



# İBRAHİM AYDOĞDU

## PROF.

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### International Researcher IDs

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

ScopusID: 41260920300

Yoksis Researcher ID: 128447



## Education

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Post Doctorate  
2022 - 2023

Georgia Institute of Technology, Faculty of Engineering, Department of  
Mechanical engineering, United States Of America

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Doctorate  
2002 - 2010

Middle East Technical University, Faculty Of Engineering, Department Of  
Engineering Sciences, Turkey

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Undergraduate  
1998 - 2002

Akdeniz University, Faculty Of Engineering, Department of Civil Engineering,  
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

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Associate Professor  
2018 - Continues

Akdeniz University, Faculty of Engineering, Department of Civil Engineering

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Associate Professor

2022 - 2023

Georgia Institute of Technology, Engineering faculty, Mechanical engineering

Assistant Professor

2013 - 2018

Akdeniz University, Faculty of Engineering, Department of Civil Engineering

Research Assistant

2010 - 2013

Akdeniz University, Faculty of Engineering, Department of Civil Engineering

Research Assistant

2002 - 2010

Middle East Technical University, Faculty Of Engineering, Department Of Engineering Sciences

Other

2008 - 2008

The University of Memphis, Engineering, Civil Engineering

## Supported Projects

1. Helhel S., Aydođdu İ., Başıyigit İ. B., TUBITAK Project, Design of Intra-Column Corrosion Detection Radar System in Buildings as a Decision Support System, 2021 - 2023
2. AYDOĐDU 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. AYDOĐDU 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. AYDOĐDU 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., Aydođdu İ., TUBITAK Project, Development of External Reinforcement Methods with Buckling Prevented Steel Braces of Reinforced Concrete Structures, 2017 - 2020
6. AYDOĐDU 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., AYDOĐDU 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. Aydođdu İ., TUBITAK Project, DEVELOPMENT OF A PROGRAM THAT DESIGNS THE OPTIMUM GEOMETRY FOR URBAN INTERCHANGES WITH DESIGN ERRORS, 2017 - 2018
9. AYDOĐDU İ., AYDIN M. M., Project Supported by Higher Education Institutions, Şehiriçi Kavşaklardaki Geometrik Disiplinsizliğin Optimize Edilerek İrdelenmesi, 2017 - 2017
10. Aydođdu İ., TUBITAK Project, Optimum design of Composite Slabs, 2015 - 2016
11. Aydođdu I., TUBITAK Project, Optimum Design of Sinusoidal Beams, 2015 - 2016
12. Aydođdu İ., TUBITAK Project, DEVELOPMENT OF A PROGRAM THAT MAKES THE OPTIMUM DESIGN OF TRUE SYSTEMS, 2015 - 2016
13. Aydođdu İ., TUBITAK Project, Optimum Sizing of Reinforced Concrete and Steel Structures by Considering Earthquake Loads, 2007 - 2009

## Jury Memberships

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

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

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

- 1. Development of new modified delay and queue length methods for urban signalized intersections: A case of Antalya city**  
Aydın M. M., AYDOĞDU İ.  
Ain Shams Engineering Journal, vol.16, no.2, 2025 (SCI-Expanded)
- 2. A comparative analysis of metaheuristic algorithms for optimizing curved roof structures**  
Üstüner B., AYDOĞDU İ., Özyürek C., Doğan E.  
Structures, vol.70, 2024 (SCI-Expanded)
- 3. Scalable Bayesian optimization based on exploitation-enhanced sparse Gaussian process**  
Aydogdu I., Wang Y.  
Structural and Multidisciplinary Optimization, vol.67, no.12, 2024 (SCI-Expanded)
- 4. Cost optimization of tall buildings having tube composite columns using social spider algorithm**  
Paksoy A., AYDOĞDU İ., Akin A.  
Structural Design of Tall and Special Buildings, vol.33, no.13, 2024 (SCI-Expanded)
- 5. Seismic design optimization of space steel frame buildings equipped with triple friction pendulum base isolators**  
Taymuş R. B., AYDOĞDU İ., Carbas S., Ormecioglu T. O.  
Journal of Building Engineering, vol.92, 2024 (SCI-Expanded)
- 6. GPU-based parallel programming for FEM analysis in the optimization of steel frames**  
Örmecioglu T. O., AYDOĞDU İ., ÖRMECİOĞLU H. T.  
Journal of Asian Architecture and Building Engineering, 2024 (SCI-Expanded)
- 7. Efficiency in public transportation: a new flow direction method for optimizing multi-route networks**  
Akgol K., Demir E., AYDOĞDU İ., Murat Y. S.  
Transportation Letters, 2024 (SCI-Expanded)
- 8. 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)
- 9. Optimum design of pin-jointed aluminum structures to AA-ASD using three Meta-heuristic algorithms**  
Aydoğdu İ., Kılıç V., Akin A.  
Structures, vol.55, pp.1406-1422, 2023 (SCI-Expanded)
- 10. 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)
- 11. 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)
- 12. 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)
- 13. 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)
14. **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)
  15. **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)
  16. **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)
  17. **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)
  18. **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)
  19. **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)
  20. **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)
  21. **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. **Path inference implementing the cluster path covering method**  
AKGÖL K., DEMİR E., AYDOĞDU İ.  
Pamukkale Üniversitesi Mühendislik Bilimleri Dergisi, vol.30, no.1, pp.53-62, 2024 (ESCI)
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.  
International Journal of Engineering and Applied Sciences, vol.3, no.4, pp.21-31, 2011 (Peer-Reviewed Journal)

## Books

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. **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, Gebrael Bekdaş, Anupam Yadav, Editor, Springer, Singapore, pp.207-217, 2021
3. **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
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 Bekdas, 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. **Utilization of Harmony Search Algorithm in Optimal Structural Design of Cold-Formed Steel Structures**  
ÇARBAŞ S., AYDOĞDU İ.  
in: *Harmony Search Algorithm: Proceedings of the 3rd International Conference on Harmony Search Algorithm (ICHSA 2017)*, Javier Del Ser, Editor, Springer, Singapore, pp.240-251, 2017
  7. **Use of Swarm Intelligence in Structural Steel Design Optimization**  
ÇARBAŞ S., MEHMET POLAT S., AYDOĞDU İ., AKIN A.  
in: *Metaheuristics and Optimization in Civil Engineering*, Xin-She Yang, Gebrail Bekdas, Sinan Melih Nigdeli, Editor, Springer International Publishing, Londrina, pp.43-73, 2016
  8. **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 Bekdas, Sinan Melih Nigdeli, Editor, Springer International Publishing, Zürich, pp.43-73, 2015
  9. **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
  10. **Comparative Study on Recent Metaheuristic Algorithms in Design Optimization of Cold-Formed Steel Structures**  
MEHMET POLAT S., ÇARBAŞ S., AYDOĞDU İ., AKIN A., ZONG WOO G.  
in: *Engineering and Applied Sciences Optimization*, Nikos D. Lagaros, Manolis Papadrakakis, Editor, Springer International Publishing, BARCELONA, pp.145-173, 2015
  11. **Analysis of Swarm Intelligence-Based Algorithms for Constrained Optimization**  
MEHMET POLAT S., DOĞAN E., AYDOĞDU İ.  
in: *Swarm Intelligence and Bio Inspired Computation Theory and Applications*, Xin-She Yang, Zhihua Cui, Renbin Xiao, Amir Hossein Gandomi, Mehmet Karamanoglu, Editor, ELSEVIER, Waltham, Massachusetts, pp.25-48, 2013
  12. **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
  13. **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 Xin-She, Koziel Slawomir, Editor, Springerlink, Berlin, pp.145-182, 2011

## Papers Published in Refereed Scientific Meetings

1. **Scalable Bayesian Optimization with Metaheuristics for Efficiency and Exploitation**  
Aydoğdu I., Kempner M., Wang Y.  
ASCE Engineering Mechanics Institute 2023 Conference, Georgia, United States Of America, 6 - 09 June 2023, pp.650-651
2. **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

3. **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
4. **Size Optimization of Geodesic Wooden Domes using Social Spider Optimization Algorithm**  
AYDOĞDU İ.  
8. Uluslararası Çelik Yapılar Sempozyumu, 24 - 26 October 2019
5. **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
6. **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
7. **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
8. **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
9. **Prediction of modulus of elasticity by using artificial bee colony optimization**  
KOCKAL N. U., AYDOĞDU İ.  
Mediterranean International Conference of Pure & Applied Mathematics and Related Areas, Antalya, Turkey, 26 - 29 October 2018, pp.183-187
10. **Optimization of High-Rise Buildings having Concrete Encased Steel Column using Tree Seed Algorithm**  
AYDOĞDU İ., Örmecioglu T. O.  
4 th International Conference on Mechanics of Composites, Madrid, Spain, 9 - 12 July 2018, pp.44
11. **Structural Design Optimization through Water Cycle Algorithm with Evaporation Rate**  
TUNCA O., AYDOĞDU İ., ERDAL F., ÇARBAŞ S.  
International Conference on Applied Mathematics in Engineering, Balıkesir, Turkey, 27 - 29 June 2018, pp.169
12. **Optimal Discrete Design of Steel Truss Systems Using Symbiotic Organisms Search**  
TUNCA O., AYDOĞDU İ., ERDAL F., ÇARBAŞ S.  
International Congress on Computational Mechanics, Chania, Greece, 4 - 06 June 2018, pp.58
13. **Symbiotic Organisms Search Based Optimal Design of Steel Rigid Frames**  
TUNCA O., AYDOĞDU İ., ÇARBAŞ S.  
International Congress on Computational Mechanics, CHANIA, Greece, 4 - 06 June 2018, pp.57
14. **Grasshopper Optimization Algorithm Based Design of Structures**  
Tunca O., Aydoğdu İ., Omercioglu T. O., Carbas S.  
International Conference on Applied Mathematics in Engineering (ICAME), Balıkesir, Turkey, 27 June 2018, pp.170-171
15. **Soğukta Şekillendirilmiş Çelik Profiller Kullanılarak Yapılan Tonoz Sistemlerin Optimum Tasarımı**  
TUNCA O., AYDOĞDU İ., Çarbaş S.  
Uluslararası Katılımlı 7. Çelik Yapılar Sempozyumu, Gaziantep, Turkey, 26 - 28 October 2017, pp.221-231
16. **Çelik Çatılarda Kullanılan Aşık Sistemlerinin Optimum Tasarımı**  
AYDOĞDU İ., KUBAR M. M., ŞEN D., TUNCA O., ÇARBAŞ S.  
Uluslararası Katılımlı 7. Çelik Yapılar Sempozyumu, Gaziantep, Turkey, 26 - 28 October 2017, pp.241-250

17. **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
18. **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
19. **Melez Metabulğusal Yöntemler Vasıtasıyla Optimal Çelik Yeşil Bina Tasarımı**  
TUNCA O., AYDOĞDU İ., ÇARBAŞ S.  
2. ULUSLARARASI MÜHENDİSLİK MİMARLIK VE TASARIM KONGRESİ, Kocaeli, Turkey, 12 - 13 May 2017, pp.422-423
20. **Melez Metabulğusal 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
21. **Structural Shape Design Optimization of Steel Lamella Domes**  
TUNCA O., AYDOĞDU İ., ERDAL F., ÇARBAŞ S.  
2.Uluslararası Mühendislik Mimarlık ve Tasarım Kongresi, Kocaeli, Turkey, 12 - 13 May 2017, pp.420-421
22. **Utilization of Harmony Search Algorithm in Optimal Structural Design of Cold-Formed Steel Structures**  
ÇARBAŞ S., AYDOĞDU İ.  
The 3rd International Conference on Harmony Search Algorithm, Bilbao, Spain, 22 - 24 February 2017, vol.514, pp.240-251
23. **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
24. **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
25. **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
26. **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
27. **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
28. **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, Naples, Italy, 2 - 05 September 2014, no.172, pp.1-26
29. **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

30. **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
31. **Optimum Design of Retaining Walls Using Adaptive Firefly Algorithm**  
AKIN A., AYDOĞDU İ.  
ICSEA2014: International Civil Engineering Architecture Symposium for Acedemicians, Antalya, Turkey, 17 - 20 May 2014, pp.1-19
32. **Optimization Study of Solar Air Heaters by Using Artificial Bee Colony Optimization Algorithm**  
YILDIRIM C., AYDOĞDU İ.  
EWRES – II. European Workshop on Renewable Energy Systems, Antalya, Turkey, 20 - 30 September 2013
33. **An Optimization Study of Solar Air Heaters by Using Artificial Bee Colony Optimization Algorithm**  
YILDIRIM C., AYDOĞDU İ.  
EWRES – II. European Workshop on Renewable Energy Systems, Antalya, Antalya, Turkey, 20 - 30 September 2013, pp.1-10
34. **A Comparative Study Of Three Metaheuristics For Optimum Design Of Engineering Structures**  
Çarbaş S., AYDOĞDU İ., Saka M. P.  
10th World Congress on Structural and Multidisciplinary Optimization, Orlando, United States Of America, 19 - 24 May 2013, pp.1-10
35. **Optimum Design of Steel Space Frames by Artificial Bee Colony Algorithm**  
AYDOĞDU İ., AKIN A., SAKA M. P.  
10th International Congress on Advances in Civil Engineering, Ankara, Turkey, 17 October 2012
36. **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
37. **Açık Kanalların Yapay Arı Kolonisi Yöntemi Kullanarak Optimum Tasarımı**  
AYDOĞDU İ.  
International Construction Congress 2012, Isparta, Turkey, 11 - 13 October 2012
38. **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
39. **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
40. **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
41. **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
42. **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
43. **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
44. **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
45. **Ant Colony Optimization of Irregular Steel Space Frames including the Effect of Warping**  
AYDOĞDU İ., SAKA M. P.  
Twelfth International Conference on Civil, Structural and Environmental Engineering Computing, MADERIA, Portugal, 1 - 04 September 2009
46. **Ant Colony Optimization of Irregular Steel Frames Including Effect 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
47. **YANAL YÜKLER ALTINDA DÜZENSİZ ÇELİK ÇERÇEVELERİN ANALİZİNDE ÇARPILMA ETKİSİNİN İNCELENMESİ**  
AYDOĞDU İ., SAKA M. P.  
XV. ULUSAL MEKANİK KONGRESİ, Isparta, Turkey, 3 - 07 September 2007

## Expert Reports

1. **75 Yataklı Antalya Gazipaşa Hastanesi D Blok Kısımında 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

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2014 - 2022	<b>Deputy Head of Department</b>	Akdeniz University, Faculty Of Engineering, Department of Civil Engineering
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## Courses

### Postgraduate

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

### Undergraduate

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

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

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

## Supervised Theses

Aydoğdu İ., YAPAY SİNİR AĞI KULLANARAK YAPISAL OPTİMİZASYON PROBLEMLERİNDEKİ ÇÖZÜM SÜREÇLERİNİN KISALTILMASI, Doctorate, T.OĞUZ(Student), 2024

Aydoğdu İ., Nano kafes sistemlerin şekil optimizasyonu, Postgraduate, A.HAFIZ(Student), 2021

Aydoğdu İ., Üçlü sarkaç izolatörlerle sismik olarak izole edilen çelik konstrüksiyon binaların optimum tasarımı, Doctorate, R.BURAK(Student), 2021

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

Aydoğdu İ., GPU-based optimization of steel frame systems, Postgraduate, T.OĞUZ(Student), 2019

Aydoğdu İ., Optimal design of shallow foundations using meta-heuristic methods, Doctorate, M.ALPAY(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., Beton dolgulu çelik tüp kompozit kolonlu yüksek katlı yapıların sosyal örümcek optimizasyonu algoritması ile optimum boyutlandırılması, Postgraduate, A.PAKSOY(Student), 2018

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

Aydoğdu İ., Murat Y. Ş., Flow-based route optimization in public transport, Doctorate, K.AKGÖL(Student), 2018

Aydoğdu İ., 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: 96

Citation (WoS): 271

Citation (Scopus): 368

H-Index (WoS): 8

H-Index (Scopus): 9

## 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  
International Construction Congress 2012, 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