

## **Asst. Prof. Ömer Faruk Beyca**

### **Personal Information**

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### **International Researcher IDs**

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### **Education Information**

Doctorate, Oklahoma State University, Industrial Engineering & Management, United States Of America 2007 - 2013

Undergraduate, Fatih Üniversitesi, Faculty Of Engineering, Department Of Industrial Engineering, Turkey 2003 - 2007

### **Dissertations**

Doctorate, SENSOR BASED REAL-TIME PROCESS MONITORING FOR ULTRA-PRECISION MANUFACTURING PROCESSES WITH NON-LINEARITY AND NONSTATIONARITY, Oklahoma State University, Industrial Engineering & Management, 2013

### **Research Areas**

Technical Sciences, Industrial Engineering

### **Academic Titles / Tasks**

Assistant Professor, Istanbul Technical University, İşletme Fakültesi, Endüstri Mühendisliği Bölümü, 2018 - Continues

Assistant Professor, Istanbul Technical University, İşletme Fakültesi, Endüstri Mühendisliği Bölümü, 2015 - 2018

Assistant Professor, Fatih Üniversitesi, Faculty Of Engineering, Department Of Industrial Engineering, 2014 - 2015

### **Academic and Administrative Experience**

Fatih Üniversitesi, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2014 - Continues

### **Courses**

Intr to Sci&Eng Comp (C), Undergraduate, 2016 - 2017

ADVANCED TOPICS IN SCHEDULING, Undergraduate, 2016 - 2017

### **Published journal articles indexed by SCI, SSCI, and AHCI**

- I. **Energy-Efficient Bi-Objective Optimization Based on the Moth-Flame Algorithm for Cluster Head Selection in a Wireless Sensor Network**  
Mistarihi M. Z., Bany Salameh H. A., Alsaadi M. A., Beyca Ö. F., Heilat L., Al-Shobaki R.  
Processes, vol.11, no.2, 2023 (SCI-Expanded)
- II. **Deep-learning-based short-term electricity load forecasting: A real case application**  
Yazıcı İ., Beyca Ö. F., Delen D.  
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, vol.109, 2022 (SCI-Expanded)
- III. **A comparative analysis of machine learning techniques and fuzzy analytic hierarchy process to determine the tacit knowledge criteria**  
Yazıcı İ., Beyca Ö. F., Gürcan Ö. F., Zaim H., Delen D., Zaim S.  
ANNALS OF OPERATIONS RESEARCH, vol.308, no.1-2, pp.753-776, 2022 (SCI-Expanded)
- IV. **An integrated machine learning: Utility theory framework for real-time predictive maintenance in pumping systems**  
Khorsheed R. M., Beyca Ö. F.  
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART B-JOURNAL OF ENGINEERING MANUFACTURE, vol.235, no.5, pp.887-901, 2021 (SCI-Expanded)
- V. **A Comprehensive Study of Machine Learning Methods on Diabetic Retinopathy Classification**  
Gürcan Ö. F., Beyca Ö. F., Dogan O.  
INTERNATIONAL JOURNAL OF COMPUTATIONAL INTELLIGENCE SYSTEMS, vol.14, no.1, pp.1132-1141, 2021 (SCI-Expanded)
- VI. **Using machine learning tools for forecasting natural gas consumption in the province of Istanbul**  
Beyca Ö. F., Ervural B. C., Tatoglu E., ÖZUYAR P., ZAIM S.  
ENERGY ECONOMICS, vol.80, pp.937-949, 2019 (SSCI)
- VII. **Forecasting Intermittent Demand Using the Cox Process**  
Kaya G. O., Demirel O. F., Beyca Ö. F.  
JOURNAL OF MULTIPLE-VALUED LOGIC AND SOFT COMPUTING, vol.31, pp.425-441, 2018 (SCI-Expanded)
- VIII. **Dirichlet Process Gaussian Mixture Models for Real-Time Monitoring and Their Application to Chemical Mechanical Planarization**  
Liu J. (., Beyca Ö. F., Rao P. K., Kong Z. (., Bukkapatnam S. T. S.  
IEEE TRANSACTIONS ON AUTOMATION SCIENCE AND ENGINEERING, vol.14, no.1, pp.208-221, 2017 (SCI-Expanded)
- IX. **Heterogeneous Sensor Data Fusion Approach for Real-time Monitoring in Ultraprecision Machining (UPM) Process Using Non-Parametric Bayesian Clustering and Evidence Theory**  
Beyca O. F., RAO P. K., KONG Z., BUKKAPATNAM S. T. S., KOMANDURI R.  
IEEE TRANSACTIONS ON AUTOMATION SCIENCE AND ENGINEERING, vol.13, no.2, pp.1033-1044, 2016 (SCI-Expanded)
- X. **Time series forecasting for nonlinear and non-stationary processes: a review and comparative study**  
Cheng C., SA-NGASOONGSONG A., Beyca O., Trung Le T. L., Yang H., KONG Z. (., BUKKAPATNAM S. T. S.  
IIE TRANSACTIONS, vol.47, no.10, pp.1053-1071, 2015 (SCI-Expanded)
- XI. **A graph-theoretic approach for quantification of surface morphology variation and its application to chemical mechanical planarization process**  
Rao P. K., Beyca O. F., KONG Z. (., BUKKAPATNAM S. T. S., CASE K. E., KOMANDURI R.  
IIE TRANSACTIONS, vol.47, no.10, pp.1088-1111, 2015 (SCI-Expanded)
- XII. **Real-Time Identification of Incipient Surface Morphology Variations in Ultraprecision Machining Process**  
Rao P., BUKKAPATNAM S., Beyca O., KONG Z. (., KOMANDURI R.  
JOURNAL OF MANUFACTURING SCIENCE AND ENGINEERING-TRANSACTIONS OF THE ASME, vol.136, no.2, 2014 (SCI-Expanded)
- XIII. **Process-Machine Interaction (PMI) Modeling and Monitoring of Chemical Mechanical Planarization (CMP) Process Using Wireless Vibration Sensors**  
Rao P. K., BHUSHAN M. B., BUKKAPATNAM S. T. S., KONG Z., BYALAL S., Beyca O. F., FIELDS A., KOMANDURI R.

- IEEE TRANSACTIONS ON SEMICONDUCTOR MANUFACTURING, vol.27, no.1, pp.1-15, 2014 (SCI-Expanded)
- XIV. **Nonlinear Sequential Bayesian Analysis-Based Decision Making for End-Point Detection of Chemical Mechanical Planarization (CMP) Processes**  
Kong Z., Beyca O., BUKKAPATNAM S. T., KOMANDURI R.  
IEEE TRANSACTIONS ON SEMICONDUCTOR MANUFACTURING, vol.24, no.4, pp.523-532, 2011 (SCI-Expanded)
- XV. **Process Performance Prediction for Chemical Mechanical Planarization (CMP) by Integration of Nonlinear Bayesian Analysis and Statistical Modeling**  
Kong Z. (., OZTEKIN A., Beyca O. F., PHATAK U., BUKKAPATNAM S. T. S., KOMANDURI R.  
IEEE TRANSACTIONS ON SEMICONDUCTOR MANUFACTURING, vol.23, no.2, pp.316-327, 2010 (SCI-Expanded)

## Articles Published in Other Journals

- I. **A Hybrid Deep Learning-Metaheuristic Model for Diagnosis of Diabetic Retinopathy**  
GÜRCAN Ö. F., Atici U., Beyca Ö. F.  
Gazi University Journal of Science, vol.36, no.2, pp.693-703, 2023 (Scopus)
- II. **Recurrent Neural Networks Based Wind Speed Forecasting Models: A Case Study of Yalova**  
Kosanoglu F., Kiriş Z. N., Beyca Ö. F.  
Zeki sistemler teori ve uygulamaları dergisi (Online), vol.5, no.2, pp.178-188, 2022 (Peer-Reviewed Journal)
- III. **Additive Manufacturing Technologies and Applications**  
Beyca Ö. F., Hançerlioğulları Köksalınış G., Yazıcı İ.  
INDUSTRY 4.0: MANAGING THE DIGITAL TRANSFORMATION, pp.217-234, 2018 (Peer-Reviewed Journal)
- IV. **Clustering Techniques Within Service Sector**  
Yazıcı İ., Beyca Ö. F., Zaim S.  
APPLYING PREDICTIVE ANALYTICS WITHIN THE SERVICE SECTOR, pp.74-87, 2017 (Peer-Reviewed Journal)

## Metrics

Publication: 40

Citation (WoS): 225

Citation (Scopus): 216

H-Index (WoS): 10

H-Index (Scopus): 9