

## Res. Asst. SEFA ARAS

### Personal Information

**Office Phone:** [+90 462 377 8380](tel:+904623778380) Extension: 8380

**Email:** sefaaras@ktu.edu.tr

**Web:** <https://avesis.ktu.edu.tr//sefaaras>

**Address:** KTÜ Of Teknoloji Fakültesi, Yazılım Mühendisliği Bölümü, Çamlı Mahallesi Hacı Mehmet Baheddin Ulusoy Caddesi No:144 Of/TRABZON

### International Researcher IDs

ScholarID: 7MDGoxoAAAAJ

ORCID: 0000-0002-4043-3754

Publons / Web Of Science ResearcherID: V-9527-2017

ScopusID: 57200284743

Yoksis Researcher ID: 240729

### Education Information

Doctorate, Karadeniz Technical University, -, Bilgisayar Mühendisliği, Turkey 2018 - Continues

Postgraduate, Karadeniz Technical University, -, Bilgisayar Mühendisliği, Turkey 2015 - 2018

Undergraduate, Gazi University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, Turkey 2009 - 2014

### Foreign Languages

English, B1 Intermediate

### Research Areas

Computer Sciences, Software, Software Engineering, Engineering and Technology

### Academic Titles / Tasks

Research Assistant, Karadeniz Technical University, Of Teknoloji Fakültesi, Yazılım Mühendisliği, 2015 - Continues

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

- I. **Fitness-distance balance based artificial ecosystem optimisation to solve transient stability constrained optimal power flow problem**  
Sonmez Y., Duman S., Kahraman H. T., Kati M., Aras S., Guvenc U.  
JOURNAL OF EXPERIMENTAL & THEORETICAL ARTIFICIAL INTELLIGENCE, vol.36, no.5, pp.745-784, 2024 (SCI-Expanded)
- II. **Development of the Natural Survivor Method (NSM) for designing an updating mechanism in metaheuristic search algorithms**  
Kahraman H. T., Kati M., Aras S., Taşçı D. A.

ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, vol.122, 2023 (SCI-Expanded)

- III. **A comprehensive performance analysis of meta-heuristic optimization techniques for effective organic rankine cycle design**  
Gürgen S., Kahraman H. T., Aras S., Altın İ.  
APPLIED THERMAL ENGINEERING, vol.213, 2022 (SCI-Expanded)
- IV. **A powerful meta-heuristic search algorithm for solving global optimization and real-world solar photovoltaic parameter estimation problems**  
Duman S., KAHRAMAN H. T., SÖNMEZ Y., GUVENC U., KATI M., ARAS S.  
Engineering Applications of Artificial Intelligence, vol.111, 2022 (SCI-Expanded)
- V. **Dynamic FDB selection method and its application: modeling and optimizing of directional overcurrent relays coordination**  
KAHRAMAN H. T., BAKIR H., DUMAN S., KATI M., ARAS S., GUVENC U.  
APPLIED INTELLIGENCE, vol.52, no.5, pp.4873-4908, 2022 (SCI-Expanded)
- VI. **Fitness-Distance Balance based adaptive guided differential evolution algorithm for security-constrained optimal power flow problem incorporating renewable energy sources**  
GUVENC U., DUMAN S., KAHRAMAN H. T., ARAS S., KATI M.  
Applied Soft Computing, vol.108, 2021 (SCI-Expanded)
- VII. **Development of a Lévy flight and FDB-based coyote optimization algorithm for global optimization and real-world ACOPF problems**  
Duman S., KAHRAMAN H. T., GUVENC U., ARAS S.  
Soft Computing, vol.25, pp.6577-6617, 2021 (SCI-Expanded)
- VIII. **A novel stochastic fractal search algorithm with fitness-Distance balance for global numerical optimization**  
ARAS S., GEDİKLİ E., KAHRAMAN H. T.  
Swarm and Evolutionary Computation, vol.61, 2021 (SCI-Expanded)
- IX. **Fitness-distance balance (FDB): A new selection method for meta-heuristic search algorithms**  
Kahraman H. T., Aras S., Gedikli E.  
KNOWLEDGE-BASED SYSTEMS, vol.190, 2020 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Analysis, Test and Management of the Meta-Heuristic Searching Process: An Experimental Study on SOS**  
Kahraman H. T., Aras S., Sönmez Y., Güvenç U., Gedikli E.  
JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, vol.23, no.2, pp.445-455, 2020 (ESCI)
- II. **Current status and future perspectives in articles about coding learning at pre-university level published from 2009 to 2017: A content analysis study**  
ÖZYURT H., ÖZYURT Ö., ARAS S.  
Turkish Journal of Computer and Mathematics Education, vol.10, no.3, pp.567-587, 2019 (Scopus)
- III. **Development of Programming Learning Environment With Compiler Techniques**  
ARAS S., GEDİKLİ E.  
Journal of Investigations on Engineering Technology, vol.1, no.2, pp.14-18, 2018 (Peer-Reviewed Journal)
- IV. **Meta-Sezgisel Arama Algoritmalarının Test Edilmesi İçin Yeni Yöntemlerin Geliştirilmesi**  
ARAS S., KAHRAMAN H. T., SÖNMEZ Y., GÜVENÇ U.  
İleri Teknoloji Bilimleri Dergisi, vol.6, no.2, pp.1-8, 2017 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Investigation of the Most Effective Meta-Heuristic Optimization Technique for Constrained**

## Engineering Problems

KAHRAMAN H. T., ARAS S.

in: Artificial Intelligence and Applied Mathematics in Engineering Problems, Hemanth, D., J., Editor, Springer, Cham, pp.484-501, 2020

## Refereed Congress / Symposium Publications in Proceedings

- I. **Investigation of the Most Effective Meta-Heuristic Optimization Technique for Constrained Engineering Problems**  
KAHRAMAN H. T., ARAS S.  
International Conference on Artificial Intelligence and Applied Mathematics in Engineering (ICAIAME 2019), 20 - 22 April 2019
- II. **Meta-sezgisel Algoritmaların Çok Boyutlu Problem Uzaylarındaki Arama Performanslarının Araştırılması**  
Aras E., KAHRAMAN H. T., ARAS S.  
2018 International Conference on Artificial Intelligence and Data Processing, IDAP 2018, Malatya, Turkey, 28 - 30 September 2018
- III. **A Framework Based on Compiler Design Techniques for Programming Learning Environments**  
ARAS S., GEDİKLİ E., ÖZYURT Ö.  
2018 International Conference on Artificial Intelligence and Data Processing, IDAP 2018, Malatya, Turkey, 28 - 30 September 2018
- IV. **META-SEZGİSEL ALGORİTMALARIN DENEYSEL ÇALIŞMALARINDAKİ STANDARTSIZLIKLAR VE ÇÖZÜM ÖNERİLERİ**  
KAHRAMAN H. T., ARAS S., GEDİKLİ E.  
INTERNATIONAL ACADEMIC RESEARCH CONGRESS, 30 October - 03 November 2018, pp.1466-1472
- V. **META-SEZGİSEL OPTİMİZASYON ÇALIŞMALARINDA BENCHMARK PROBLEMLERİNDE KARŞILAŞILAN STANDARTSIZLIKLAR VE ÇÖZÜM ÖNERİLERİ**  
KAHRAMAN H. T., ARAS S., GEDİKLİ E.  
INTERNATIONAL ACADEMIC RESEARCH CONGRESS, 30 October - 03 December 2018, pp.1494-1501
- VI. **Development and testing of meta heuristic regression tool**  
KAHRAMAN H. T., ARAS S., SÖNMEZ Y., GÜVENÇ U.  
7 th International Conference on Advanced Technologies (ICAT'18), 28 April - 01 May 2018
- VII. **Akıllı SQL Öğretici İçin bir Çerçeve Önerisi**  
ÖZYURT Ö., ÖZYURT H., ARAS S.  
12. Uluslararası Bilgisayar ve Öğretim Teknolojileri Sempozyumu, İzmir, Turkey, 2 - 04 May 2018, pp.48-49
- VIII. **Kodlama Eğitimi İçin Yenilikçi bir Eğitsel Yazılımın Altyapısına Yönelik Çerçeve**  
ÖZYURT H., ÖZYURT Ö., REİSOĞLU İ., ARAS S.  
12. Uluslararası Bilgisayar ve Öğretim Teknolojileri Sempozyumu, İzmir, Turkey, 2 - 04 May 2018, pp.16-24
- IX. **A Framework Based on Compiler Design Techniques for Programming Learning Environments**  
ARAS S., GEDİKLİ E., ÖZYURT Ö.  
International Conference on Artificial Intelligence and Data Processing (IDAP), Malatya, Turkey, 28 - 30 September 2018
- X. **Determination of the Effects of Penalty Coefficient on the Meta-Heuristic Optimization Process**  
ARAS S., KAHRAMAN H. T., GEDİKLİ E.  
International Conference on Artificial Intelligence and Data Processing (IDAP), Malatya, Turkey, 28 - 30 September 2018
- XI. **Meta-Sezgisel Algoritmalarda Tasarım Desenlerinin Keşfedilmesi**  
KAHRAMAN H. T., ARAS S., GÜVENÇ U., SÖNMEZ Y.  
International Engineering Research Symposium, Antalya, Turkey, 11 - 13 September 2017, pp.155-165
- XII. **Meta-Sezgisel Algoritmaların Geliştirilme ve Test Süreçlerinde Standartların Belirlenmesi**

KAHRAMAN H. T., ONUR K., ARAS S., GÜVENÇ U.

International Engineering Research Symposium, Antalya, Turkey, 11 - 13 September 2017, pp.108-110

**XIII. Erken Yaşlarda Kodlama Eğitimine Yönelik Araştırmalardaki Eğilimin İncelenmesi: 2009-2016 Döneminde Yayımlanan Makalelerin İçerik Analizi**

ARAS S., ÖZYURT Ö., ÖZYURT H.

11. Uluslararası Bilgisayar ve Öğretim Teknolojileri Sempozyumu, Malatya, Turkey, 24 - 26 May 2017, pp.1

**XIV. Exploring the Effect of Distribution Methods on Meta-Heuristic Searching process**

KAHRAMAN H. T., ARAS S., GUVENC U., SONMEZ Y.

2017 International Conference on Computer Science and Engineering (UBMK), Antalya, Turkey, 5 - 08 October 2017, pp.371-376

**XV. Genetik Algoritmalara Dayalı Haftalık Ders Çizelgeleme Aracı**

ARAS S., AYDIN H., GEDİKLİ E.

International Conference on Computer Science and Engineering, Tekirdağ, Turkey, 20 - 23 October 2016, pp.828-832

**XVI. Çocukların kodlama öğrenebilecekleri ortamların incelenmesi**

ÖZYURT H., ÖZYURT Ö., ARAS S.

10th International Computer & Instructional Technologies Symposium, Rize, Turkey, 16 - 18 May 2016, pp.764-771

## Supported Projects

ÖZTÜRK H. T., ARAS S., GEDİKLİ E., Project Supported by Higher Education Institutions, Beton Basınç Dayanımının Bilgisayarla Görmeye Dayalı Tahribatsız Tahmin Edilmesi, 2016 - 2020

## Metrics

Publication: 30

Citation (WoS): 464

Citation (Scopus): 513

H-Index (WoS): 9

H-Index (Scopus): 9