

### İBRAHİM AYDOĞDU ASSOC. PROF.

Email: aydogdu@akdeniz.edu.tr
Office Phone: +90 242 310 6372
Fax Phone: +90 242 310 6310
International Researcher IDs
ScholarID: dmEe-dYAAAAJ

ORCID: 0000-0002-8281-2365

Publons / Web Of Science ResearcherID: B-9237-2016

ScopusID: 41260920300 Yoksis Researcher ID: 128447



### Learning Knowledge

| Post Doctorate | Georgia Institute of Technology, Faculty of Engineering, Department of     |  |  |
|----------------|--|--|--|
| 2022 - 2023    | Mechanical engineering, United States Of America                           |  |  |
| Doctorate      | Middle East Technical University, Faculty Of Engineering, Department Of    |  |  |
| 2002 - 2010    | Engineering Sciences, Turkey   |  |  |
| Undergraduate  | Akdeniz University, Faculty Of Engineering, Department of Civil Engineerin |  |  |
| 1998 - 2002    | Turkey   |  |  |

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Optimum Design of 3-D Irregular Steel Frames Using Ant Colony Optimization and Harmony Search Algorithms, Middle East Technical University, Faculty Of Engineering, Department Of Engineering Sciences, 2010

### Academic Titles / Tasks

| Associate Professor |
|---------------------|
| 2018 - Continues    |

Akdeniz University, Faculty of Engineering, Department of Civil Engineering

| Assistant Professor<br>2013 - 2018 | Akdeniz University, Faculty of Engineering, Department of Civil Engineering                  |
|------------------------------------|--|
| Research Assistant<br>2010 - 2013  | Akdeniz University, Faculty of Engineering, Department of Civil Engineering                  |
| Research Assistant<br>2002 - 2010  | Middle East Technical University, Faculty Of Engineering, Department Of Engineering Sciences |
| Other<br>2008 - 2008               | The University of Memphis, Engineering, Civil Engineering                                    |

### **Supported Projects**

- 1. Helhel S., Aydoğdu İ., Başyiğit İ. B., TUBITAK Project, Design of Intra-Column Corrosion Detection Radar System in Buildings as a Decision Support System, 2021 2023
- 2. AYDOĞDU İ., EFE P., AKIN A., Yetkin M., YILDIRIM C., Project Supported by Higher Education Institutions, Artificial bee colony algorithm for thermohydraulic optimization of flat plate solar air heaters, 2018 2021
- 3. AYDOĞDU İ., Project Supported by Higher Education Institutions, Design optimization of real world steel space frames using artificial bee colony algorithm with Levy flight distribution, 2017 2020
- 4. AYDOĞDU İ., Project Supported by Higher Education Institutions, Cost optimization of reinforced concrete cantilever retaining walls under seismic loading using a biogeographybased optimization algorithm with Levy flights, 2017 2020
- 5. Özçelik R., Erdal F., Aydoğdu İ., TUBITAK Project, Development of External Reinforcement Methods with Buckling Prevented Steel Braces of Reinforced Concrete Structures, 2017 2020
- 6. AYDOĞDU İ., AKIN A., PAKSOY A., Project Supported by Higher Education Institutions, Çelik-Beton Kompozit Kolonlu Yüksek Yapıların Optimize Edilerek Maliyet Açısından Karşılaştırılması, 2018 2019
- 7. ÖZÇELİK R., AYDOĞDU İ., DİKİCİAĞIK Y., SÖĞÜT H., Project Supported by Higher Education Institutions, BURKULMASI ENGELLENMİŞ ÇELİK ÇAPRAZLARIN ÇERÇEVE BENZERİ SİSTEM İÇERİSİNDE HİSTERETİK DAVRANIŞLARININ BELİRLENMESİ, 2014 2019
- 8. Aydoğdu İ., TUBITAK Project, DEVELOPMENT OF A PROGRAM THAT DESIGNS THE OPTIMUM GEOMETRY FOR URBAN INTERCHANGES WITH DESIGN ERRORS, 2017 2018
- 9. AYDOĞDU İ., AYDIN M. M., Project Supported by Higher Education Institutions, Şehiriçi Kavşaklardaki Geometrik Disiplinsizliğin Optimize Edilerek İrdelenmesi, 2017 2017
- 10. Aydoğdu İ., TUBITAK Project, Optimum design of Composite Slabs, 2015 2016
- 11. Aydoğdu I., TUBITAK Project, Optimum Design of Sinusoidal Beams, 2015 2016
- 12. Aydoğdu İ., TUBITAK Project, DEVELOPMENT OF A PROGRAM THAT MAKES THE OPTIMUM DESIGN OF TRUE SYSTEMS, 2015 2016
- 13. Aydoğdu İ., TUBITAK Project, Optimum Sizing of Reinforced Concrete and Steel Structures by Considering Earthquake Loads, 2007 2009

Post Graduate, Post Graduate, Balikesir University, May, 2015

Post Graduate, Şerafettin Sağlam Yüksek Lisans Tez Savunması, Akdeniz Üniversitesi, July, 2013

Doctorate, Soner Şeker Doktora Tez Savunma Jürisi, Celal Bayar Üniversitesi, June, 2013

Post Graduate, Hamdi Cem Çilek Yüksek Lisans Tez Savunması, Akdeniz Üniversitesi, June, 2013

Post Graduate, Hakan Kaplan Yüksek Lisans Tez Savunma Jürisi, Akdeniz Üniversitesi, June, 2013

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

 $1. \quad \hbox{Size optimization of planar truss systems using the modified salp swarm algorithm} \\$ 

Altay O., Cetindemir O., AYDOĞDU İ.

Engineering Optimization, vol.56, no.4, pp.469-485, 2024 (SCI-Expanded)

2. Comparison of optimized roughness parameters of some artificially roughened solar air heaters Yıldırım C., AYDOĞDU İ.

Journal of Mechanical Science and Technology, vol.36, no.10, pp.5267-5280, 2022 (SCI-Expanded)

3. Design of large-scale real-size steel structures using various modified grasshopper optimization algorithms

Aydogdu I., Ormecioglu T. O., TUNCA O., Carbas S.

NEURAL COMPUTING & APPLICATIONS, vol.34, no.16, pp.13825-13848, 2022 (SCI-Expanded)

4. Estimation of Rigidity of Concrete Based on Multi Parameters Using Artificial Bee Colony Optimization Method with Levy Flight Distribution

KOÇKAL N. U., AYDOĞDU İ.

FILOMAT, vol.34, no.2, pp.583-590, 2020 (SCI-Expanded)

5. Artificial bee colony algorithm for thermohydraulic optimization of flat plate solar air heaters YILDIRIM C., AYDOĞDU İ.

JOURNAL OF MECHANICAL SCIENCE AND TECHNOLOGY, vol.31, no.7, pp.3593-3602, 2017 (SCI-Expanded)

6. Optimum design of steel space structures using social spider optimization algorithm with spider jump technique

AYDOĞDU İ., Efe P., Yetkin M., AKIN A.

STRUCTURAL ENGINEERING AND MECHANICS, vol.62, no.3, pp.259-272, 2017 (SCI-Expanded)

7. Effect of Levy Flight on the discrete optimum design of steel skeletal structures using metaheuristics AYDOĞDU İ., ÇARBAŞ S., Akin A.

STEEL AND COMPOSITE STRUCTURES, vol.24, no.1, pp.93-112, 2017 (SCI-Expanded)

8. Cost optimization of reinforced concrete cantilever retaining walls under seismic loading using a biogeography-based optimization algorithm with Levy flights

AYDOĞDU İ.

ENGINEERING OPTIMIZATION, vol.49, no.3, pp.381-400, 2017 (SCI-Expanded)

9. Design optimization of real world steel space frames using artificial bee colony algorithm with Levy flight distribution

AYDOĞDU İ., AKIN A., Saka M. P.

ADVANCES IN ENGINEERING SOFTWARE, vol.92, pp.1-14, 2016 (SCI-Expanded)

10. Use of Swarm Intelligence in Structural Steel Design Optimization

Saka M. P., ÇARBAŞ S., AYDOĞDU İ., Akin A.

METAHEURISTICS AND OPTIMIZATION IN CIVIL ENGINEERING, vol.7, pp.43-73, 2016 (SCI-Expanded)

11. Analysis of Swarm Intelligence-Based Algorithms for Constrained Optimization

Saka M. P., Dogan E., AYDOĞDU İ.

SWARM INTELLIGENCE AND BIO-INSPIRED COMPUTATION: THEORY AND APPLICATIONS, pp.25-48, 2013 (SCI-Expanded)

12. Ant colony optimization of irregular steel frames including elemental warping effect

Aydogdu I., Saka M. P.

ADVANCES IN ENGINEERING SOFTWARE, vol.44, no.1, pp.150-169, 2012 (SCI-Expanded)

13. Harmony Search Algorithms in Structural Engineering

SAKA M. P., AYDOĞDU İ., HASANÇEBİ O., Geem Z. W.

COMPUTATIONAL OPTIMIZATION AND APPLICATIONS IN ENGINEERING AND INDUSTRY, vol.359, pp.145-182, 2011 (SCI-Expanded)

### Articles Published in Other Journals

1. Optimum design of pin-jointed aluminum structures to AA-ASD using three Meta-heuristic algorithms AYDOĞDU İ., Kilic V., Akin A.

Structures, vol.55, pp.1406-1422, 2023 (Scopus)

2. Optimum Design Of Elastic Continuous Foundations With The Artificial Bee Colony Method Turan S., Aydoğdu İ., Emsen E.

International Journal of Engineering and Applied Sciences, vol.15, no.1, pp.36-51, 2023 (Peer-Reviewed Journal)

3. Sinyalize kavşaklarda ülkelere göre gecikme ve kuyruk uzunluğu denklemleri geliştirilmesinin gerekliliği üzerine bir araştırma

AYDIN M. M., AYDOĞDU İ., YILDIRIM M. S.

Gümüşhane Üniversitesi Fen Bilimleri Dergisi, vol.12, no.2, pp.597-613, 2022 (Peer-Reviewed Journal)

4. Effect of Seismic Isolation with Triple Friction Pendulum Isolator Device on Weight Optimization of Steel Plane Frames

TAYMUŞ R. B., AYDOĞDU İ.

International Journal of Engineering and Applied Sciences, vol.13, no.3, pp.79-92, 2021 (Peer-Reviewed Journal)

5. Optimum Design of Nano-Scaled Beam Using the Social Spider Optimization (SSO) Algorithm UZUN B., CİVALEK Ö., AYDOĞDU İ.

JOURNAL OF APPLIED AND COMPUTATIONAL MECHANICS, vol.7, no.3, pp.1348-1361, 2021 (ESCI)

6. Performance evaluation of artificial bee colony algorithm and its variants in the optimum design of steel skeletal structures

SAKA M. P., AYDOĞDU İ.

Asian Journal of Civil Engineering, vol.22, pp.73-91, 2021 (Scopus)

7. Optimum design of purlin systems used in steel roofs

AYDOĞDU İ., KUBAR M. M., ŞEN D., TUNCA O., Çarbaş S.

Challenge Journal of Structural Mechanics, vol.4, no.3, pp.89-94, 2018 (Peer-Reviewed Journal)

8. Optimum Design of Braced Barrel Vault Systems Using Cold-Formed Steel Sections TUNCA O., AYDOĞDU İ., ÇARBAŞ S.

European Council of Civil Engineers, vol.15, pp.9-16, 2017 (Peer-Reviewed Journal)

9. Comparison of metaheuristics on multi objective (cost&CO2) optimization of RC cantilever retaining walls

AYDOĞDU İ.

PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.23, no.3, pp.221-231, 2017 (ESCI)

10. New Iterative method to Calculate Base Stress of Footings under Biaxial Bending AYDOĞDU İ.

International Journal of Engineering & Applied Sciences, vol.8, no.4, pp.40-48, 2016 (Peer-Reviewed Journal)

11. Discrete Singular Convolution and Differential Quadrature Method for Buckling Analysis of Laminated Composite Plates

MERCAN K., AYDOĞDU İ., CİVALEK Ö.

International Journal of Engineering & Applied Sciences (IJEAS), vol.4, no.8, pp.66-74, 2016 (Peer-Reviewed Journal)

12. Optimum Design of Steel Space Frames by Hybrid Teaching-Learning Based Optimization and Harmony Search Algorithms

AKIN A., AYDOĞDU İ.

Optimum Design of Steel Space Frames by Hybrid Teaching-Learning Based Optimization and Harmony Search Algorithms, vol.9, no.1, pp.1344-1351, 2015 (Peer-Reviewed Journal)

### 13. Bees Algorithm Based Optimum Design of Open Canal Sections

AYDOĞDU İ., AKIN A.

InternationalJournalofEngineeringandAppliedSciences, vol.3, no.4, pp.21-31, 2011 (Peer-Reviewed Journal)

### **Books & Book Chapters**

1. Optimum Design of 3D Steel Frames with Composite Slabs Using Adaptive Harmony Search Method Saka M. P., Aydoğdu İ., Taymuş R. B., Geem Z. W.

in: Soft Computing Recent Advances and Applications in Engineering and Mathematical Sciences, Pradip Debnath,Oscar Castillo,Poom Kumam, Editor, CRC, New York, London, pp.1-31, 2023

2. Electrostatic Discharge Algorithm for Optimum Design of Real-Size Truss Structures AYDOĞDU İ., T. O. Ö., ÇARBAŞ S.

in: Nature-Inspired Metaheuristic Algorithms for Engineering Optimization Applications, Carbas Serdar, Toktas Abdurrahim, Ustun Deniz, Editor, Springer, pp.93-109, 2021

3. Transportation Path Assignment Within the Airports in Turkey

DEMİR E., AYDOĞDU İ.

in: Proceedings of 6th International Conference on Harmony Search, Soft Computing and Applications. ICHSA 2020. Advances in Intelligent Systems and Computing, vol 1275, Sinan Melih Nigdeli, Joong Hoon Kim, Gebrail Bekdaş, Anupam Yadav, Editor, Springer, Singapore, pp.207-217, 2021

4. Performance of the Whale Optimization Algorithm in Space Steel Frame Optimization Problems KALE B. N., AYDOĞDU İ., DEMİR E.

in: Proceedings of 6th International Conference on Harmony Search, Soft Computing and Applications. ICHSA 2020. Advances in Intelligent Systems and Computing, vol 1275, Sinan Melih Nigdeli, Joong Hoon Kim, Gebrail Bekdaş, Anupam Yadav, Editor, Springer, Singapore, pp.139-154, 2021

5. Cuckoo Search for Optimum Design of Real-Sized High-Level Steel Frames

Çarbaş S., AYDOĞDU İ.

in: Applications of Cuckoo Search Algorithm and its Variants, Dey, Nilanjan, Editor, Springer Nature Singapore Pte Ltd., pp.123-145, 2020

6. Use of Swarm Intelligence in Structural Steel Design Optimization

SAKA M. P., AYDOĞDU İ., AKIN A., Çarbaş S.

in: Metaheuristics and Optimization in Civil Engineering, in-She Yang, Gebrail Bekdaş, Sinan Melih Nigdeli, Editor, Springer International Publishing, Zürih, pp.43-73, 2015

7. Comparative Study on Recent Metaheuristic Algorithms in Design Optimization of Cold-Formed Steel Structures

SAKA M. P., Çarbaş S., AYDOĞDU İ., AKIN A., Geem Z. W.

in: Engineering and Applied Sciences Optimization, Nikos D. Lagaros, Manolis Papadrakakis, Editor, Springer International Publishing, Barcelona, pp.145-173, 2015

8. Harmony Search Algorithms in Structural Engineering.-

SAKA M. P., AYDOĞDU İ., HASANÇEBİ O., Geem Z. W.

in: Computational Optimization and Applications in Engineering and Industry, Yang X. S. and Koziel S., Editor, Springer, Berlin, pp.145-182, 2011

### Refereed Congress / Symposium Publications in Proceedings

1. Performance of the Whale Optimization Algorithm in Space Steel Frame Optimization Problems Kale B. N., AYDOĞDU İ., Demir E.

6th International Conference on Harmony Search, Soft Computing and Applications, ICHSA 2020, İstanbul, Turkey,

22 - 24 April 2020, vol.1275, pp.139-154

#### 2. Transportation Path Assignment Within the Airports in Turkey

Demir E., AYDOĞDU İ.

6th International Conference on Harmony Search, Soft Computing and Applications, İstanbul, Turkey, 16 July 2020, pp.207-218

## 3. Size Optimization of Geodesic Wooden Domes using Social Spider Optimization Algorithm AYDOĞDU İ.

8. Uluslararası Çelik Yapılar Sempozyumu, 24 - 26 October 2019

### 4. Development of Software to Design and Calculate Capacity of Steel Connections

ŞİMŞEK R., YAHOU H. B., ÖZDEN C., AYDOĞDU İ.

8. Uluslararası Çelik Yapılar Sempozyumu, 24 - 26 October 2019

## 5. Investigation The Effect Of Greedy Selection Strategies On The Performance Of The Tree Seed Algorithm

AYDOĞDU İ., Çarbaş S., PAKSOY A.

International Conference on Mathematical Studies and Applications, Karaman, Turkey, 4 - 06 October 2018, pp.67-76

## 6. Optimum Design Of Spatial Steel Frames Using Water Cycle Algorithm With Evaporation Rate Çarbaş S., AYDOĞDU İ.

International Conference on Mathematical Studies and Applications, Karaman, Turkey, 4 - 06 October 2018, pp.459-464

## 7. Optimal Design of 2-D Steel Frames Utilizing Symbiotic Organisms Search Algorithm Çarbaş S., AYDOĞDU İ.

International Conference on Mathematical Studies and Applications, Karaman, Turkey, 4 - 06 October 2018

### 8. Prediction of modulus of elasticity by using artificial bee colony optimization

KOÇKAL N. U., AYDOĞDU İ.

Mediterranean International Conference of Pure & Applied Mathematics and Related Areas, Antalya, Turkey, 26 - 29 October 2018, pp.183-187

## 9. Optimization of High-Rise Buildings having Concrete Encased Steel Column using Tree Seed Algorithm

AYDOĞDU İ., Örmecioğlu T. O.

4 th International Conference on Mechanics of Composites, Madrid, Spain, 9 - 12 July 2018, pp.44

## 10. Soğukta Şekillendirilmiş Çelik Profiller Kullanılarak YapılanTonoz Sistemlerin Optimum Tasarımı TUNCA O., AYDOĞDU İ., Çarbaş S.

Uluslararası Katılımlı 7. Çelik Yapılar Sempozyumu, Gaziantep, Turkey, 26 - 28 October 2017, pp.221-231

## 11. Optimum Design of a Space Frame Structure with concrete filled steel tube composite columns using Social Spider Optimization

AYDOĞDU İ.

3rd International Conference on Mechanics of Composites (MECHCOMP3), Bologna, Italy, 4 - 07 July 2017, pp.32

### 12. Melez Metabulgusal Yöntemler Vasıtasıyla Optimal Çelik Yeşil Bina Tasarımı

TUNCA O., AYDOĞDU İ., Çarbaş S.

The 2nd International Congress on Engineering, Architecture and Design, Kocaeli, Turkey, 12 - 13 May 2017

### 13. Optimum Design of Composite Slabs Using Brain Storming Optimization Algorithm

AYDOĞDU İ., YÖNDEMLİ M. A., ÖZ S.

3rd International Conference on Mechanics of Composites (MECHCOMP3), Bologna, Italy, 4 - 07 July 2017, pp.31

### 14. Cost and CO2 Optimization for RC Short Column Sections Subjected to Axial Load and

#### Uniaxial/Biaxial Bending Using the Social Spider Optimization Algorithm

AKIN A., AYDOĞDU İ., Bilir T.

Sustainable Construction Materials and Technologies 4, Las Vegas, United States Of America, 7 August - 11 December 2016, pp.293-303

# 15. Optimum Design of Steel Space Frames by Hybrid Teaching-Learning Based Optimization and Harmony Search Algorithms

AKIN A., AYDOĞDU İ.

The International Conference on Computing in Civil and Building Engineering, Paris, France, 20 - 21 July 2015, pp.1486-1493

### 16. Biogeography Based CO2 and Cost Optimization of RC Cantilever Retaining Walls

AYDOĞDU İ., AKIN A.

The International Conference on Computing in Civil and Building Engineering, Paris, France, 20 - 21 July 2015, pp.1480-1485

#### 17. Optimum Design of Geodesic Aluminum Domes using Firefly Algorithm

AYDOĞDU İ., AKIN A.

ACE 2014 11th INTERNATIONAL CONGRESS ON ADVANCES IN CIVIL ENGINEERING, Antalya, Turkey, 21 - 25 October 2014, pp.1-6

## 18. Teaching and Learning Based Optimum Design Algorithm for Steel Grillage Systems to LRFD-AISC AKIN A., AYDOĞDU İ.

ACE 2014 11th INTERNATIONAL CONGRESS ON ADVANCES IN CIVIL ENGINEERING, İstanbul, Turkey, 21 - 25 October 2014, pp.1-6

## 19. Design Optimization of Low-Rise Cold-Formed Steel Frames with Thin-Walled Sections using the Artificial Bee Colony Algorithm

Çarbaş S., AYDOĞDU İ., Tokdemir T., SAKA M. P.

CST2014: Proceedings of the Twelfth International Conference on Computational Structures Technology, Neples, Italy, 2 - 05 September 2014, no.172, pp.1-26

## 20. Teaching and Learning Based Optimization Algorithm for Optimum Design of Steel Buildings AYDOĞDU İ., AKIN A.

ICCCBE2014: The International Conference on Computing in Civil and Building Engineering, Orlando, United States Of America, 23 - 25 June 2014, pp.2167-2175

### 21. Optimum Design of Retaining Walls Using Adaptive Firefly Algorithm

AKIN A., AYDOĞDU İ.

 $ICSEA 2014: International\ Civil\ Engineering\ Architecture\ Symposium\ for\ Acedemicians,\ Antalya,\ Turkey,\ 17-20$  May 2014, pp.1-19

# 22. Optimum Design of Aluminum Space Trusses Using Teacher and Learning Based Optimization Algorithm

AYDOĞDU İ., AKIN A.

ICSEA2014: International Civil Engineering Architecture Symposium for Acedemicians, Antalya, Turkey, 17 - 20 May 2014, pp.1-15

## 23. An Optimization Study of Solar Air Heaters by Using Artificial Bee Colony Optimization Algorithm YILDIRIM C., AYDOĞDU İ.

 $\hbox{EWRES-II. European Workshop on Renewable Energy Systems, Antalya, Antalya, Turkey, 20-30 September 2013, pp.1-10 } \\$ 

## 24. A Comparative Study Of Three Metaheuristics For Optimum Design Of Engineering Structures Çarbaş S., AYDOĞDU İ., Saka M. P.

 $10 th\ World\ Congress\ on\ Structural\ and\ Multidisciplinary\ Optimization,\ Orlando,\ United\ States\ Of\ America,\ 19-24$  May 2013, pp.1-10

#### 25. Optimum Design of Steel Space Frames by Arti?cial Bee Colony Algorithm.

AYDOĞDU İ., AKIN A., Saka M. P.

10th Congress on Advances in Civil Engineering, Ankara, Turkey, 17 - 19 October 2012, pp.1-10

### 26. Optimum Design of Open Canal Using Arti?cial Bee Colony Algorithm.

AYDOĞDU İ., AKIN A., SAKA M. P.

InternationalConstructionCongress2012, Isparta, Turkey, 11 - 13 October 2012, pp.239-249

## 27. Discrete Design Optimization of Space Steel Frames using the Adaptive Firefly Algorithm AYDOĞDU İ., AKIN A., SAKA M. P.

Proceedings of the Eleventh International Conference on Computational Structures Technology, Dubrovnik, Croatia, 4 - 07 July 2012, pp.1-20

### 28. Sudoku Puzzle Solving with Bees Algorithm

AKIN A., AYDOĞDU İ.

2nd International Symposium on Computing in Science and Engineering, Aydın, Turkey, 1 - 04 June 2011, pp.1230-1235

29. Evaluation of recent improvements in harmony search based structural optimization algorithms. SAKA M. P., AYDOĞDU İ., HASANÇEBİ O.

The Tenth International Conference on Computational Structures Technology, Valencia, Spain, 14 September - 17 October 2010, pp.1-20

30. Optimum Design of Cold-Formed Open Thin Walled Sections Using Harmony Search Algorithm. Çarbaş S., AYDOĞDU İ., SAKA M. P.

9th International Congress on Advances in Civil Engineering, Trabzon, Turkey, 27 - 30 June 2010, pp.1-10

31. Optimum Design of Steel Frames Using Adaptive Harmony Search Method to LRFD-AISC. Çarbaş S., AYDOĞDU İ., SAKA M. P.

8th World Congress on Structural and Multidisciplinary Optimization, Lizbon, Portugal, 1 - 05 June 2010, pp.1-10

32. Evaluation of Recent Improvements in Harmony Search based Structural Optimization Algorithms Saka M. P., AYDOĞDU İ., Hasacebi O.

10th International Conference on Computational Structures Technology, Valencia, Spain, 14 - 17 September 2010, vol 93

33. Ant Colony Optimization of Irregular Steel Frames Including E?ect of Warping AYDOĞDU İ., SAKA M. P.

Twelfth International Conference on Civil, Structural and Environmental Engineering Computing., Maderia, Spain, 1 - 04 September 2009, vol.32, no.4, pp.1-20

### **Expert Reports**

1. **75 Yataklı Antalya Gazipaşa Hastanesi D Blok Kısmında Görülen Çatlaklar Hakkında Değerlendirme** AYDOĞDU İ., ÖZCAN O.

Gürtaş Yapı Endüstri ve Tic.A.Ş., pp.8, Antalya, 2014

2. Evaluation of the Cracks Observed in the D Block of Antalya Gazipaşa Hospital with 75 Beds Aydoğdu İ., Özcan O.

Gürtaş Yapı Endüstri ve Tic.A.Ş., pp.8, Antalya, 2014

### Academic and Administrative Experience

| 2014 - 2022 | Deputy Head of | Akdeniz University, Faculty Of Engineering, Department of Civil |
|-------------|----------------|---|
|             | Department     | Engineering   |

#### Courses

Computer Programming Section 1, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2012 - 2013

Computer programming section 2, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2012 - 2013

Optimum design of structures, Postgraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016

Engineering mechanics, statics, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014

Engineering mechanics, Dynamics, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2016 - 2017,

2015 - 2016, 2014 - 2015, 2013 - 2014

Matrix structural analysis, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2016 - 2017, 2015 - 2016

Advanced numerical methods in engineering, Postgraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017

İnşaat Mühendisliğinde Optimizasyon, Postgraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015 İnşaat Mühendisliğine giriş, Undergraduate, 2016 - 2017

Cable structures, Undergraduate, 2016 - 2017, 2015 - 2016

Structural members, Undergraduate, 2014 - 2015, 2013 - 2014

Structural engineering, Undergraduate, 2012 - 2013

### **Advising Theses**

Aydoğdu I., Investigation of the performance of current metaheuristic optimization algorithms in the optimum dimensioning problem of steel structures., Postgraduate, G.RASOOL(Student), 2020

Aydoğdu İ., Optimal design of shallow foundations using meta-heuristic methods, Doctorate, M.ALPAY(Student), 2019 Aydoğdu İ., GPU-based optimization of steel frame systems, Postgraduate, T.OĞUZ(Student), 2019

Aydoğdu İ., Determination of the base stress distribution in elastic continuous foundations with large eccentricities by meta-heuristic techniques, Postgraduate, S.TURAN(Student), 2019

Aydoğdu İ., Murat Y. Ş., Flow-based route optimization in public transport, Doctorate, K.AKGÖL(Student), 2018 Aydoğdu İ., Beton dolgulu çelik tüp kompozit kolonlu yüksek katlı yapıların sosyal örümcek optimizasyonu algoritması ile optimum boyutlandırılması, Postgraduate, A.PAKSOY(Student), 2018

Aydoğdu I., Optimal design of aluminum truss systems according to meta-heuristic optimization techniques, Postgraduate, V.KILIÇ(Student), 2018

Aydoğdu I., OPTIMUM DESIGN OF DOUBLE T SECTION PRESTRESSED CONCRETE ELEMENTS ACCORDING TO META-INTUITIVE OPTIMIZATION TECHNIQUES, Postgraduate, C.Shoma(Student), 2017

Aydoğdu I., Examining the inconsistency between the legal speed limit and operating speed in traffic, considering the driver and road geometry of our country., Postgraduate, G.ÇAYIRKUŞU(Student), 2017

Aydoğdu İ., Efe P., Dimensioning of Plane Steel Frames by Social Spider Optimization, Postgraduate, M.Yetkin(Student), 2015

### Activities in Scientific Journals

International of Engineering and Applied Sciences, First Editor, 2021 - Continues

### Metrics

Publication: 70 Citation (WoS): 271 Citation (Scopus): 295 H-Index (WoS): 8 H-Index (Scopus): 8

### Congress and Symposium Activities

The International Conference on Computing in Civil and Building Engineering(ICSE2015), Attendee, Paris, France, 2015 11th INTERNATIONAL CONGRESS ON ADVANCES IN CIVIL ENGINEERING, Attendee, İstanbul, Turkey, 2014 15th International Conference on Computing in Civil and Building Engineering, Attendee, Orlando/Florida, United States Of America, 2014

International Civil Engineering & Architecture Symposium for Academicians ICESA 2014, Attendee, Side/Antalya, Turkey, 2014

II. European Workshop on Renewable Energy Systems., Attendee, Antalya, Turkey, 2013
InternationalConstructionCongress2012, Attendee, Isparta, Turkey, 2012
10th INTERNATIONAL CONGRESS ON ADVANCES IN CIVIL ENGINEERING, Attendee, Ankara, Turkey, 2012
The Eleventh International Conference on Computational Structures Technology, Attendee, Dubrovnik, Croatia, 2012
XV. Ulusal Mekanik Kongresi, Attendee, Isparta, Turkey, 2007

### Research Areas

Mechanics of Solid Bodies, Civil Engineering, Mechanical, Structural Mechanics, Structure, Structural Engineering, Steel Structures, Mathematics, Optimization, Numerical Analysis, Natural Sciences, Engineering and Technology