

Journal of Construction Engineering, Management & Innovation

Volume 7 • Issue 3 • September 2024
ISSN: 2630-5771

Honorary Editors-in-Chief

David Arditi

Illinois Institute of Technology, USA

M. Talat Birgönül

Middle East Technical University, Turkey

Editor-in-Chief

Vedat Toğan

Karadeniz Technical University, Turkey

Managing Editor

Ahmet Can Altunışık

Karadeniz Technical University, Turkey



www.dynaaca.com
www.goldenlightpublish.com

Journal of Construction Engineering, Management & Innovation

ISSN: 2630-5771 (online)

Honorary Editors-in-Chief

David Arditi

Illinois Institute of Technology

M. Talat Birgönül

Middle East Technical University

Editor-in-Chief

Vedat Toğan

Karadeniz Technical University  togan@ktu.edu.tr

Managing Editor

Ahmet Can Altunışık

Karadeniz Technical University  ahmetcan@ktu.edu.tr

Design & Layout Editor

Hasan Basri Başağa

Karadeniz Technical University  hasanbb@ktu.edu.tr

Journal of Construction Engineering, Management & Innovation is an open-access journal international journal quarterly published by Golden Light Publishing®. Each paper submitted is subject to peer review, and only papers of the highest quality that contain original ideas will be published.

Golden Light Publishing® is a trademark of Dynamic Academy®.

Postal address

Golden Light Publishing®

Trabzon Teknoloji Geliştirme Bölgesi, Yönetici A.Ş.

Üniversite Mahallesi, Hastane Caddesi, No: 33

61080 Trabzon, Türkiye

E-mail: info@goldenlightpublish.com

EDITORIAL BOARD

Editor-in-Chief

Vedat Toğan

Karadeniz Technical University, Türkiye

Editorial Board (in alphabetical order)

Ahmed Senouci University of Houston, USA

Alfredo F. Serpell Universidad del Desarrollo, Chile

Ana Cocho-Bermejo Barcelona TECh, Spain

Assed N. Haddad Universidade Federal do Rio de Janeiro, Brazil

Aynur Kazaz Akdeniz University, Türkiye

Beliz Özorhon Orakçal Boğaziçi University, Türkiye

Bon-Gang Hwang National University of Singapore, Singapore

Carlos Torres Formoso Federal University of Rio Grande do Sul, Brazil

Chien-Ho Ko National Pingtung University of Science and Technology, Taiwan

Esin Ergen Pehlevan İstanbul Technical University, Türkiye

Gökhan Arslan İstanbul Aydın University, Türkiye

Gül Polat İstanbul Technical University, Türkiye

Hasan Basri Başağa Karadeniz Technical University, Türkiye

İrem Dikmen Toker University of Reading, United Kingdom

Johannes I.M. Halman University of Twente, The Netherlands

Jurgita Antucheviciene Vilnius Gediminas Technical University, Lithuania

Low Sui Pheng National University of Singapore, Singapore

Lucio Soibelman University of Southern California, USA

Miklos Hajdu Budapest University of Technology and Economics, Hungary

Mladen Radujkovic Alma Mater Europaea University, Slovenia

Onur Behzat Tokdemir İstanbul Technical University, Türkiye

Reza Maalek Karlsruhe Institute of Technology, Germany

Salman Azhar Auburn University, USA

Serkan Kıvrak Eskişehir Technical University, Türkiye

Sherif Mohamed University of Southern Queensland, Australia

Sibel Maçka Kalfa Karadeniz Technical University, Türkiye

Sparsh Johari Indian Institute of Technology Guwahati, India

Víctor Yepes Universitat Politècnica de València, Spain

Zhen-Song Chen Wuhan University, China

Journal of Construction Engineering, Management & Innovation

Volume 7, Issue 3, September 30, 2024

CONTENTS

Gozde Basak Ozturk, Busra Ozen and Fatih Soygazi

Novel technology use for digital transformation of cultural heritage..... 172

Review Article

Muhammet Yıldırım and Omer Giran

Implementation of Digital Twins in construction industry: A systematic review 189

Review Article

Serkan Yıldız

Water conservation criteria in green building evaluation systems and estimation of possible water savings in the case of application of these criteria on a detached house 213

Research Article

Şeyma Gebel, Semahat Merve Top, Çağatay Takva, Berru İzel Gökgöz, Zeynep Yeşim İlerisoy and Mustafa Şahmaran

Exploring the role of 3D concrete printing in AEC: Construction, design, and performance..... 229

Review Article

Saman Aminbakhsh

Effects of topological structure of project network on computational cost..... 247

Research Article