

ERMAN ÇAKIT

Associate Professor

Department of Industrial Engineering,
Aksaray University, 68100, Aksaray, Turkey

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<https://scholar.google.com.tr/citations?user=L7Q6zrAAAAAJ&hl=tr>

RESEARCH INTERESTS

- *Applications:* Human Factors/Ergonomics, Work Analysis and Design, Cross-Cultural Decision Making, and Human Socio-Cultural Behavior (HSCB) Modeling.
- *Methodologies:* Soft-Computing Techniques, Applied Statistics, and Geographic Information Systems.

EDUCATION

- Ph.D. in Industrial Engineering, August 2013
 - Department of Industrial Engineering and Management Systems, University of Central Florida, Orlando, FL, USA
 - *Dissertation Title:* Investigating the Relationship Between Infrastructure Development and Adverse Events in an Active War Theater Using Soft Computing Techniques
 - *Advisor:* Waldemar Karwowski (<http://www.iems.ucf.edu/people/waldemar-karwowski>)
- M.Sc. in Industrial Engineering, August 2008
 - Department of Industrial Engineering, Çukurova University, Adana, Turkey
 - *Thesis Title:* Fuzzy Logic Approach to Determine the Factors Affecting Hand Dexterity
 - *Advisors:* Behice Durgun and Oya Çetik
- B.Sc. in Industrial Engineering, 2006
 - Department of Industrial Engineering, University of Gaziantep, Gaziantep, Turkey

PUBLICATIONS

PEER REVIEWED JOURNAL ARTICLES (SCI, SCI- Expanded, SSCI)

1. Çakit, E., & Karwowski, W. (2018). A fuzzy overlay model for mapping adverse event risk in an active war theatre. *Journal of Experimental & Theoretical Artificial Intelligence*, 1-11. DOI: 10.1080/0952813X.2018.1467494.
2. Çakit E. (2018). Ergonomic assessment of airport shuttle driver tasks using an ergonomic analysis toolset, *International Journal of Occupational Safety and Ergonomics*, 24(2), 286-293.

3. Çakıt, E., and Karwowski, W. (2017). Estimating electromyography responses using an adaptive neuro-fuzzy inference system with subtractive clustering, *Human Factors and Ergonomics in Manufacturing & Service Industries*, 27: 177-186.
4. Çakıt, 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*, 48:139-155. doi 10.1007/s10462-016-9497-3.
5. Çakıt, E., Durgun, B., and Cetik, O. (2015). A neural network approach for assessing the relationship between grip strength and hand anthropometry, *Neural Network World*, 6, 603-622.
6. Çakıt, 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.
7. Çakıt, E. (2015). Assessment of the physical demands of waste collection tasks, *Global NEST Journal*, 17(2), 426-438.
8. Çakıt, E., Karwowski, W., Bozkurt, H., Ahram, T., Thompson, W., Mikusinski, P., & 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.
9. Çakıt, E., Durgun, B., Cetik, O. and Yoldas, O. (2014). A Survey of Hand Anthropometry and Biomechanical Measurements of Dentistry Students in Turkey. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 24: 739–753.

PEER REVIEWED JOURNAL ARTICLES (Other Indexes)

1. Çakıt, E., and Karwowski, W. (2017). Potential Applications of Soft-Computing Techniques for Human Socio-Cultural Behavior Modeling. *Journal of Computing* vol. 12, no.4, pp.284-290.
2. Çakıt E. (2017). Grip Strength Survey Based on Hand Tool Usage. *Süleyman Demirel University Journal of Natural and Applied Sciences*, 21(1), 230-234. doi:10.19113/sdufbed.67994.
3. Çakıt E. (2017). Estimation of Energy Expenditure Based on Divided Manual Material Handling Task: Waste Collection Example. *Celal Bayar University Journal of Science*, 13 (1), 51-54. DOI: 10.18466/cbayarfbe.302640
4. Çakıt, E., and 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* vol. 5, no. 3, pp. 252-257.

UNDER REVIEW

1. Çakıt, E., Karwowski, W., Atsuo, M., Alrehaili, O., Olak, A. Examining the safety culture in petrochemical industries using structural equation modeling. (*Under review*).
2. Çakıt, E., Karwowski, W., Servi, L. Application of soft-computing techniques for estimating emotional states expressed in Twitter time series data. (*Under review*).
3. Bozkurt, H., Karwowski, W., Ahram, T., Çakıt, E. A Cellular Automata Modeling of the Relationship between Infrastructure Development Projects and Adverse Events in an Active War Theater. (*Under review*).

4. Donghui, S., Zurada, J., Karwowski, W., Guan, J., Çakıt, E. Batch and Data Streaming Classification Models for Detecting Adverse Events. (*Under review*).

BOOK CHAPTERS

1. Çakıt, E., and Karwowski, W. (2017). Understanding the Social and Economic Factors Affecting Adverse Events in an Active Theater of War: A Neural Network Approach. In *Advances in Cross-Cultural Decision Making* (pp. 215-223). Springer International Publishing.
2. Çakıt, E., & Karwowski, W. (2016). Gaining Insight by Applying Geographical Modeling. In *Modeling Sociocultural Influences on Decision Making: Understanding Conflict, Enabling Stability* (pp. 243-266). CRC Press.
3. Çakıt, E., Durgun, B., & Cetik, O. (2016). Assessing the Relationship Between Hand Dimensions and Manual Dexterity Performance for Turkish Dental Students. In *Advances in Physical Ergonomics and Human Factors* (pp. 469-479). Springer International Publishing.

INTERNATIONAL REFEREED CONFERENCE PROCEEDINGS

1. 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.
2. Çakıt, E., Karwowski, W. (2015). Understanding patterns of infrastructure development in the active war theater of Afghanistan over the period 2002-2010. 6th International Conference on Applied Human Factors and Ergonomics (AHFE 2015) and the Affiliated Conferences, *Procedia Manufacturing*, Volume 3, 3876-3882.
3. 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.
4. Cakit, E., Karwowski, W. (2014). Using Geographic Information Systems Analysis for Mapping Adverse Events in an Active War Theater. In: S. Schatz, J. Cohn, and D. Nicholson (Eds.), *Advances in Cross-Cultural Decision Making* (Published by 5th AHFE Conference, Krakow, Poland), CRC Press, pp. 187-197.

NATIONAL REFEREED CONFERENCE PAPERS

1. Çakıt, E. (2014). Posture Analysis of Solid Waste Collection Tasks Using Three Dimensional Ergonomics Assessment Tool (in Turkish), 20th National Ergonomics Conference, Ankara, Turkey.
2. Çakıt, E. (2014). Posture Analysis of Airport Shuttle Driver Tasks Using Three Dimensional Ergonomics Assessment Tool: A Case Study (in Turkish), 20th National Ergonomics Conference, Ankara, Turkey.
3. Çakıt, E., Durgun, B., Çetik, O. (2008). Adaptive Neuro-Fuzzy Inference Systems (ANFIS) Approach to Determine The Anthropometric Factors That Affects Hand Grip Strength (in Turkish), 14th National Ergonomics Conference, Trabzon, Turkey.
4. Çakıt, E., Durgun, B., Çetik, O. (2008). Fuzzy Logic and Applications in Ergonomics (in Turkish), 28th National Meeting on Operational Research and Industrial Engineering, Istanbul, Turkey.

5. Çakıt, E., Durgun, B., Çetik, O. (2008). Adaptive Neuro-Fuzzy Inference Systems (ANFIS) Approach To Determine The Anthropometric Factors That Affects Hand Dexterity (in Turkish), 28th National Meeting on Operational Research and Industrial Engineering, Istanbul, Turkey.

PROFESSIONAL EXPERIENCE

ACADEMIC EXPERIENCE

- Associate Professor: October 2017 – present
Department of Industrial Engineering, Aksaray University, Aksaray, Turkey
- Visiting Research Scholar: November 2017 – January 2018
Department of Industrial Engineering and Management Systems, University of Central Florida, Orlando, FL, USA
- Assistant Professor: January 2014 – October 2017
Department of Industrial Engineering, Aksaray University, Aksaray, Turkey
- Research and Teaching Assistant: November 2006 – April 2009
Department of Industrial Engineering, Cukurova University, Adana, Turkey

INDUSTRY EXPERIENCE

- Time Study and Productivity Project in TEMSA Bus & Coach Masters, Method Engineer, Sep. 2006 – Nov. 2006

TEACHING

- *Department of Industrial Engineering, Aksaray University*

Course #	Course Title	Credits	Class	Semester	# of Students	TA Support
IE 207	<i>Ergonomics</i>	3	<i>Undergraduate</i>	<i>Fall 2015</i>	60	<i>None</i>
				<i>Fall 2016</i>	100	
IE 357	<i>Artificial Intelligence Applications in Engineering</i>	3	<i>Undergraduate</i>	<i>Fall 2016</i>	60	<i>None</i>
IE 111	<i>Computer Programming I</i>	5	<i>Undergraduate</i>	<i>Fall 2014</i>	62	<i>None</i>
				<i>Fall 2015</i>	100	
				<i>Fall 2016</i>	100	
IE 117	<i>Introduction to Computer Science</i>	2	<i>Undergraduate</i>	<i>Fall 2014</i>	62	<i>None</i>
				<i>Fall 2015</i>	100	
				<i>Fall 2016</i>	100	

<i>MATH 175</i>	<i>Calculus I</i>	<i>4</i>	<i>Undergraduate</i>	<i>Fall 2014</i>	<i>62</i>	<i>None</i>
<i>IE 112</i>	<i>Computer Programming II (Python, MATLAB)</i>	<i>5</i>	<i>Undergraduate</i>	<i>Spring 2015</i>	<i>62</i>	<i>None</i>
				<i>Spring 2016</i>	<i>108</i>	
				<i>Spring 2017</i>	<i>100</i>	<i>None</i>
				<i>Spring 2018</i>	<i>100</i>	<i>None</i>
<i>MATH 176</i>	<i>Calculus II</i>	<i>4</i>	<i>Undergraduate</i>	<i>Spring 2015</i>	<i>62</i>	<i>None</i>
<i>IE 214</i>	<i>Differential Equations</i>	<i>4</i>	<i>Undergraduate</i>	<i>Spring 2016</i>	<i>60</i>	<i>None</i>
<i>IE 328</i>	<i>Simulation Modeling</i>	<i>3</i>	<i>Undergraduate</i>	<i>Spring 2017</i>	<i>60</i>	<i>None</i>
<i>IE 372</i>	<i>Lean Manufacturing</i>	<i>3</i>	<i>Undergraduate</i>	<i>Spring 2017</i>	<i>60</i>	<i>None</i>
				<i>Spring 2018</i>	<i>100</i>	<i>None</i>
<i>IE 392</i>	<i>Time Management</i>	<i>2</i>	<i>Undergraduate</i>	<i>Spring 2017</i>	<i>40</i>	<i>None</i>
<i>IE 394</i>	<i>Productivity and Performance Analysis</i>	<i>2</i>	<i>Undergraduate</i>	<i>Spring 2018</i>	<i>30</i>	<i>None</i>
<i>IE 404</i>	<i>Work Analysis and Design</i>	<i>3</i>	<i>Undergraduate</i>	<i>Spring 2018</i>	<i>60</i>	<i>None</i>

HONORS AND AWARDS

- Turkish Ministry of Education, Scholarship for Language School and Graduate Study Abroad (April 2009- August 2013)
- Awarded research assistantship during graduate study, Cukurova University, Adana, Turkey, November 2006 – April 2009
- Scholarship for Erasmus Student Exchange Program, Department of Management and Production Engineering, Opole University of Technology, Opole, Poland (February 2006 – July 2006)
- Granted Six Sigma Yellow Belt Certificate, University of Central Florida, USA, 2013

ACADEMIC SERVICE ACTIVITIES

SCIENTIFIC REVIEWING SERVICE

- Reviewer, *Ergonomics*, 2011 – present
- Reviewer, *Applied Soft Computing*, 2016 – present
- Reviewer, *Human Factors and Ergonomics in Manufacturing & Service Industries*, 2015 – present
- Reviewer, *Theoretical Issues in Ergonomics Science*, 2016 - present
- Reviewer, *Computers & Industrial Engineering*, 2016 – present

- Reviewer, *Computers in Human Behavior*, 2017 - present
- Reviewer, *Expert Systems*, 2014 – present
- Reviewer, *Neural Computing and Applications*, 2017 - present
- Reviewer, *Artificial Intelligence Review*, 2015-present
- Reviewer, *Journal of Applied Statistics*, 2016
- Reviewer, *WORK: A Journal of Prevention, Assessment, and Rehabilitation*, 2016
- Reviewer, *Progress in Health Sciences*, 2017

PROFESSIONAL ACTIVITIES

JOURNAL EDITORIAL BOARD MEMBERSHIP

- Associate Editor, *Ergonomics International Journal*, July 2018- present
- Member, Editorial Board, *International Journal of Machine Learning and Computing (IJMLC)*, 2015 - present.

CONFERENCE SCIENTIFIC ADVISORY BOARD MEMBERSHIP

- Member, Scientific Advisory Board, *International Conference on Applied Human Factors and Ergonomics (AHFE), Cross-Cultural Decision-Making Track*, 2014-present, <http://www.ahfe2018.org/>
- Member, Scientific Advisory Board, *International Conference on Soft Computing and Applications (ICSCA'16)*, May 2016-present, <http://www.iaeng.org/WCECS2016/ICSCA2016.html>
- Member, Scientific Advisory Board, *International Conference on Information and Intelligent Computing*, 2014, <http://www.iciic.org/>
- Member, Scientific Advisory Board, *International Conference on Industrial Technology and Management*, 2015, <http://www.icitm.org/>

SCIENTIFIC SOCIETIES

- International representative for Turkey, *Foundation for Professional Ergonomics (FPE)*, 2015- present www.ergofoundation.org
- Member, *International Association of Computer Science and Information Technology (IACSIT)* 2014- present
- Member, *Science and Engineering Institute (SCIEI)* 2014- present