Assoc. Prof. Erkan Günpınar

Personal Information

Office Phone: +90 212 293 1300
Email: gunpinar@itu.edu.tr
Web: https://scad.itu.edu.tr

International Researcher IDs
ORCID: 0000-0002-0266-5546
ScopusID: 18433861100
Yoksis Researcher ID: 148483

Education Information

Doctorate, Tokyo University, Precision Engineering, Japan 2010 - 2013
Postgraduate, Korean Advanced Institute Of Science And Technology, Mechanical Engineering, South Korea 2004 - 2006
Undergraduate, Middle East Technical University, Faculty Of Engineering, Makine Mühendisliği Bölümü, Turkey 1998 - 2003

Foreign Languages

English

Dissertations

Doctorate, Feature-aware Partitioning of Quadrilateral Meshesfor Reverse Engineering, Tokyo Üniversitesi, Precision Engineering, 2013
Postgraduate, Interfacing heterogeneous PDM systems by PLM Services for design collaboration, Korean Advanced Institute Of Science And Technology, Mechanical Engineering, 2006

Research Areas

Technical Sciences, Mechanical Engineering, Construction and Manufacturing, Computer Aided Design and Manufacturing

Academic Titles / Tasks

Associate Professor, Istanbul Technical University, Makina, Makina Mühendisliği, 2019 - Continues
Assistant Professor, Istanbul Technical University, Makina, Makina Mühendisliği, 2018 - 2019
Assistant Professor, Istanbul Technical University, Makina, Makina Mühendisliği, 2012 - 2018

Courses

Advanced Mesh Processing, Undergraduate, 2016 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Mechanical property estimation for additive manufacturing parts with supports**
Günaydın E., Günpınar E.
International Journal of Advanced Manufacturing Technology, vol.129, no.9-10, pp.4031-4044, 2023 (SCI-Expanded)

II. **G-Puzzle: Infilling 3D Models With Reinforced G-Lattices**
Armanfar A., Üstündağ E., Günpınar E.
Journal of Mechanical Design, Transactions of the ASME, vol.145, no.10, 2023 (SCI-Expanded)

III. **Exploration of 3D motorcycle complexes from hexahedral meshes**
Günpınar E., Livesu M., Attene M.
Computers and Graphics (Pergamon), vol.114, pp.105-115, 2023 (SCI-Expanded)

IV. **Fluid Flow-inspired Curvature-aware Print-paths from Hexahedral Meshes for Additive Manufacturing**
Cam S., Günpınar E.
CAD Computer Aided Design, vol.159, 2023 (SCI-Expanded)

V. **G-Lattices: A Novel Lattice Structure and Its Generative Synthesis Under Additive Manufacturing Constraints**
Armanfar A., Günpınar E.
Journal of Mechanical Design, Transactions of the ASME, vol.145, no.1, 2023 (SCI-Expanded)

VI. **Helical5AM: Five-axis parametrized helical additive manufacturing**
Günpınar E., Armanfar A.
JOURNAL OF MATERIALS PROCESSING TECHNOLOGY, vol.304, 2022 (SCI-Expanded)

VII. **4 and 5-Axis additive manufacturing of parts represented using free-form 3D curves**
Günpınar E., Cam S.
GRAPHICAL MODELS, vol.120, 2022 (SCI-Expanded)

VIII. **SplineLearner: Generative learning system of design constraints for models represented using B-spline surfaces**
Taşmektepligil A. A., Günpınar E.
Advanced Engineering Informatics, vol.51, 2022 (SCI-Expanded)

IX. **Curvature and Feature-Aware Print-Paths from Hexahedral Meshes for Additive Manufacturing**
Günpınar E.
CAD Computer Aided Design, vol.141, 2021 (SCI-Expanded)

X. **A multi-criteria based selection method using non-dominated sorting for genetic algorithm based design**
Günpınar E., Khan S.
OPTIMIZATION AND ENGINEERING, vol.21, no.4, pp.1319-1357, 2020 (SCI-Expanded)

XI. **GenYacht: An interactive generative design system for computer-aided yacht hull design**
Khan S., Günpınar E., ŞENER B.
OCEAN ENGINEERING, vol.191, 2019 (SCI-Expanded)

XII. **Evolving a Psycho-Physical Distance Metric for Generative Design Exploration of Diverse Shapes**
Khan S., Günpınar E., Moriguchi M., Suzuki H.
JOURNAL OF MECHANICAL DESIGN, vol.141, no.11, 2019 (SCI-Expanded)

XIII. **A user-centered side silhouette generation system for sedan cars based on shape templates**
Günpınar E., Ovur S. E., Gunpinar S.
OPTIMIZATION AND ENGINEERING, vol.20, no.3, pp.683-723, 2019 (SCI-Expanded)

XIV. **A generative sampling system for profile designs with shape constraints and user evaluation**
Dogan K. M., Suzuki H., Günpınar E., Kim M.

COMPUTER-AIDED DESIGN, vol.111, pp.93-112, 2019 (SCI-Expanded)

XV. **A Generative Design and Drag Coefficient Prediction System for Sedan Car Side Silhouettes based on Computational Fluid Dynamics**
Günpınar E., Coşkun U. C., Özsipahi M., Gunpinar S.
COMPUTER-AIDED DESIGN, vol.111, pp.65-79, 2019 (SCI-Expanded)

XVI. **Eye tracking for screening design parameters in adjective-based design of yacht hull**
Doğan K. M., SUZUKI H., Günpınar E.
OCEAN ENGINEERING, vol.166, pp.262-277, 2018 (SCI-Expanded)

XVII. **Sampling CAD models via an extended teaching-learning-based optimization technique**
Khan S., Günpınar E.
COMPUTER-AIDED DESIGN, vol.100, pp.52-67, 2018 (SCI-Expanded)

XVIII. **A shape sampling technique via particle tracing for CAD models**
Günpınar E., Gunpinar S.
GRAPHICAL MODELS, vol.96, pp.11-29, 2018 (SCI-Expanded)

XIX. **Learning yacht hull adjectives and their relationship with hull surface geometry using GMDH-type neural networks for human oriented smart design**
Dogan K. M., Günpınar E.
OCEAN ENGINEERING, vol.145, pp.215-229, 2017 (SCI-Expanded)

XX. **AN EXTENDED LATIN HYPERCUBE SAMPLING APPROACH FOR CAD MODEL GENERATION**
Khan S., Günpınar E.
ANADOLU UNIVERSITY JOURNAL OF SCIENCE AND TECHNOLOGY - A Applied Sciences and Engineering, vol.18, no.2, pp.301-314, 2017 (SSCI)

XXI. **A novel design framework for generation and parametric modification of yacht hull surfaces**
Khan S., Günpınar E., Doğan K. M.
OCEAN ENGINEERING, vol.136, pp.243-259, 2017 (SCI-Expanded)

XXII. **Motorcycle graph enumeration from quadrilateral meshes for reverse engineering**
Günpınar E., Moriguchi M., SUZUKI H., OHTAKE Y.
COMPUTER-AIDED DESIGN, vol.55, pp.64-80, 2014 (SCI-Expanded)

XXIII. **Feature-aware partitions from the motorcycle graph**
Gunpinar E., Moriguchi M., SUZUKI H., OHTAKE Y.
COMPUTER-AIDED DESIGN, vol.47, pp.85-95, 2014 (SCI-Expanded)

XXIV. **Generation of bi-monotone patches from quadrilateral mesh for reverse engineering**
Gunpinar E., SUZUKI H., OHTAKE Y., Moriguchi M.
COMPUTER-AIDED DESIGN, vol.45, no.2, pp.440-450, 2013 (SCI-Expanded)

XXV. **Interfacing heterogeneous PDM systems using the PLM Services**
Gunpinar E., HAN S.
ADVANCED ENGINEERING INFORMATICS, vol.22, no.3, pp.307-316, 2008 (SCI-Expanded)

Articles Published in Other Journals

I. **Computer sand art**
Günpınar E., Asman S., Elber G.
Computer-Aided Design and Applications, vol.18, no.1, pp.1-23, 2020 (Scopus)

II. **A K-MEANS CLUSTERING BASED SHAPE RETRIEVAL TECHNIQUE FOR 3D MESH MODELS**
REZAEİ M., GÜNPINAR E.
Selçuk Üniversitesi Mühendislik, Bilim ve Teknoloji Dergisi, vol.6, pp.114-128, 2018 (Peer-Reviewed Journal)

III. **A two-dimensional bin packing-based split-and-pack approach for decomposing large three-dimensional structures into convex items**
Günpınar E.
Computer-Aided Design and Applications, vol.15, no.1, pp.11-24, 2018 (Scopus)

IV. **TERSİNE MÜHENDİSLİK YOLUYLA ÜÇ BOYUTLU GEOMETRİK MODELİN OLUŞTURULMASI VE GEMİ YAPIM ENDÜSTRİSİNDEKİ BAZI UYGULAMALARI**
Günpınar E.
Dokuz Eylül Üniversitesi Fen ve Mühendislik Dergisi, vol.54, no.3, pp.624-639, 2016 (Peer-Reviewed Journal)

Supported Projects

Günpınar E., Armanfar A., Project Supported by Higher Education Institutions, Katmanlı İmalat Ürünlerinin Mekanik Özelliklerinin Yenilikçi Dolgu ve Dilimleme Yöntemleri ile Geliştirilmesi, 2021 - 2023
Günpınar E., Project Supported by Higher Education Institutions, Beş eksenli eklemeli imalat için üç boyutlu bir modelin düzlemsel olmayan eğrilik bazlı eğriler ile baskı yollarının üretilmesi, 2020 - 2022
Günpınar Ş., Günpınar E., TUBITAK Project, Ağız Hijyen Motivasyonu İçin Hastaya Özgü Olası Dişeti Sorunlarının Öngörülmesi ve Bilgisayar Destekli Demonstrasyonu, 2019 - 2022
Günpınar E., TUBITAK Project, Müşteri Tercihini ve Araç Sürükleme Katsayısını Dikkate Alarak Araba Yan Profilinin İnteraktif Olarak Tasarımı, 2016 - 2018
Günpınar E., Project Supported by Higher Education Institutions, CUSTOMER-CENTERED SHAPE RECOMMENDER FOR CAR BODY DESİNG, 2015 - 2018
Günpınar E., TUBITAK Project, GEMI GÖVDESININ HIZLI KOLAY VE VERİMLİ BİR ŞEKİLDE ÜRETİMİ İÇİN ÜRETİLEBİLİR LEVHALARA AYRIŞTIRILMASI, 2014 - 2016

Metrics

Publication: 49
Citation (WoS): 79
Citation (Scopus): 96
H-Index (WoS): 6
H-Index (Scopus): 6

Non Academic Experience

Samsung Heavy Industries