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Personal Information

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Education Information

Doctorate, Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar Mühendisliği, Turkey 2008 - 2014

Doctorate, The University Of Birmingham, School Of Computer Science, (Doktora İçi Araştırma), United Kingdom 2011 - 2012

Postgraduate, Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar Mühendisliği, Turkey 2002 - 2006

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Paralel Programlama Tekniklerinin Gelişime Dayalı Algoritmalar Üzerindeki Etkinlik Analizi, Erciyes Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği, 2014

Postgraduate, Memetik Algoritma Kullanarak PID Denetleyici Tasarımı, Erciyes Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği, 2006

Research Areas

Computer Sciences, algorithms, Parallel Algorithms, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Erciyes University, Mühendislik Fakültesi, Mekatronik Mühendisliği, 2018 - Continues

Assistant Professor, Erciyes University, Mühendislik Fakültesi, Mekatronik Mühendisliği, 2014 - 2018

Academic and Administrative Experience

Staj Başkanı, Erciyes University, Mühendislik Fakültesi, Mekatronik Mühendisliği, 2015 - Continues

Head of Department, Erciyes University, Mühendislik Fakültesi, Mekatronik Mühendisliği, 2016 - 2019

Courses

Bilgisayar Yapıları, Undergraduate, 2017 - 2018, 2018 - 2019, 2019 - 2020, 2020 - 2021

Paralel Hesaplama Sistemleri ve Par. Prog., Postgraduate, 2017 - 2018, 2018 - 2019, 2019 - 2020

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Multilevel Thresholding Segmentation of Color Plant Disease Images Using Metaheuristic Optimization Algorithms**
Akay R., Saleh R. A. A., Farea S. M. O., Kanaan M.
Neural Computing & Applications, vol.1, no.1, pp.1, 2021 (Journal Indexed in SCI Expanded)
- II. **Artificial bee colony algorithm with directed scout**
Saleh R. A. A., Akay R.
Soft Computing, vol.1, no.1, pp.1-27, 2021 (Journal Indexed in SCI Expanded)
- III. **Fast Path Planning in Multi-Obstacle Environments for Mobile Robots**
Yıldırım M. Y., Akay R.
Journal Of The Faculty Of Engineering And Architecture Of Gazi University, vol.36, no.3, pp.1551-1564, 2021 (Journal Indexed in SCI Expanded)
- IV. **A comprehensive survey on optimizing deep learning models by metaheuristics**
AKAY B., KARABOĞA D., AKAY R.
ARTIFICIAL INTELLIGENCE REVIEW, 2021 (Journal Indexed in SCI)
- V. **Parallel population-based algorithm portfolios: An empirical study**
AKAY R., BAŞTÜRK A., KALINLI A., Yao X.
NEUROCOMPUTING, vol.247, pp.115-125, 2017 (Journal Indexed in SCI)
- VI. **Performance analysis of the coarse-grained parallel model of the artificial bee colony algorithm**
BAŞTÜRK A., AKAY R.
INFORMATION SCIENCES, vol.253, pp.34-55, 2013 (Journal Indexed in SCI)
- VII. **Parallel Implementation of Synchronous Type Artificial Bee Colony Algorithm for Global Optimization**
BAŞTÜRK A., AKAY R.
JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS, vol.155, no.3, pp.1095-1104, 2012 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **A Comparative Study of Optimization Algorithms for Global Path Planning of Mobile Robots**
Yıldırım M. Y., Akay R.
Sakarya University Journal of Science, vol.25, no.2, pp.417-428, 2021 (International Refereed University Journal)
- II. **Using Recurrent Neural Network Models Trained With Artificial Bee Colony Algorithm for Robot Navigation**
Yönem E., Akay R.
European Journal of Science and Technology, vol.1, pp.318-324, 2020 (Refereed Journals of Other Institutions)
- III. **Indoor Localization Using Artificial Bee Colony with Levy Flight**
Ali Abdulghani SALEH R., AKAY R.
Avrupa Bilim ve Teknoloji Dergisi, pp.152-156, 2019 (Refereed Journals of Other Institutions)
- IV. **Classification of Melanoma Images Using Modified Teaching Learning Based Artificial Bee Colony**
Ali Abdulghani SALEH R., AKAY R.
Avrupa Bilim ve Teknoloji Dergisi, pp.225-232, 2019 (Refereed Journals of Other Institutions)
- V. **In-Body Ranging Using Ultra Wide Band Signals Using Neural Networks based on Particle Swarm Optimization**
KANAAN M., AKAY R., SUVEREN M.

Books & Book Chapters

- I. **On the Use of Artificial Intelligence Techniques in Crop Monitoring and Disease Identification**
Kanaan M., Akay R., Baykara C. K.
in: Precision Agriculture Technologies for Food Security and Sustainability, Sherine M. Abd El-Kader and Basma M. Mohammad El-Basioni, Editor, IGI Global, Pennsylvania, pp.166-186, 2020
- II. **Artificial Bee Colony Algorithm and An Application to Software Defect Prediction**
Akay R., Akay B.
in: Metaheuristic Optimization Methods: Algorithms and Engineering Applications, Fouad Bennis, Rajib K Bhattacharjya, Editor, Springer, London/Berlin, Berlin, pp.73-92, 2020

Refereed Congress / Symposium Publications in Proceedings

- I. **Maintenance Estimation with Modbus-Based Communication and Fuzzy Logic**
Ceyhan A., Akay R.
29th Signal Processing and Communications Applications Conference (SIU), İstanbul, Turkey, 9 - 11 June 2021, pp.1
- II. **Investigation of Linearity in Path Planning of Mobile Robot**
Yıldırım M. Y., Akay R.
2nd International Conference On Access To Recent Advances In Engineering And Digitalization (ARACONF 2021), Kayseri, Turkey, 10 - 12 March 2021, pp.63
- III. **Real-Time Optimization of PID Controller Parameters for DC Motor Speed Control with PSO Algorithm**
Yıldırım M. Y., Akay R.
2nd International Eurasian Conference on Science, Engineering and Technology (EurasianSciEnTech 2020), Gaziantep, Turkey, 7 - 09 October 2020, pp.543-549
- IV. **A Fast Firefly Algorithm**
AKAY R., BAŞTÜRK A.
Akıllı Sistemlerde Yenilikler ve Uygulamaları Sempozyumu (ASYU-2017), 5 - 07 October 2017
- V. **Öğretme ve Öğrenme Temelli Optimizasyon Algoritması için Paralel Yaklaşımlar**
AKAY R., BAŞTÜRK A.
Akıllı Sistemlerde Yenilikler ve Uygulamaları Sempozyumu (ASYU-2016), Düzce, Turkey, 29 September - 01 October 2016, pp.168-173
- VI. **Gezgin Satıcı Problemi için Paralel Yapay Arı Koloni Algoritması**
AKAY R., BAŞTÜRK A.
22. IEEE Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SIU-2014), Trabzon, Turkey, 23 - 25 April 2014, pp.501-505
- VII. **Paralel Diferansiyel Gelişim Algoritmasında Farklı Göç Topolojilerinin Performansa Etkisi**
AKAY R., BAŞTÜRK A.
Akıllı Sistemlerde Yenilikler ve Uygulamaları Sempozyumu ASYU-2012, Trabzon, Turkey, 3 - 04 July 2012, pp.1
- VIII. **Comparison of Fine Grained and Coarse Grained Parallel Models in Particle Swarm Optimization Algorithm**
BAŞTÜRK A., AKAY R., KALINLI A.
2nd World Conference on Information Technology WCIT-2011, Antalya, Turkey, 23 - 27 November 2011
- IX. **İşaret İşleme Algoritmalarının GPU Üzerinde Gerçekleştirilerek Hesaplama Sürelerinin Azaltılması**
BAŞTÜRK A., AKAY R., KALINLI A., YÜKSEL M. E.

Supported Projects

AKAY R., YÖNEM E., Project Supported by Higher Education Institutions, Nesnelerin İnternetinde Veri Analizi İçin Farklı Yöntemler, 2017 - 2019

BAŞTÜRK A., AKAY R., Project Supported by Higher Education Institutions, Paralel Programlama Tekniklerinin Gelişime Dayalı Algoritmalar Üzerindeki Etkinlik Analizi, 2010 - 2015

KALINLI A., AKAY R., HAZNEDAR B., BENLİ H., AKARSU B., BÜYÜKKANTARCI TOLGAY S., Project Supported by Higher Education Institutions, Erciyes Üniversitesi Araştırmacı Alt Yapısının Desteklenmesi, 2011 - 2014

KALINLI A., BAŞTÜRK A., AKAY R., Project Supported by Higher Education Institutions, Paralel Zeki Optimizasyon Algoritmalarının GPU Üzerinde Gerçekleştirilmesi, 2011 - 2014

KALINLI A., AKAY R., HAZNEDAR B., BENLİ H., Project Supported by Higher Education Institutions, ERÜ Akademisyenlerinin Bilimsel Faaliyetlerine Yönelik Envanter Sistemi Alt Yapısının Araştırılması, 2009 - 2011

Scientific Refereeing

INFORMATION SCIENCES, Journal Indexed in SSCI, March 2020

INFORMATION SCIENCES, Journal Indexed in SSCI, May 2019

TUBITAK Project, March 2018

Information Sciences, Journal Indexed in SSCI, February 2018

Neurocomputing, Journal Indexed in SSCI, November 2017

Arabian Journal for Science and Engineering, Journal Indexed in SSCI, July 2017

Engineering Applications of Artificial Intelligence, Journal Indexed in SSCI, June 2017

Citations

Total Citations (WOS):48

h-index (WOS):3