf, Master of Science in Industrial Engineering, Ergonomic Evaluation of Computer Keyboards, Department of Industrial Engineering, May 2004.
29. Desiree Aixut, Master of Science in Industrial Engineering, Creative Tension: Management of Personnel Competences, Escola Tecnica Superior d'Enginyeria Industrial, Universitat Politecnica De Catalunya, Barcelona, Spain, May 2005.
30. Carles Monso Varona, Master of Science in Industrial Engineering, Learning Organizations and Creative Tension: Management of Personnel Competences- Part I, Escola Tecnica Superior d'Enginyeria Industrial Universitat Politecnica De Catalunya, Barcelona, Spain, May 2006.
31. Carlos Solduga Ramirez, Master of Science in Industrial Engineering, Learning Organizations and Creative Tension: Management of Personnel Competences- Part II, Escola Tecnica Superior d'Enginyeria Industrial, Universitat Politecnica De Catalunya, Barcelona, Spain, May 2006.
32. Benjamin Sawyer, Master of Science in Industrial Engineering, Applied Error Related Negativity: Single Electrode Electroencephalography in Complex Visual Stimuli, University of Central Florida, August 2014.

V. SERVICE ACTIVITY

Demonstrating national and international prominence in the field of industrial and system engineering, Dr. Karwowski has provided over 40 letters of promotion to professor at not only universities in the U.S. but internationally in the last five years.

1. College and University

- Member of the UCF Faculty Senate Personnel Committee (2015 -2018)
- Member of the UCF Faculty Senate (2015 - 2018)
- Member of the UCF Undergraduate Policy and Curriculum Committee (2013-2015)
- Member, CECS Provost Distinguished Professorship Search Committee (2014-2015)
- Core Member, Faculty Cluster Initiative (FCI), Cyber Security and Privacy Cluster, 2014 – 2018.
- Core Member, Faculty Cluster Initiative (FCI), UCF - A Prominent World Leader in Implantable Devices for Prosthetic Interfaces, 2014 – 2018.
- Chair of the Fellows Selection Committee for the Human Factors and Ergonomics Society (HFES), 2012.
- Chair of the CECS Selection Committee for CECS Dean's Research Professorship Awards (UCF), 2013.
- Chair of the Fellows Selection Committee for the Institute of Industrial Engineers (IIE), 2013.
- Member of the ISERC Annual Conference Oversight Committee of the Council of Industrial Engineering Academic Department Heads (CIEDH), 2012-2015.
- Past-President (2012) and Member of the Institute of Industrial Engineers (IIE) Council of Fellows, 2012-present.
- Representative of Academy of Industrial Management (AIM) to IIE for international collaboration. 2014-present
- Member, UofL Provost's Committee on Graduate/Professional Student Admission and Performance (2002 –2007).
- Member, UofL Graduate School Council (2001-2004)
- Chair and UofL University-wide Representative for the President's Award for Scholarship, Research and Creative Activity (1992-1994)
- Member, UofL Provost's Advisory Committee for the International Center (1994-2007)
- Member, UofL Learning and Instruction Committee (1983-1985)
- Member, UofL Artificial Intelligence Research Program (1985-2007)
- UofL Graduate School: Member, Graduate Programs Review Committee for Exercise Physiology Laboratory (1984-1985)
- Chair and UofL University-wide Representative for the President's Committee on Awards for Scholarship, Research and Creative Activity (1992-1994)
- Member, UofL Speed School Promotion and Tenure Committee (1987-1990)
- Member, UofL Kersey Library Users Group (1984-1986)
- Vice-Chairman, UofL Kersey Library Users Group (1986-1988)
- Chairman, UofL Speed Scientific School Library Committee (1988-1989)
- Chairman of the UofL Dean's Screening Committee for the President's Award for Scholarship, Research and Creative Activity (1992-1994)
- UofL Interdisciplinary Faculty Position in Manufacturing Engineering, Member (1994-1995)

- Member, UofL Speed School Promotion and Tenure Committee (1986-1999)
- Chair, UofL Promotion and Tenure Committee, Industrial Engineering Department (1986-1999)
- Member, UofL Search Committee for the Assistant Professor faculty position (1984-1986)
- Member, UofL Search Committee for the Departmental Technician (1986)
- Chair, UofL IE Departmental Space Needs Analysis and Allocation Committee (1986-1987)
- Member, UofL Search Committee for the Edward Reep Clark Chair of Computer-Aided Engineering (1986-1988).
- Member, UofL IE Department / Ph.D. Admissions Committee (1987-1994)
- Member, UofL IE Department / Library Committee (1989-present)
- Departmental UofL Faculty Search Committee, Member (1994-1995)
- Chair, UofL IE Department / Ph.D. Admissions Committee (1995 - present).

2. Scientific Reviewer

2.1. Reviewer of research proposals for:

- National Science Foundation (USA)
 - NSF Panel Review Evaluator for PFI: BIC Smart Manufacturing & Logistics, Program. April 21- 23, 2016, NSF, Washington, DC.
 - NSF Panel Review Evaluator for PFI: BIC Smart Manufacturing & Logistics, 3D Printing P151395: March 24- 25, 2015, NSF, Washington DC.
- National Institute for Occupational Safety and Health Study Section, NIOSH (DHHS)
- The Research Council of Hong Kong
- The Ontario Workplace Safety and Insurance Board (WSIB),
Canada National Science Foundation (USA)
- National Sciences and Engineering Research Council of Canada
- The Research Council of Hong Kong
- VII Framework Program European Union, Brussels, Belgium
- Agency for Healthcare Research and Quality (AHRQ), DHHS.

2.2. Reviewer for archival peer-review journals (2016):

- Ergonomics
- Human Factors
- Work, International Journal
- Applied Ergonomics
- International Journal of Industrial Ergonomics
- International Journal of Occupational Safety and Ergonomics
- Occupational Ergonomics
- IISE Transactions
- Universal Access to the Information Society: International Journal
- IEEE Transactions on Fuzzy Sets and Systems

- IEEE Transactions on Man, Systems, Cybernetics
- IEEE Transactions on Human-Machine Systems
- Fuzzy Sets and Systems: International Journal
- Journal of Intelligent & Fuzzy Systems
- International Journal of Production Research
- International Journal of Human-Computer Interaction
- International Journal of Computers and Industrial Engineering
- Computers in Human Behaviour
- Frontiers in Human Neuroscience
- Frontiers in Neuroscience
- Frontiers in Psychology
- Frontiers in Neuroscience
- Symmetry
- Applied Sciences
- IEEE Access
- Theoretical Issues in Ergonomics Science
- International Journal of Environmental Research and Public Health
- Journal of Integrative Neuroscience

3. Other professional activities

- Conference Co-Chair, Member Plenary Session: Science Technology, Higher Education and Society in the Conceptual Age (STHESCA), AHFE 2014.
- Conference Co-Chair, Chair Plenary Session: Beyond Technological Borders, International Conference on "Science, Technology, Higher Education, and Society in the Conceptual Age" (STHESCA), Krakow, Poland, 2011.
- Chair, CIEDAH Oversight Committee for Technical Program, 2012 IIE Annual Meeting, Orlando, FL.
- Newsletter Editor, Industrial Ergonomics Technical Group, Human Factors and Ergonomics Society, 1994-1995.
- Chair, Industrial Ergonomics Subcommittee of The Science and Technology Committee, International Ergonomics Association, 1988-1994.
- Invited Chair of the Cluster on Ergonomics in Manufacturing, Joint ORSA/TIMS Fall Conference: Global Manufacturing in 21st Century, Detroit, October 23-26, 1994.
- Founding Member and Treasurer, International Foundation for Industrial Ergonomics and Safety Research, 1986 -1989.
- Conference Chairman, Second International Conference on Ergonomics of Advanced Manufacturing and Hybrid Automated Systems, Honolulu, Hawaii, August 12-14, 1990.
- Chairman, Ergonomics Committee, American Industrial Hygiene Association, 1988-1989.

- Founder and Conference Chairman, International Conference on Ergonomics of Advanced Manufacturing and Hybrid Automated Systems, Louisville, KY, August 16-18, 1988.
- Conference Chairman, Annual International Industrial Ergonomics and Safety Conference 1986, Louisville, KY, June 12-14, 1986.
- Program-Chair of the Industrial Ergonomics Technical Group, Human Factors Society, 1987-1989.
- Chairman of the Industrial Ergonomics Technical Group to the Council of Technical Groups, Human Factors Society, 1987-1989.
- Representative of the Industrial Ergonomics Technical Group to the Council of Technical Groups, Human Factors Society, 1987-1989.