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Personal Information

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Education Information

Doctorate, Middle East Technical University, Faculty of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, Turkey
1997 - 2001

Post Graduate, Middle East Technical University, Faculty of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, Turkey
1993 - 1997

Under Graduate, Middle East Technical University, Faculty of Engineering, Elektrik-Elektronik Mühendisliği Bölümü,
Turkey 1988 - 1993

Research Areas

Communications and Network Protocols, Data Routing, Knowledge Engineering, Computer Learning, Neural Networks,
Software Engineering

Academic Titles / Tasks

Associate Professor, Middle East Technical University, Graduate School of Informatics, Information Systems, 2017 -
Continues

Assistant Professor, Middle East Technical University, Graduate School of Informatics, Information Systems, 2009 - 2017

Lecturer PhD, Middle East Technical University, Graduate School of Informatics, Information Systems, 2002 - 2009

Expert, Middle East Technical University, Faculty of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, 1993 - 1995

Advising Theses

KOÇYIĞİT A., Cost aware TCP scheduler for bandwidth aggregation, Post Graduate, S.AĞIRBAŞ(Student), 2018

KOÇYIĞİT A., SOFTWARE EQUIVALENCE CHECKING BASED ON UNIT TESTING AND SYMBOLIC EXECUTION, Post
Graduate, B.ÜNALTAY(Student), 2018

KOÇYIĞİT A., Modeling and predicting customer purchase behavior in the grocery retail industry, Doctorate,
S.PEKER(Student), 2017

KOÇYIĞİT A., An optimal application partitioning and computational offloading framework for mobile cloud computing,
Doctorate, M.KAYA(Student), 2016

KOÇYIĞİT A., Size and effort estimation based on correlations between problem and solution domain measures for
object oriented software, Doctorate, T.ERÇELEBİ(Student), 2015

KOÇYIĞİT A., A context-aware application recommendation system for mobile device users, Post Graduate,
G.BAYRAM(Student), 2015

KOÇYIĞİT A., A cloud based architecture for distributed real time processing of continuous queries, Post Graduate,
M.ONURALP(Student), 2015

KOÇYİĞİT A., A context-aware reminder system based on publish and subscribe model, Post Graduate, Ö.ÇAĞLAR(Student), 2013

KOÇYİĞİT A., Energy efficient wireless sensor network clustering algorithms and their real life performance evaluation, Post Graduate, M.ERHAN(Student), 2012

BETİN CAN A., KOÇYİĞİT A., QoS-aware service selection for web service composition, Post Graduate, R.ABDYLDAEVA(Student), 2012

KOÇYİĞİT A., Query based energy efficient clustering methods for wireless sensor networks, Post Graduate, O.KOŞAR(Student), 2011

KOÇYİĞİT A., A novel user activity prediction model for context aware computing systems, Post Graduate, S.PEKER(Student), 2011

KOÇYİĞİT A., An ontology and conceptual graph based best matching algorithm for context-aware applications, Post Graduate, R.KOUSHAEİAN(Student), 2011

KOÇYİĞİT A., A certificate based, context aware access control model for multi domain environments, Post Graduate, A.YORTANLI(Student), 2011

KOÇYİĞİT A., Evaluation and selection of CASE tools: A methodology and a case study, Post Graduate, K.OKŞAR(Student), 2010

KOÇYİĞİT A., Network dimensioning in randomly deployed wireless sensor networks, Doctorate, C.SEVGİ(Student), 2009

SOYTAŞ U., KOÇYİĞİT A., Cost and demand driven pricing model for internet services and application on Turkey's case, Post Graduate, M.MURAT(Student), 2006

KOÇYİĞİT A., Development of a library for automated verification of UML models, Post Graduate, M.FİLİZ(Student), 2006

KOÇYİĞİT A., Analysis of electronic signature in Turkey from the legal and economic perspectives and the awareness level in the country, Post Graduate, G.İSKENDER(Student), 2006

KOÇYİĞİT A., Blocking performance of class of service differentiation in survivable all-optical networks, Post Graduate, B.TURAN(Student), 2005

KOÇYİĞİT A., Software project scheduling, software project performance measurement and control, Post Graduate, Y.KANIK(Student), 2005

KOÇYİĞİT A., Priority based multi-constrained quality of service routing in military applications, Post Graduate, B.ARAZ(Student), 2005

KOÇYİĞİT A., Weighted granular best matching algorithm for context-aware computing systems, Post Graduate, B.KOCABALLI(Student), 2005

KOÇYİĞİT A., Performance evaluation of routing protocols in wireless ad hoc networks with service differentiation, Post Graduate, S.YILMAZ(Student), 2003

KOÇYİĞİT A., A Framework for distributed intrusion detection systems, Post Graduate, Ü.ÖZTOSUN(Student), 2002

Designed Lessons

Koçyiğit A., Software Management Primer I, Post Graduate, 2018 - 2019

Koçyiğit A., Software Management Primer II, Post Graduate, 2018 - 2019

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

- **A visual programming framework for distributed Internet of Things centric complex event processing**
Gökalp M. O. , Koçyiğit A., Eren P. E.
COMPUTERS & ELECTRICAL ENGINEERING, vol.74, pp.581-604, 2019 (Journal Indexed in SCI)
- **Size and Effort Estimation Based on Problem Domain Measures for Object-Oriented Software**
AYYILDIZ T. E. , KOÇYİĞİT A.
INTERNATIONAL JOURNAL OF SOFTWARE ENGINEERING AND KNOWLEDGE ENGINEERING, vol.28, pp.219-238, 2018 (Journal Indexed in SCI)

● **Correlations between problem and solution domain measures of open source software**

Ayyildiz T. E. , KOÇYİĞİT A.

JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.32, pp.887-900, 2017 (Journal Indexed in SCI)

● **A hybrid approach for predicting customers' individual purchase behavior**

Peker S., KOÇYİĞİT A., EREN P. E.

KYBERNETES, vol.46, pp.1614-1631, 2017 (Journal Indexed in SCI)

● **LRFMP model for customer segmentation in the grocery retail industry: a case study**

Peker S., KOÇYİĞİT A., EREN P. E.

MARKETING INTELLIGENCE & PLANNING, vol.35, pp.544-559, 2017 (Journal Indexed in SSCI)

● **An adaptive mobile cloud computing framework using a call graph based model**

Kaya M., KOÇYİĞİT A., EREN P. E.

JOURNAL OF NETWORK AND COMPUTER APPLICATIONS, vol.65, pp.12-35, 2016 (Journal Indexed in SCI)

● **Modelling and analysis of vertical handover in highly mobile environments**

Kirsal Y., Ever E., KOÇYİĞİT A., Gemikonakli O., Mapp G.

JOURNAL OF SUPERCOMPUTING, vol.71, pp.4352-4380, 2015 (Journal Indexed in SCI)

● **A Generic Analytical Modelling Approach for Performance Evaluation of the Handover Schemes in Heterogeneous Environments**

Kirsal Y., Ever E., KOÇYİĞİT A., Gemikonakli O., Mapp G.

WIRELESS PERSONAL COMMUNICATIONS, vol.79, pp.1247-1276, 2014 (Journal Indexed in SCI)

● **Optimal deployment in randomly deployed heterogeneous WSNs: A connected coverage approach**

SEVGİ C., KOÇYİĞİT A.

JOURNAL OF NETWORK AND COMPUTER APPLICATIONS, vol.46, pp.182-197, 2014 (Journal Indexed in SCI)

● **A hybrid approach to minimize state space explosion problem for the solution of two stage tandem queues**

Ever E., Gemikonakli O., KOÇYİĞİT A., Gemikonakli E.

JOURNAL OF NETWORK AND COMPUTER APPLICATIONS, vol.36, pp.908-926, 2013 (Journal Indexed in SCI)

● **Approximate solution for two stage open networks with Markov-modulated queues minimizing the state space explosion problem**

Gemikonakli O., Ever E., KOÇYİĞİT A.

JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.223, pp.519-533, 2009 (Journal Indexed in SCI)

● **On determining cluster size of randomly deployed heterogeneous WSNs**

Sevgi C., KOÇYİĞİT A.

IEEE COMMUNICATIONS LETTERS, vol.12, pp.232-234, 2008 (Journal Indexed in SCI)

● **Granular best match algorithm for context-aware computing systems**

Kocaballi A. B. , Kocyigit A.

JOURNAL OF SYSTEMS AND SOFTWARE, vol.80, pp.2015-2024, 2007 (Journal Indexed in SCI)

Articles Published in Other Journals

● **Statistically Predictive Optimal Routing and Wavelength Assignment in All Optical Networks**

Koçyiğit A., Bilgen S.

Optical Networks Magazine, vol.4, pp.121-133, 2003 (Refereed Journals of Other Institutions)

Books & Book Chapters

● **Current Research Topics in Industry 4.0 and an Analysis of Prominent Frameworks**

Kayabay K., Akyol M. A. , Gökalp M. O. , Koçyiğit A., Eren P. E.

in: Industry 4.0 from the MIS Perspective, Sevinç Gülseçen,Zerrin Ayzav Reis,Murat Gezer,Çiğdem Erol, Editor,

Peter Lang Publishing, Inc., Berlin, pp.127-140, 2018

Big Data in mHealth

Gökalp M. O. , Kayabay K., Akyol M. A. , Koçyiğit A., Eren P. E.

in: Current and Emerging mHealth Technologies Adoption, Implementation, and Use, Emre Sezgin, Soner Yıldırım, Sevgi Özkan Yıldırım, Evren Sumuer, Editor, Springer, London/Berlin , Zug, pp.241-256, 2018

Refereed Congress / Symposium Publications in Proceedings

A reference model for personal process management (PPM) Systems

Oruc S., Eren P. E. , Koçyiğit A.

14th Iberian Conference on Information Systems and Technologies, CISTI 2019, Coimbra, Portugal, 19 - 22 June 2019

A Taxonomy for Personal Processes: Results from a Semi-structured Interview

Oruç S., Eren P. E. , Koçyiğit A., Yeralan S.

18th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2019, Trondheim, Norway, 18 - 20 September 2019, pp.771-782

Predictive Maintenance in Healthcare Services with Big Data Technologies

Coban S., GÖKALP M. O. , Gokalp E., EREN P. E. , KOÇYIĞIT A.

11th IEEE International Conference on Service-Oriented Computing and Applications (SOCA), Paris, France, 19 - 22 November 2018, pp.93-98

A Workflow and Cloud Based Service-Oriented Architecture for Distributed Manufacturing in Industry 4.0 Context

KAYABAY K., GÖKALP M. O. , EREN P. E. , KOÇYIĞIT A.

11th IEEE International Conference on Service-Oriented Computing and Applications (SOCA), Paris, France, 19 - 22 November 2018, pp.88-92

An empirical comparison of customer behavior modeling approaches for shopping list prediction

Peker S., KOÇYIĞIT A., Erhan Eren P. E.

41st International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2018, Opatija, Croatia, 21 - 25 May 2018, pp.1220-1225

A methodology for product segmentation using sale transactions

Peker S., KOÇYIĞIT A., Erhan Eren P. E.

41st International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2018, Opatija, Croatia, 21 - 25 May 2018, pp.1249-1253

A Context Aware Notification Architecture Based on Distributed Focused Crawling in the Big Data Era

AKYOL M. A. , GÖKALP M. O. , KAYABAY K., EREN P. E. , KOÇYIĞIT A.

14th European, Mediterranean, and Middle Eastern Conference (EMCIS), Coimbra, Portugal, 7 - 08 September 2017, vol.299, pp.29-39

BIG DATA FOR INDUSTRY 4.0: A CONCEPTUAL FRAMEWORK

GÖKALP M. O. , KAYABAY K., AKYOL M. A. , EREN P. E. , KOÇYIĞIT A.

International Conference on Computational Science and Computational Intelligence (CSIC), Nevada, United States Of America, 15 - 17 December 2016, pp.431-434

mRHR: A Modified Reciprocal Hit Rank Metric for Ranking Evaluation of Multiple Preferences in Top-N Recommender Systems

Peker S., KOÇYIĞIT A.

17th International Conference on Artificial Intelligence - Methodology, Systems and Applications (AIMSA), Varna, Bulgaria, 7 - 10 September 2016, vol.9883, pp.320-329

An Adjusted Recommendation List Size Approach for Users' Multiple Item Preferences

Peker S., KOÇYIĞIT A.

17th International Conference on Artificial Intelligence - Methodology, Systems and Applications (AIMSA), Varna,

Bulgaria, 7 - 10 September 2016, vol.9883, pp.310-319

A Case Study on the Utilization of Problem and Solution Domain Measures for Software Size Estimation

AYYILDIZ T. E. , KOÇYİĞİT A.

42nd Euromicro Conference Series on Software Engineering and Advanced Applications (SEAA), Limassol, CYPRUS, 31 August - 02 September 2016, pp.108-111

A Cloud Based Architecture for Distributed Real Time Processing of Continuous Queries

GÖKALP M. O. , KOÇYİĞİT A., EREN P. E.

41st Euromicro Conference on Software Engineering and Advanced Applications 2015, Funchal, Portugal, 26 - 28 August 2015, pp.459-462

Correlations Between Problem Domain and Solution Domain Size Measures for Open Source Software

AYYILDIZ T. E. , KOÇYİĞİT A.

40th Euromicro Conference on Software Engineering and Advanced Applications (SEAA), Verona, Italy, 27 - 29 August 2014, pp.81-84

A Mobile Computing Framework Based on Adaptive Mobile Code Offloading

Kaya M., KOÇYİĞİT A., EREN P. E.

40th Euromicro Conference on Software Engineering and Advanced Applications (SEAA), Verona, Italy, 27 - 29 August 2014, pp.479-482

Use Case Point (UCP) Methodology for Software Effort Estimation

AYYILDIZ T. E. , KOÇYİĞİT A., Kara A.

9th International Conference on Electronics Computer and Computation (ICECCO 2012), Ankara, Turkey, 1 - 03 November 2012, pp.271-274

Balancing Energy Loads in Wireless Sensor Networks through Uniformly Quantized Energy Levels-Based Clustering

ALÍ S. A. , Sevgi C., KOÇYİĞİT A.

4th International Conference on Sensor Technologies and Applications (SENSORCOMM), Mestre, Italy, 18 - 25 July 2010, pp.19-23

An optimal network dimensioning and initial energy assignment minimizing the monetary cost of a heterogeneous WSN

Sevgi C., KOÇYİĞİT A.

6th IEEE International Symposium on Wireless Communication Systems (ISWCS 09), Siena, Italy, 7 - 10 September 2009, pp.517-518

Analytical modelling of large scale multi-server systems with deferred repairs: A reward rate approach

KOÇYİĞİT A., Gemikonakli O., Ever E.

EMS 2008, European Modelling Symposium, 2nd UKSim European Symposium on Computer Modelling and Simulation, Liverpool, United Kingdom, 8 - 10 September 2008, pp.447-452

Cost Reduction in High Power Computing Using a Deferred Repair Strategy: A Simulation Study

KOÇYİĞİT A., Gemikonakli O., Ever E.

UKSim 10th International Conference on Computer Modelling and Simulation (EUROSIM/UKSim), Cambridge, Canada, 1 - 03 April 2008, pp.354-359

AN ANALYTICAL APPROACH FOR OPTIMISING THE NUMBER OF REPAIRMEN FOR LARGE SCALE, HOMOGENEOUS, MULTI-SERVER SYSTEMS

Gemikonakli O., Sanei H., Ever E., Kocyigit A.

20th European Modeling and Simulation Symposium, Amantea, Italy, 17 - 19 September 2008, pp.602-604

Granular best match algorithm for context-aware computing systems

Kocaballi A. B. , Kocyigit A.

3rd IEEE International Conference on Pervasive Services (ICPS 2006), Lyon, France, 26 - 29 June 2006, pp.143-149

Supported Projects

KOÇYİĞİT A., ŞENER U., TOPCU A. K. , GÖKALP M. O. , GÜMÜŞOĞLU A., EREN P. E. , AKYOL M. A. , KAYABAY K., Project Supported by Higher Education Institutions, Endüstri 4.0 için süreç modelleme tabanlı karar destek sistemi, 2018 - 2020

KOÇYİĞİT A., ŞENER U., TOPCU A. K. , GÖKALP M. O. , GÜMÜŞOĞLU A., EREN P. E. , TILTAK D., AKYOL M. A. , KAYABAY K., YANDIK Y. B. , Project Supported by Higher Education Institutions, Endüstri 4.0 İçin Özelleştirilmiş Bir Süreç Modelleme ve Yönetim Çatısı, 2017 - 2019

EREN P. E. , ŞENER U., GÖKALP M. O. , AKYOL M. A. , KAYABAY K., KOÇYİĞİT A., Project Supported by Higher Education Institutions, İşletmeler için Büyük Veri ve İş Analitiği Yaklaşımlarının İncelenmesi ve Çözüm Önerisi, 2016 - 2017

EREN P. E. , ŞENER U., GÖKALP M. O. , AKYOL M. A. , KAYABAY K., KOÇYİĞİT A., Project Supported by Higher Education Institutions, Yaygın Bilişim Odaklı Servis Birleştirme Sistemi Tasarımı ve Uygulaması, 2015 - 2017

EREN P. E. , ŞENER U., KAYABAY K., KOÇYİĞİT A., Project Supported by Higher Education Institutions, Bulut Tabanlı Kurumsal Yönetim Bilişim Sistemlerinin Kullanımının İncelenmesi, 2016 - 2016

KOÇYİĞİT A., GÖKALP M. O. , EREN P. E. , Project Supported by Higher Education Institutions, Nesnelerin İnterneti ile Bulut Hesaplama Destekli Dinamik Servis Oluşturma, 2014 - 2015

EREN P. E. , KOÇYİĞİT A., Project Supported by Higher Education Institutions, Akıllı Ofis ve Bina Ortamları İçin Mobil Cihaz Tabanlı İş Akışı Otomasyon Sistemi Geliştirilmesi, 2013 - 2015

EREN P. E. , KOÇYİĞİT A., Project Supported by Higher Education Institutions, Akıllı Ev Ve Ofis Ortamları İçin Mobil Cihaz Tabanlı Erişim Kontrol Sistemi Tasarımı Ve Gerçekleşmesi, 2012 - 2014

KOÇYİĞİT A., Project Supported by Higher Education Institutions, Kablosuz Ağlar İle Orman Yangınlarının Erken Tespiti, 2010 - 2010

Scientific Refereeing

TUBITAK Project, 1501 - Industry R & D Projects Support Program, TELENİTY İLETİŞİM SİSTEMLERİ SAN. VE TİC. A.Ş., Turkey, March 2019

Citations

Total Citations (WOS):130

h-index (WOS):7