

## Prof. Metin Çelik

### Personal Information

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### International Researcher IDs

ORCID: 0000-0003-0107-1380

Publons / Web Of Science ResearcherID: D-8717-2014

ScopusID: 23049358700

Yoksis Researcher ID: 109074

### Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Deniz Ulaştırma Ve İşletme Mühendisliği (Dr), Turkey  
2006 - 2009

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Deniz Ulaştırma Ve İşletme Mühendisliği  
(Disiplinlerarası) (YI) (Tezli), Turkey 2004 - 2006

Undergraduate, Istanbul Technical University, Denizcilik Fakültesi, Gemi Makineleri İşletme Mühendisliği Bölümü, Turkey  
1998 - 2003

### Foreign Languages

English

### Dissertations

Doctorate, An integrated decision support system towards risk-based analytical modelling of managerial processes in shipping business, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2009

Postgraduate, Gemi makine dairesi dizaynında operasyonel gereksinimlerin önemi ve sistemlere entegrasyonu, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2006

### Research Areas

Industrial Engineering, Quality and Reliability, Reliability and Maintenance, Quality Control, Naval Architecture and Marine Engineering, Ship Machines, Engineering and Technology

### Academic Titles / Tasks

Professor, Istanbul Technical University, Denizcilik, Temel Bilimler, 2019 - Continues

Associate Professor, Istanbul Technical University, Denizcilik, Gemi Makineleri İşletme Mühendisliği, 2013 - 2019

Assistant Professor, Istanbul Technical University, Denizcilik, Gemi Makineleri İşletme Mühendisliği, 2010 - 2013

## Academic and Administrative Experience

İstanbul Teknik Üniversitesi, Denizcilik Fakültesi, Gemi Makineleri İşletme Mühendisliği Bölümü, 2011 - Continues  
Head of Department, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2018 - 2019

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

- I. **Estimation of human error probabilities in marine safety services: The case of lifeboat and davits inspection**  
Orhan M., Çelik M., Kandemir C.  
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART M-JOURNAL OF ENGINEERING FOR THE MARITIME ENVIRONMENT, vol.237, no.3, pp.687-699, 2023 (SCI-Expanded)
- II. **A bibliometric review on maritime inspection analysis: Current and future insights**  
Biçen S., Çelik M.  
Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, vol.237, no.2, pp.275-292, 2023 (SCI-Expanded)
- III. **A safety supervision tool toward digitalization of maritime HRA applications: the case of MMOHRA**  
Kandemir C., Çelik M.  
JOURNAL OF MARINE SCIENCE AND TECHNOLOGY, vol.28, no.1, pp.87-97, 2023 (SCI-Expanded)
- IV. **A preliminary design of a 3D maritime gamified mentoring platform to support tanker pre-vetting inspection training: 'Maritime Gamentor'**  
Gurbuz S. C., Çelik M.  
SHIPS AND OFFSHORE STRUCTURES, vol.18, no.12, pp.1627-1637, 2023 (SCI-Expanded)
- V. **A hybrid approach to near-miss report investigation towards next-generation safety solutions on-board ships**  
Biçen S., Çelik M.  
Ocean Engineering, vol.266, 2022 (SCI-Expanded)
- VI. **Composite Films Based on Styrene-co-butyl-acrylate with Colemanite and Calcium Bentonite Mineral Fillers**  
Güven O., Karakaş F., Kaya M. A., Yildirim H., Çelik M.  
MECHANICS OF COMPOSITE MATERIALS, vol.50, no.3, pp.335-342, 2014 (SCI-Expanded)
- VII. **A decision-making solution to ship flagging out via administrative maritime strategies**  
Çelik M., Topcu Y. İ.  
MARITIME POLICY & MANAGEMENT, vol.41, no.1, pp.112-127, 2014 (SSCI)
- VIII. **Application of failure modes and effects analysis to main engine crankcase explosion failure on-board ship**  
Çiçek K., Çelik M.  
SAFETY SCIENCE, vol.51, no.1, pp.6-10, 2013 (SCI-Expanded)
- IX. **Maritime policy development against ship flagging out dilemma using a fuzzy quantified SWOT analysis**  
Çelik M., KANDAKOĞLU A.  
MARITIME POLICY & MANAGEMENT, vol.39, no.4, pp.401-421, 2012 (SSCI)
- X. **An Axiomatic Decision Aid for Marine Equipment Selection in Ship Machinery Design and Installation Projects**  
ÇEBİ S., Çelik M., KAHRAMAN C.  
JOURNAL OF MULTIPLE-VALUED LOGIC AND SOFT COMPUTING, vol.18, pp.223-245, 2012 (SCI-Expanded)
- XI. **An integrated decision aid extension to material selection problem**

Çiçek K., Çelik M., Topcu Y. İ.

MATERIALS & DESIGN, vol.31, no.9, pp.4398-4402, 2010 (SCI-Expanded)

- XII. **Multiple attribute decision-making solution to material selection problem based on modified fuzzy axiomatic design-model selection interface algorithm**

Çiçek K., ÇELİK M.

MATERIALS & DESIGN, vol.31, no.4, pp.2129-2133, 2010 (SCI-Expanded)

- XIII. **Structuring ship design project approval mechanism towards installation of operator-system interfaces via fuzzy axiomatic design principles**

Cebi S., Çelik M., KAHRAMAN C.

INFORMATION SCIENCES, vol.180, no.6, pp.886-895, 2010 (SCI-Expanded)

- XIV. **Enhancement of occupational health and safety requirements in chemical tanker operations: The case of cargo explosion**

Celik M.

SAFETY SCIENCE, vol.48, no.2, pp.195-203, 2010 (SCI-Expanded)

- XV. **A Key Decision-Making Process on Logistic Support to Merchant Ships Based on Operational Requirements: Marine Supplier Selection**

Celik M.

NAVAL ENGINEERS JOURNAL, vol.122, no.1, pp.125-135, 2010 (SCI-Expanded)

- XVI. **Use of an ANP to prioritize managerial responsibilities of maritime stakeholders in environmental incidents: An oil spill case**

Çelik M., Topcu Y. İ.

TRANSPORTATION RESEARCH PART D-TRANSPORT AND ENVIRONMENT, vol.14, no.7, pp.502-506, 2009 (SCI-Expanded)

- XVII. **Establishing an Integrated Process Management System (IPMS) in ship management companies**

Celik M.

EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.4, pp.8152-8171, 2009 (SCI-Expanded)

- XVIII. **Designing of integrated quality and safety management system (IQSMS) for shipping operations**

Celik M.

SAFETY SCIENCE, vol.47, no.5, pp.569-577, 2009 (SCI-Expanded)

- XIX. **An integrated fuzzy QFD model proposal on routing of shipping investment decisions in crude oil tanker market**

Çelik M., CEBİ S., KAHRAMAN C., ER I. D.

EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.3, pp.6227-6235, 2009 (SCI-Expanded)

- XX. **Application of axiomatic design and TOPSIS methodologies under fuzzy environment for proposing competitive strategies on Turkish container ports in maritime transportation network**

Çelik M., CEBİ S., KAHRAMAN C., ER I. D.

EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.3, pp.4541-4557, 2009 (SCI-Expanded)

- XXI. **An expert system towards solving ship auxiliary machinery troubleshooting: SHIPAMT(SOLVER)**

Cebi S., Çelik M., KAHRAMAN C., ER I. D.

EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.3, pp.7219-7227, 2009 (SCI-Expanded)

- XXII. **Fuzzy axiomatic design extension for managing model selection paradigm in decision science**

Çelik M., ER I. D.

EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.3, pp.6477-6484, 2009 (SCI-Expanded)

- XXIII. **Structuring fuzzy integrated multi-stages evaluation model on academic personnel recruitment in MET institutions**

Çelik M., KANDAKOĞLU A., ER I. D.

EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.3, pp.6918-6927, 2009 (SCI-Expanded)

- XXIV. **Computer-based systematic execution model on human resources management in maritime transportation industry: The case of master selection for embarking on board merchant ships**

Çelik M., ER I. D., Topcu Y. İ.

EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.2, pp.1048-1060, 2009 (SCI-Expanded)

- XXV. **A hybrid design methodology for structuring an Integrated Environmental Management System (IEMS) for shipping business**  
Celik M.  
JOURNAL OF ENVIRONMENTAL MANAGEMENT, vol.90, no.3, pp.1469-1475, 2009 (SCI-Expanded)
- XXVI. **A multi-methodological approach for shipping registry selection in maritime transportation industry**  
Kandakoglu A., Çelik M., AKGUN I.  
MATHEMATICAL AND COMPUTER MODELLING, vol.49, pp.586-597, 2009 (SCI-Expanded)
- XXVII. **Fuzzy axiomatic design-based performance evaluation model for docking facilities in shipbuilding industry: The case of Turkish shipyards**  
Çelik M., KAHRAMAN C., CEBİ S., ER I. D.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.1, pp.599-615, 2009 (SCI-Expanded)
- XXVIII. **Analytical modelling of shipping business processes based on MCDM methods**  
Çelik M., Topcu Y. İ.  
MARITIME POLICY & MANAGEMENT, vol.36, no.6, pp.469-479, 2009 (SSCI)
- XXIX. **Application of fuzzy extended AHP methodology on shipping registry selection: The case of Turkish maritime industry**  
Çelik M., ER I. D., OZOK A. F.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.1, pp.190-198, 2009 (SCI-Expanded)
- XXX. **Analytical HFACS for investigating human errors in shipping accidents**  
Çelik M., CEBİ S.  
ACCIDENT ANALYSIS AND PREVENTION, vol.41, no.1, pp.66-75, 2009 (SSCI)
- XXXI. **Managing the Operational Constraints in Ship Machinery Design and Installation: Synthesis of Design-Based Failures for Improving the Structural Quality of Shipboard Systems**  
Celik M.  
NAVAL ENGINEERS JOURNAL, vol.120, no.3, pp.67-76, 2008 (SCI-Expanded)

## Articles Published in Other Journals

- I. **A Fuzzy Cognitive Mapping Approach to Conduct Deficiency Investigation under SIRE 2.0 Inspection**  
Orhan M., Çelik M.  
Transactions on Maritime Science, vol.12, no.2, 2023 (ESCI)
- II. **Systematic Analysis of Multi-Source Inspection Database via Ship Smart Audit System**  
Aydin O., Celik M., Biçen S., Bayer D.  
Transactions on Maritime Science, vol.11, no.2, 2022 (Scopus)
- III. **A Human Reliability Assessment of Marine Engineering Students through Engine Room Simulator Technology**  
Kandemir Ç., Çelik M.  
SIMULATION & GAMING, vol.52, no.5, pp.635-649, 2021 (ESCI)
- IV. **Assessment of ISPS Code Compliance at Ports Using Cognitive Maps**  
Çelik M., Topcu Y. İ.  
TransNav International Journal on Marine Navigation and Safety of Sea Transportation, vol.4, no.3, pp.359-362, 2010 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Future Skills Requirements Analysis in Maritime Industry**  
ÇİÇEK K., AKYÜZ E., ÇELİK M.  
3rd World Conference on Technology, Innovation and Entrepreneurship (WOCTINE), İstanbul, Turkey, 21 - 23 June 2019, pp.270-274

- II. **A Comparative Research of Machine Learning Impact to Future of Maritime Transportation**  
AKYÜZ E., ÇİÇEK K., ÇELİK M.  
3rd World Conference on Technology, Innovation and Entrepreneurship (WOCTINE), İstanbul, Turkey, 21 - 23 June 2019, pp.275-280
- III. **Using Weka Data-Mining Analysis To Determine Ship Emergency Preparedness Level In Case Of Fire**  
Ozturk Tac B., ÇELİK M., AKYÜZ E.  
Future Learning 2018 (7th International Conference on “Innovations in Learning for the Future”: Digital Transformation in Education), İstanbul, Turkey, 11 September 2019 - 24 September 2018
- IV. **A continuing professional development program on designated person ashore (DPA) position in ship management companies.**  
AKYÜZ E., ÇİÇEK K., ÇELİK M.  
International Congresses on Education 2018, 28 June - 01 July 2018
- V. **Developing a maritime course on human reliability assessment in shipboard operations via problem-based gaming practices.**  
AKYÜZ E., ÇELİK M., ÇİÇEK K.  
International Congresses on Education 2018, 28 June - 01 July 2018
- VI. **Investigation the Availability of Large-Scale Data Sets in Existing Ships to Conduct Performance Analysis Under Operational Conditions.**  
SÖNER Ö., AKYÜZ E., ÇELİK M.  
INT-NAM 2018 ( 3rd International Naval Architecture and Maritime Symposium), İstanbul, Turkey, 24 - 25 April 2018
- VII. **An intelligent fault diagnosis system on ship machinery systems based on support vector machine principles**  
Öztürk Ü., ÇİÇEK K., ÇELİK M.  
European Safety and Reliability conference (ESREL 2016), Glasgow, United Kingdom, 25 - 29 September 2016, pp.1949-1953
- VIII. **Establishing Training Module for IMDG Code in Maritime Education and Training (MET) Institutions**  
ÇİÇEK K., ÇELİK M.  
International Conference on Prospects for Research in Transport and Logistics on a Regional-Global Perspective, 12 - 14 February 2009
- IX. **Execution Model Proposal on Managing Accreditation Process in Maritime Education and Training (MET) Institutions**  
ÇİÇEK K., ÇELİK M.  
International Maritime Lecturer Association 16th conference on MET, 14 - 17 October 2008
- X. **AHP in Strategic Planning: The Case of Shipping Investment**  
ÇELİK M., TOPCU Y. İ.  
OR'50 - Golden Anniversary conference, York, Sierra Leone, 9 - 11 September 2008, pp.47
- XI. **Definitions at human factor analysis for maritime safety management process**  
ER Z., ÇELİK M.  
International Association of Maritime Universities (IAMU). (2005), 26 - 29 October 2005
- XII. **Makine dairesi dizaynında operasyonel gerekliliklerin entegrasyonu**  
Deniz C., Çelik M.  
TMMOB Gemi Makineleri İşletme Mühendisleri Odası II. Ulusal Kongresi, İstanbul, Turkey, 02 June 2005, pp.74-87

## Supported Projects

Çiçek K., Çelik M., Project Supported by Other Official Institutions, Tanker Filosu Gemilerinde Kritik Operasyonlara Yönelik İleri Emniyet Destek Sistemi Dijitalizasyonu, 2018 - 2019

Çelik M., Project Supported by Other Official Institutions, TERSANELER İÇİN RİSK ANALİZ KARAR DESTEK SİSTEMİ, 2015 - 2016

## **Metrics**

Publication: 167

Citation (WoS): 1511

Citation (Scopus): 2675

H-Index (WoS): 22

H-Index (Scopus): 30

## **Non Academic Experience**

Nemtaş Denizcilik

Arkas Denizcilik

Trans KA Denizcilik