ESRA ERDEM

CURRICULUM VITAE

CONTACT INFORMATION

Sabancı University
Faculty of Engineering and Natural Sciences
Orhanlı, Tuzla, Istanbul 34956

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esra.erdem@sabanciuniv.edu
http://people.sabanciuniv.edu/esraerdem/
https://orcid.org/0000-0001-8384-7810
https://www.linkedin.com/in/esra-erdem-16806a11/

RESEARCH INTERESTS

Artificial intelligence. In particular, the mathematical foundations of knowledge representation, automated reasoning, reasoning about actions and change, and answer set programming, and their applications in various domains, including bioinformatics, logistics, robotics, and economics.

EDUCATION

Ph.D. (Computer Sciences), The University of Texas at Austin, 2002.
  Dissertation: *Theory and applications of answer set programming.*
  Advisor: Vladimir Lifschitz.
  Thesis committee: Chitta Baral, J. Strother Moore, Tandy Warnow, Martin D. F. Wong.

M.S. (Computer Sciences), The University of Texas at Austin, 1998.

B.S. (Computer Sciences), Bilkent University, 1996, with high honors.

AWARDS AND HONORS

Best Application Paper Award, ICLP, 2020.

Distinguished Visiting Professor Fellowship, Scottish Informatics and Computing Science Alliance (SICSA), 2019.

Technology Award, Turkish Industry and Business Association (TUSIAD), Technology Development Foundation of Turkey (TTGV), and The Scientific and Technical Research Council of Turkey (Tubitak), 2018.

Women Leader of Innovative and Disruptive Technologies, Microsoft and the Women Entrepreneurs Association of Turkey (KAGIDER), 2018.

BAGEP, Young Scientist Award by the Science Academy, 2015.

Best Conference Paper Award Runner-Up, Best Cognitive Robotics Paper Award Runner-Up, IEEE/RAS ICRA, 2015.

NATO Science Fellowship, 1996–2002.

Travel Award, The University of Texas at Austin, The Department of Computer Sciences, 1999 and 2001.

GTE Corporation Fellowship, 1997.

TA-Service Commendation, The University of Texas at Austin, The Department of Computer Sciences, 1997.

Full Scholarship, Bilkent University, 1992–1996.

EMPLOYMENT HISTORY

4/2021–present	Sabancı University. Professor, Faculty of Engineering and Natural Sciences.
1/2015–present	Interact Technologies Inc. Co-founder, Chief Scientific Officer in AI.
11/2012–3/2021	Sabancı University. Associate professor, Faculty of Engineering and Natural Sciences.
10/2019–11/2019	University of Edinburgh. Visiting faculty, School of Informatics.
10/2019–11/2019	National Institute of Health. Visiting scientist, Cognitive Science Branch.
9/2006–11/2012	Sabancı University. Assistant professor, Faculty of Engineering and Natural Sciences.
9/2003–8/2006	Vienna University of Technology. Post-doctoral researcher, Knowledge-Based Systems Group (Thomas Eiter). *Monitoring of plan execution, and updates of action domain descriptions.*
8/2002–8/2003	University of Toronto. Post-doctoral fellow, Cognitive Robotics Group (Hector Levesque and Ray Reiter). *The situation calculus and cognitive robotics.*
1/1999–8/2002	University of Texas at Austin. Research assistant, Department of Computer Sciences (Vladimir Lifschitz). *The mathematical theory of logic programming, knowledge representation, reasoning about actions and change, planning, and answer set programming.*
6/2001–8/2001	IBM, Austin Research Lab. Intern, Formal Verification Group (Warren Hunt and Jun Sawada). *The design and the implementation of a program to be used for hardware verification.*
8/1996–12/2001	University of Texas at Austin. Teaching assistant, Department of Computer Sciences.

RESEARCH FUNDING

PRINCIPAL INVESTIGATOR

Cognitive Cellular Warehouses: An Innovative Logistics Paradigm supported by Artificial Intelligence and Robotics, 2019–2021. (Industry Partner: Ekol Logistics) The Scientific and Technical Research Council of Turkey, The Primary Subjects Research and Development Funding Program (1003).

AI-Based Personalized and Adaptive Education Platform for Children with Cerebral Palsy, 1/2019–12/2019. (UK Partner: Matteo Leonetti) Newton Fund Research Environment Links Grant.

A General Framework for Matching Problems using Artificial Intelligence, 9/2018–8/2019. (Co-PI: Ahmet Alkan) Sabancı University, Internal Research Grant.

Knowledge-Based Reasoning for Autonomous Robots to Guide Humans in Complex Environments, 10/2014–10/2017. (as part of the *COACHES* project) European Union under the ERA-Net funding scheme of the FP7 (CHIST-ERA).

Rehabilitation Robotics Ontology System on the Cloud: Representing and Querying Big Data, 10/2014–10/2016. (Co-PI: Volkan Patoglu) Sabancı University, Internal Research Grant.

Cognitive Factories, 10/2011–4/2014. The Scientific and Technical Research Council of Turkey, The Support Programme for Scientific and Technological Research Projects (1001).

Towards Intelligent, Interactive, Personalized Robot-Assisted Physical Rehabilitation, 9/2009–9/2011. (Co-PI: Volkan Patoglu) Sabancı University, Internal Research Grant.

Integration of Biomedical Ontologies and Automated Reasoning for Drug Discovery, 6/2009–12/2011. The Scientific and Technical Research Council of Turkey, The Support Programme for Scientific and Technological Research Projects (1001).

Inferring the Evolutionary History of Turkic Languages using Answer Set Programming, 2/2008–2/2010. The Scientific and Technical Research Council of Turkey, The Support Programme for Scientific and Technological Research Projects (1001).

OTHER

Management Committee (MC) member. *Distributed Knowledge Graphs*, 4/2020. H2020 COST Action CA19134.

Management Committee (MC) member, and Working Group leader. *Digital Forensics: Evidence Analysis via Intelligent Systems and Practices (DigForASP)*, 10/2018–10/2021. H2020 COST Action CA17124.

Partner. *Cooperative Autonomous Robots in Complex and Humans Environments (COACHES)*, 10/2014–10/2017. European Union under the ERA-Net funding scheme of the FP7 (CHIST-ERA).

COURSES TAUGHT

FACULTY MEMBER (Sabancı University)

CS301, Algorithms	(Fall 2011, Fall 2018, Spring 2019, Spring 2020, Spring 2021, Spring 2022, Fall 2022)
CS500, Logic in Computer Science	(Fall 2021)
CS400/500, Logic in Computer Science	(Spring 2007, Spring 2008, Spring 2010, Spring 2011, Fall 2014–2016, Spring 2018)
CS404, Artificial Intelligence	(Fall 2008, Fall 2009, Fall 2012, Spring 2015, Spring 2017, Fall 2018, Fall 2020, Fall 2021, Spring 2023)
CS502, Automated Reasoning	(Spring 2007, Spring 2013, Fall 2020)
CS504, Knowledge Representation and Reasoning	(Fall 2007, Fall 2008, Fall 2010, Fall 2015, Fall 2017, Spring 2020, Fall 2022)
CS506, Cognitive Robotics	(Spring 2010, Spring 2012, Spring 2013, Spring 2017)
CS526, Motion Planning	(Fall 2014, Spring 2016)
CS581, Special Topics in CS	(Fall 2006)
CS611, Advanced Topics in Artificial Intelligence	(Spring 2008, Spring 2009, Spring 2011, Fall 2012)
CS551, Graduate Seminar I	(Fall 2006–2009, 2016)
CS552, Graduate Seminar II	(Spring 2007–2010, 2016)
PURE	(Fall/Spring 2017–2018)
PROJ 102/201	(Fall/Spring 2007–2020, Fall 2022)
ENS 491/2	(Fall/Spring 2007–2023)

THESIS COMMITTEES AND OTHER ADVISING

POSTDOCTORAL FELLOWS

4. Dr. Yusuf Izmirlioglu (Fall 2020, Sabancı University)
   Qualitative Spatial Reasoning using Answer Set Programming

3. Dr. Eray Gencay (Summer 2013–Summer 2015, Sabancı University)
   Optimization and Verification of Automotive Product Configurations using Answer Set Programming

2. Dr. Peter Schueller (Fall 2012–Summer 2013, Sabancı University) (co-supervisor: Volkan Patoglu)
   Applications of Answer Set Programming in Cognitive Robotics

1. Dr. Damien J. Duff (Fall 2012–Summer 2013, Sabancı University) (co-supervisor: Volkan Patoglu)
   Robust Physical Cognition for Applications in Computer Vision by Exploiting Knowledge of Rigid Body Dynamics

DOCTORAL COMMITTEE SUPERVISOR

5. Aysu Bogatarkan (Fall 2019–present, Sabancı University)

4. Muge Fidan (Fall 2019–present, Sabancı University)

3. Gokay Coruhlu (Fall 2015–Fall 2021, Sabancı University) (co-supervisor)
   Explainable Robotic Plan Execution Monitoring under Partial Observability

2. Yusuf Izmirlioglu (Fall 2015–Summer 2020, Sabancı University)
   Qualitative Reasoning about Cardinal Directions between Spatial Objects using Answer Set Programming

1. Ahmed Nouman (Spring 2013–Fall 2018, Sabancı University) (co-supervisor)
   Hybrid Conditional Planning for Service Robotics

MASTERS COMMITTEE SUPERVISOR

22. Baturay Yilmaz (Fall 2022–present, Sabancı University)

21. Arca Ozkan (Fall 2021–present, Sabancı University)

20. Mohammad Abdeh (Fall 2020–present, Sabancı University)

19. Cagri Uluc Yildirimoglu (Fall 2019–Summer 2022, Sabancı University) *MAPDC: Multi-agent Pick and Delivery with Capacities*

18. Selin Eyupoglu (Spring 2020–Summer 2022, Sabancı University) *Solving Hard Stable Marriage Problems using Logic-Based Methods*

17. Emre Cemal Gonen (Fall 2019–Summer 2021, Sabancı University) (co-supervisor)
    Hybrid Planning for Free Climbing Robots: Combining Task and Motion Planning with Dynamics and Control

16. Abdul Rahman Dabbour (Spring 2017–Fall 2019, Sabancı University) (co-supervisor)
    Placement Generation and Hybrid Planning for Robotic Rearrangement on Cluttered Surfaces

15. Momina Rizwan (Spring 2016–Fall 2019, Sabancı University) (co-supervisor)
    A Formal Approach to Human Robot Collaborative Assembly Planning under Uncertainty

14. Faseeh Ahmad (Spring 2016–Fall 2019, Sabancı University) (co-supervisor)
    A Hybrid Planning Approach to Robot Construction Problems

13. Omid Khorsand Kazemy (Fall 2015–Fall 2017, Sabancı University)
    Hybrid Generalized Multi-Agent Pathfinding: A Hierarchical Method using ASP

12. Ibrahim Faruk Yalciner (Spring 2015–Fall 2017, Sabancı University) (co-supervisor: Volkan Patoglu)
    HCP-ASP: A Parallel Algorithm for Hybrid Conditional Planning using Answer Set Programming

11. Ezgi Demirel (Fall 2014–Fall 2016, Sabancı University)
    Hierarchical Knowledge-Rich Semantic Maps for Personalized Path Finding

10. Zeynep Gozen Saribatur (Fall 2012–Summer 2014, Sabancı University) (co-supervisor: Volkan Patoglu)
    Optimal Global Planning for Cognitive Factories with Multiple Teams of Heterogeneous Robots

9. Zeynep Dogmus (Fall 2011–Summer 2013, Sabancı University) (co-supervisor: Volkan Patoglu)
   An Ontology System for Rehabilitation Robotics

8. Erdi Aker (Fall 2010–Summer 2013, Sabancı University) (co-supervisor: Volkan Patoglu)
   Housekeeping with Multiple Autonomous Robots: Representation, Reasoning, and Execution

7. Suha Orhun Mutluergil (Fall 2010–Summer 2012, Sabancı University)
   Applications of Heuristic Search on Phylogeny Reconstruction Problems

6. Umut Oztok (Fall 2010–Summer 2012, Sabancı University)
   Generating Explanations for Complex Biomedical Queries

5. Halit Erdogan (Fall 2009–Summer 2011, Sabancı University)
   Finding Similar or Diverse Solutions in Answer Set Programming: Theory and Applications

4. Tansel Uras (Fall 2009–Summer 2011, Sabancı University) (co-supervisor: Volkan Patoglu)
   Applications of AI Planning in Genome Rearrangement and in Multi-Robot Systems

3. Kadir Haspalamutgil (Fall 2009–Summer 2011, Sabancı University) (co-supervisor)
   Multi-Robot Systems in Cognitive Factories: Representation, Reasoning, Execution and Monitoring

2. Can Palaz (Fall 2009–Summer 2011, Sabancı University) (co-supervisor)
   Combining High-Level Causal Reasoning with Low-Level Geometric Reasoning and Motion Planning for Robotic Manipulation

1. Duygu Cakmak (Fall 2008–Summer 2010, Sabancı University)
   Reconstructing Weighted Phylogenetic Trees and Phylogenetic Networks Using Answer Set Programming

DOCTORAL COMMITTEE MEMBER (EXTERNAL)

8. Alper Ahmetoglu (present, Bogazici University), Supervisor: Emre Ugur
   End-to-end Deep Symbol Generation and Rule Learning from Unsupervised Continuous Robot Interaction for Planning

7. Ibrahim Ozcan (present, Bogazici University), Supervisor: Levent Akin
   Explainable Localization with Relative Positioning at Indoor Environment

6. Denise Angilica (Spring 2020, University of Calabria), Supervisors: Giovambattista Ianni and Gian-luigi Greco
   Tight integration of Artificial Intelligence in Game Development Tools

5. Fabien Lagriffoul (Spring 2016, Örebro University), Supervisors: Alessandro Saffiotti and Lars Karlsson
   Combining Task and Motion Planning

4. Mustafa Ersen (Fall 2014, Istanbul Technical University), Supervisor: Sanem Sariel Talay
   Learning Guided Reasoning for Cognitive Service Robots

3. Ahmetcan Erdogan (Summer 2014, Sabanci University), Supervisor: Volkan Patoglu
   Optimal Exoskeleton Design and Effective Human-in-the-Loop Control Frameworks for Rehabilitation Robotics

2. Gunay Akin (Fall 2013, Bogazici University), Supervisor: Pinar Yolum Birbil
   Developing An Effective Commitment Store for Agent Communication: Properties, Operations And Algorithms

1. Elisabetta De Maria (Spring 2009, University of Udine), Supervisor: Angelo Montanari
   Computer Science Logic for Structure Prediction, String Comparison, and Biological Pathway Analysis

MASTERS COMMITTEE MEMBER

11. Yasin Ilkagan Tepeli (Summer 2020, Sabancı University), Supervisor: Oznur Tastan
    A Pathway Graph Kernel Based Multi-Omics Approach for Patient Clustering

10. Sertac Karahoda (Fall 2017, Sabancı University), Supervisor: Husnu Yenigun
    Algorithmic Optimization and Parallelization of Eppstein's Synchronizing Heuristic

9. Mehmet Cagri Calpur (Fall 2011, Sabancı University), Supervisor: Cemal Yilmaz
   Interleaving Coverage Criteria Oriented Testing of Multi-threaded Applications

8. Ugur Usug (Spring 2011, Istanbul Technical University), Supervisor: Sanem Sariel
   Dynamic Temporal Planning for Multirobot Systems

7. Melda Ulusoy (Summer 2010, Sabancı University), Supervisor: Volkan Patoglu
   Haptic Rendering of Continuous Parametric Models

6. Serdar Kecici (Spring 2010, Istanbul Technical University), Supervisor: Sanem Sariel
   Tlplan-C: An Extended Temporal Planner for Modeling Continuous Change

5. Reyyan Yeniterzi (Summer 2009, Sabancı University), Supervisor: Kemal Oflazer
   Syntax-to-Morphology Alignment and Constituent Reordering in Factored Phrase-Based Statistical Machine Translation from English to Turkish

4. Ferah Gulactı (Summer 2008, Sabancı University), Supervisor: Devrim Gözuacik
   Search for Atg5 Interacting Proteins by Using Yeast Two Hybrid System

3. Ferhan Ture (Summer 2008, Sabancı University), Supervisor: Kemal Oflazer
   A Hybrid Machine Translation System from Turkish to English

2. Onsel Armagan (Fall 2007, Sabancı University), Supervisor: Kemal Oflazer
   LingBrowser – A NLP Based Browser For Linguistic Information

1. Muge Erdogmus (Summer 2007, Sabancı University), Supervisor: Ugur Sezerman
   Application of automatic mutation-gene pair extraction to diseases

SENIOR PROJECT SUPERVISOR

43. Yasemin Ozkut, Ahmet Emirhan Kaya (Spring 2023–present)
    Serious Games for Children with Cerebral Palsy

42. Alper Abaci, Goktug Genckaya, Mustafa Ata Onbas, Onat Tanis (Fall 2022–Spring 2023)
    Serious Games for Children with Cerebral Palsy

41. Mert Ilginoglu, Co-Supervisor: Jessica Zangari (Fall 2021–Spring 2022)
    Dynamic Multi-Agent Path Finding using AI Methods

40. Muhammet Akif Midilli (Fall 2021–Spring 2022)
    Solving Matching Problems using AI

39. Mehmet Berke Sezgin, Berkay Cagri Soylu, Alize Sevgi Yalcinkaya (Fall 2021–Spring 2022)
    Serious Games for Children with Cerebral Palsy

38. Ahmed Eshmawy, Rama Hakmi (Fall 2021–Spring 2022)
    Serious Games for Children with Cerebral Palsy

37. Hasim Sait Goktan, Zeki Oguzhan Ince, Berkin Karacam, Taygun Ozcan (Fall 2020–Spring 2021)
    Gossip Problems

36. Yavuz Gulesen, Ilayda Begum Izci, Baturay Yilmaz (Spring 2020–Fall 2020)
    Solving Matching Problems using AI

35. Berna Gun, Miray Turan (Spring 2020–Fall 2020)
    Multi-Agent Path Finding using AI Methods

34. Farukhzhon Barotov (Fall 2019–Spring 2020), Co-Supervisor: Christoph Koch
    Probabilistic Programming based on Datalog

33. Emre Hilmi Songur, Mohamed Zeina (Fall 2019–Spring 2020), Co-Supervisor: Volkan Patoglu
    AI for Robot-Assisted Medical Treatments

32. Burak Meric, Berk Tunc, Cansu Ulker (Fall 2018–Spring 2019), Co-Supervisor: Volkan Patoglu
    Serious Games for Children with Cerebral Palsy

31. Omer Serhat Dai (Fall 2018–Spring 2019), Co-Supervisor: Ahmet Alkan
    Solving Matching Problems using AI

30. Cagri Uluc Yildirim (Fall 2018–Spring 2019), Co-Supervisor: Volkan Patoglu
    Multi-Agent Path Finding using AI Methods

29. Aysu Bogatarkan (Fall 2017–Spring 2018), Co-Supervisor: Volkan Patoglu
    High-Level Coordination and Low-Level Control of Multiple Mobile Robots

28. Basem Atiq (Fall 2017–Spring 2018), Co-Supervisor: Volkan Patoglu
    High-Level Coordination and Low-Level Control of Multiple Mobile Robots

27. Kubilay Karapinar (Fall 2016–Spring 2017)
    Multi-Agent Path Finding using AI Methods

26. Baris Yazici, Berke Atac (Fall 2016–Spring 2017), Co-Supervisor: Volkan Patoglu
    Intelligent Robots: Manipulation Planning

25. Aysenur Kulunk (Fall 2016–Spring 2017)
    Optimal Multi-Agent Path Finding using Integer Linear Programming

24. Izzet Pasensya (Fall 2016–Spring 2017)
    Optimal Multi-Agent Path Finding using Integer Linear Programming

23. Sude Gonul, Deniz Bayram (Spring 2016–Fall 2016)
    An Interactive Automated Theorem Prover

22. Veli Can Erdem (Spring 2016–Fall 2016)
    Optimal Multi-Agent Path Finding using Integer Linear Programming

21. Bahadir Pehlivan (Spring 2016–Fall 2016)
    Optimal Multi-Agent Path Finding using Answer Set Programming

20. Misra Turp (Fall 2015–Spring 2016), Co-Supervisor: Volkan Patoglu
    Intelligent Robots: Multi-Robot Planning

19. Kazim Selim Engin (Fall 2015–Spring 2016), Co-Supervisor: Volkan Patoglu
    Intelligent Robots: Manipulation Planning

18. Mehmet Berk Gedik (Spring 2015–Fall 2015)
    Developing an Intelligent Agent to Play Angry Birds

17. Yigit Ozkan (Spring 2015), Co-Supervisor: Volkan Patoglu
    Game AI for Physical Medicine

16. Rebi Daldal (Fall 2012–Spring 2013)
    Multi-Agent Pathfinding: Theory and Applications

15. Ahmet Erdem Ekin (Fall 2011–Fall 2012)
    Mobile AI Apps

14. Doga Gizem Kisa (Fall 2011–Spring 2012)
    Environmental Coverage with Multiple Robots

13. Guchan Ozbilgin (Fall 2011–Spring 2012), Co-Supervisor: Volkan Patoglu
    Cloud Robotics

12. Baris Dincer, Umut Gencay Zorlu (Fall 2011–Spring 2012)
    Mobile AI Apps

11. Ozan Erdem (Fall 2009–Spring 2010)
    Semantic web and life sciences

10. Erdi Aker, Berker Agir (Fall 2009–Spring 2010)
    Intelligent robots: low-level control meets high-level reasoning

9. Selen Başol, Sinan Egilmez (Fall 2008–Spring 2009)
   Semantic web and life sciences

8. Ozan Caldiran, Abdullah Ok (Fall 2008–Spring 2009), Co-Supervisor: Volkan Patoglu
   Intelligent robots: low-level control meets high-level reasoning

7. Halit Erdogan (Fall 2008–Spring 2009)
   Comparing phylogenies: theory and applications

6. Kadir Haspalamutgil, Can Palaz (Fall 2008–Spring 2009), Co-Supervisor: Volkan Patoglu
   Intelligent robots: low-level control meets high-level reasoning

5. Seyma Mutlu (Fall 2008–Spring 2009)
   Commonsense reasoning for interactive applications

4. Firat H. Tahaoglu (Fall 2008–Spring 2009)
   Semantic web and life sciences

3. Tansel Uras (Fall 2008–Spring 2009), Co-Supervisor: Ugur Sezerman
   Genome rearrangement: theory and applications

2. Kadir Malak (Fall 2007–Spring 2008), Co-Supervisor: Marco Aiello
   Automating reasoning about web services

1. Betul Keles (Fall 2006–Spring 2007), Co-Supervisors: Devrim Gozuacik and Volkan Patoglu
   Drug discovery-establishment of a cell-based drug testing system

FRESHMAN PROJECT SUPERVISOR

25. Osama Abdo, Egemen Yagiz Akyuz, Eid Alhamali, Arın Alihafizoglu, Raghad Arar, Eda Ecesu Cinar, Ozan Erden, Basar Erses, Ahmet Musa Ersoy, Jana Fattal, Beste Gokce, Ece Gulkanat, Banuchichak Karimli, Bengisu Esin Kazanc, Hakan Mert Ozcan, Ceren Oztekin, Bahar Turkmen, Tolga Tektunali, Emre Ute, Kemal Yilmaz (Fall 2022)
    Co-Supervisors: Aysu Bogatarkan, Muge Fidan
    A Journey into the Past of AI

24. Mehmet Fatih Bas, Idil Kapikiran, Nazli Gulsah Onen, Berna Yildiran (Spring 2020)
    Co-Supervisors: Aysu Bogatarkan, Muge Fidan, Volkan Patoglu
    AI4PUZZLES

23. Kaan Dinc, Atalay Alatas, Taylan Karadeniz (Spring 2018)
    A Journey into the Past of AI

22. Mert Can Ozdemir, Bugra Alpagut, Berk Uzalp, Nikan Lahut (Spring 2017)
    Logical Puzzles

21. Berke Ozten, Muhammed Kerem Kahraman, Gursel Simin Soysal, Kerem Gultekin (Spring 2016)
    Co-Supervisor: Ezgi Demirel
    AI4PUZZLES

20. Batu Gokalp, Coruh Simsek (Spring 2015)
    Intelligent Strategies for Angry Birds

19. Mehmet Can Erincag, Berke Koculu (Spring 2015)
    Intelligent Strategies for Angry Birds

18. Danial Kadiri, Can Kulpedin (Spring 2015)
    Intelligent Strategies for Angry Birds

17. Bora Makar (Spring 2015)
    Intelligent Strategies for Angry Birds

16. Tarik E. Abdioglu, Can B. Ozturk, Nazli Siyok, Oyku Yucedere (Spring 2013)
    Co-Supervisors: Zeynep Dogmus, Zeynep G. Saribatur
    AI4PUZZLES

15. Burak Aydin, Fehmi C. Aksakal (Fall 2009)
    Co-Supervisors: Ozan Erdem, Halit Erdogan, Firat H. Tahaoglu, Tansel Uras
    AI4PUZZLES

14. Ferit C. Kocagil, Adnan Emiroglu (Fall 2009)
    Co-Supervisors: Ozan Erdem, Halit Erdogan, Firat H. Tahaoglu, Tansel Uras
    AI4PUZZLES

13. Berker Sarigun, Mehmet S. Basmaci (Fall 2009)
    Co-Supervisors: Ozan Erdem, Halit Erdogan, Firat H. Tahaoglu, Tansel Uras
    AI4PUZZLES

12. Ozge Oz, Can Terzihan (Fall 2009), Co-Supervisor: Volkan Patoglu
    Collecting expert knowledge from medical professionals

11. Ahmet D. Ihtiyar, Merve Cebi (Fall 2009), Co-Supervisor: Volkan Patoglu
    Collecting expert knowledge from medical professionals

10. Yigit S. Gucer, Birkan Suzer (Fall 2009), Co-Supervisor: Volkan Patoglu
    Collecting expert knowledge from medical professionals

9. Mehmet C. Yilmaz (Fall 2009), Co-Supervisor: Volkan Patoglu
   Collecting expert knowledge from medical professionals

8. Burcu Vitrinel, Ceren Bezzazoglu (Fall 2009), Co-Supervisor: Volkan Patoglu
   Collecting expert knowledge from medical professionals

7. Cemal I. Islak (Fall 2009), Co-Supervisor: Volkan Patoglu
   Collecting expert knowledge from medical professionals

6. Fatma E. Kavalci, Gokce Tuncer, Fatih O. Yilmaz (Fall 2009), Co-Supervisor: Volkan Patoglu
   Collecting expert knowledge from medical professionals

5. Irem Aydin, Dilara Yegenoglu (Fall 2009), Co-Supervisor: Volkan Patoglu
   Collecting expert knowledge from medical professionals

4. Utku Kaymaz (Fall 2009), Co-Supervisor: Volkan Patoglu
   Collecting expert knowledge from medical professionals

3. Abdullah Caliskan (Fall 2009), Co-Supervisor: Volkan Patoglu
   Collecting expert knowledge from medical professionals

2. Gokhan Murtezaoglu (Fall 2009), Co-Supervisor: Volkan Patoglu
   Collecting expert knowledge from medical professionals

1. Can Yildiz, Elif Ozdogan, Deniz Altunlu (Fall 2007), Co-Supervisor: Ferhan Ture
   Solving challenging grid puzzles with answer set programming

UNDERGRADUATE RESEARCH PROJECT SUPERVISOR

6. Begum Arslanhan, Mehmet Ali Aydogan, Buse Carik, Abdullah Yavuz, Hatice Deniz Zorlu (Fall 2018),
   Co-Supervisor: Ahmet Alkan, Yusuf Izmirlioglu
   Solving Matching Problems using Artificial Intelligence

5. Gurhan Elcicek, Mert Ertorer, Muhammed Kerem Kahraman (Fall 2018)
   Course Schedule Planning

4. Farukhzhon Barotov, Aysu Bogatarkan, Emre Hilmi Songur, Deren Ege Turan, Muhammet Sami Yavuz, Batuhan Yildirim, Cem Yuksel (Fall 2018), Co-Supervisor: Volkan Patoglu
Dynamic Multi-Agent Pathfinding

3. Berkan Teber, Selin Eyuboglu (Spring 2018), Co-Supervisor: Ahmet Alkan
Solving Matching Problems using Artificial Intelligence

2. Farukhzhon Barotov, Emre Hilmi Songur (Fall 2017), Co-Supervisor: Volkan Patoglu
Development of an Educational Multi-robot System

1. Berkan Teber, Selin Eyuboglu, Ozgun Ozerk, Talha Samil Cakir, Zeynep Melis Meric (Fall 2017), Co-Supervisor: Ahmet Alkan
Solving Matching Problems using Artificial Intelligence

PROFESSIONAL ACTIVITIES

COMMITTEE MEMBER

- President, Principles of Knowledge Representation and Reasoning, Incorporated (KR, Inc.) (2022–present)

- Steering Committee Member, Principles of Knowledge Representation and Reasoning, Incorporated (KR, Inc.) (2010–2014, 2018–present)

- Executive Committee Member, The Association for Logic Programming (ALP) (2018–2022)

EDITORIAL BOARD MEMBER

- Artificial Intelligence (AIJ) (2021–present; Associate Editor)

- Theory and Practice of Logic Programming (TPLP) (2021–present; Area Editor)

- Theory and Practice of Logic Programming (TPLP) (2020–2021; Editorial Advisor)

- Journal of Artificial Intelligence Research (JAIR) (2014–2016)

EVENT COORDINATION

- Co-Chair, International Conference on Logic Programming (ICLP), Tutorials Track, 2023

- Co-Chair, International Conference on the Principles of Knowledge Representation and Reasoning (KR), Special Session on KR and Robotics/Planning, 2023

- Co-Chair, International Joint Conference on Artificial Intelligence (IJCAI), Robot Exhibition Track, 2022

- General Chair, International Conference on the Principles of Knowledge Representation and Reasoning (KR), 2021

- Co-Chair, International Joint Conference on Artificial Intelligence (IJCAI), Journal Track, 2021

- Program Co-Chair, International Conference on the Principles of Knowledge Representation and Reasoning (KR), 2020

- Program Co-Chair, International Conference on Logic Programming (ICLP), 2019

- Co-Chair, International Joint Conference on Artificial Intelligence (IJCAI), Tutorial Track, 2016

- Co-Chair, AAAI Conference on Artificial Intelligence (AAAI), What's Hot Program, 2016

- Doctoral Consortium Co-Chair, International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR), 2015

- Co-Chair, AAAI Conference on Artificial Intelligence (AAAI), What's Hot Program, 2015

- Co-Chair, IJCAI Workshop, Hybrid Reasoning, 2015

- Co-Chair, IEEE/RSJ IROS Workshop, Task Planning for Intelligent Robots in Service and Manufacturing, 2015

- Co-Chair, Robotics: Science and Systems Workshop, on Combining AI Reasoning and Cognitive Science with Robotics, 2015

- Co-Chair, International Workshop on Cognitive Robotics (CogRob), 2014

- Co-Chair, AAAI Spring Symposium Series, Knowledge Representation and Reasoning in Robotics, 2014

- Track Chair, International Workshop on Non-Monotonic Reasoning (NMR), Systems and Applications, 2014

- General Co-Chair, International Conference on Logic Programming (ICLP), 2013

- Co-Chair, RSS Workshop, Combined Robot Motion Planning and AI Planning for Practical Applications, 2013

- Doctoral Consortium Co-Chair, International Conference on the Principles of Knowledge Representation and Reasoning (KR), 2012

- Co-Chair, International Symposium on Logical Formalizations of Commonsense Reasoning (CommonSense), 2011

- Special Theme Chair, International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR), 2009

- Session Co-Chair, International Workshop on Non-Monotonic Reasoning (NMR), Session on Declarative Programming Paradigms and Systems for NMR, 2008

CONFERENCE AREA CHAIR

- International Conference on Principles of Knowledge Representation and Reasoning (KR), 2022, 2023

CONFERENCE ASSOCIATE EDITOR

- IEEE International Conference on Robotics and Automation (ICRA), 2017, 2018, 2019

Conference Senior Program Committee Member

- International Joint Conference on Artificial Intelligence (IJCAI), 2009, 2011, 2012, 2013, 2015, 2016, 2017, 2018

- AAAI Conference on Artificial Intelligence (AAAI), 2012, 2018

- European Conference on Artificial Intelligence (ECAI), 2014, 2016, 2018, 2020

Conference Program Committee Member

- International Joint Conference on Artificial Intelligence (IJCAI), 2009, 2011, 2012, 2013, 2015, 2016, 2017, 2018

- AAAI Conference on Artificial Intelligence (AAAI), 2004, 2005, 2006, 2007, 2008, 2010, 2011, 2012, 2013, 2014, 2015, 2018, 2019

- European Conference on Artificial Intelligence (ECAI), 2006, 2008, 2010, 2012, 2014, 2016, 2018, 2023

- IEEE International Conference on Robotics and Automation (ICRA), 2017, 2018, 2019

- International Conference on Principles of Knowledge Representation and Reasoning (KR), 2012, 2014, 2016, 2018, 2019

- International Conference on Logic Programming (ICLP), 2007, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2021, 2022, 2023

- International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR), 2003, 2009, 2011, 2013, 2015, 2019, 2022

- Conference on Uncertainty in Artificial Intelligence (UAI), 2021, 2022

- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2013, 2014

- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), Robotics Track, 2019

- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), Knowledge Representation, Reasoning and Planning Track, 2022

- International Conference on Automated Planning and Scheduling (ICAPS), Robotics Track, 2019

- International FLAIRS Conference (FLAIRS), Robotics Track, 2016, 2018, 2019, 2021, 2022

- International Conference on Agents and Artificial Intelligence (ICAART), 2015

- Extended Semantic Web Conference (ESWC), 2015

- Conference on Prestigious Applications of Intelligent Systems (PAIS), 2014

- International Conference on Web Reasoning and Rule Systems (RR), 2013

- International Joint Conference on Rules and Reasoning (RuleML+RR), 2018

- Australasian Joint Conference on Artificial Intelligence (AI), 2008, 2009, 2010, 2011, 2012

- European Conference on Logics in Artificial Intelligence (JELIA), 2010, 2012, 2021, 2023

- Global Conference on Artificial Intelligence (GCAI), 2015

- International Conference on Applications of Declarative Programming and Knowledge Management (INAP), 2011

- International Conference on Industrial Engineering and Other Applications of Applied Intelligence (IEA/AIE), 2013

- International Conference on Artificial Intelligence: Methodology, Systems, Applications (AIMSA), 2014

- Türkiye Otonom Robotlar Konferansı (TORK), 2014–2019

- International Symposium on Practical Aspects of Declarative Languages (PADL), 2017–2023

- International Symposium on Principles and Practice of Declarative Programming (PPDP), 2022

- International Symposium on Logic-based Program Synthesis and Transformation (LOPSTR), 2012

- International Symposium on Computer and Information Sciences (ISCIS), 2008, 2009

- International Symposium on Logical Formalizations of Commonsense Reasoning (CommonSense), 2005, 2007, 2009, 2011, 2017

- AAAI 2018 Spring Symposium on Integrating Representation, Reasoning, Learning, and Execution for Goal Directed Autonomy (SIRLE), 2018

- European Starting AI Researcher Symposium (STAIRS), 2010, 2012

- International Colloquium on Theoretical Aspects of Computing (ICTAC), 2008

- International Workshop on the Algorithmic Foundations of Robotics (WAFR), 2016, 2018, 2020, 2022

- International Workshop on Non-Monotonic Reasoning (NMR), 2004, 2008, 2010, 2014

- International Workshop on Constraint Modelling and Reformulation (ModRef), 2008, 2010

- International Knowledge Representation and Automatic Reasoning Workshop (RCRA), 2009, 2010, 2011, 2013, 2016, 2018

- Workshop on Constraint Based Methods for Bioinformatics (WCB), 2009, 2010, 2011, 2012

- Workshop on Dynamics of Knowledge and Belief Representation, Annual German Conference on Artificial Intelligence (KI), 2007

- Workshop on Logic Programming (WLP), 2011

- ICAPS Workshop on Combining Task and Motion Planning for Real-World Applications (TAMPRA), 2012

- International Workshop on Spatio-Temporal Dynamics (STeDy), 2012

- International Workshop on Cognitive Robotics (CogRob), 2012, 2014, 2016, 2018

- Workshop on Controlled Natural Language (CNL), 2014, 2016, 2018

- ICLP Workshop on Knowledge Representation and Reasoning in Robotics (KRR), 2013

- AAAI Workshop on Artificial Intelligence and Robotics (AIRob), 2014

- Workshop on Natural Language Processing and Automated Reasoning (NLPAR), 2013, 2015

- Robotics, Science and Systems Conference (RSS) Workshops, 2014

- KR 2018 Hybrid Reasoning and Learning Workshop, 2018

- IJCAI 2015 Workshop, Hybrid Reasoning, 2015

- IEEE/RSJ IROS 2015 Workshop on Task Planning for Intelligent Robots in Service and Manufacturing, 2015

- RSS 2015 Workshop on Combining AI Reasoning and Cognitive Science with Robotics, 2015

- Workshop on Knowledge-based techniques for problem solving and reasoning (KnowProS), 2016, 2017

- IJCAI Workshop, Hybrid Reasoning, 2018

- Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP), 2016, 2017, 2018, 2020

- Workshop on Applications of Semantic Web technologies in Robotics (AnSWeR), 2017, 2018

- AAAI Conference on Artificial Intelligence, Student Abstract and Poster Program Track, 2010, 2011, 2012, 2013, 2014, 2015

- IJCAI Video Competition, 2013, 2015

REVIEWER: JOURNALS AND BOOK CHAPTERS

- ACM Transactions on Computational Logic (TOCL)

- Artificial Intelligence Journal (AIJ)

- Artificial Intelligence in Medicine (AIM)

- Annals of Mathematics in Artificial Intelligence (AMAI)

- Autonomous Agents and Multi-Agent Systems (AGNT)

- Autonomous Robots (AURO)

- BioMed Central

- Data and Knowledge Engineering (DKE)

- IEEE Robotics and Automation Letters (RA-L)

- IEEE Robotics and Automation Magazine (RAM)

- IEEE Transactions on Automation Science and Engineering (TASE)

- IEEE/ACM Transactions on Computational Biology and Bioinformatics (TCBB)

- IEEE Transactions on Robotics (TRO)

- International Journal of Robotics Research (IJRR)

- Journal of Artificial Intelligence Research (JAIR)

- Journal of Applied Non-Classical Logics (JANCL)

- Journal of Experimental and Theoretical Artificial Intelligence (JETAI)

- Journal of Logic and Computation (JLC)

- Logic Journal of the IGPL

- Machine Learning (MACH)

- Parallel Computing (PC)

- Theory and Practice of Logic Programming (TPLP)

- Transactions on Computational Intelligence and AI in Games (TCIAIG)

- Transactions on Neural Systems & Rehabilitation Engineering (TNSRE)

- Intelligent Techniques for Planning (edited by Ioannis Vlahavas and Dimitris Vrakas)

- Bridges between the Methodological and Practical Work of the Robotics and Cognitive Systems Communities – From Sensors to Concepts (edited by Yacine Amirat, Abdelghani Chibani, and Gian Piero Zarri)

- Logic Programming, Knowledge Representation, and Nonmonotonic Reasoning – Essays Dedicated to Michael Gelfond on the Occasion of His 65th Birthday (edited by Marcello Balduccini and Tran Cao Son)

REVIEWER: CONFERENCES AND WORKSHOPS

- International Joint Conference on Artificial Intelligence (IJCAI), 2003, 2005, 2007, 2009, 2011, 2012, 2013, 2015, 2016, 2017, 2018

- AAAI Conference on Artificial Intelligence (AAAI), 2002, 2004, 2005, 2006, 2007, 2008, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2018, 2019

- European Conference on Artificial Intelligence (ECAI), 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018

- International Conference on Principles of Knowledge Representation and Reasoning (KR), 2006, 2008, 2012, 2014, 2016, 2018, 2019

- European Conference on Logics in Artificial Intelligence (JELIA), 2002, 2006, 2010, 2012

- International Conference on Logic Programming (ICLP), 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019

- Robotics, Science and Systems Conference (RSS), 2016, 2021

- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2013, 2015, 2017, 2021

- IEEE International Conference on Robotics and Automation (ICRA), 2014–2020, 2022

- International Conference on Principles and Practice of Constraint Programming (CP), 2007

- International Conference on Computational Logic (CL), 2000

- International Conference on Logic for Programming Artificial Intelligence and Reasoning (LPAR), 2005, 2006, 2010

- International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR), 2001, 2003, 2009, 2011, 2013, 2015, 2019

- International Conference on Agents and Artificial Intelligence (ICAART), 2015

- Extended Semantic Web Conference (ESWC), 2015

- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2007, 2013, 2014, 2019

- IEEE Int'l Conf. on Simulation, Modelling, and Programming for Autonomous Robots (SIMPAR), 2018

- International Conference on Automated Planning and Scheduling (ICAPS), Robotics Track, 2019

- International FLAIRS Conference (FLAIRS), Robotics Track, 2016, 2018, 2019

- Conference on Prestigious Applications of Intelligent Systems (PAIS), 2014

- Australasian Joint Conference on Artificial Intelligence (AI), 2008, 2009, 2010, 2011, 2012

- Int'l Conf. on Applications of Declarative Programming and Knowledge Management (INAP), 2011

- Int'l Conf. on Industrial Engineering and Other Applications of Applied Intelligence (IEA/AIE), 2013

- International Conference on Web Reasoning and Rule Systems (RR), 2013

- International Joint Conference on Rules and Reasoning (RuleML+RR), 2018

- Int'l Conf. on Artificial Intelligence: Methodology, Systems, Applications (AIMSA), 2014

- Türkiye Otonom Robotlar Konferansı (TORK), 2014–2019

- International Symposium on Practical Aspects of Declarative Languages (PADL), 2017, 2018, 2019

- IFAC Symposium on Robot Control (SYROCO), 2012

- International Symposium on Logic-based Program Synthesis and Transformation (LOPSTR), 2012

- International Symposium on Artificial Intelligence and Mathematics (ISAIM), 2008

- International Symposium on Logical Formalizations of Commonsense Reasoning (CommonSense), 2003, 2005, 2007, 2009, 2011

- International Symposium on Foundations of Information and Knowledge Systems (FoIKS), 2006

- International Symposium on Computer and Information Sciences (ISCIS), 2004, 2008, 2009

- AAAI Spring Symposium, 2001, 2010, 2014, 2018

- European Starting AI Researcher Symposium (STAIRS), 2010, 2012

- International Colloquium on Theoretical Aspects of Computing (ICTAC), 2008

- International Workshop on the Algorithmic Foundations of Robotics (WAFR), 2016, 2018

- International Workshop on Non-Monotonic Reasoning (NMR), 2004, 2008, 2010, 2014

- International Workshop on Constraint Modelling and Reformulation (ModRef), 2008, 2010

- International Knowledge Representation and Automatic Reasoning Workshop (RCRA), 2009, 2010, 2011, 2013, 2016

- Workshop on Constraint Based Methods for Bioinformatics (WCB), 2009, 2010, 2011, 2012

- Workshop on Dynamics of Knowledge and Belief Representation, Annual German Conference on Artificial Intelligence (KI), 2007

- ICAPS Workshop on Combining Task and Motion Planning for Real-World Applications (TAMPRA), 2012

- International Workshop on Spatio-Temporal Dynamics (STeDy), 2012

- RSS Workshop on Combined Robot Motion Planning and AI Planning for Practical Applications, 2013

- ICLP Workshop on Knowledge Representation and Reasoning in Robotics (KRR), 2013

- International Workshop on Cognitive Robotics (CogRob), 2012, 2014, 2016

- AAAI Workshop on Artificial Intelligence and Robotics (AIRob), 2014

- Workshop on Natural Language Processing and Automated Reasoning (NLPAR), 2013, 2015

- Workshop on Controlled Natural Language (CNL), 2014, 2016

- International Workshop on User-Oriented Logic Programming (IULP), 2015, 2017

- Workshop on Knowledge-based techniques for problem solving and reasoning (KnowProS), 2016, 2017

- Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP), 2016, 2018

- The International Workshop on Answer Set Programming and Its Applications (ASPIA), 2017

- Workshop on Logical Foundations for Uncertainty and Machine Learning (LFU), 2017

- Workshop on Learning and Reasoning: Principles and Applications to Everyday Spatial and Temporal Knowledge (LR), 2018

- Robotics, Science and Systems Conference (RSS) Workshops, 2014

- AAAI Conference on Artificial Intelligence, Student Abstract and Poster Program Track, 2010, 2011, 2012, 2013, 2014, 2015

- IJCAI Video Competition, 2013, 2015

- IJCAI Sister Conference Best Paper Track, 2017

- Doctoral Consortium on Logic Programming and Nonmonotic Reasoning (LPNMR-DC), 2017

Reviewer: Projects and Proposals

- European Commission, The EU Framework Programme for Research and Innovation, Horizon Europe, 2021, 2022

- European Commission, The EU Framework Programme for Research and Innovation, Horizon 2020, 2015, 2020

- Natural Sciences and Engineering Research Council of Canada (NSERC), 2020

- Progetti di Ricerca di Interesse Nazionale, Italian Ministry of Education (PRIN MIUR), 2018, 2020

- Research Foundation Flanders (FWO), 2015

- The Scientific and Technical Research Council of Turkey, Technology and Innovation Funding Programs Directorate (TEYDEB), 2007–2021

- The Scientific and Technical Research Council of Turkey, Academic Research Funding Program Directorate (ARDEB), 2009, 2017, 2021

- Greek Ministry of Education, Life Long Learning and Religious Affairs, 2012

- Bogazici University, 2016

Reviewer: Other

- External Member, Faculty Hiring Committee, University of Klagenfurt, 2022

- External Expert, Faculty Search Group, Uppsala University, 2021

- Test-of-Time Award Committee Co-Chair, The 38th International Conference on Logic Programming (ICLP), 2022

Faculty Services at Sabanci University

- Publicity Committee (Spring 2022–present)

- Project Courses Committee (Fall 2020–present)

- Undergrad Major Diploma Area Advisor (Fall 2020–present)

- Research Ethics Council (Fall 2021–Fall 2022)

- Summer School Council (Fall 2020–Spring 2021)

- Institute Board Member (Fall 2017–Fall 2019)

- Graduate Coordinator (Fall 2017–Summer 2019)

- Discipline Court, Member (Fall 2018–Spring 2019)

- Faculty Search Committee Member, Bioinformatics (Spring 2016)

- Faculty Search Committee Member, Neural Data and Imaging Sciences (Spring 2016)

- Student Recruitment/Publicity Committee Member (Spring 2016)

- PhD Qualifying Committee Member (Spring 2016–Spring 2017)

- PhD Committee Member (Fall 2012–Spring 2017)

- TA Assignment and Evaluation Committee (Spring 2010–Spring 2017)

- CS Seminar Coordinator (Fall 2007–Spring 2010, Spring 2016)

- Gursel Sönmez Research Award Committee Member (Spring 2009, Fall 2012–Fall 2015)

- CS Program Coordinator (Fall 2011–Summer 2012)

- Academic Success Monitoring and Counseling Committee (Spring 2010–Spring 2012)

- Diploma Area Advisor (Fall 2007–Fall 2008)

OTHER

- Panelist, Machine Ethics and Explainable AI, ICLP, 2020

- Panelist, AI capabilities in the digital forensic technologies, Forensics Europe Expo, 2019

- Panelist, Disruptive Technologies and Our Future, BTS & Partners GC Academy, 2018

- Moderator, Artificial Intelligence and Robotic Technologies Forum, ICT Summit NOW, 2013

- Co-Organizer, Computer Science and Engineering Student Workshop (CSW), 2010, 2011, 2012

- Organizer, Oberseminar Talks, 2010, 2015

- Organizer, AI Day at Sabancı University, 2008, 2010

- Panel Coordinator, "Existing Successful Applications of ASP/LPNMR", International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR), 2009

- Panelist, "Applications of Nonmonotonic Reasoning", Workshop on Nonmonotonic Reasoning (NMR), 2006

- Coordinator, Cognitive Robotics Reading Group, University of Toronto, 2002–2003

- Coordinator, Texas Action Group at Austin, 2000–2002

- Coordinator, Logic-Based AI Reading Group, University of Texas at Austin, 2001–2002

- Mentor, Doctoral Consortium, International Conf. on Principles of Knowledge Representation and Reasoning (KR), 2004

INVITED TALKS AND TUTORIALS

69. Keynote Talk: Workshop on Challenges and Adequacy Conditions for Logics in the New Age of Artificial Intelligence, 11/2023.
    Explanation Generation in Applications of Answer Set Programming

68. Keynote Talk: ICRA 2023 Workshop on Robot Execution Failures and Failure Management Strategies, 6/2023.
    Explainable Plan Execution Monitoring under Partial Observability

67. Colloquium: Center for Artificial Intelligence and Machine Learning, TU Wien, 1 / 2023.
    Explanation Generation in Applications of Answer Set Programming.

66. Keynote Talk: The Third Workshop on Explainable Logic-Based Knowledge Representation (XLoKR), 7/2022.
    Explanation Generation in Applications of Answer Set Programming

65. Keynote Talk: The 15th Workshop on Answer Set Programming and Other Computing Paradigms (ASPOCP), 7/2022.
    Hard Variants of Stable Marriage Problems: An Empirical Comparison of ASP with Other Computing Paradigms

64. Brief Overview, Dagstuhl Perspectives Workshop on Current and Future Challenges in Knowledge Representation and Reasoning, 7/2022.
    Applications of KR&R

63. ADP FUTURE Seminar, Sabanci University, 12/2021.
    Artificial Intelligence

62. Keynote Talk: IEEE CASE 2021 Workshop on Smart Robotic Systems for Advanced Manufacturing Industries: Planning, Interaction and Collaboration With Humans, 8/2021.
    Human Robot Collaborative Assembly Planning under Uncertainty

61. Tutorial: The 6'th Turkish Robotics Conference (ToRK), 7/2021.
    Robotlar için Eylem Planlama

60. Keynote Talk: European Conference on Logics in Artificial Intelligence (JELIA), 6/2021.
    Knowledge Representation and Hybrid Reasoning for Cognitive Robotics

59. Türk Eğitim Vakfı İnanç Türkeş Özel Lisesi (TEVİTOL), 3/2021.
    Yapay Zeka

58. Heriot-Watt University, 10/2020
    Applications of Answer Set Programming where Theory meets Practice

57. Keynote Talk: International Conference on Logic Programming (ICLP), 9/2020.
    Applications of Answer Set Programming where Theory meets Practice

56. Bosch Research, Robotics Systems, 12/2019.
    Declarative Method for Dynamic Multi-Agent Path Finding

55. SICSA Distinguished Visiting Fellow talk: University of Glasgow, 10/2019.
    A General Framework for Stable Roommate Problems

54. SICSA Distinguished Visiting Fellow talk: University of St. Andrews, 10/2019.
A Declarative Method for Dynamic Multi-Agent Path Finding

53. SICSA Distinguished Visiting Fellow talk: University of Glasgow, 10/2019.
Generalized Multi-Agent Pathfinding with Feasibility Checks.

52. SICSA Distinguished Visiting Fellow talk: Heriot-Watt University, 10/2019.
Human Robot Collaborative Assembly Planning under Uncertainty

51. SICSA Distinguished Visiting Fellow talk: University of Edinburgh, 10/2019.
Hybrid Reasoning for Robotics using Answer Set Programming

50. Rice University, 9/2019.
Human Robot Collaborative Assembly Planning under Uncertainty

49. Keynote Talk: International Conference on Logic Programming and Non-monotonic Reasoning (LP-NMR), 6/2019.
Integrating AI and Robotics using Answer Set Programming

48. RSS 2018 Workshop, Exhibition and Benchmarking of Task-Motion Planners, 6/2018.
Generalized Multi-Agent Pathfinding with Feasibility Checks

47. Terakki Foundation Schools, 6/2018.
Artificial Intelligence

46. National Medicine Student Conference, 4/2017.
Artificial Intelligence in Medicine

45. National Institute of Informatics (NII), 10/2016.
Hybrid Conditional Planning for Robotics

44. IROS 2016 Workshop, Integrating Multiple Knowledge Representation and Reasoning Techniques in Robotics, 10/2016.
Hybrid Conditional Planning for Robotics

43. RSS 2016 Workshop, Task and Motion Planning, 6/2016.
Hybrid Conditional Planning for Robotics

42. The 6th Hybris Workshop, 11/2015.
Hybrid Reasoning for Robotics using Answer Set Programming.

41. Middle East Technical University (METU), 5/2015.
Knowledge Representation and Reasoning for Drug Discovery.

40. Hong Kong University of Science and Technology (HKUST), 5/2014.
Finding Answers and Generating Explanations for Complex Biomedical Queries.

39. University of Calabria, 5/2014.
A Formal Hybrid Planning Framework for Robotic Manipulation.

38. SRI International, Artificial Intelligence Center, 3/2014.
A Formal Hybrid Planning Framework for Robotic Manipulation.

37. The 31st Workshop of the UK Planning and Scheduling Special Interest Group (PlanSIG 2013), 1/2014.
A Formal Hybrid Planning Framework for Robotic Manipulation.

36. University of Texas at Austin, 1/2014.
    A Formal Hybrid Planning Framework for Robotic Manipulation.

35. Rice University, 1/2014.
    A Formal Hybrid Planning Framework for Robotic Manipulation.

34. National Institute of Informatics (NII), 11/2013.
    Finding Answers and Generating Explanations for Complex Biomedical Queries.

33. National Institute of Informatics (NII), 11/2013.
    A Systematic Analysis of Levels of Integration between High-Level Task Planning and Low-Level Feasibility Checks.

32. ICGEB Workshop on Bioinformatic Approaches for Analysis of High-Throughput Biological Data, 9/2012.
    Genome Rearrangement with AI Planning.

31. ICGEB Workshop on Bioinformatic Approaches for Analysis of High-Throughput Biological Data, 9/2012.
    Querying Biomedical Databases and Ontologies in Natural Language Using Automated Reasoners.

30. Twenty-Sixth Conference on Artificial Intelligence (AAAI), 7/2012.
    Theory and Practice of Answer Set Programming.
    (The tutorial is given with Joohyung Lee and Yuliya Lierler.)

29. SRI International, Artificial Intelligence Center, 9/2011.
    Finding Answers and Generating Explanations for Complex Biomedical Queries.

28. Vienna University of Technology, 12/2010.
    Querying Biomedical Ontologies using Answer Set Programming.

27. Koc University, 5/2010.
    Applications of Automated Reasoning.

26. New Mexico State University, 2/2010.
    Querying Biomedical Ontologies in a Controlled Natural Language.

25. University of Arizona, 2/2010.
    Querying Biomedical Ontologies in a Controlled Natural Language.

24. University of Arizona, 2/2010.
    Bridging the Gap between High-Level Reasoning and Low-Level Control.

23. University of Texas at Austin, 1/2010.
    Querying Biomedical Ontologies in a Controlled Natural Language.

22. University of Texas at Austin, 1/2010.
    Bridging the Gap between High-Level Reasoning and Low-Level Control.

21. Istanbul Technical University, 11/2009.
    Bridging the Gap between High-Level Reasoning and Low-Level Control.

20. Guizhou University, 10/2009.
    Efficient Haplotype Inference with Answer Set Programming.

19. Guizhou Academy of Sciences, 10/2009.
    Computational Cladistics with Answer Set Programming.

18. University of Groningen, 4/2009.
    Genome Rearrangement and Planning.

17. Sabancı University, 9/2008.
    Computational Cladistics with Answer Set Programming.

16. Vienna University of Technology, 9/2008.
    Efficient Haplotype Inference with Answer Set Programming.

15. National Institutes of Health, National Library of Medicine, 7/2008.
    A New Approach to Integrating Biomedical Ontologies and Answering Complex Queries related to Drug Discovery.

14. National Institutes of Health, National Center for Biotechnology Information, 7/2008.
    Efficient Haplotype Inference with Answer Set Programming.

13. University of Groningen, 6/2008.
    Inferring Phylogenetic Trees using Answer Set Programming.

12. AI Day at Sabancı University, 5/2008.
    A New Approach to Integrating Biomedical Ontologies and Answering Complex Queries related to Drug Discovery.

11. Bogazici University, 5/2008.
    Inferring Phylogenetic Trees using Answer Set Programming.

10. Middle East Technical University, 4/2008.
    Inferring Phylogenetic Trees using Answer Set Programming.

 9. Simon Fraser University, 7/2007.
    Inferring Phylogenetic Trees using Answer Set Programming.

 8. Sabancı University, 6/2006.
    Logic-Based Artificial Intelligence and the Genome Rearrangement Problem.

 7. University of Texas at Austin, 1/2005.
    Character-Based Cladistics and Answer Set Programming.

 6. University of Waterloo, 3/2003.
    Evolutionary History of Languages and Answer Set Programming.

 5. University of Texas at Austin, 1/2003.
    Reconstructing the Evolutionary History of Indo-European Languages using Answer Set Programming.

 4. University of Toronto, 12/2002.
    Reconstructing the Evolutionary History of Indo-European Languages using Answer Set Programming.

 3. Schloss Dagstuhl, 9/2002.
    Reconstructing the Evolutionary History of Indo-European Languages using Answer Set Programming.

 2. IBM, Austin Research Labs, 8/2001.
    SAT Solvers.

 1. University of Texas at Austin, 2/2000.
    Missionaries and Cannibals in the Causal Calculator.

PUBLICATIONS

BOOKS, AND SPECIAL ISSUES

8. Meghyn Bienvenu, Gerhard Lakemeyer, <u>Esra Erdem</u> (editors). *The 18th International Conference on Principles of Knowledge Representation and Reasoning*, 2021.

7. Diego Calvanese, <u>Esra Erdem</u>, Michael Thielscher (editors). *The 17th International Conference on Principles of Knowledge Representation and Reasoning*, 2020.

6. <u>Esra Erdem</u>, Andrea Formisano, Germán Vidal, Fangkai Yang (editors). *The 35th International Conference on Logic Programming Special Issue*, Theory and Practice of Logic Programming, 2019.
DOI: 10.1017/S1471068419000413

5. Bart Bogaerts, <u>Esra Erdem</u>, Paul Fodor, Andrea Formisano, Giovambattista Ianni, Daniela Inclezan, Germán Vidal, Alicia Villanueva, Marina De Vos, Fangkai Yang (editors). *Proceedings of the 35th International Conference on Logic Programming (Technical Communications)*, 2019.
DOI: 10.4204/EPTCS.306

4. Bart Bogaerts, <u>Esra Erdem</u>, Amelia Harrison (editors). *Answer Set Programming & Other Computing Paradigms*, Annals of Mathematics and Artificial Intelligence (AMAI) Special Issue, 2019.
DOI:10.1007/s10472-019-09634-w

3. Mehul Bhatt, <u>Esra Erdem</u>, Fredrik Heintz, Michael Spranger (editors). *Cognitive Robotics*, Journal of Experimental & Theoretical Artificial Intelligence (JETAI) Special Issue, Vol. 28, 2016.
DOI:10.1080/0952813X.2016.1218649

2. <u>Esra Erdem</u>, Joohyung Lee, Yuliya Lierler, David Pearce (editors). *Correct Reasoning – Essays on Logic-Based AI in Honour of Vladimir Lifschitz*, Lecture Notes in Computer Science, Vol. 7265, Springer, 2012. ISBN 978-3-642-30742-3. DOI:10.1007/978-3-642-30743-0

1. <u>Esra Erdem</u>, Fangzhen Lin, Torsten Schaub (editors). *Proceedings of the Tenth International Conference on Logic Programming and Nonmonotonic Reasoning, Lecture Notes in Computer Science*, Lecture Notes in Artificial Intelligence, Vol. 5753, 2009. ISBN 978-3-642-04237-9.
DOI:10.1007/978-3-642-04238-6

BOOK CHAPTERS

4. Erdi Aker, Ahmetcan Erdogan, <u>Esra Erdem</u>, Volkan Patoglu. Housekeeping with Autonomous Robots: Representation, Reasoning and Execution. To appear in *Bridges between the Methodological and Practical Work of the Robotics and Cognitive Systems Communities – From Sensors to Concepts*, Intelligent Systems Reference Library, Springer, 2016.

3. <u>Esra Erdem</u> and Volkan Patoglu. Applications of Action Languages in Cognitive Robotics. In *Correct Reasoning – Essays on Logic-Based AI in Honour of Vladimir Lifschitz*, Lecture Notes in Computer Science, Vol. 7265, pages 229–246, Springer, 2012. DOI:10.1007/978-3-642-30743-0_16

2. Neelakantan Kartha, <u>Esra Erdem</u>, Joohyung Lee, Paolo Ferraris, Wanwan Ren, Yuliya Lierler, Fangkai Yang, Albert Rondan. Vladimir Lifschitz – A Youth at 65. In *Correct Reasoning – Essays on Logic-Based AI in Honour of Vladimir Lifschitz*, Lecture Notes in Computer Science, Vol. 7265, pages 14–23, Springer, 2012. DOI:10.1007/978-3-642-30743-0_2

1. <u>Esra Erdem</u>. Applications of Answer Set Programming in Phylogenetic Systematics. In *Logic Programming, Knowledge Representation, and Nonmonotonic Reasoning: Essays Dedicated to Michael Gelfond on the Occasion of His 65th Birthday*, Lecture Notes in Computer Science, Vol. 6565, pages 415–431, Springer, 2011. DOI:10.1007/978-3-642-20832-4_26

JOURNAL ARTICLES

34. Yusuf Izmirlioglu and <u>Esra Erdem</u>. Qualitative Reasoning about 2D Cardinal Directions using Answer Set Programming. In *Journal of Artificial Intelligence Research (JAIR)*, 77, 2023.

33. Faseeh Ahmad, Volkan Patoglu, <u>Esra Erdem</u>. Hybrid planning for challenging construction problems: An Answer Set Programming approach. In *Artificial Intelligence (AIJ)*, 319: 103902, 2023.
DOI: 10.1016/j.artint.2023.103902

32. Gokay Coruhlu, <u>Esra Erdem</u>, Volkan Patoglu. Explainable Robotic Plan Execution Monitoring Under Partial Observability. In *IEEE Transactions on Robotics (TRO)*, 38(4): 2495–2515, 2022.
DOI: 10.1109/TRO.2021.3123840

31. Muge Fidan and <u>Esra Erdem</u>. Knowledge-Based Stable Roommates Problem: A Real-World Application. In *Theory and Practice of Logic Programming (TPLP)*, 21(6): 852–869, 2021.
DOI:10.1017/S1471068420000277

30. Ahmed Nouman, Volkan Patoglu, <u>Esra Erdem</u>. Hybrid conditional planning for robotic applications. In *International Journal of Robotics Research (IJRR)*, 40(2–3): 594–623, 2021.
DOI: 10.1177/0278364920963783

29. Aysu Bogatarkan and <u>Esra Erdem</u>. Explanation Generation for Multi-Modal Multi-Agent Path Finding with Optimal Resource Utilization using Answer Set Programming. In *Theory and Practice of Logic Programming (TPLP)*, 20(6):974–989, 2020. DOI:10.1017/S1471068420000320

28. <u>Esra Erdem</u>, Muge Fidan, David Manlove, Patrick Prosser. A General Framework for Stable Roommates Problems using Answer Set Programming. In *Theory and Practice of Logic Programming (TPLP)*, 20(6):911–925, 2020. DOI:10.1017/S1471068420000277

27. Yusuf Izmirlioglu and <u>Esra Erdem</u>. Reasoning about Cardinal Directions between 3-Dimensional Extended Objects using Answer Set Programming. In *Theory and Practice of Logic Programming (TPLP)*, 20(6):942–957, 2020. DOI:10.1017/S1471068420000411

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