

## Assoc. Prof. BARBAROS YET

### Personal Information

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### International Researcher IDs

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### Education Information

Doctorate, University of London-Queen Mary and Westfield College, School of Electronic Engineering and Computer Science, Computer Science, United Kingdom 2010 - 2014

Postgraduate, Chalmers Tekniska Högskola (Chalmers University of Technology), Technology Management & Economics, Quality and Operations Management, Sweden 2008 - 2010

Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Industrial Engineering, Turkey 2004 - 2008

### Research Areas

Computer Sciences, Simulation and Modelling, Artificial Intelligence, Computer Learning and Pattern Recognition, Uncertainty Management, Decision Support Systems

### Academic Titles / Tasks

Associate Professor, Middle East Technical University, Graduate School of Informatics, Cognitive Science, 2022 - Continues

Assistant Professor, Middle East Technical University, Graduate School of Informatics, Cognitive Science, 2020 - 2022

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2015 - 2020

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

- I. **Presenting predictions and performance of probabilistic models for clinical decision support in trauma care**  
Alptekin C., Wohlgemut J. M., Perkins Z. B., Marsh W., Tai N. R. M., YET B.  
INTERNATIONAL JOURNAL OF MEDICAL INFORMATICS, vol.194, 2025 (SCI-Expanded)
- II. **Secondary data analysis using Evidence-Based Bayesian Networks with an application to investigate the determinants of childhood stunting**  
YET B., Öykü Başerdem E., Rosenstock T.  
Expert Systems with Applications, vol.256, 2024 (SCI-Expanded)
- III. **Bayesian networks may allow better performance and usability than logistic regression**

Wohlgemut J. M., Pisirir E., Stoner R. S., Kyrimi E., YET B., Marsh W., Perkins Z. B., Tai N. R. M.  
Critical Care, vol.28, no.1, 2024 (SCI-Expanded)

- IV. **Multicriteria decision support under uncertainty: combining outranking methods with Bayesian networks**  
Cebesoy M., TUNCER ŞAKAR C., YET B.  
ANNALS OF OPERATIONS RESEARCH, 2024 (SCI-Expanded)
- V. **Statistical modelling of determinants of child stunting using secondary data and Bayesian networks: a UKRI Global Challenges Research Fund (GCRF) Action Against Stunting Hub protocol paper**  
Rosenstock T. S., YET B.  
BMJ PAEDIATRICS OPEN, vol.8, no.SUPPL\_1, 2024 (SCI-Expanded)
- VI. **The Role of Honor Concerns in Disclosing (vs. Hiding) COVID-19 Diagnosis: Insights from Türkiye**  
Ceylan-Batur S., Doğulu C., Akbaş G., YET B., Uskul A. K.  
Sex Roles, vol.89, no.7-8, pp.409-424, 2023 (SSCI)
- VII. **A Multicriteria Method to Form Optional Preventive Maintenance Plans: A Case Study of a Large Fleet of Vehicles**  
Guner G. G., Sakar C. T., YET B.  
IEEE Transactions on Engineering Management, vol.70, no.6, pp.2153-2164, 2023 (SCI-Expanded)
- VIII. **Celecoxib Nanoformulations with Enhanced Solubility, Dissolution Rate, and Oral Bioavailability: Experimental Approaches over In Vitro/In Vivo Evaluation**  
Arslan A., YET B., NEMUTLU E., AKDAĞ ÇAYLI Y., EROĞLU H., ÖNER L.  
Pharmaceutics, vol.15, no.2, 2023 (SCI-Expanded)
- IX. **Reliability prediction for aircraft fleet operators: A Bayesian network model that combines supplier estimates, maintenance data and expert judgement**  
Kucuker F. U., Yet B.  
JOURNAL OF THE OPERATIONAL RESEARCH SOCIETY, vol.74, no.10, pp.2187-2198, 2023 (SCI-Expanded)
- X. **Reducing the question burden of patient reported outcome measures using Bayesian networks**  
Yuceturk H., Gulle H., TUNCER ŞAKAR C., Joyner C., Marsh W., ÜNAL E., Morrissey D., YET B.  
JOURNAL OF BIOMEDICAL INFORMATICS, vol.135, 2022 (SCI-Expanded)
- XI. **Early Identification of Trauma-induced Coagulopathy: Development and Validation of a Multivariable Risk Prediction Model.**  
Perkins Z., Yet B., Marsden M., Glasgow S., Marsh W., Davenport R., Brohi K., Tai N.  
Annals of surgery, vol.274, 2021 (SCI-Expanded)
- XII. **Effectiveness of intubation devices in patients with cervical spine immobilisation: a systematic review and network meta-analysis**  
Singleton B. N., Morris F. K., YET B., Buggy D. J., Perkins Z. B.  
BRITISH JOURNAL OF ANAESTHESIA, vol.126, no.5, pp.1055-1066, 2021 (SCI-Expanded)
- XIII. **Analyzing the Simonshaven Case Using Bayesian Networks**  
Fenton N., Neil M., Yet B., Lagnado D.  
TOPICS IN COGNITIVE SCIENCE, vol.12, no.4, pp.1092-1114, 2020 (SSCI)
- XIV. **Predicting the Outcome of Limb Revascularization in Patients With Lower-extremity Arterial Trauma: Development and External Validation of a Supervised Machine-learning Algorithm to Support Surgical Decisions.**  
Perkins Z. B., Yet B., Sharrock A., Rickard R., Marsh W., Rasmussen T. E., Tai N. R. M.  
Annals of surgery, vol.272, no.4, pp.564-572, 2020 (SCI-Expanded)
- XV. **Estimating criteria weight distributions in multiple criteria decision making: a Bayesian approach**  
Yet B., Sakar C. T.  
ANNALS OF OPERATIONS RESEARCH, vol.293, no.2, pp.495-519, 2020 (SCI-Expanded)
- XVI. **Integrating Risk into Project Control Using Bayesian Networks**  
PİŞİRİR E., Su Y., YET B.  
INTERNATIONAL JOURNAL OF INFORMATION TECHNOLOGY & DECISION MAKING, vol.19, no.5, pp.1327-1352, 2020 (SCI-Expanded)

- XVII. **Evidence-based investment selection: Prioritizing agricultural development investments under climatic and socio-political risk using Bayesian networks**  
YET B., Lamanna C., Shepherd K. D., Rosenstock T. S.  
PLOS ONE, vol.15, no.6, 2020 (SCI-Expanded)
- XVIII. **Building Bayesian networks based on DEMATEL for multiple criteria decision problems: A supplier selection case study**  
Kaya R., YET B.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.134, pp.234-248, 2019 (SCI-Expanded)
- XIX. **Cyber-physical-based PAT (CPbPAT) framework for Pharma 4.0**  
VATANKHAH BARENJI R., Akdag Y., YET B., ÖNER L.  
INTERNATIONAL JOURNAL OF PHARMACEUTICS, vol.567, 2019 (SCI-Expanded)
- XX. **Long-term, patient-centered outcomes of lower-extremity vascular trauma**  
Perkins Z. B., YET B., Glasgow S., Marsh D. W. R., Tai N. R. M., Rasmussen T. E.  
JOURNAL OF TRAUMA AND ACUTE CARE SURGERY, vol.85, 2018 (SCI-Expanded)
- XXI. **An improved method for solving Hybrid Influence Diagrams**  
YET B., Neil M., Fenton N., Constantinou A., Dementiev E.  
INTERNATIONAL JOURNAL OF APPROXIMATE REASONING, vol.95, pp.93-112, 2018 (SCI-Expanded)
- XXII. **Expected Value of Partial Perfect Information in Hybrid Models Using Dynamic Discretization**  
YET B., Constantinou A., Fenton N., Neil M.  
IEEE ACCESS, vol.6, pp.7802-7817, 2018 (SCI-Expanded)
- XXIII. **The role of splenic angioembolization as an adjunct to nonoperative management of blunt splenic injuries: A systematic review and meta-analysis**  
Crichton J. C. I., Naidoo K., YET B., Brundage S. I., Perkins Z.  
JOURNAL OF TRAUMA AND ACUTE CARE SURGERY, vol.83, no.5, pp.934-943, 2017 (SCI-Expanded)
- XXIV. **Clinical evidence framework for Bayesian networks**  
YET B., Perkins Z. B., Tai N. R. M., Marsh D. W. R.  
KNOWLEDGE AND INFORMATION SYSTEMS, vol.50, no.1, pp.117-143, 2017 (SCI-Expanded)
- XXV. **How to model mutually exclusive events based on independent causal pathways in Bayesian network models**  
Fenton N., Neil M., Lagnado D., Marsh W., YET B., Constantinou A.  
KNOWLEDGE-BASED SYSTEMS, vol.113, pp.39-50, 2016 (SCI-Expanded)
- XXVI. **A Bayesian network framework for project cost, benefit and risk analysis with an agricultural development case study**  
YET B., Constantinou A., Fenton N., Neil M., Luedeling E., Shepherd K.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.60, pp.141-155, 2016 (SCI-Expanded)
- XXVII. **Value of information analysis for interventional and counterfactual Bayesian networks in forensic medical sciences**  
Constantinou A. C., YET B., Fenton N., Neil M., Marsh W.  
ARTIFICIAL INTELLIGENCE IN MEDICINE, vol.66, pp.41-52, 2016 (SCI-Expanded)
- XXVIII. **Meta-analysis of prognostic factors for amputation following surgical repair of lower extremity vascular trauma**  
Perkins Z. B., YET B., Glasgow S., Cole E., Marsh W., Brohi K., Rasmussen T. E., Tai N. R. M.  
BRITISH JOURNAL OF SURGERY, vol.102, no.5, pp.436-450, 2015 (SCI-Expanded)
- XXIX. **Combining data and meta-analysis to build Bayesian networks for clinical decision support**  
YET B., Perkins Z. B., Rasmussen T. E., Tai N. R. M., Marsh D. W. R.  
JOURNAL OF BIOMEDICAL INFORMATICS, vol.52, pp.373-385, 2014 (SCI-Expanded)
- XXX. **Compatible and incompatible abstractions in Bayesian networks**  
YET B., Marsh D. W. R.  
KNOWLEDGE-BASED SYSTEMS, vol.62, pp.84-97, 2014 (SCI-Expanded)
- XXXI. **Not just data: A method for improving prediction with knowledge**  
YET B., Perkins Z., Fenton N., Tai N., Marsh W.

JOURNAL OF BIOMEDICAL INFORMATICS, vol.48, pp.28-37, 2014 (SCI-Expanded)

- XXXII. **Decision support system for Warfarin therapy management using Bayesian networks**  
YET B., Bastani K., Raharjo H., Lifvergren S., Marsh W., Bergman B.  
DECISION SUPPORT SYSTEMS, vol.55, no.2, pp.488-498, 2013 (SCI-Expanded)

### Articles Published in Other Journals

- I. **A Multi-Criteria Decision Support Tool for Shared Decision Making in Clinical Consultation**  
TUNCER ŞAKAR C., Keith-Jopp C., YET B., Joyner C., Hill A., Roberts J., Marsh W., Morrissey D.  
Journal of Multi-Criteria Decision Analysis, vol.31, no.5-6, 2024 (ESCI)
- II. **Assessing Serious Spinal Pathology Using Bayesian Network Decision Support: Development and Validation Study**  
Hill A., Joyner C. H., Keith-Jopp C., Yet B., Tuncer Sakar C., Marsh W., Morrissey D.  
JMIR FORMATIVE RESEARCH, vol.7, pp.44187, 2023 (ESCI)
- III. **A Bayesian Network Decision Support Tool for Low Back Pain Using a RAND Appropriateness Procedure: Proposal and Internal Pilot Study**  
Hill A., Joyner C. H., Keith-Jopp C., YET B., TUNCER ŞAKAR C., Marsh W., Morrissey D.  
JMIR RESEARCH PROTOCOLS, vol.10, no.1, 2021 (ESCI)
- IV. **Football Analytics using Bayesian Networks: the FutBA Model**  
Karabıyık M., YET B.  
Pamukkale University Journal of Engineering Sciences, vol.25, no.1, pp.121-131, 2019 (Peer-Reviewed Journal)
- V. **Çok Kriterli Karar Verme Problemlerinde Fayda Fonksiyonu Ağırlıklarının Tahmin Edilmesi için Matematiksel Model Temelli bir Yöntem**  
TUNCER ŞAKAR C., YET B.  
Uludağ University Journal of The Faculty of Engineering, vol.23, no.1, pp.379-402, 2018 (Peer-Reviewed Journal)
- VI. **COTTAPP: An Online University Timetable Application based on a Goal Programming Model**  
Dursun T., Sü Y., Coşgun R., Durak A. S., YET B.  
International Journal of Intelligent Systems and Applications in Engineering, vol.3, no.5, pp.117-123, 2017 (Peer-Reviewed Journal)
- VII. **Using operational data for decision making a feasibility study in rail maintenance**  
Marsh W., Nur K., YET B., Majumdar A.  
Safety and Reliability, vol.36, no.1, pp.35-47, 2016 (Peer-Reviewed Journal)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Learning and planning to solve boulder climbing problems**  
Türedioğlu M., Yet B., Demirtaş K.  
10th MathSport International Conference, Budapest, Hungary, 26 June 2023, pp.70-75
- II. **Creating semantically related and unrelated word lists for episodic memory research using word embeddings**  
Büyükyaprak B., KILIÇ ÖZHAN A., YET B.  
9th International Symposium on Brain and Cognitive Science, İstanbul, Turkey, 07 May 2023
- III. **Ciddi Oyunlar ile Ortak Karar Verme**  
SÜLÜN A., YET B.  
14. Tıp Bilişimi Kongresi, İzmir, Turkey, 16 March 2023, pp.154-157
- IV. **Decision Support for Project Management by using Diagnostic Inference and Explaining-Away in Bayesian Networks**  
YET B., PİŞİRİR E.  
6th International Conference on Decision Support System Technology (ICDSST 2020), Zaragoza, Spain, 27 - 29

May 2020, pp.131-136

- V. **Sınırlı Sayıda Veri ile Güvenilirlik Tahmini: SARP Modeli**  
KÜÇÜKER F. U., YET B.  
Sekizinci Ulusal Savunma Uygulamaları Modelleme ve Simulasyon Konferansı - USMOS 2019, Ankara, Turkey, 19 - 20 November 2019, pp.327-338
- VI. **Improved Software Reliability Prediction by Using Model Stacking and Averaging**  
Karaomer R. B., YET B., CHOUSEİNOGLOU O.  
45th Euromicro Conference on Software Engineering and Advanced Applications (SEAA) / 22nd Euromicro Conference on Digital System Design (DSD), Kallithea, Greece, 28 - 30 August 2019, pp.186-192
- VII. **Probabilistic Earned Value Management Using Bayesian Networks**  
YET B., SÜ Y.  
INFORMS 2018, Phoenix, United States Of America, 2 - 06 November 2018, pp.488
- VIII. **A Probabilistic Approach for Indirect Elicitation of the Preferences of a Decision Maker**  
YET B., TUNCER ŞAKAR C.  
BALCOR 2018 - XIII Balkan Conference on Operational Research, Belgrade, Serbia And Montenegro, 25 - 28 May 2018, pp.39
- IX. **Towards an Evidence-Based Decision Support Tool for Management of Musculoskeletal Conditions**  
YET B., Marsh W., Morrissey D.  
Special Topic Conference of the European-Federation-for-Medical-Informatics (EFMI STC), Zagreb, Croatia, 15 - 16 October 2018, vol.255, pp.175-179
- X. **A Framework to Present Bayesian Networks to Domain Experts and Potential Users**  
YET B.  
Probability and Statistics in Forensic Science - Isaac Newton Institute for Mathematical Sciences, Cambridge, Canada, 18 July - 21 December 2016
- XI. **Tek Değişkenli Meta analiz Sonuçları ve Çok Değişkenli Veriyi Birlikte Kullanarak Bayes Ağı Modelleri Öğrenme**  
YET B., Perkins Z., Tai N., Marsh W.  
36. Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi (YAEM-2016), İzmir, Turkey, 13 - 15 July 2016, pp.56-57
- XII. **NEDENSEL BAYES AĞLARI İLE CERRAHİ KARAR DESTEK**  
YET B., Perkins Z., Tai N., Marsh W.  
35. Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi (YAEM-2015), Ankara, Turkey, 9 - 11 September 2015
- XIII. **Project Cost Benefit and Risk Analysis using Bayesian Networks**  
YET B., Constantinou A., Fenton N., Neil M., Luedeling E., Shepherd K.  
31st Conference on Uncertainty in Artificial Intelligence (UAI 2015) - Bayesian Applications Workshop, Amsterdam, Netherlands, 12 - 16 July 2015
- XIV. **Explicit Evidence for Prognostic Bayesian Network Models**  
YET B., Perkins Z., Tai N., Marsh W.  
25th European Medical Informatics Conference (MIE), İstanbul, Turkey, 31 August - 03 September 2014, vol.205, pp.53-57
- XV. **Predicting Latent Variables with Knowledge and Data A Case Study in Trauma Care**  
YET B., Marsh W., Perkins Z., Tai N., Fenton N.  
29th Conference on Uncertainty in Artificial Intelligence (UAI 2013 - Bayesian Applications Workshop, BELLEVUE, WASHINGTON, United States Of America, 15 July 2013, vol.1024, pp.49
- XVI. **Towards a Method for Building Causal Bayesian Networks for Prognostic Decision Support**  
YET B., Perkins Z., Marsh W., Fenton N.  
AIME'11 Workshop on Probabilistic Problem Solving in Biomedicine (ProBioMed-11), BLED, Slovenia, 02 July 2011, pp.107-120

## **Metrics**

Publication: 71

Citation (WoS): 651

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