

# Prof. İSMAİL HAKKI TOROSLU

## Personal Information

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## Education Information

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

Post Graduate, İhsan Doğramacı Bilkent Üniversitesi, Mühendislik Ve Fen Bilimleri Enstitüsü, Bilgisayar Mühendisliği (YI) (Tezli), Turkey 1987 - 1989

Under Graduate, 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. , Developing a twitter bot that can join a discussion using state-of-the-art architectures, Post Graduate, Y.Mücahit(Student), 2019

TOROSLU İ. H. , Classification based personality analysis on Turkish tweets, Post Graduate, G.Maviş(Student), 2019

ÜÇOLUK G., TOROSLU İ. H. , RnR: Reduce and Raise - Bottom-Up Community Detection in Bipartite and Tripartite Graphs, Post Graduate, K.EKMEKÇİ(Student), 2019

TOROSLU İ. H. , Forecasting directional movement of forex data using LSTM with technical and macroeconomic indicators, Post Graduate, 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

TOROSLU İ. H. , ŞEHİTOĞLU O. T. , Forecasting direction of exchange rate fluctuations with two dimensional patterns and currency strength, Doctorate, M.Onur(Student), 2017

TOROSLU İ. H. , Co-clustering signed 3-partite graphs, Post Graduate, S.ŞAHİN(Student), 2017

TOROSLU İ. H. , KARAGÖZ P., Product and channel prediction for direct marketing in banking sector, Post Graduate, M.MITİK(Student), 2017

TOROSLU İ. H. , KARAGÖZ P., Data mining approach for direct marketing of banking products with profit/cost analysis, Post Graduate, O.KORKMAZ(Student), 2017

TOROSLU İ. H. , KARAGÖZ P., Feature based sentiment analysis on informal Turkish texts, Post Graduate, B.KAMA(Student), 2016

TOROSLU İ. H. , Heuristic based trading system on Forex data using technical indicator rules, Post Graduate, M.ÖZTÜRK(Student), 2015

TOROSLU İ. H. , Dynamic modularity based community detection for large scale networks, Post Graduate, R.AKTUNÇ(Student), 2015

TOROSLU İ. H. , Methods for location prediction of mobile phone users, Post Graduate, İ.KELEŞ(Student), 2014

TOROSLU İ. H. , KARAGÖZ P., Emotion analysis on Turkish tweets, Post Graduate, S.DEMİRCİ(Student), 2014

TOROSLU İ. H. , Reco, a hybrid video recommendation system using user behaviours and features of videos, Post Graduate, Ş.BEZEN(Student), 2014

TOROSLU İ. H. , Extending singular value decomposition based recommendation systems with tags and ontology, Post Graduate, Y.TURGUT(Student), 2014

TOROSLU İ. H. , A new collaborative filtering algorithm using near-clique bipartite graph clusters, Post Graduate, H.YILDIZ(Student), 2014

KARAGÖZ P., TOROSLU İ. H. , Predicting the location and time of mobile phone users by using sequential pattern mining techniques, Post Graduate, M.ÖZER(Student), 2014

TOROSLU İ. H. , KARAGÖZ P., Improving the prediction of page access by using semantically enhanced clustering, Post Graduate, E.ŞEN(Student), 2014

TOROSLU İ. H. , KARAGÖZ P., Efficient rating estimation by using similarity in multi-dimensional check-in data, Post Graduate, B.UÇAR(Student), 2014

TOROSLU İ. H. , A hybrid geo-activity recommendation system using advanced feature combination and semantic activity similarity, Post Graduate, M.SATTARI(Student), 2013

TOROSLU İ. H. , An extensible security infrastructure for the secondary use of electronic health records in clinical research, Post Graduate, E.ERYILMAZ(Student), 2013

TOROSLU İ. H. , Link based limited session reconstruction method for mining web usage data, Post Graduate, B.TIKNAZ(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, Post Graduate, M.KAYA(Student), 2013

TOROSLU İ. H. , Toroslu İ., Patient privacy and consent management in health, Post Graduate, E.Alpay(Student), 2012

TOROSLU İ. H. , K-way partitioning of signed bipartite graphs, Post Graduate, N.BURAK(Student), 2012

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

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

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

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

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

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

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

TOROSLU İ. H. , Genetic algorithm for personnel assignment problem with multiple objectives, Post Graduate,

Y.ARSLANOĞLU(Student), 2006

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

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

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

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

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

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

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

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

ÜÇOLUK G., TOROSLU İ. H. , Turkish text compression using Huffman coding, Post Graduate, Y.Çiftçisoğ(Student), 1996

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

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

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

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

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

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

TOROSLU İ. H. , Object algebra inan object oriented data modelinde nesne cebri, Post Graduate, K.ŞAHİN(Student), 1995

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

- I. **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 (Journal Indexed in SSCI)
- II. **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 (Journal Indexed in SCI)
- III. **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 (Journal Indexed in SCI)
- IV. **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 (Journal Indexed in SCI)
- V. **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 (Journal Indexed in SCI)
- VI. **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 (Journal Indexed in SCI)
- VII. **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 (Journal Indexed in SCI)

- VIII. **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 (Journal Indexed in SCI)
- IX. **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 (Journal Indexed in SCI)
- X. **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 (Journal Indexed in SCI)
- XI. **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 (Journal Indexed in SCI)
- XII. **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 (Journal Indexed in SCI)
- XIII. **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 (Journal Indexed in SCI)
- XIV. **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 (Journal Indexed in SCI)
- XV. **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 (Journal Indexed in SCI)
- XVI. **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 (Journal Indexed in SCI)
- XVII. **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 (Journal Indexed in SCI)
- XVIII. **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 (Journal Indexed in SCI)
- XIX. **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 (Journal Indexed in SCI)
- XX. **Integrated search and alignment of protein structures**  
Sacan A., TOROSLU İ. H. , Ferhatosmanoglu H.  
BIOINFORMATICS, vol.24, no.24, pp.2872-2879, 2008 (Journal Indexed in SCI)
- XXI. **Authors' response to "an addendum on the incremental assignment problem" by Volgenant**  
TOROSLU İ. H. , Uecoluk G.  
INFORMATION SCIENCES, vol.178, no.23, pp.4584, 2008 (Journal Indexed in SCI)
- XXII. **Incremental assignment problem**  
Toroslu I. H. , Ucoluk G.  
INFORMATION SCIENCES, vol.177, no.6, pp.1523-1529, 2007 (Journal Indexed in SCI)
- XXIII. **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 (Journal Indexed in SCI)
- XXIV. **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 (Journal Indexed in SCI)
- XXV. **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 (Journal Indexed in SCI)
- XXVI. **An architecture for workflow scheduling under resource allocation constraints**  
Senkul P., Toroslu I.  
INFORMATION SYSTEMS, vol.30, no.5, pp.399-422, 2005 (Journal Indexed in SCI)
- XXVII. **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 (Journal Indexed in SCI)
- XXVIII. **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 (Journal Indexed in SCI)
- XXIX. **Dynamic programming solution for multiple query optimization problem**  
Toroslu I., Cosar A.  
INFORMATION PROCESSING LETTERS, vol.92, no.3, pp.149-155, 2004 (Journal Indexed in SCI)
- XXX. **Repetition support and mining cyclic patterns**  
Toroslu I.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.25, no.3, pp.303-311, 2003 (Journal Indexed in SCI)
- XXXI. **Personnel assignment problem with hierarchical ordering constraints**  
Toroslu I.  
COMPUTERS & INDUSTRIAL ENGINEERING, vol.45, no.3, pp.493-510, 2003 (Journal Indexed in SCI)
- XXXII. **Automatic reconstruction of broken 3-D surface objects**  
Ucoluk G., Toroslu I.  
COMPUTERS & GRAPHICS-UK, vol.23, no.4, pp.573-582, 1999 (Journal Indexed in SCI)
- XXXIII. **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 (Journal Indexed in SCI)
- XXXIV. **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 (Journal Indexed in SCI)
- XXXV. **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 (Journal Indexed  
in SCI)
- XXXVI. **AN EFFICIENT DATABASE TRANSITIVE CLOSURE ALGORITHM**  
TOROSLU I., QADAH G., HENSCHEN L.  
APPLIED INTELLIGENCE, vol.4, no.2, pp.205-218, 1994 (Journal Indexed in SCI)

## Articles Published in Other Journals

- I. **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 (Journal

Indexed in ESCI)

- II. **Developing a Twitter bot that can join a discussion using state-of-the-art architectures**  
ÇETİNKAYA Y. M. , TOROSLU İ. H. , Davulcu H.  
SOCIAL NETWORK ANALYSIS AND MINING, vol.10, no.1, 2020 (Journal Indexed in ESCI)
- III. **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 (Journal Indexed in ESCI)
- IV. **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 (Refereed Journals of Other Institutions)
- V. **Discovering More Accurate Frequent Web Usage Patterns**  
BAYIR M. A. , TOROSLU İ. H. , COŞAR A., FİDAN G.  
ARXIV, 2008 (Non-Refreed 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 Alhajj, 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 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, 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, 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.  
International Conference on Intelligent Computing and Optimization, ICO 2018, 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**  
Omeroglu N. B. , TOROSLU İ. H. , Gokalp S., Davulcu H.  
ASE/IEEE International Conference on Social Computing (SocialCom), Washington, Kiribati, 8 - 14 September 2013, pp.815-820
- XIX. Partitioning and Scaling Signed Bipartite Graphs for Polarized Political Blogosphere**  
Gokalp S., Temkit M., Davulcu H., TOROSLU İ. H.  
ASE/IEEE International Conference on Social Computing (SocialCom), Washington, Kiribati, 8 - 14 September 2013, pp.168-173
- XX. Similarity search in protein sequence databases using metric access methods**  
Cetintas A., Sacan A., TOROSLU İ. H.  
5th International Conference on Bioinformatics and Computational Biology 2013, BICoB 2013, Honolulu, HI, United States Of America, 4 - 06 March 2013, pp.131-136
- XXI. Sentiment Analysis of Turkish Political News**  
Kaya M., Fidan G., TOROSLU İ. H.  
11th IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT), Macau, China, 4 - 07 December 2012, pp.174-180
- XXII. Geo activity Recommendations by using Improved Feature Combination**  
SATTARI M., MANGUOĞLU M., TOROSLU İ. H. , PANAGIOTIS S., KARAGÖZ P., YANNIS M.  
4th International Workshop on Location-Based Social Networks, 08 September 2012
- XXIII. Using tag similarity in SVD-based recommendation systems**  
Osmanli O. N. , TOROSLU İ. H.  
2011 5th International Conference on Application of Information and Communication Technologies, AICT 2011, Baku, Azerbaijan, 12 - 14 October 2011
- XXIV. Geo-social recommendations based on incremental tensor reduction and local path traversal**  
Symeniodis P., Papadimitriou A., Manolopoulos Y., KARAGÖZ P., TOROSLU İ. H.  
ACM SIGSPATIAL International Workshop on Location-Based Social Networks, 01 November 2011
- XXV. Adaptation and Fine-Tuning of the Weighted Sum Method on Personnel Assignment Problem with Hierarchical Ordering and Team Constraints**  
Arslanoglu Y., TOROSLU İ. H.  
26th Annual International Symposium on Computer and Information Science, London, Canada, 26 - 28 September 2011, pp.571-576
- XXVI. Semantically Enriched Event Based Model for Web Usage Mining**  
Soztutar E., TOROSLU İ. H. , Bayir M. A.  
11th International Conference on Web Information Systems Engineering, Hong Kong, PEOPLES R CHINA, 12 - 14 December 2010, vol.6488, pp.166-168
- XXVII. Comparison of multidimensional data access methods for feature-based image retrieval**  
Arslan S., Saçan A., Açar E., TOROSLU İ. H. , YAZICI A.  
2010 20th International Conference on Pattern Recognition, ICPR 2010, İstanbul, Turkey, 23 - 26 August 2010, pp.3260-3263
- XXVIII. A genetic algorithm approach to the artillery target assignment problem**  
Sapaz B., TOROSLU İ. H. , ÜÇOLUK G.  
25th International Symposium on Computer and Information Sciences, ISCIS 2010, London, England, 22 - 24 September 2010, pp.39-42



- XXIX. **Smart Miner: A new framework for mining large scale web usage data**  
Bayir M. A. , TOROSLU İ. H. , COŞAR A., Fidan G.  
18th International World Wide Web Conference, WWW 2009, Madrid, Spain, 20 - 24 April 2009, pp.161-170
- XXX. **Confidence-based concept discovery in relational databases**  
Kavurucu Y., Senkul P., TOROSLU İ. H.  
2009 WRI World Congress on Computer Science and Information Engineering, CSIE 2009, Los Angeles, CA, United States Of America, 31 March - 02 April 2009, vol.4, pp.282-286
- XXXI. **Multi-Relational Concept Discovery with Aggregation**  
Kavurucu Y., Senkul P., TOROSLU İ. H.  
24th International Symposium on Computer and Information Sciences, Güzelyurt, Cyprus (Kktc), 14 - 16 September 2009, pp.247-252
- XXXII. **Analyzing Transitive Rules on a Hybrid Concept Discovery System**  
Kavurucu Y., Senkul P., TOROSLU İ. H.  
4th International Workshop on Hybrid Artificial Intelligence Systems, Salamanca, Mexico, 10 - 12 June 2009, vol.5572, pp.227-234
- XXXIII. **Aggregation in confidence-based concept discovery for multi-relational data mining**  
Kavurucu Y., Senkul P., TOROSLU İ. H.  
Informatics 2008 and Data Mining 2008, MCCSIS'08 - IADIS Multi Conference on Computer Science and Information Systems, Amsterdam, Netherlands, 22 - 27 July 2008, pp.43-50
- XXXIV. **Distance-based Indexing of Residue Contacts for Protein Structure Retrieval and Alignment**  
Sacan A., TOROSLU İ. H. , Ferhatosmanoglu H.  
8th IEEE International Conference on Bioinformatics and Bioengineering, Athens, Greece, 8 - 10 October 2008, pp.314-316
- XXXV. **Approximate similarity search in genomic sequence databases using landmark-guided embedding**  
Sacan A., TOROSLU İ. H.  
24th IEEE International Conference on Data Engineering/ 1st International Workshop on Secure Semantic Web, Cancun, Mexico, 7 - 12 April 2008, pp.498-499
- XXXVI. **Confidence-based concept discovery in multi-relational data mining**  
Kavurucu Y., Senkul P., TOROSLU İ. H.  
International Multiconference of Engineers and Computer Scientists, Hong Kong, PEOPLES R CHINA, 19 - 21 March 2008, pp.446-451
- XXXVII. **Amino acid substitution matrices based on 4-body Delaunay contact profiles**  
Sacan A., TOROSLU İ. H.  
7th IEEE International Conference on Bioinformatics and Bioengineering, Massachusetts, United States Of America, 14 - 17 October 2007, pp.796-801
- XXXVIII. **A new ILP-based concept discovery method for business intelligence**  
Toprak S. D. , Senkul P., Kavurucu Y., TOROSLU İ. H.  
IEEE 23rd International Conference on Data Engineering Workshop, İstanbul, Turkey, 17 - 20 April 2007, pp.962-969
- XXXIX. **Performance comparison of pattern discovery methods on web log data**  
Bayir M. A. , TOROSLU İ. H. , COŞAR A.  
4th IEEE/ACS International Conference on Computer Systems and Applications (AICCSA-06), Sharjah, United Arab Emirates, 8 - 11 March 2006, pp.445-446
- XL. **A new approach for reactive web usage data processing**  
Bayir M. A. , TOROSLU İ. H. , COŞAR A.  
22nd International Conference on Data Engineering Workshops, ICDEW 2006, Georgia, United States Of America, 3 - 07 April 2006
- XLI. **A semantic-based user privacy protection framework for Web services**  
Turner A., Dogac A., TOROSLU İ. H.  
IJCAI 2003 Workshop on Intelligent Techniques for Web Personalization, ITWP 2003, Acapulco, Mexico, 11 August 2003, pp.289-305

- XLII. Data Mining in Deductive Databases Using Query Flocks: Extended Abstract**  
Toroslu İ. H. , Yetisgen M.  
Proceedings of the 6th Joint Conference on Information Sciences, JCIS 2002, Research Triange Park, NC, United States Of America, 8 - 13 March 2002, vol.6, pp.494-497
- XLIII. A logical framework for scheduling workflows under resource allocation constraints**  
KARAGÖZ P., Kifer M., TOROSLU İ. H.  
28th international conference on Very Large Data Bases, 18 - 22 August 2002
- XLIV. Mining cyclically repeated patterns**  
Toroslu İ. H. , Kantarcioglu M.  
3rd International Conference on Data Warehousing and Knowledge Discovery, DaWaK 2001, Munich, Germany, 5 - 07 September 2001, vol.2114, pp.83-92
- XLV. Data mining using query flocks with views**  
Yetisgen M., TOROSLU İ. H.  
11th International Conference on Database and Expert Systems Applications, DEXA 2000, London, England, 4 - 08 September 2000, vol.1873, pp.720-729
- XLVI. Effective maintenance views: Improvements to the DRed algorithm**  
Toroslu I., Kocabas F.  
14th International Conference on Logic Programming (ICLP 97), LOUVAIN, Belgium, 8 - 11 July 1997, pp.213-225
- XLVII. Efficient computation of strong partial transitive-closures**  
Toroslu İ. H. , Qadah G. Z.  
1993 IEEE 9th International Conference on Data Engineering, Vienna, Austria, 19 - 23 April 1993, pp.530-537
- XLVIII. An efficient transitive closure algorithm for distributed databases**  
Toroslu İ. H. , Henschen L.  
5th International Conference on Computing and Information, ICCI 1993, Sudbury, Canada, 27 - 29 May 1993, pp.185-189
- XLIX. New transitive closure algorithm for recursive query processing in deductive databases**  
Toroslu İ. H. , Qadah G.  
4th International Conference on Tools with Artificial Intelligence, ICTAI 1992, Virginia, United States Of America, 10 - 13 November 1992, pp.268-275

## Supported Projects

Karagöz P., Toroslu İ. H. , TÜBİTAK International Bilateral Joint Cooperation Program Project, Açık ve Gizli Güven İlişkilerinden Faydalanan Güven Tabanlı Öneri Teknikleri Geliştirme, 2019 - 2021

## Citations

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h-index (WOS):12

## Awards

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