

Prof. FARUK POLAT

Personal Information

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Education Information

Doctorate, Ihsan Dogramaci Bilkent University, Institute Of Engineering And Natural Sciences, Bilgisayar Mühendisliği (Dr), Turkey 1989 - 1994

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 1983 - 1987

Foreign Languages

English, C1 Advanced

Research Areas

Engineering and Technology

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty Of Engineering, Department Of Computer Engineering, 2002 - Continues

Associate Professor, Middle East Technical University, Faculty Of Engineering, Department Of Computer Engineering, 1996 - 2002

Assistant Professor, Middle East Technical University, Faculty Of Engineering, Department Of Computer Engineering, 1994 - 1996

Research Assistant, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, Department Of Computer Engineering, 1987 - 1994

Advising Theses

POLAT F., Automatic identification of transitional bottlenecks in reinforcement learning under partial observability, Postgraduate, H.AYDIN(Student), 2017

POLAT F., Effective subgoal discovery and option generation in reinforcement learning, Postgraduate, A.DEMİR(Student), 2016

POLAT F., A multi-objective recommendation system, Doctorate, M.GÜLÇİN(Student), 2016

POLAT F., A heuristic temporal difference approach with adaptive grid discretization, Postgraduate, O.BORA(Student), 2016

POLAT F., Task assignment and scheduling in UAV mission planning with multiple constraints, Postgraduate, F.SEMİZ(Student), 2015

POLAT F., Factored reinforcement learning using extended sequence trees, Postgraduate, C.ŞAHİN(Student), 2015

POLAT F., Community detection in social networks, Postgraduate, K.ÖZTÜRK(Student), 2014

POLAT F., Context-aware Markov decision processes, Postgraduate, Ö.EKMEKÇİ(Student), 2014

POLAT F., Mission planning for unmanned aerial vehicle (UAV) teams, Postgraduate, S.YILGIN(Student), 2014

POLAT F., Abstraction in reinforcement learning in partially observable environments, Doctorate, E.ÇILDEN(Student), 2014

POLAT F., Batch mode reinforcement learning for controlling gene regulatory networks and multi-model gene expression data enrichment framework, Postgraduate, U.ŞİRİN(Student), 2013

POLAT F., Efficient partially observable markov decision process based formulation of gene regulatory network control problem, Doctorate, U.ERDOĞDU(Student), 2012

POLAT F., Multi-objective path planning for virtual environments, Postgraduate, T.ORAL(Student), 2012

POLAT F., Multiresolution formation preserving path planning in 3-D virtual environments, Postgraduate, C.HOŞGÖR(Student), 2011

POLAT F., Optimization algorithms for resource allocation problem of air tasking order preparation, Postgraduate, A.ENGİN(Student), 2010

POLAT F., An automated conversion of temporal databases into XML with fuzziness option, Postgraduate, Ö.ÖZGÜN(Student), 2010

POLAT F., Design and implementation of a p2p contracting overlay, Postgraduate, R.ÇELEBİ(Student), 2009

POLAT F., Induction and control of large-scale gene regulatory networks, Doctorate, M.TAN(Student), 2009

POLAT F., Learning cooperation in hunter-prey problem via state abstraction, Postgraduate, A.İŞÇEN(Student), 2009

POLAT F., A BDI-based multiagent simulation framework, Postgraduate, M.YÜKSELEN(Student), 2008

POLAT F., A new offline path search algorithm for computer games that considers damage as a feasibility criterion, Postgraduate, S.BAYILI(Student), 2008

POLAT F., Formation preserving navigation of agent teams in 3-D terrains, Postgraduate, A.GALİP(Student), 2008

POLAT F., Single and multi agent real-time path search in dynamic and partially observable environments, Doctorate, Ç.ÜNDEĞER(Student), 2007

POLAT F., Abstraction in reinforcement learning, Doctorate, S.GİRGİN(Student), 2007

POLAT F., Multiagent moving target search in fully visible grid environments with no speed difference, Postgraduate, C.EROĞUL(Student), 2006

POLAT F., Controlling discrete genetic regulatory networks, Doctorate, O.ABUL(Student), 2005

POLAT F., Resource based plan revision in dynamic multi-agent environments, Postgraduate, U.ERDOĞDU(Student), 2004

POLAT F., Coopretrieval: A cooperation framework for role-based case-based reasoning agents, Postgraduate, M.ÖZGÜR(Student), 2003

POLAT F., Implementing KQML agent communication language for multiagent simulation architectures on HLA, Postgraduate, E.GÖKTÜRK(Student), 2003

POLAT F., Learning to coordinate for target selection, Postgraduate, M.TAN(Student), 2003

POLAT F., 2 LRL: A two-level multi-agent reinforcement learning algorithm with communication, Postgraduate, G.ERUS(Student), 2002

POLAT F., Real time mission planning for virtual human agents, Postgraduate, Ç.ÜNDEĞER(Student), 2001

POLAT F., Path-connecting multi-agent real-time A-star search, Postgraduate, M.KEMAL(Student), 2001

POLAT F., Multi-agent reinforcement learning using roles, Postgraduate, E.ÇILDEN(Student), 2001

POLAT F., Coordination of agents in multi-agent search, Postgraduate, A.ÇAKIR(Student), 2000

POLAT F., S-learning: A multi-agent reinforcement learning method, Postgraduate, U.KUTER(Student), 2000

POLAT F., Multilevel graph partitioning : an evolutionary approach, Postgraduate, S.Küçükpetek(Student), 2000

POLAT F., Multi-agent reinforcement learning, Postgraduate, S.ŞENKUL(Student), 1999

POLAT F., Forming coalitions through negotiation in multi-agent environments, Postgraduate, H.Ulusoy(Student), 1999

POLAT F., Multi-agent reinforcement learning using function approximation, Postgraduate, O.ABUL(Student), 1999

POLAT F., Forming coalitions through negotiation in multi-agent environments, Postgraduate, H.ULUSOY(Student), 1999

POLAT F., Implementation of an object data model enforcing closure and reusability, Postgraduate, A.YILMAZ(Student), 1998

POLAT F., Solving graph partitioning problem using evolutionary heuristic., Postgraduate, M.KARDAŞLAR(Student), 1998

POLAT F., Implementation of an object data model enforcing closure and reusability., Postgraduate, A.F(Student), 1998

POLAT F., Distributed shared memory implementation of linda model, Postgraduate, S.Oflaz(Student), 1998

POLAT F., Distributed shared memory linda system, Postgraduate, S.OFLAZ(Student), 1998

POLAT F., Alternative plan generation for multiple query optimization., Postgraduate, G.MENEKŞE(Student), 1998

POLAT F., A theoretical framework for combining multiple knowledge bases with uncertainty, Postgraduate, E.Seyedi(Student), 1996

POLAT F., A Theoretical framework for combining multiple knowledge bases with uncertainty, Postgraduate, E.SEYEDİ(Student), 1996

POLAT F., A Genetic algorithm for graph partitioning, Postgraduate, E.AKMAN(Student), 1995

Jury Memberships

Appointment Academic Staff, Appointment Academic Staff, Orta Doğu Teknik Üniversitesi, October, 2019

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

- I. **Using chains of bottleneck transitions to decompose and solve reinforcement learning tasks with hidden states**
Aydin H., Çilden E., Polat F.
Future Generation Computer Systems, vol.133, pp.153-168, 2022 (Journal Indexed in SCI Expanded)
- II. **Incremental multi-agent path finding**
Semiz F., Polat F.
FUTURE GENERATION COMPUTER SYSTEMS-THE INTERNATIONAL JOURNAL OF ESCIENCE, vol.116, pp.220-233, 2021 (Journal Indexed in SCI)
- III. **Solving the area coverage problem with UAVs: A vehicle routing with time windows variation**
SEMİZ F., POLAT F.
Robotics and Autonomous Systems, vol.126, 2020 (Journal Indexed in SCI)
- IV. **Effective feature reduction for link prediction in location-based social networks**
Bayrak A. E. , Polat F.
JOURNAL OF INFORMATION SCIENCE, vol.45, pp.676-690, 2019 (Journal Indexed in SCI)
- V. **Automatic landmark discovery for learning agents under partial observability**
Demir A., Cilden E., Polat F.
KNOWLEDGE ENGINEERING REVIEW, vol.34, 2019 (Journal Indexed in SCI)
- VI. **GENERATING EFFECTIVE INITIATION SETS FOR SUBGOAL-DRIVEN OPTIONS**
DEMİR A., Cilden E., POLAT F.
ADVANCES IN COMPLEX SYSTEMS, vol.22, no.2, 2019 (Journal Indexed in SCI)
- VII. **A context aware model for autonomous agent stochastic planning**
Ekmekci O., POLAT F.
ROBOTICS AND AUTONOMOUS SYSTEMS, vol.112, pp.137-153, 2019 (Journal Indexed in SCI)
- VIII. **Effective induction of gene regulatory networks using a novel recommendation method**
Ozsoy M. G. , POLAT F., Alhadj R.
INTERNATIONAL JOURNAL OF DATA MINING AND BIOINFORMATICS, vol.22, no.2, pp.91-112, 2019 (Journal Indexed in SCI)
- IX. **Realizing drug repositioning by adapting a recommendation system to handle the process**
OZSOY M. G. , Ozyer T., POLAT F., Alhadj R.
BMC BIOINFORMATICS, vol.19, 2018 (Journal Indexed in SCI)

- X. **Batch Mode TD(λ) for Controlling Partially Observable Gene Regulatory Networks**
Sirin U., POLAT F., Alhajj R.
IEEE-ACM TRANSACTIONS ON COMPUTATIONAL BIOLOGY AND BIOINFORMATICS, vol.14, no.6, pp.1214-1227, 2017 (Journal Indexed in SCI)
- XI. **Employing decomposable partially observable Markov decision processes to control gene regulatory networks**
Erdogdu U., POLAT F., Alhajj R.
ARTIFICIAL INTELLIGENCE IN MEDICINE, vol.83, pp.14-34, 2017 (Journal Indexed in SCI)
- XII. **Making recommendations by integrating information from multiple social networks**
Ozsoy M. G. , POLAT F., Alhajj R.
APPLIED INTELLIGENCE, vol.45, no.4, pp.1047-1065, 2016 (Journal Indexed in SCI)
- XIII. **Effective gene expression data generation framework based on multi-model approach**
Sirin U., Erdogdu U., POLAT F., TAN M., Alhajj R.
ARTIFICIAL INTELLIGENCE IN MEDICINE, vol.70, pp.41-61, 2016 (Journal Indexed in SCI)
- XIV. **MOD* Lite: An Incremental Path Planning Algorithm Taking Care of Multiple Objectives**
Oral T., POLAT F.
IEEE TRANSACTIONS ON CYBERNETICS, vol.46, no.1, pp.245-257, 2016 (Journal Indexed in SCI)
- XV. **Toward Generalization of Automated Temporal Abstraction to Partially Observable Reinforcement Learning**
Cilden E., POLAT F.
IEEE TRANSACTIONS ON CYBERNETICS, vol.45, no.8, pp.1414-1425, 2015 (Journal Indexed in SCI)
- XVI. **Employment of an evolutionary heuristic to solve the target allocation problem efficiently**
Bayrak A. E. , POLAT F.
INFORMATION SCIENCES, vol.222, pp.675-695, 2013 (Journal Indexed in SCI)
- XVII. **Subtree selection in kernels for graph classification**
TAN M., POLAT F., Alhajj R.
INTERNATIONAL JOURNAL OF DATA MINING AND BIOINFORMATICS, vol.8, no.3, pp.294-310, 2013 (Journal Indexed in SCI)
- XVIII. **Integrating machine learning techniques into robust data enrichment approach and its application to gene expression data**
Erdogdu U., TAN M., Alhajj R., POLAT F., Rokne J., Demetrick D.
INTERNATIONAL JOURNAL OF DATA MINING AND BIOINFORMATICS, vol.8, no.3, pp.247-281, 2013 (Journal Indexed in SCI)
- XIX. **Revealing miRNA Regulation and miRNA Target Prediction Using Constraint-Based Learning**
Alshalalfa M., TAN M., Naji G., Alhajj R., POLAT F., Rokne J.
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART C-APPLICATIONS AND REVIEWS, vol.42, no.6, pp.1354-1364, 2012 (Journal Indexed in SCI)
- XX. **Formation preserving path finding in 3-D terrains**
Bayrak A. G. , POLAT F.
APPLIED INTELLIGENCE, vol.36, no.2, pp.348-368, 2012 (Journal Indexed in SCI)
- XXI. **Limited-Damage A*: A path search algorithm that considers damage as a feasibility criterion**
Bayili S., POLAT F.
KNOWLEDGE-BASED SYSTEMS, vol.24, no.4, pp.501-512, 2011 (Journal Indexed in SCI)
- XXII. **Influence of Prior Knowledge in Constraint-Based Learning of Gene Regulatory Networks**
TAN M., Alshalalfa M., Alhajj R., POLAT F.
IEEE-ACM TRANSACTIONS ON COMPUTATIONAL BIOLOGY AND BIOINFORMATICS, vol.8, no.1, pp.130-142, 2011 (Journal Indexed in SCI)
- XXIII. **Improving reinforcement learning by using sequence trees**
Girgin S., POLAT F., Alhajj R.
MACHINE LEARNING, vol.81, no.3, pp.283-331, 2010 (Journal Indexed in SCI)
- XXIV. **Multi-agent real-time pursuit**

- Undeger C., POLAT F.
AUTONOMOUS AGENTS AND MULTI-AGENT SYSTEMS, vol.21, no.1, pp.69-107, 2010 (Journal Indexed in SCI)
- XXV. **Automated Large-Scale Control of Gene Regulatory Networks**
Tan M., Alhajj R., POLAT F.
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART B-CYBERNETICS, vol.40, no.2, pp.286-297, 2010
(Journal Indexed in SCI)
- XXVI. **Scalable approach for effective control of gene regulatory networks**
Tan M., Alhajj R., POLAT F.
ARTIFICIAL INTELLIGENCE IN MEDICINE, vol.48, no.1, pp.51-59, 2010 (Journal Indexed in SCI)
- XXVII. **Real-Time Moving Target Evaluation Search**
Undeger C., POLAT F.
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART C-APPLICATIONS AND REVIEWS, vol.39, no.3,
pp.366-372, 2009 (Journal Indexed in SCI)
- XXVIII. **A layered approach to learning coordination knowledge in multiagent environments**
Erus G., Polat F.
APPLIED INTELLIGENCE, vol.27, no.3, pp.249-267, 2007 (Journal Indexed in SCI)
- XXIX. **Positive impact of state similarity on reinforcement learning performance**
Girgin S., Polat F., Alhajj R.
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART B-CYBERNETICS, vol.37, no.5, pp.1256-1270,
2007 (Journal Indexed in SCI)
- XXX. **RTTES: Real-time search in dynamic environments**
Undeger C., Polat F.
APPLIED INTELLIGENCE, vol.27, no.2, pp.113-129, 2007 (Journal Indexed in SCI)
- XXXI. **Real-time edge follow: A real-time path search approach**
Undeger C., Polat F.
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART C-APPLICATIONS AND REVIEWS, vol.37, no.5,
pp.860-872, 2007 (Journal Indexed in SCI)
- XXXII. **A powerful approach for effective finding of significantly differentially expressed genes**
Abul O., Alhajj R., Polat F.
IEEE-ACM TRANSACTIONS ON COMPUTATIONAL BIOLOGY AND BIOINFORMATICS, vol.3, no.3, pp.220-231, 2006
(Journal Indexed in SCI)
- XXXIII. **Effectiveness of considering state similarity for reinforcement learning**
Girgin S., Polat F., Alhajj R.
INTELLIGENT DATA ENGINEERING AND AUTOMATED LEARNING - IDEAL 2006, PROCEEDINGS, vol.4224, pp.163-
171, 2006 (Journal Indexed in SCI)
- XXXIV. **Co-operation framework of case-based reasoning agents for automated product recommendation**
Baykal M., Alhajj R., Polat F.
JOURNAL OF EXPERIMENTAL & THEORETICAL ARTIFICIAL INTELLIGENCE, vol.17, no.3, pp.201-220, 2005
(Journal Indexed in SCI)
- XXXV. **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)
- XXXVI. **Multilevel graph partitioning: an evolutionary approach**
Kucupetek S., Polat F., Oguztuzun H.
JOURNAL OF THE OPERATIONAL RESEARCH SOCIETY, vol.56, no.5, pp.549-562, 2005 (Journal Indexed in SCI)
- XXXVII. **Views as first-class citizens in object-oriented databases**
Alhajj R., Polat F., Yilmaz C.
VLDB JOURNAL, vol.14, no.2, pp.155-169, 2005 (Journal Indexed in SCI)
- XXXVIII. **Finding differentially expressed genes for pattern generation**
Abul O., Alhajj R., Polat F., Barker K.
BIOINFORMATICS, vol.21, no.4, pp.445-450, 2005 (Journal Indexed in SCI)

- XXXIX. **Multiple-agents to identify and separate touching digits in unconstrained handwritten Hindi numerals**
Alhajj R., Polat F.
JOURNAL OF EXPERIMENTAL & THEORETICAL ARTIFICIAL INTELLIGENCE, vol.15, no.4, pp.461-471, 2003
(Journal Indexed in SCI)
- XL. **Chemoenzymatic synthesis of both enantiomers of 3-hydroxy-2,3-dihydro-4H-chromen-4-one**
Demir A., Aybey A., Sesenoglu O., Polat F.
TETRAHEDRON-ASYMMETRY, vol.14, no.11, pp.1489-1493, 2003 (Journal Indexed in SCI)
- XLI. **Implementing agent communication for a multi-agent simulation infrastructure on HLA**
Gokturk E., Polat F.
COMPUTER AND INFORMATION SCIENCES - ISCIS 2003, vol.2869, pp.619-626, 2003 (Journal Indexed in SCI)
- XLII. **Rule-based schema evolution in object-oriented databases**
Alhajj R., Polat F.
KNOWLEDGE-BASED SYSTEMS, vol.16, no.1, pp.47-57, 2003 (Journal Indexed in SCI)
- XLIII. **Learning intelligent behavior in a non-stationary and partially observable environment**
Senkul S., Polat F.
ARTIFICIAL INTELLIGENCE REVIEW, vol.18, no.2, pp.97-115, 2002 (Journal Indexed in SCI)
- XLIV. **Coordination of intelligent agents in real-time search**
Cakir A., Polat F.
EXPERT SYSTEMS, vol.19, no.2, pp.80-87, 2002 (Journal Indexed in SCI)
- XLV. **Learning sequences of compatible actions among agents**
Polat F., Abul O.
ARTIFICIAL INTELLIGENCE REVIEW, vol.17, no.1, pp.21-37, 2002 (Journal Indexed in SCI)
- XLVI. **Semantic information-based alternative plan generation for multiple query optimization**
Polat F., Cosar A., Alhajj R.
INFORMATION SCIENCES, vol.137, pp.103-133, 2001 (Journal Indexed in SCI)
- XLVII. **Multiagent reinforcement learning using function approximation**
Abul O., Polat F., Alhajj R.
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART C-APPLICATIONS AND REVIEWS, vol.30, no.4, pp.485-497, 2000 (Journal Indexed in SCI)
- XLVIII. **Using object-oriented materialized views to answer selection-based complex queries**
Alhajj R., Polat F.
INFORMATION SCIENCES, vol.118, pp.75-99, 1999 (Journal Indexed in SCI)
- XLIX. **A multi-agent tuple-space based problem solving framework**
Polat F., Alhajj R.
JOURNAL OF SYSTEMS AND SOFTWARE, vol.47, no.1, pp.11-17, 1999 (Journal Indexed in SCI)
- L. **Proper handling of query results towards maximizing reusability in object-oriented databases**
Alhajj R., Polat F.
INFORMATION SCIENCES, vol.107, pp.247-272, 1998 (Journal Indexed in SCI)
- LI. **Incremental view maintenance in object-oriented databases**
Alhajj R., Polat F.
DATA BASE FOR ADVANCES IN INFORMATION SYSTEMS, vol.29, no.3, pp.52-64, 1998 (Journal Indexed in SCI)
- LII. **View maintenance in object-oriented databases**
Alhajj R., Polat F.
DATABASE AND EXPERT SYSTEMS APPLICATIONS, vol.1134, pp.153-162, 1996 (Journal Indexed in SCI)

Books & Book Chapters

- I. **An Evolutionary Approach for Detecting Communities in Social Networks**
POLAT F., Ozturk K.

in: From Security to Community Detection in Social Networking Platforms, , Editor, Springer, pp.17-44, 2019

II. State of the Art Applications of Social Network Analysis

Can F., POLAT F., Ozyer T.

Springer, 2014

Refereed Congress / Symposium Publications in Proceedings

- I. **LIMP: Incremental Multi-agent Path Planning with LPA***
Yorganci M. A., SEMİZ F., POLAT F.
14th International Conference on Agents and Artificial Intelligence (ICAART), ELECTR NETWORK, 3 - 05 February 2022, pp.208-215
- II. **Compact Frequency Memory for Reinforcement Learning with Hidden States.**
Polat F., Aydin H., Cilden E.
PRIMA 2019: Principles and Practice of Multi-Agent Systems - 22nd International Conference, Taranto, Italy, 28 - 31 October 2019, pp.425-433
- III. **Reducing Features to Improve Link Prediction Performance in Location Based Social Networks, Non-Monotonically Selected Subset from Feature Clusters**
Bayrak A. E. , POLAT F.
IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), Vancouver, Canada, 27 - 30 August 2019, pp.809-815
- IV. **Landmark Based Reward Shaping in Reinforcement Learning with Hidden States**
DEMİR A., Cilden E., POLAT F.
18th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS), Montreal, Canada, 13 - 17 May 2019, pp.1922-1924
- V. **Mining Individual Features to Enhance Link Prediction Efficiency in Location Based Social Networks**
Bayrak A. E. , Polat F.
IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), Barcelona, Spain, 28 - 31 August 2018, pp.920-925
- VI. **Using Transitional Bottlenecks to Improve Learning in Nearest Sequence Memory Algorithm**
AYDIN H., Cilden E., POLAT F.
IEEE 29th International Conference on Tools with Artificial Intelligence (ICTAI), Massachusetts, United States Of America, 6 - 08 November 2017, pp.147-152
- VII. **A Concept Filtering Approach for Diverse Density to Discover Subgoals in Reinforcement Learning**
DEMİR A., Cilden E., POLAT F.
IEEE 29th International Conference on Tools with Artificial Intelligence (ICTAI), Massachusetts, United States Of America, 6 - 08 November 2017, pp.1-5
- VIII. **Autonomous Intelligent Agents and Multi-Agent Systems**
POLAT F.
International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2017), 1 - 03 November 2017
- IX. **An Evolutionary Approach for Detecting Communities in Social Networks**
POLAT F., Ozturk K., Ozyer T.
Proceedings of the 2017 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining 2017 - ASONAM 'xx17, Sydney, Australia, 31 July - 03 August 2017
- X. **Local Roots A Tree Based Subgoal Discovery Method to Accelerate Reinforcement Learning**
Demir A., POLAT F., Cilden E.
Machine Learning and Knowledge Discovery in Databases - European Conference, ECML PKDD 2016, 19 - 23 September 2016
- XI. **A History Tree Heuristic to Generate Better Initiation Sets for Options in Reinforcement Learning**
DEMİR A., Cilden E., POLAT F.

22nd European Conference on Artificial Intelligence (ECAI), Hague, Netherlands, 29 August - 02 September 2016, vol.285, pp.1644-1645

- XII. **Time Preference aware Dynamic Recommendation Enhanced with Location, Social Network and Temporal Information**
Ozsoy M. G. , POLAT F., Alhadj R.
8th IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), San-Francisco, Costa Rica, 18 - 21 August 2016, pp.909-916
- XIII. **Examining Place Categories for Link Prediction in Location Based Social Networks**
Bayrak A. E. , POLAT F.
8th IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), San-Francisco, Costa Rica, 18 - 21 August 2016, pp.976-979
- XIV. **Inference of Gene Regulatory Networks Via Multiple Data Sources and a Recommendation Method**
Ozsoy M. G. , POLAT F., Alhadj R.
IEEE International Conference on Bioinformatics and Biomedicine, Washington, Kiribati, 9 - 12 November 2015, pp.661-664
- XV. **Modeling Individuals and Making Recommendations Using Multiple Social Networks**
Ozsoy M. G. , POLAT F., Alhadj R.
IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), Paris, France, 25 - 28 August 2015, pp.1184-1191
- XVI. **Memory Efficient Factored Abstraction for Reinforcement Learning**
Sahin C., Cilden E., POLAT F.
IEEE 2nd International Conference on Cybernetics (CYBCONF), Gdynia, Poland, 24 - 26 June 2015, pp.18-23
- XVII. **Multi-Objective Optimization Based Location and Social Network Aware Recommendation**
Ozsoy M. G. , POLAT F., Alhadj R.
10th IEEE International Conference on Collaborative Computing Networking Applications and Worksharing, Florida, United States Of America, 22 - 25 October 2014, pp.233-242
- XVIII. **Contextual Feature Analysis to Improve Link Prediction for Location Based Social Networks**
Bayrak A. E. , POLAT F.
Proceedings of the 8th Workshop on Social Network Mining and Analysis - SNAKDD'14, New York, NY, USA, 24 - 27 August 2014
- XIX. **Cluster validity analysis using subsampling**
ABUL O., Lo A., Alhadj R., POLAT F.
SMC'03 Conference Proceedings. 2003 IEEE International Conference on Systems, Man and Cybernetics. Conference Theme - System Security and Assurance (Cat. No.03CH37483), Washington, DC, USA, 5 - 08 August 2003
- XX. **Trust Based Recommendation Systems**
Ozsoy M. G. , POLAT F.
IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), Niagara Falls, Canada, 25 - 28 August 2013, pp.1267-1274
- XXI. **Effective Enrichment of Gene Expression Data Sets**
Sirin U., Erdogdu U., TAN M., POLAT F., Alhadj R.
11th IEEE International Conference on Machine Learning and Applications (ICMLA), Florida, United States Of America, 12 - 15 December 2012, pp.76-81
- XXII. **Abstraction in Model Based Partially Observable Reinforcement Learning using Extended Sequence Trees**
Cilden E., POLAT F.
11th IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT), Macau, China, 4 - 07 December 2012, pp.348-355
- XXIII. **A Multi-Objective Incremental Path Planning Algorithm for Mobile Agents**
Oral T., POLAT F.
11th IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-

IAT), Macau, China, 4 - 07 December 2012, pp.401-408

- XXIV. **Partially Observable Gene Regulatory Network Control Without a Boundary on Horizon**
Erdogdu U, POLAT F., Alhajj R.
IEEE 24th International Conference on Tools with Artificial Intelligence (ICTAI), Athens, Greece, 7 - 09 November 2012, pp.81-88
- XXV. **Employing Machine Learning Techniques for Data Enrichment: Increasing the number of samples for effective gene expression data analysis**
Erdogdu U, TAN M., Alhajj R., POLAT F., Demetrick D., Rokne J.
IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Georgia, United States Of America, 12 - 15 November 2011, pp.238-242
- XXVI. **Reengineering relational databases to object oriented constructing the class hierarchy and migrating the data**
Alhajj R., POLAT F.
Proceedings Eighth Working Conference on Reverse Engineering, Stuttgart, Germany, 2 - 05 October 2001
- XXVII. **Feature Selection for Graph Kernels**
TAN M., POLAT F., Alhajj R.
IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Hong Kong, Hong Kong, 18 - 21 December 2010, pp.632-637
- XXVIII. **Derivation of Transcriptional Regulatory Relationships by Partial Least Squares Regression**
Tan M., POLAT F., Alhajj R.
IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2009), Washington, Kiribati, 1 - 04 November 2009, pp.88-89
- XXIX. **Large-Scale Approximate Intervention Strategies for Probabilistic Boolean Networks as Models of Gene Regulation**
Tan M., Alhajj R., POLAT F.
8th IEEE International Conference on Bioinformatics and Bioengineering, Athens, Greece, 8 - 10 October 2008, pp.296-297
- XXX. **Combining Multiple Types of Biological Data in Constraint-Based Learning of Gene Regulatory Networks**
Tan M., AlShalalfa M., Alhajj R., POLAT F.
IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology, Idaho, United States Of America, 15 - 17 September 2008, pp.131-132
- XXXI. **FORMATION PRESERVING NAVIGATION OF AGENT TEAMS IN 3-D TERRAINS**
Bayrak A. G. , POLAT F.
6th International Industrial Simulation Conference, Lyon, France, 9 - 11 June 2008, pp.148-155
- XXXII. **Real-Time Moving Target Search**
Undeger C., POLAT F.
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