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Personal Information

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International Researcher IDs
ORCID: 0000-0003-1466-9605
Publons / Web Of Science ResearcherID: D-6138-2013
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Education Information

Post Doctorate, Eindhoven Teknoloji Üniversitesi / Endüstri Mühendisliği Ve Yenilik Bilimleri, Bilişim Sistemleri, Netherlands 2013 - 2015
Doctorate, Middle East Technical University, Bilişim Ensitüsü, Bilişim Sistemleri, Turkey 2000 - 2006
Postgraduate, Dokuz Eylul University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, Turkey 1997 - 1999
Undergraduate, Ege University, Faculty Of Engineering, Bilgisayar Mühendisliği, Turkey 1990 - 1995

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, An assessment model for the applicability of statistical process control for software processes, Orta Doğu Teknik Üniversitesi, Enformatik Enstitüsü, Bilişim Sistemleri Anabilim Dalı, 2006
Postgraduate, Commitment management in software development, Dokuz Eylül Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 1999

Research Areas

Computer Sciences, Software, Software Engineering, Industrial Engineering , Quality and Reliability, Total quality Management, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2018 - Continues
Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2012 - 2018
Assistant Professor, Technische Universiteit Eindhoven, Industrial Engineering And Innovation Sciences, Information Systems, 2013 - 2015

Lecturer PhD, Hacettepe University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2007 - 2012

Research Assistant, Dokuz Eylul University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 1997 - 1999

Academic and Administrative Experience

Hacettepe Üniversitesi, Bilişim Enstitüsü, Sağlık Bilişimi Anabilim Dalı, 2017 - Continues

Hacettepe Üniversitesi, Bilişim Enstitüsü, Bilişim Sistemleri Anabilim Dalı, 2013 - 2013

Courses

BBS651 YAZILIM MÜHENDİSLİĞİ, Postgraduate, 2017 - 2018, 2016 - 2017

CMP782 SOFTWARE METRICS, Postgraduate, 2017 - 2018

BIL701 SEMINER, Doctorate, 2017 - 2018

BIL700 SPECIAL STUDIES, Doctorate, 2017 - 2018

BBM419 DESIGN PROJECT I, Undergraduate, 2017 - 2018

BIL600 SPECIAL STUDIES, Postgraduate, 2017 - 2018

BYZ695 DÖNEM PROJESİ, Postgraduate, 2017 - 2018, 2016 - 2017

BYZ660 GEREKSİNİM MÜHENDİSLİĞİ, Postgraduate, 2017 - 2018

BIL702 DOKTORA YETERLİK SINAVINA HAZIRLIK, Doctorate, 2017 - 2018

BIL601 SEMINER, Postgraduate, 2017 - 2018, 2016 - 2017

BYZ653 KİŞİSEL YAZILIM SÜRECİ, Postgraduate, 2016 - 2017

BBM430 PROJE II, Undergraduate, 2016 - 2017

KUM655 YAZILIM KALİTE YÖNETİMİ, Postgraduate, 2016 - 2017

BBM487 SOFTWARE ENGINEERING LAB, Undergraduate, 2016 - 2017

BBM102 INTRODUCTION TO PROGRAMMING II, Undergraduate, 2016 - 2017

BİL781 YAZILIM KALİTE YÖNETİMİ, Doctorate, 2016 - 2017

BBM429 PROJE I, Undergraduate, 2016 - 2017

BIL700 OZEL KONULAR, Doctorate, 2016 - 2017

BBM104 INTRODUCTION TO PROGRAMMING LAB II, Undergraduate, 2016 - 2017

BIL600 OZEL KONULAR, Postgraduate, 2016 - 2017

BBM382 SOFTWARE ENGINEERING, Undergraduate, 2016 - 2017

BBM475 YONETIM BILISIM SISTEMLERI, Undergraduate, 2016 - 2017

Advising Theses

TARHAN A., A method for product defectiveness prediction with process enactment data in a small software organization, Postgraduate, D.SİVRİOĞLU(Student), 2012

TARHAN A., Improvement of software system test process through statistical process control, Postgraduate, C.GÜLENAY(Student), 2008

TARHAN A., An assessment and analysis tool for statistical process control of software processes, Postgraduate, S.KIRBAŞ(Student), 2007

Published journal articles indexed by SCI, SSCI, and AHCI

I. **A decision analysis approach for selecting software defect prediction method in the early phases**
    Ozakinci R., KOLUKISA TARHAN A.
    SOFTWARE QUALITY JOURNAL, vol.31, no.1, pp.121-177, 2023 (SCI-Expanded)

II. **ERP failure: A systematic mapping of the literature**

Coskun E., GEZİCİ B., AYDOS M., KOLUKISA TARHAN A., Garousi V.

DATA & KNOWLEDGE ENGINEERING, vol.142, 2022 (SCI-Expanded)

III. **Demand response process assessment model: Development and case study assessment**

Ilisulu F., KOLUKISA TARHAN A., Kavak K.

COMPUTER STANDARDS & INTERFACES, vol.82, 2022 (SCI-Expanded)

IV. **Quality evaluation models or frameworks for open source software: A systematic literature review**

YILMAZ N., KOLUKISA TARHAN A.

JOURNAL OF SOFTWARE-EVOLUTION AND PROCESS, vol.34, no.6, 2022 (SCI-Expanded)

V. **Challenges and Solution Directions of Microservice Architectures: A Systematic Literature Review**

Soylemez M., Tekinerdogan B., KOLUKISA TARHAN A.

APPLIED SCIENCES-BASEL, vol.12, no.11, 2022 (SCI-Expanded)

VI. **Feature-Driven Characterization of Microservice Architectures: A Survey of the State of the Practice**

Soylemez M., Tekinerdogan B., KOLUKISA TARHAN A.

APPLIED SCIENCES-BASEL, vol.12, no.9, 2022 (SCI-Expanded)

VII. **Systematic literature review on software quality for AI-based software**

GEZİCİ B., KOLUKISA TARHAN A.

EMPIRICAL SOFTWARE ENGINEERING, vol.27, no.3, 2022 (SCI-Expanded)

VIII. **BPMN Data Model for Multi-Perspective Process Mining on Blockchain**

Ekici B., ERDOĞAN T., KOLUKISA TARHAN A.

INTERNATIONAL JOURNAL OF SOFTWARE ENGINEERING AND KNOWLEDGE ENGINEERING, vol.32, no.02, pp.317-345, 2022 (SCI-Expanded)

IX. **Multi-perspective process mining for emergency process**

ERDOĞAN T., KOLUKISA TARHAN A.

HEALTH INFORMATICS JOURNAL, vol.28, no.1, 2022 (SCI-Expanded)

X. **A framework for multi-perspective process mining into a BPMN process model**

Tiftik M. N., Gurgen Erdogan T., KOLUKISA TARHAN A.

MATHEMATICAL BIOSCIENCES AND ENGINEERING, vol.19, no.11, pp.11800-11820, 2022 (SCI-Expanded)

XI. **Maturity assessment and maturity models in health care: A multivocal literature review**

KOLUKISA TARHAN A., Garousi V., Turetken O., Soylemez M., Garossi S.

DIGITAL HEALTH, vol.6, 2020 (SCI-Expanded)

XII. **Correlation of critical success factors with success of software projects: an empirical investigation**

Garousi V., KOLUKISA TARHAN A., Pfahl D., Coskuncay A., DEMİRÖRS O.

SOFTWARE QUALITY JOURNAL, vol.27, no.1, pp.429-493, 2019 (SCI-Expanded)

XIII. **A two-dimensional method for evaluating maintainability and reliability of open source software**

YILMAZ N., KOLUKISA TARHAN A.

JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.34, no.4, pp.1807-1829, 2019 (SCI-Expanded)

XIV. **Early software defect prediction: A systematic map and review**

Ozakinci R., KOLUKISA TARHAN A.

JOURNAL OF SYSTEMS AND SOFTWARE, vol.144, pp.216-239, 2018 (SCI-Expanded)

XV. **A Goal-Driven Evaluation Method Based On Process Mining for Healthcare Processes**

ERDOĞAN T., KOLUKISA TARHAN A.

APPLIED SCIENCES-BASEL, vol.8, no.6, 2018 (SCI-Expanded)

XVI. **Challenges of software process and product quality improvement: catalyzing defect root-cause investigation by process enactment data analysis**

Soylemez M., KOLUKISA TARHAN A.

SOFTWARE QUALITY JOURNAL, vol.26, no.2, pp.779-807, 2018 (SCI-Expanded)

XVII. **Systematic Mapping of Process Mining Studies in Healthcare**

ERDOĞAN T., KOLUKISA TARHAN A.

IEEE ACCESS, vol.6, pp.24543-24567, 2018 (SCI-Expanded)

XVIII. **Business process maturity models: A systematic literature review**

TARHAN A., TÜRETKEN O., Reijers H. A.

INFORMATION AND SOFTWARE TECHNOLOGY, vol.75, pp.122-134, 2016 (SCI-Expanded)

XIX. **Systematic analyses and comparison of development performance and product quality of Incremental Process and Agile Process**

TARHAN A., YILMAZ S. G.

INFORMATION AND SOFTWARE TECHNOLOGY, vol.56, no.5, pp.477-494, 2014 (SCI-Expanded)

XX. **Apply Quantitative Management Now**

TARHAN A., Demirors O.

IEEE SOFTWARE, vol.29, no.3, pp.77-85, 2012 (SCI-Expanded)

XXI. **Investigating the effect of variations in the test development process: a case from a safety-critical system**

TARHAN A., Demirors O.

SOFTWARE QUALITY JOURNAL, vol.19, no.4, pp.615-642, 2011 (SCI-Expanded)

Articles Published in Other Journals

I. **An Ontology Based Infrastructure To Support CMMI-Based Software Process Assessment**

Gazel S., SEZER E., KOLUKISA TARHAN A.

GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.25, no.1, pp.155-164, 2012 (ESCI)

Refereed Congress / Symposium Publications in Proceedings

I. **Software Implementation Performances of Block Ciphers: A Systematic Literature Review**

Zorba B. B., ALKAR A. Z., AYDOS M., Kolukisa-Tarhan A.

7th International Workshop on Big Data and Information Security, IWBIS 2022, Depok, Indonesia, 1 - 03 October 2022, pp.65-74

II. **Capability Assessment of Software Product Line Processes in Defense Industry**

Savaş D., GÖKALP E., KOLUKISA A.

6th International Conference on Computer Science and Engineering (UBMK), Ankara, Turkey, 15 - 17 September 2021, pp.682-687

III. **An Evaluation Approach for Selecting Suitable Defect Prediction Method at Early Phases**

Ozakinci R., KOLUKISA TARHAN A.

45th Euromicro Conference on Software Engineering and Advanced Applications (SEAA) / 22nd Euromicro Conference on Digital System Design (DSD), Kallithea, Greece, 28 - 30 August 2019, pp.199-203

IV. **Process Mining for Healthcare Process Analytics**

ERDOĞAN T., KOLUKISA TARHAN A.

Joint Conference of 26th International Workshop on Software Measurement (IWSM) / 11th International Conference on Software Process and Product Measurement (Mensura), Berlin, Germany, 5 - 07 October 2016, pp.125-130

V. **A Proposal on Requirements for COSMIC FSM Automation from Source Code**

KOLUKISA TARHAN A., ÖZKAN B., Icoz G. C.

Joint Conference of 26th International Workshop on Software Measurement (IWSM) / 11th International Conference on Software Process and Product Measurement (Mensura), Berlin, Germany, 5 - 07 October 2016, pp.195-200

VI. **The Use of Maturity/Capability Frameworks for Healthcare Process Assessment and Improvement**

Söylemez M., TARHAN A.

16th International Conference on Software Process Improvement and Capability Determination (SPICE), Dublin, Ireland, 9 - 10 June 2016, vol.609, pp.31-42

VII. **Business Process Maturity Assessment: State of the Art and Key Characteristics**

KOLUKISA TARHAN A., Turetken O., Ilisulu F.

41st Euromicro Conference on Software Engineering and Advanced Applications 2015, Funchal, Portugal, 26 - 28 August 2015, pp.430-437

VIII. **Run-time Calculation of COSMIC Functional Size via Automatic Installment of Measurement Code into Java Business Applications**

Gonultas R., KOLUKISA TARHAN A.

41st Euromicro Conference on Software Engineering and Advanced Applications 2015, Funchal, Portugal, 26 - 28 August 2015, pp.112-118

IX. **Assessing Healthcare Process Maturity: Challenges Of Using A Business Process Maturity Model**

KOLUKISA TARHAN A., Turetken O., van den Biggelaar F. J. H. M.

9th International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth), İstanbul, Turkey, 20 - 23 May 2015, pp.339-342

X. **Investigating Defect Prediction Models for Iterative Software Development When Phase Data is Not Recorded Lessons Learned**

Aydin A., KOLUKISA TARHAN A.

9th International Conference on Evaluation of Novel Approaches to Software Engineering (ENASE), Lisbon, Portugal, 28 - 30 April 2014, pp.48-58

XI. **Using Process Enactment Data Analysis to Support Orthogonal Defect Classification for Software Process Improvement**

Soylemez M., KOLUKISA TARHAN A.

Joint Conference of the 23rd International Workshop on Software Measurement and the 8th International Conference on Software Process and Product Measurement (IWSM-MENSURA), Ankara, Turkey, 23 - 26 October 2013, pp.120-125

XII. **Run-time measurement of COSMIC functional size for Java business applications: Is it worth the cost?**

Akca A. A., KOLUKISA TARHAN A.

Joint Conference of the 23rd International Workshop on Software Measurement and the 8th International Conference on Software Process and Product Measurement (IWSM-MENSURA), Ankara, Turkey, 23 - 26 October 2013, pp.54-59

XIII. **Yazılım Süreç Doğrulama için Bütünleşik Altyapı**

ERDOĞAN T., TARHAN A.

6. Ulusal Yazılım Mühendisliği Sempozyumu, Ankara, Turkey, 30 May - 01 June 2012

XIV. **Run-time measurement of COSMIC functional size for Java business applications: Initial results**

Akca A. A., KOLUKISA TARHAN A.

Joint Conference of the 22nd International Workshop on Software Measurement / 7th International Conference on Software Process and Product Measurement (IWSM-MENSURA), Assis, Brazil, 17 - 19 October 2012, pp.226-231

XV. **Süreç Madenciliğinin Yazılım Süreç Doğrulama İçin Kullanımı**

ERDOĞAN T., TARHAN A.

5. Ulusal Yazılım Mühendisliği Sempozyumu, Ankara, Turkey, 26 - 28 September 2011

XVI. **Assessment of Software Process and Metrics to Support Quantitative Understanding: Experience from an Undefined Task Management Process**

TARHAN A., DEMIRORS O.

11th International Conference on Software Process Improvement and Capability Determination, Dublin, Ireland, 30 May - 01 June 2011, vol.155, pp.108-110

XVII. **Assessment of software process and metrics to support quantitative understanding**

TARHAN A., Demirors O.

Joint Meeting of the International Workshop on Software Measurement (IWSM)/International Conference on Software Process and Product Measurement (MENSURA), Palma de Mallorca, Spain, 5 - 07 November 2007, vol.4895, pp.102-104

Supported Projects

KOLUKISA A., ERDOĞAN T., Project Supported by Higher Education Institutions, CERRAHİ SÜREÇLERİN KEŞFİ İÇİN SÜREÇ MADENCİLİĞİ ÇALIŞMALARININ DEĞERLENDİRİLMESİ, 2017 - 2018

KOLUKISA A., ERDOĞAN T., Project Supported by Higher Education Institutions, Sağlık Süreç Analitiği İçin Süreç Madenciliği, 2016 - 2017

KOLUKISA A., Project Supported by Higher Education Institutions, İş Süreci Olgunluk Modelleri: Bir Sistematik Literatür Tarama, 2016 - 2017

KOLUKISA A., Project Supported by Higher Education Institutions, Yazılım test edilebilirliği: Bir sistematik literatür haritalaması, 2016 - 2016

KOLUKISA A., Söylemez M., Project Supported by Higher Education Institutions, OlgunlukYetenek Çerçevelerinin Sağlık Süreçlerini Değerlendirme ve İyileştirmede Kullanımı, 2016 - 2016

KOLUKISA A., Güneş Yılmaz S., Project Supported by Higher Education Institutions, Artırımlı Süreç ve Çevik Sürecin Geliştirme Performansı ve Ürün Kalitesinin Sistematik Analizi ve Karşılaştırması, 2015 - 2016

KOLUKISA A., REİJERS H. A., TÜRETKEN O., Project Supported by Higher Education Institutions, Olgun iş süreçleri performansta iyileşme sağlar mı? - Deneysel kanıt için bir literatür özeti, 2015 - 2016

TARHAN A., TUBITAK Project, DEVELOPMENT OF A SELF ASSESSMENT APPROACH FOR BUSINESS PROCESS MATURITY, 2013 - 2014

Metrics

Publication: 40
Citation (WoS): 150
Citation (Scopus): 105
H-Index (WoS): 6
H-Index (Scopus): 5

Non Academic Experience

Bilgi Grubu Yazılım Araştırma, Eğitim ve Danışmanlık Ltd.
TÜRK STANDARTLARI ENSTİTÜSÜ