

Prof. ALPER BİLGE

Personal Information

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International Researcher IDs

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ORCID: 0000-0003-3467-9915

Publons / Web Of Science ResearcherID: G-3583-2013

ScopusID: 36661765600

Yoksis Researcher ID: 147650

Education Information

Doctorate, Anadolu University, Institute Of Science, Bilgisayar Mühendisliği, Turkey 2009 - 2013

Postgraduate, Anadolu University, Institute Of Science, Bilgisayar Bilimleri, Turkey 2005 - 2008

Undergraduate, Anadolu University, Faculty Of Engineering-Architecture, Elektrik-Elektronik Mühendisliği, Turkey 2001 - 2005

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Improving performance of privacy-preserving collaborative filtering schemes, Akdeniz University, Institute of Science, Bilgisayar Mühendisliği, 2013

Postgraduate, Design and implementation of a TCP/IP stack for geekos operating system, Anadolu University, Fen Bilimleri Enstitüsü, Bilgisayar Bilimleri, 2008

Research Areas

Computer Sciences, Information Security and Reliability, Hiding Information, Artificial Intelligence, Computer Learning and Pattern Recognition, Computer Learning, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Akdeniz University, Faculty of Engineering, Department of Computer Engineering, 2020 - Continues

Assistant Professor, Eskişehir Technical University, Faculty Of Engineering, Bilgisayar Mühendisliği, 2018 - 2020

Assistant Professor, Anadolu University, Faculty Of Engineering, Bilgisayar Mühendisliği, 2014 - 2018

Research Assistant PhD, Anadolu University, Faculty Of Engineering, Bilgisayar Mühendisliği, 2013 - 2014

Research Assistant, Anadolu University, Faculty Of Engineering, Bilgisayar Mühendisliği, 2005 - 2013

Academic and Administrative Experience

Anabilim Dalı Akademik Kurul Üyesi, Akdeniz University, Mühendislik Fakültesi, Department of Computer Engineering, 2020 - Continues

Anadolu University, Bilgisayar Araştırma Ve Uygulama Merkezi, 2014 - 2019

Courses

Doctorate

Recommender Systems, Doctorate, 2020 - 2021

Postgraduate

Design Patterns, Postgraduate, 2020 - 2021

Undergraduate

Design Patterns, Undergraduate, 2020 - 2021

Basics of Electronic Circuits, Undergraduate, 2020 - 2021

Supervised Theses

BİLGE A., Grup öneri sistemleri için yeni otomatik grup tanımlama ve tercih birleştirme yöntemleri, Doctorate, E.Yalçın(Student), 2020

BİLGE A., Öğrenci kayıt yenileme işlemlerinde öneri sistemleri uygulaması, Postgraduate, İ.Burak(Student), 2019

BİLGE A., Genetik algoritma tabanlı gizliliği koruyan ortak filtreleme, Postgraduate, M.Kemal(Student), 2019

BİLGE A., Gizliliği koruyan çoklu-ölçütlü ortak filtreleme, Doctorate, A.Yargıç(Student), 2019

BİLGE A., Filling missing ratings in privacy-preserving collaborative filtering systems, Postgraduate, M.Özcan(Student), 2018

BİLGE A., Kullanıcı/ürün çiftleri için en iyi öneri algoritmalarının tespit edilmesi, Postgraduate, İ.Terzi(Student), 2017

BİLGE A., Naive Bayes sınıflandırıcı tabanlı ikili-veri çoklu-ölçütlü öneri sistemler, Postgraduate, E.Yalçın(Student), 2016

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A novel target item-based similarity function in privacy-preserving collaborative filtering**
YALÇIN E., BİLGE A.
Journal of Supercomputing, vol.80, no.13, pp.19433-19461, 2024 (SCI-Expanded)
- II. **A Novel Pre-Processing Technique to Combat Popularity Bias in Personality-Aware Recommender Systems**
Waris M., Fakhar M. Z., Gulsoy M., YALÇIN E., BİLGE A.
IEEE Access, 2024 (SCI-Expanded)
- III. **Popularity bias in personality perspective: An analysis of how personality traits expose individuals to the unfair recommendation**
YALÇIN E., BİLGE A.
Concurrency and Computation: Practice and Experience, vol.35, no.9, 2023 (SCI-Expanded)
- IV. **A survey of smart home energy conservation techniques**
Fakhar M. Z., YALÇIN E., BİLGE A.
Expert Systems with Applications, vol.213, 2023 (SCI-Expanded)
- V. **Robustness of privacy-preserving collaborative recommenders against popularity bias problem**
Gulsoy M., YALÇIN E., BİLGE A.
PeerJ Computer Science, vol.9, 2023 (SCI-Expanded)
- VI. **Evaluating unfairness of popularity bias in recommender systems: A comprehensive user-centric**

analysis

YALÇIN E., BİLGE A.

Information Processing and Management, vol.59, no.6, 2022 (SCI-Expanded)

- VII. **Treating adverse effects of blockbuster bias on beyond-accuracy quality of personalized recommendations**
YALÇIN E., BİLGE A.
Engineering Science and Technology, an International Journal, vol.33, 2022 (SCI-Expanded)
- VIII. **IESR: Instant Energy Scheduling Recommendations for Cost Saving in Smart Homes**
Fakhar M. Z., YALÇIN E., BİLGE A.
IEEE Access, vol.10, pp.52178-52195, 2022 (SCI-Expanded)
- IX. **Exploring playlist titles for cold-start music recommendation: an effectiveness analysis**
Yurekli A., Bilge A., Kaleli C.
JOURNAL OF AMBIENT INTELLIGENCE AND HUMANIZED COMPUTING, vol.12, no.11, pp.10125-10144, 2021 (SCI-Expanded)
- X. **Investigating and counteracting popularity bias in group recommendations**
Yalçin E., Bilge A.
INFORMATION PROCESSING & MANAGEMENT, vol.58, no.5, 2021 (SCI-Expanded)
- XI. **Alleviating the cold-start playlist continuation in music recommendation using latent semantic indexing**
Yurekli A., Kaleli C., Bilge A.
INTERNATIONAL JOURNAL OF MULTIMEDIA INFORMATION RETRIEVAL, vol.10, no.3, pp.185-198, 2021 (SCI-Expanded)
- XII. **Novel automatic group identification approaches for group recommendation**
Yalçin E., Bilge A.
EXPERT SYSTEMS WITH APPLICATIONS, vol.174, 2021 (SCI-Expanded)
- XIII. **An entropy empowered hybridized aggregation technique for group recommender systems**
Yalçin E., Ismailoğlu F., Bilge A.
EXPERT SYSTEMS WITH APPLICATIONS, vol.166, 2021 (SCI-Expanded)
- XIV. **Binary multicriteria collaborative filtering**
YALÇIN E., BİLGE A.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.28, no.6, pp.3419-3437, 2020 (SCI-Expanded)
- XV. **A review on deep learning for recommender systems: challenges and remedies**
Batmaz Z., Yurekli A., BİLGE A., Kaleli C.
ARTIFICIAL INTELLIGENCE REVIEW, vol.52, no.1, pp.1-37, 2019 (SCI-Expanded)
- XVI. **Privacy-preserving multi-criteria collaborative filtering**
Yargic A., BİLGE A.
INFORMATION PROCESSING & MANAGEMENT, vol.56, no.3, pp.994-1009, 2019 (SCI-Expanded)
- XVII. **Privacy-Aware Detection of Shilling Profiles on Arbitrarily Distributed Recommender Systems**
Yilmazel B., BİLGE A., Kaleli C.
IEEE ACCESS, vol.7, pp.28863-28885, 2019 (SCI-Expanded)
- XVIII. **A Similarity-Inclusive Link Prediction Based Recommender System Approach**
Kurt Z., ÖZKAN K., BİLGE A., Gerek O. N.
ELEKTRONIKA IR ELEKTROTEHNIKA, vol.25, no.6, pp.62-69, 2019 (SCI-Expanded)
- XIX. **Robustness analysis of multi-criteria collaborative filtering algorithms against shilling attacks**
Turk A. M., BİLGE A.
EXPERT SYSTEMS WITH APPLICATIONS, vol.115, pp.386-402, 2019 (SCI-Expanded)
- XX. **Shilling attacks against recommender systems: a comprehensive survey**
Gunes I., Kaleli C., BİLGE A., Polat H.
ARTIFICIAL INTELLIGENCE REVIEW, vol.42, no.4, pp.767-799, 2014 (SCI-Expanded)
- XXI. **Robustness analysis of privacy-preserving model-based recommendation schemes**

- BİLGE A., Gunes I., Polat H.
EXPERT SYSTEMS WITH APPLICATIONS, vol.41, no.8, pp.3671-3681, 2014 (SCI-Expanded)
- XXII. **A SURVEY OF PRIVACY-PRESERVING COLLABORATIVE FILTERING SCHEMES**
BİLGE A., Kaleli C., Yakut I., Gunes I., Polat H.
INTERNATIONAL JOURNAL OF SOFTWARE ENGINEERING AND KNOWLEDGE ENGINEERING, vol.23, no.8, pp.1085-1108, 2013 (SCI-Expanded)
- XXIII. **A scalable privacy-preserving recommendation scheme via bisecting k-means clustering**
BİLGE A., Polat H.
INFORMATION PROCESSING & MANAGEMENT, vol.49, no.4, pp.912-927, 2013 (SCI-Expanded)
- XXIV. **A comparison of clustering-based privacy-preserving collaborative filtering schemes**
BİLGE A., Polat H.
APPLIED SOFT COMPUTING, vol.13, no.5, pp.2478-2489, 2013 (SCI-Expanded)
- XXV. **Shilling Attacks Against Memory-Based Privacy-Preserving Recommendation Algorithms**
Gunes I., BİLGE A., Polat H.
KSII TRANSACTIONS ON INTERNET AND INFORMATION SYSTEMS, vol.7, no.5, pp.1272-1290, 2013 (SCI-Expanded)
- XXVI. **An improved privacy-preserving DWT-based collaborative filtering scheme**
BİLGE A., Polat H.
EXPERT SYSTEMS WITH APPLICATIONS, vol.39, no.3, pp.3841-3854, 2012 (SCI-Expanded)

Articles Published in Other Journals

- I. **A Graph-Based Recommendation Algorithm on Quaternion Algebra**
Kurt Z., Gerek Ö. N., BİLGE A., ÖZKAN K.
SN Computer Science, vol.3, no.4, 2022 (Scopus)
- II. **A PERSONALITY-BASED AGGREGATION TECHNIQUE FOR GROUP RECOMMENDATION**
YALÇIN E., BİLGE A.
Eskişehir Technical University Journal of Science and Technology A - Applied Sciences and Engineering, vol.21, no.4, pp.486-498, 2020 (Peer-Reviewed Journal)
- III. **Improving accuracy of multi-criteria collaborative filtering by normalizing user ratings**
BİLGE A., YARGIÇ A.
ANADOLU UNIVERSITY JOURNAL OF SCIENCE AND TECHNOLOGY A - Applied Sciences and Engineering, vol.18, no.1, pp.225, 2017 (Peer-Reviewed Journal)
- IV. **Maskelenmiş veriler için kümeleme-tabanlı şilin atak tespit yöntemi**
BİLGE A., BATMAZ Z., POLAT H.
FIRAT ÜNİVERSİTESİ MÜHENDİSLİK BİLİMLERİ DERGİSİ, vol.28, no.2, pp.207-216, 2016 (Peer-Reviewed Journal)
- V. **Shilling attacks against privacy-preserving collaborative filtering**
GÜNEŞ İ., BİLGE A., KALELİ C., POLAT H.
JOURNAL OF ADVANCED MANAGEMENT SCIENCE, vol.1, no.1, pp.54-60, 2013 (Peer-Reviewed Journal)

Books

- I. **Computer Communication**
BİLGE A.
in: INFORMATION TECHNOLOGIES, Aybar Aydın, Editor, Anadolu Üniversitesi, Eskişehir, pp.39-62, 2017

Papers Published in Refereed Scientific Meetings

- I. **Novel approaches to measuring the popularity inclination of users for the popularity bias problem**

Tacli Y., Yalçin E., Bilge A.

6th International Symposium on Multidisciplinary Studies and Innovative Technologies, ISMSIT 2022, Ankara, Turkey, 20 - 22 October 2022, pp.555-560

- II. **Similarity-inclusive Link Prediction with Quaternions**
KURT Z., GEREK Ö. N., BİLGE A., ÖZKAN K.
23rd International Conference on Enterprise Information Systems, Portugal, 26 April 2021, pp.842-854
- III. **An empirical evaluation of aggregation techniques used in group recommender systems**
YALÇIN E., BİLGE A., YÜKSEK A. G.
International Conference on Advanced Technologies, SARAYBOSNA, Bosnia And Herzegovina, 26 - 30 August 2019, pp.186-191
- IV. **Genetic Algorithm-Based Privacy Preserving Collaborative Filtering**
Birgin M. K., Bilge A.
Innovations in Intelligent Systems and Applications Conference (ASYU), İzmir, Turkey, 31 October - 02 November 2019, pp.89-93
- V. **On Similarity Measures for a Graph-Based Recommender System**
Kurt Z., BİLGE A., ÖZKAN K., Gerek O. N.
25th International Conference on Information and Software Technologies (ICIST), Vilnius, Lithuania, 10 - 12 October 2019, vol.1078, pp.136-147
- VI. **Kullanıcı ve ürün tabanlı çoklu-ölçütlü ortak filtreleme**
YARGIÇ A., BİLGE A.
International Congress on Engineering and Architecture, 14 - 16 November 2018
- VII. **Karşılıklı bilgi miktarı ile ağırlıklandırılmış çoklu-ölçütlü ortak filtreleme**
YARGIÇ A., BİLGE A.
International Congress on Engineering and Architecture, 14 - 16 November 2018
- VIII. **A Robust Multi-Criteria Collaborative Filtering Algorithm**
Turk A. M., Bilge A.
IEEE (SMC) International Conference on Innovations in Intelligent Systems and Applications (INISTA), Thessaloniki, Greece, 3 - 05 July 2018
- IX. **Veri Merkezleri Üzerine Bir İnceleme**
GÜNAL S., KALELİ C., BİLGE A., HOŞCAN Y.
34. Ulusal Bilişim Kurultayı, Ankara, Turkey, 20 - 21 December 2017
- X. **Privacy Risks for Multi-Criteria Collaborative Filtering Systems**
Yargic A., Bilge A.
26th International Conference on Computer Communication and Networks (ICCCN), Vancouver, Canada, 31 July - 03 August 2017
- XI. **Bilgisayar mühendisliği eğitiminde teknoloji eğilimlerinin takip edilmesi**
TÜRK A. M., BİLGE A.
I. INTERNATIONAL WORKSHOP ON CONSTRUCTION AND ELECTRICITY APPLICATIONS ON VOCATIONAL EDUCATION, Eskişehir, Turkey, 30 November - 01 December 2015, pp.497-506
- XII. **Robustness of bisecting k-means clustering-based collaborative filtering algorithm**
BİLGE A., POLAT H.
The Fifth International Conference on Advances in Information Mining and Management, BRÜKSEL, Belgium, 21 - 26 June 2015, pp.7-13
- XIII. **A novel shilling attack detection method**
BİLGE A., Ozdemir Z., Polat H.
2nd International Conference on Information Technology and Quantitative Management (ITQM), Moscow, Russia, 3 - 05 June 2014, vol.31, pp.165-174
- XIV. **A Multi-Criteria Item-based Collaborative Filtering Framework**
BİLGE A., Kaleli C.
11th International Joint Conference on Computer Science and Software Engineering (JCSSE), Pattaya, Thailand, 14 - 16 May 2014, pp.18-22

- XV. **A robust privacy-preserving recommendation algorithm**
BİLGE A., GÜNEŞ İ., POLAT H.
The Second Asian Conference on Information Systems, Phuket, Thailand, 31 October - 02 November 2013
- XVI. **An enhanced collaborative filtering scheme via recursive clustering**
BİLGE A., SERHAN G., POLAT H.
Workshop on Knowledge Discovery, Data Mining and Machine Learning, Dortmund, Germany, 12 - 14 September 2012
- XVII. **On applications of privacy preserving collaborative filtering schemes**
BİLGE A., KALELİ C., YAKUT İ., POLAT H.
The Fifth International Conference on Information Security and Cryptology, Ankara, Turkey, 17 - 18 May 2012, pp.93-99
- XVIII. **An Improved Profile-based CF Scheme with Privacy**
BİLGE A., Polat H.
5th Annual IEEE International Conference on Semantic Computing (ICSC), California, United States Of America, 18 - 22 September 2011, pp.133-140
- XIX. **Improving privacy-preserving NBC-based recommendations by preprocessing**
Bilge A., POLAT H.
2010 IEEE/WIC/ACM International Conference on Web Intelligence, WI 2010, Toronto, Canada, 31 August - 03 September 2010, vol.1, pp.143-147
- XX. **ON BINARY SIMILARITY MEASURES FOR PRIVACY-PRESERVING TOP-N RECOMMENDATIONS**
Bilge A., Kaleli C., Polat H.
5th International Conference on Software and Data Technologies (ICSOF 2010), Athens, Greece, 22 - 24 July 2010, pp.299-304
- XXI. **Bilgisayar ağları eğitiminde proje tabanlı çalışmanın etkileri: Bir protokol yığını uygulaması**
BİLGE A., AKINLAR C.
IV. ELEKTRİK ELEKTRONİK BİLGİSAYAR BİYOMEDİKAL MÜHENDİSLİKLERİ EĞİTİMİ SEMPOZYUMU, Eskişehir, Turkey, 22 - 24 October 2009
- XXII. **The estimation of daily temperature by artificial and fuzzy neural network methods**
Bilge A.
2007 International Conference on Artificial Intelligence, ICAI 2007, Las Vegas, NV, United States Of America, 25 - 28 June 2007, vol.1, pp.217-220

Supported Projects

- Bilge A., Yalçın E., TUBITAK Project, Developing novel methods to mitigate the adverse effects of the popularity bias problem in recommender systems, 2022 - 2024
- BİLGE A., TUBITAK Project, Çoklu-Ölçüt Tabanlı Öneri Sistemlerinin Gizlilik Sorunlarının Giderilmesi ve Gürbüzülüğünün Artırılması için Yöntemler Geliştirilmesi, 2016 - 2018
- Bilge A., Yargıç A., Project Supported by Higher Education Institutions, Çoklu Ölçütlü Ortak Filtreleme Sistemlerinde Normalizasyon Yöntemlerinin Doğruluk Üzerine Etkisi, 2016 - 2017
- Bilge A., Yilmazel B., Kaleli C., Project Supported by Higher Education Institutions, Gizliliği Koruyan Dağıtık Veri Tabanlı Ortak Filtreleme Metotlarının Gürbüzülüğü için Teknikler Geliştirilmesi, 2014 - 2017
- Bilge A., Project Supported by Higher Education Institutions, Naive Bayes Sınıflandırıcı Tabanlı İkili Veri Çoklu Ölçütlü Öneri Sistemleri, 2015 - 2016
- Bilge A., Project Supported by Higher Education Institutions, Öğrenci Kayıt Yenileme İşlemlerinde Öneri Sistemleri Uygulaması, 2015 - 2016
- BİLGE A., TUBITAK Project, Developing Techniques for Improving the Robustness of Privacy Preserving Collaborative Filtering Schemes, 2012 - 2014
- TUBITAK Project, Providing Predictions with Privacy, 2009 - 2012

Metrics

Publication: 54

Citation (WoS): 902

Citation (Scopus): 1220

H-Index (WoS): 16

H-Index (Scopus): 17