

# Prof. İSMAİL HAKKI TOROSLU

## Personal Information

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## International Researcher IDs

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ScopusID: 6603451626

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## Education Information

Doctorate, Northwestern University, Bilgisayar Bilimleri, United States Of America 1989 - 1993

Postgraduate, Ihsan Dogramaci Bilkent University, Institute Of Engineering And Natural Sciences, Bilgisayar Mühendisliği (YI) (Tezli), Turkey 1987 - 1989

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Computer Engineering, Turkey 1982 - 1987

## Foreign Languages

English, C1 Advanced

## Research Areas

algorithms, Database and Data Structures, Artificial Intelligence, Computer Learning and Pattern Recognition

## Academic Titles / Tasks

Professor, Middle East Technical University, Faculty Of Engineering, Department Of Computer Engineering, 2007 - Continues

Associate Professor, Middle East Technical University, Faculty Of Engineering, Department Of Computer Engineering, 1997 - 2007

Assistant Professor, Middle East Technical University, Faculty Of Engineering, Department Of Computer Engineering, 1993 - 1997

## Advising Theses

TOROSLU İ. H. , Determining user types from Twitter account content and structure, Postgraduate, M.GÜRLEK(Student),

2021

- TOROSLU İ. H. , Forecasting user behaviors in call detail records using LSTM models, Postgraduate, H.KOCAMAN(Student), 2021
- ÜÇÖLÜK G., TOROSLU İ. H. , RnR: Reduce and Raise - Bottom-Up Community Detection in Bipartite and Tripartite Graphs, Postgraduate, K.EKMEKÇİ(Student), 2019
- TOROSLU İ. H. , Developing a twitter bot that can join a discussion using state-of-the-art architectures, Postgraduate, Y.Mücahit(Student), 2019
- TOROSLU İ. H. , Classification based personality analysis on Turkish tweets, Postgraduate, G.Maviş(Student), 2019
- TOROSLU İ. H. , Forecasting directional movement of forex data using LSTM with technical and macroeconomic indicators, Postgraduate, D.Can(Student), 2019
- TOROSLU İ. H. , Privacy preserving database external layer construction algorithm via secure decomposition for attribute-based security policies, Doctorate, U.TURAN(Student), 2018
- ŞEHİTOĞLU O. T. , TOROSLU İ. H. , Forecasting direction of exchange rate fluctuations with two dimensional patterns and currency strength, Doctorate, M.Onur(Student), 2017
- KARAGÖZ P., TOROSLU İ. H. , Product and channel prediction for direct marketing in banking sector, Postgraduate, M.MITİK(Student), 2017
- TOROSLU İ. H. , Co-clustering signed 3-partite graphs, Postgraduate, S.ŞAHİN(Student), 2017
- KARAGÖZ P., TOROSLU İ. H. , Data mining approach for direct marketing of banking products with profit/cost analysis, Postgraduate, O.KORKMAZ(Student), 2017
- KARAGÖZ P., TOROSLU İ. H. , Feature based sentiment analysis on informal Turkish texts, Postgraduate, B.KAMA(Student), 2016
- TOROSLU İ. H. , Heuristic based trading system on Forex data using technical indicator rules, Postgraduate, M.ÖZTÜRK(Student), 2015
- TOROSLU İ. H. , Dynamic modularity based community detection for large scale networks, Postgraduate, R.AKTUNÇ(Student), 2015
- TOROSLU İ. H. , Reco, a hybrid video recommendation system using user behaviours and features of videos, Postgraduate, Ş.BEZEN(Student), 2014
- TOROSLU İ. H. , Extending singular value decomposition based recommendation systems with tags and ontology, Postgraduate, Y.TURGUT(Student), 2014
- TOROSLU İ. H. , A new collaborative filtering algorithm using near-clique bipartite graph clusters, Postgraduate, H.YILDIZ(Student), 2014
- TOROSLU İ. H. , KARAGÖZ P., Improving the prediction of page access by using semantically enhanced clustering, Postgraduate, E.ŞEN(Student), 2014
- TOROSLU İ. H. , Methods for location prediction of mobile phone users, Postgraduate, İ.KELEŞ(Student), 2014
- KARAGÖZ P., TOROSLU İ. H. , Predicting the location and time of mobile phone users by using sequential pattern mining techniques, Postgraduate, M.ÖZER(Student), 2014
- TOROSLU İ. H. , KARAGÖZ P., Efficient rating estimation by using similarity in multi-dimensional check-in data, Postgraduate, B.UÇAR(Student), 2014
- KARAGÖZ P., TOROSLU İ. H. , Emotion analysis on Turkish tweets, Postgraduate, S.DEMİRCİ(Student), 2014
- TOROSLU İ. H. , A hybrid geo-activity recommendation system using advanced feature combination and semantic activity similarity, Postgraduate, M.SATTARI(Student), 2013
- TOROSLU İ. H. , Link based limited session reconstruction method for mining web usage data, Postgraduate, B.TIKNAZ(Student), 2013
- TOROSLU İ. H. , An extensible security infrastructure for the secondary use of electronic health records in clinical research, Postgraduate, E.ERYILMAZ(Student), 2013
- TOROSLU İ. H. , A semantic interoperability framework for reinforcing post market safety studies, Doctorate, M.YÜKSEL(Student), 2013
- TOROSLU İ. H. , Sentiment analysis of Turkish political columns with transfer learning, Postgraduate, M.KAYA(Student), 2013
- TOROSLU İ. H. , K-way partitioning of signed bipartite graphs, Postgraduate, N.BURAK(Student), 2012
- TOROSLU İ. H. , Toroslu İ., Patient privacy and consent management in health, Postgraduate, E.Alpay(Student), 2012

TOROSLU İ. H. , Patient privacy and consent management in e-health, Postgraduate, E.ALPAY(Student), 2012

TOROSLU İ. H. , KARAGÖZ P., Clustering frequent navigation patterns from website logs using ontology and temporal information, Postgraduate, S.KILIÇ(Student), 2011

TOROSLU İ. H. , A singular value decomposition approach for recommendation systems, Postgraduate, O.NURİ(Student), 2010

TOROSLU İ. H. , Mining frequent semantic event patterns, Postgraduate, E.SÖZTUTAR(Student), 2009

ŞENER C., TOROSLU İ. H. , Parallel CLOSET+ algorithm for finding frequent closed itemsets, Postgraduate, T.ŞEN(Student), 2009

TOROSLU İ. H. , Artillery target assignment problem with time dimension, Postgraduate, B.SAPAZ(Student), 2008

TOROSLU İ. H. , Assignment problem and its variations, Postgraduate, M.Gülek(Student), 2007

TOROSLU İ. H. , Genetic algorithm for personnel assignment problem with multiple objectives, Postgraduate, Y.ARSLANOĞLU(Student), 2006

TOROSLU İ. H. , A new reactive method for processing web usage data, Postgraduate, M.ALİ(Student), 2006

TOROSLU İ. H. , A new hybrid multi-relational data mining technique, Postgraduate, S.DAĞLAR(Student), 2005

ÜÇOLUK G., TOROSLU İ. H. , A comparative study of tree encodings for evolutionary computing, Postgraduate, E.SAKA(Student), 2005

TOROSLU İ. H. , Specification and scheduling of workflows under resource allocation constraints, Doctorate, P.KARAGÖZ(Student), 2003

TOROSLU İ. H. , Handling privacy of personal user-context information using service policies and role based user privacy preferences, Postgraduate, A.TÜMER(Student), 2003

TOROSLU İ. H. , Data mining using query flocks with views, Postgraduate, M.YETİŞGEN(Student), 2000

TOROSLU İ. H. , Data mining using query flocks with views, Postgraduate, M.Yetişgen(Student), 2000

TOROSLU İ. H. , A Deductive object-oriented database language, Postgraduate, M.SAVAŞ(Student), 1997

ÜÇOLUK G., TOROSLU İ. H. , Turkish text compression using Huffman coding, Postgraduate, Y.Çiftçisoy(Student), 1996

TOROSLU İ. H. , Object algebra in an object oriented data modelinde nesne cebri, Postgraduate, K.ŞAHİN(Student), 1995

TOROSLU İ. H. , The study of compression techniques to materialize transitive closures in deductive database, Postgraduate, K.Çınkır(Student), 1995

TOROSLU İ. H. , Object algebra in an object-oriented data model, Postgraduate, K.Şahin(Student), 1995

TOROSLU İ. H. , A Study of the some generation query in deluctive databases, Postgraduate, N.ARMAN(Student), 1995

TOROSLU İ. H. , A study of the same generation query in deductive databases, Postgraduate, N.Arman(Student), 1995

TOROSLU İ. H. , Computer aided query formulation, Postgraduate, İ.ÇİÇEK(Student), 1995

TOROSLU İ. H. , The study of compression techniques to materialize transitive closures in deductive databases, Postgraduate, K.ÇINKIR(Student), 1995

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

- I. **Trust-aware location recommendation in location-based social networks: A graph-based approach**  
Canturk D., KARAGÖZ P., Kim S., TOROSLU İ. H.  
Expert Systems with Applications, vol.213, 2023 (SCI-Expanded)
- II. **Maximal paths recipe for constructing Web user sessions**  
Bayir M. A. , Toroslu I. H.  
World Wide Web, vol.25, no.6, pp.2455-2485, 2022 (SCI-Expanded)
- III. **Twitter account classification using account metadata: organization vs. individual**  
Çetinkaya Y. M. , Gürlek M., Toroslu İ. H. , Karagöz P.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.30, no.4, pp.1404-1418, 2022 (SCI-Expanded)
- IV. **A reinforcement learning based algorithm for personalization of digital, just-in-time, adaptive interventions**  
Gönül S., Namlı T., Coşar A., TOROSLU İ. H.  
Artificial Intelligence in Medicine, vol.115, 2021 (SCI-Expanded)

- V. **Forecasting directional movement of Forex data using LSTM with technical and macroeconomic indicators**  
Yildirim D. C. , TOROSLU İ. H. , Fiore U.  
FINANCIAL INNOVATION, vol.7, no.1, 2021 (SSCI)
- VI. **Event Detection on Communities: Tracking the Change in Community Structure within Temporal Communication Networks**  
Aktunc R., TOROSLU İ. H. , KARAGÖZ P.  
PUTTING SOCIAL MEDIA AND NETWORKING DATA IN PRACTICE FOR EDUCATION, PLANNING, PREDICTION AND RECOMMENDATION, pp.75-96, 2020 (SCI-Expanded)
- VII. **A framework for aspect based sentiment analysis on turkish informal texts**  
KARAGÖZ P., Kama B., ÖZTÜRK M., TOROSLU İ. H. , Canturk D.  
Journal of Intelligent Information Systems, vol.53, no.3, pp.431-451, 2019 (SCI-Expanded)
- VIII. **Short-term trend prediction in financial time series data**  
Ozorhan M. O. , TOROSLU İ. H. , ŞEHİTOĞLU O. T.  
KNOWLEDGE AND INFORMATION SYSTEMS, vol.61, no.1, pp.397-429, 2019 (SCI-Expanded)
- IX. **An expandable approach for design and personalization of digital, just-in-time adaptive interventions**  
Gonul S., Namli T., Huisman S., Erturkmen G. B. L. , TOROSLU İ. H. , COŞAR A.  
JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION, vol.26, no.3, pp.198-210, 2019 (SCI-Expanded)
- X. **Triadic co-clustering of users, issues and sentiments in political tweets**  
Koc S. S. , Ozer M., TOROSLU İ. H. , Davulcu H., Jordan J.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.100, pp.79-94, 2018 (SCI-Expanded)
- XI. **A strength-biased prediction model for forecasting exchange rates using support vector machines and genetic algorithms**  
Ozorhan M. O. , TOROSLU İ. H. , ŞEHİTOĞLU O. T.  
SOFT COMPUTING, vol.21, no.22, pp.6653-6671, 2017 (SCI-Expanded)
- XII. **Secure logical schema and decomposition algorithm for proactive context dependent attribute based inference control**  
Turan U., TOROSLU İ. H. , Kantarcioglu M.  
DATA & KNOWLEDGE ENGINEERING, vol.111, pp.1-21, 2017 (SCI-Expanded)
- XIII. **Task assignment in tree-like hierarchical structures**  
EVRENDİLEK C., TOROSLU İ. H. , Hashemikhabir S.  
JOURNAL OF COMBINATORIAL OPTIMIZATION, vol.34, no.2, pp.631-655, 2017 (SCI-Expanded)
- XIV. **Improving the prediction of page access by using semantically enhanced clustering**  
Sen E., TOROSLU İ. H. , KARAGÖZ P.  
JOURNAL OF INTELLIGENT INFORMATION SYSTEMS, vol.47, no.1, pp.165-192, 2016 (SCI-Expanded)
- XV. **Heuristic based trading system on Forex data using technical indicator rules**  
ÖZTÜRK M., TOROSLU İ. H. , Fidan G.  
APPLIED SOFT COMPUTING, vol.43, pp.170-186, 2016 (SCI-Expanded)
- XVI. **Extended feature combination model for recommendations in location-based mobile services**  
Sattari M., TOROSLU İ. H. , KARAGÖZ P., Symeonidis P., Manolopoulos Y.  
KNOWLEDGE AND INFORMATION SYSTEMS, vol.44, no.3, pp.629-661, 2015 (SCI-Expanded)
- XVII. **Comparison of feature-based and image registration-based retrieval of image data using multidimensional data access methods**  
Arslan S., YAZICI A., Sacan A., TOROSLU İ. H. , Acar E.  
DATA & KNOWLEDGE ENGINEERING, vol.86, pp.124-145, 2013 (SCI-Expanded)
- XVIII. **Discovering better navigation sequences for the session construction problem**  
Bayir M. A. , Toroslu I. H. , Demirbas M., COŞAR A.  
DATA & KNOWLEDGE ENGINEERING, vol.73, pp.58-72, 2012 (SCI-Expanded)
- XIX. **A comparative study on ILP-based concept discovery systems**

- Kavurucu Y., Senkul P., TOROSLU İ. H.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.38, no.9, pp.11598-11607, 2011 (SCI-Expanded)
- XX. **Concept discovery on relational databases: New techniques for search space pruning and rule quality improvement**  
Kavurucu Y., Senkul P., TOROSLU İ. H.  
KNOWLEDGE-BASED SYSTEMS, vol.23, no.8, pp.743-756, 2010 (SCI-Expanded)
- XXI. **A dynamic programming algorithm for tree-like weighted set packing problem**  
Gulek M., TOROSLU İ. H.  
INFORMATION SCIENCES, vol.180, no.20, pp.3974-3979, 2010 (SCI-Expanded)
- XXII. **A genetic algorithm for maximum-weighted tree matching problem**  
Gulek M., TOROSLU İ. H.  
APPLIED SOFT COMPUTING, vol.10, no.4, pp.1127-1131, 2010 (SCI-Expanded)
- XXIII. **ILP-based concept discovery in multi-relational data mining**  
Kavurucu Y., Senkul P., TOROSLU İ. H.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.9, pp.11418-11428, 2009 (SCI-Expanded)
- XXIV. **Integrated search and alignment of protein structures**  
Sacan A., TOROSLU İ. H. , Ferhatosmanoglu H.  
BIOINFORMATICS, vol.24, no.24, pp.2872-2879, 2008 (SCI-Expanded)
- XXV. **Authors' response to "an addendum on the incremental assignment problem" by Volgenant**  
TOROSLU İ. H. , Ucoluk G.  
INFORMATION SCIENCES, vol.178, no.23, pp.4584, 2008 (SCI-Expanded)
- XXVI. **Incremental assignment problem**  
Toroslu I. H. , Ucoluk G.  
INFORMATION SCIENCES, vol.177, no.6, pp.1523-1529, 2007 (SCI-Expanded)
- XXVII. **Genetic algorithm for the personnel assignment problem with multiple objectives**  
Toroslu I. H. , Arslanoglu Y.  
INFORMATION SCIENCES, vol.177, no.3, pp.787-803, 2007 (SCI-Expanded)
- XXVIII. **Genetic algorithm for the multiple-query optimization problem**  
Bayir M. A. , Toroslu I. H. , Cosar A.  
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART C-APPLICATIONS AND REVIEWS, vol.37, no.1, pp.147-153, 2007 (SCI-Expanded)
- XXIX. **Data management research at the Middle East Technical University**  
Cicekli N., Cosar A., Dogac A., Polat F., Senkul P., Toroslu I., Yazici A.  
SIGMOD RECORD, vol.34, no.3, pp.81-84, 2005 (SCI-Expanded)
- XXX. **An architecture for workflow scheduling under resource allocation constraints**  
Senkul P., Toroslu I.  
INFORMATION SYSTEMS, vol.30, no.5, pp.399-422, 2005 (SCI-Expanded)
- XXXI. **Data mining in deductive databases using query flocks**  
Toroslu I., Yetisgen-Yildiz M.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.28, no.3, pp.395-407, 2005 (SCI-Expanded)
- XXXII. **A semantic-based user privacy protection framework for Web services**  
Tumer A., Dogac A., Toroslu I.  
INTELLIGENT TECHNIQUES FOR WEB PERSONALIZATION, vol.3169, pp.289-305, 2005 (SCI-Expanded)
- XXXIII. **Dynamic programming solution for multiple query optimization problem**  
Toroslu I., Cosar A.  
INFORMATION PROCESSING LETTERS, vol.92, no.3, pp.149-155, 2004 (SCI-Expanded)
- XXXIV. **Repetition support and mining cyclic patterns**  
Toroslu I.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.25, no.3, pp.303-311, 2003 (SCI-Expanded)
- XXXV. **Personnel assignment problem with hierarchical ordering constraints**  
Toroslu I.

- COMPUTERS & INDUSTRIAL ENGINEERING, vol.45, no.3, pp.493-510, 2003 (SCI-Expanded)
- XXXVI. **Automatic reconstruction of broken 3-D surface objects**  
Ucoluk G., Toroslu I.  
COMPUTERS & GRAPHICS-UK, vol.23, no.4, pp.573-582, 1999 (SCI-Expanded)
- XXXVII. **LPL++: Object logic programming language with built-in inheritance through unification**  
Toroslu I.  
DATA BASE FOR ADVANCES IN INFORMATION SYSTEMS, vol.29, no.2, pp.50-61, 1998 (SCI-Expanded)
- XXXVIII. **A genetic algorithm approach for verification of the syllable-based text compression technique**  
Ucoluk G., Toroslu I.  
JOURNAL OF INFORMATION SCIENCE, vol.23, no.5, pp.365-372, 1997 (SCI-Expanded)
- XXXIX. **The strong partial transitive-closure problem: Algorithms and performance evaluation**  
Toroslu I., Qadah G.  
IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING, vol.8, no.4, pp.617-629, 1996 (SCI-Expanded)
- XL. **AN EFFICIENT DATABASE TRANSITIVE CLOSURE ALGORITHM**  
TOROSLU I., QADAH G., HENSCHEN L.  
APPLIED INTELLIGENCE, vol.4, no.2, pp.205-218, 1994 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Personality Analysis Using Classification on Turkish Tweets**  
Mavis G., TOROSLU İ. H. , KARAGÖZ P.  
International Journal of Cognitive Informatics and Natural Intelligence, vol.15, 2021 (ESCI)
- II. **Comparison of Integer Linear Programming and Dynamic Programming Approaches for ATM Cash Replenishment Optimization Problem**  
Ozer F., TOROSLU İ. H. , KARAGÖZ P.  
INTERNATIONAL JOURNAL OF APPLIED METAHEURISTIC COMPUTING, vol.11, no.3, pp.120-132, 2020 (ESCI)
- III. **Developing a Twitter bot that can join a discussion using state-of-the-art architectures**  
Çetinkaya Y. M. , Toroslu I. H. , Davulcu H.  
SOCIAL NETWORK ANALYSIS AND MINING, vol.10, no.1, 2020 (Peer-Reviewed Journal)
- IV. **Data Mining Approach for Direct Marketing of Banking Products with Profit/Cost Analysis**  
Mitik M., Korkmaz O., KARAGÖZ P., TOROSLU İ. H. , Yucel F.  
REVIEW OF SOCIONETWORK STRATEGIES, vol.11, no.1, pp.17-31, 2017 (ESCI)
- V. **2009 24th International Symposium on Computer and Information Sciences, ISCIS 2009: Preface**  
Vural F. Y. , Yazici A., Toroslu H., Can T., Şenkul P., Saçan A.  
2009 24th International Symposium on Computer and Information Sciences, ISCIS 2009, 2009 (Scopus)
- VI. **Discovering More Accurate Frequent Web Usage Patterns**  
BAYIR M. A. , TOROSLU İ. H. , COŞAR A., FİDAN G.  
ARXIV, 2008 (Non Peer-Reviewed Journal)

### Books & Book Chapters

- I. **Event Detection on Communities: Tracking the Change in Community Structure within Temporal Communication Networks**  
Aktunç R., TOROSLU İ. H. , KARAGÖZ P.  
in: Putting Social Media and Networking Data in Practice for Education, Planning, Prediction and Recommendation, Mehmet KayaŞuayip BirinciJalal KawashReda Alhaji, Editor, Springer Cham, pp.75-96, 2020
- II. **A Network-Based Model for Predicting Hashtag Breakouts in Twitter**  
Alzahrani S., Alashri S., Koppela A. R. , Davulcu H., TOROSLU İ. H.  
in: Social Computing Behavioral Cultural Modeling and Prediction, Agrawal N., Xu K., Osgood N., Editor, Springer,

pp.3-12, 2015

- III. **Location Prediction of Mobile Phone Users Using Apriori-Based Sequence Mining with Multiple Support Thresholds**  
Keleş I., Özer M., TOROSLU İ. H. , KARAGÖZ P.  
in: New Frontiers in Mining Complex Patterns, A. Appice, M. Ceci, C. Loglisci, G. Manco, E. Masciari and Z. W. Ras, Editor, Springer, pp.179-193, 2015
- IV. **Location Prediction of Mobile Phone Users Using Apriori-Based Sequence Mining with Multiple Support Thresholds**  
Keleş İ., Özer M., Toroslu İ. H. , Karagöz P.  
in: New Frontiers in Mining Complex Patterns, A. Appice, M. Ceci, C. Loglisci, G. Manco, E. Masciari and Z. W. Ras, Editor, Springer, New York, pp.179-193, 2015

### **Refereed Congress / Symposium Publications in Proceedings**

- I. **ATM Withdrawal Amount Forecasting Through Neural Architectures**  
Baran O. B. , Sunel S., Karagöz P., Toroslu İ. H.  
IEEE International Conference on Big Data, Los-Angeles, Chile, 9 - 12 December 2019
- II. **Clustering based personality prediction on turkish tweets**  
Tutaysalgir E., Karagöz P., Toroslu İ. H.  
Proceedings of the 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, Vancouver, Canada, 27 - 30 August 2019, pp.825-828
- III. **Dynamic Programming Solution to ATM Cash Replenishment Optimization Problem**  
Ozer F., TOROSLU İ. H. , KARAGÖZ P., Yucel F.  
1st International Conference on Intelligent Computing and Optimization (ICO), Pattaya, Thailand, 4 - 05 October 2018, vol.866, pp.428-437
- IV. **Dynamic Programming Solution to ATM Cash Replenishment Optimization Problem,, Pattaya, Thailand, Oct. 4-5, 2018.**  
Özer F., Toroslu İ. H. , Karagöz P., Yucel F.  
Int Conf. on Intelligent Computing and Optimization, Pattani, Thailand, 4 - 05 October 2018
- V. **Event Detection by Change Tracking on Community Structure of Temporal Networks**  
Aktunc R., Toroslu İ. H. , Karagöz P.  
IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), Barcelona, Spain, 28 - 31 August 2018, pp.928-931
- VI. **Optimization of Just-in-Time Adaptive Interventions Using Reinforcement Learning**  
Gonul S., Namli T., Baskaya M., Sinaci A. A. , COŞAR A., TOROSLU İ. H.  
31st International Conference on Industrial Engineering and Other Applications of Applied Intelligent Systems (IEA/AIE), Montreal, Canada, 25 - 28 June 2018, vol.10868, pp.334-341
- VII. **Analyzing Implicit Aspects and Aspect Dependent Sentiment Polarity for Aspect-based Sentiment Analysis on Informal Turkish Texts**  
Kama B., ÖZTÜRK M., KARAGÖZ P., TOROSLU İ. H. , Kalender M.  
9th International Conference on Management of Emergent Digital EcoSystems (MEDES), Bangkok, Thailand, 7 - 09 November 2017, pp.134-141
- VIII. **Data Mining based Product Marketing Technique for Banking Products**  
Mitik M., Korkmaz O., KARAGÖZ P., TOROSLU İ. H. , Yucel F.  
16th IEEE International Conference on Data Mining (ICDM), Barcelona, Spain, 12 - 15 December 2016, pp.552-559
- IX. **A Web Search Enhanced Feature Extraction Method for Aspect-Based Sentiment Analysis for Turkish Informal Texts**  
Kama B., ÖZTÜRK M., KARAGÖZ P., TOROSLU İ. H. , Ozay O.  
18th International Conference on Data Warehousing and Knowledge Discovery (DAWAK), Porto, Portugal, 6 - 08 September 2016, vol.9829, pp.225-238

- X. **Co-Clustering Signed 3-Partite Graphs**  
Koc S. S. , Toroslu I. H. , Davulcu H.  
8th IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), San-Francisco, Costa Rica, 18 - 21 August 2016, pp.945-948
- XI. **Finding All Maximal Paths In Web User Sessions**  
BAYIR M. A. , TOROSLU İ. H.  
WWW 2016, Montreal, Canada, 11 - 15 April 2016, pp.15-16
- XII. **A Dynamic Modularity Based Community Detection Algorithm for Large-scale Networks: DSLM**  
Aktunc R., TOROSLU İ. H. , Ozer M., Davulcu H.  
IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), Paris, France, 25 - 28 August 2015, pp.1177-1183
- XIII. **Cost-Aware Result Caching for Meta-Search Engines**  
Bakkal E., ALTINGÖVDE İ. S. , TOROSLU İ. H.  
38th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR), Santiago, Chile, 9 - 13 August 2015, pp.739-742
- XIV. **Predicting the Next Location Change and Time of Change for Mobile Phone Users**  
Ozer M., Keles I., TOROSLU İ. H. , KARAGÖZ P., Ergut S.  
3rd ACM SIGSPATIAL International Workshop on Mobile Geographic Information Systems (MobiGIS), Texas, United States Of America, 04 November 2014, pp.51-59
- XV. **Location Prediction of Mobile Phone Users Using Apriori-Based Sequence Mining with Multiple Support Thresholds**  
Keles I., Ozer M., TOROSLU İ. H. , KARAGÖZ P.  
International Workshop on New Frontiers in Mining Complex Patterns, 19 September 2014
- XVI. **Clustering frequent navigation patterns from website logs by using ontology and temporal information**  
Kilic S., Senkul P., TOROSLU İ. H.  
27th International Symposium on Computer and Information Sciences, ISCIS 2012, Paris, France, 3 - 04 October 2012, pp.363-370
- XVII. **Transfer Learning Using Twitter Data for Improving Sentiment Classification of Turkish Political News**  
Kaya M., Fidan G., TOROSLU İ. H.  
28th International Symposium on Computer and Information Sciences (ISCIS), Paris, France, 28 - 29 October 2013, vol.264, pp.139-148
- XVIII. **K-partitioning of Signed or Weighted Bipartite Graphs**  
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## **Metrics**

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## **Awards**

Karagöz P., Toroslu İ. H. , Best paper award, Int. Conf On Intelligent Computing And Optimization, October 2018