CURRICULUM VITAE

ESRA ERDEM

CONTACT INFORMATION

Sabancı University
Faculty of Engineering and Natural Sciences
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RESEARCH INTERESTS

Artificial intelligence. In particular, the mathematical foundations of knowledge representation, reasoning about actions and change, planning, and answer set programming, and their applications.

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.

EMPLOYMENT HISTORY

9/2006–present	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.

Awards and Honors

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.

Research Funding

Principal Investigator

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

The Scientific and Technical Research Council of Turkey, The Support Programme for Scientific and Technological Research Projects (1001), 6/2009–12/2011.
Integration of Biomedical Ontologies and Automated Reasoning for Drug Discovery, 95.383 TL.

The Scientific and Technical Research Council of Turkey, The Support Programme for Scientific and Technological Research Projects (1001), 2/2008–2/2010.
Inferring the Evolutionary History of Turkic Languages using Answer Set Programming, 94.540 TL.

Courses Taught

Assistant Professor (Sabancı University)

CS400/500, Logic in Computer Science	(Spring 2007, Spring 2008)
CS404, Artificial Intelligence	(Fall 2008, Fall 2009)
CS504, Knowledge Representation and Reasoning	(Fall 2007, Fall 2008)
CS581, Special Topics in CS	(Fall 2006)
CS502, Automated Reasoning	(Spring 2007)
CS611, Advanced Topics in Artificial Intelligence	(Spring 2008, Spring 2009)
CS551, Graduate Seminar I	(Fall 2006, Fall 2007, Fall 2008, Spring 2009)
CS552, Graduate Seminar II	(Spring 2007, Spring 2008, Spring 2009)
PROJ 102	(Fall 2007, Fall 2009)
ENS 491/2	(Fall 2007, Spring 2008, Fall 2008, Fall 2009)

Teaching Assistant (University of Texas at Austin)

CS388L, Introduction to Mathematical Logic	(Fall 1999, Fall 2001)
CS307, Foundations of Computer Science	(Fall 1997, Spring 1998, Fall 1998)
CS315, Computer Science II	(Spring 1997)
CS373, Software Engineering	(Fall 1996)

THESIS COMMITTEES

MASTERS COMMITTEE SUPERVISOR

7. Halit Erdoğan (Fall 2009–present, Sabancı University)
6. Şeyman Mutlu (Fall 2009–present, Sabancı University)
5. Fırat Hamit Tahaoğlu (Fall 2009–present, Sabancı University)
4. Tansel Uras (Fall 2009–present, Sabancı University)
3. Kadir Haspalamutgil (Fall 2009–present, Sabancı University) (co-supervisor)
2. Can Palaz (Fall 2009–present, Sabancı University) (co-supervisor)
1. Duygu Çakmak (Fall 2008–present, Sabancı University)

DOCTORAL COMMITTEE MEMBER

2. Elisabetta De Maria (Spring 2009, University of Udine), Supervisor: Angelo Montanari
   Computer Science Logic for Structure Prediction, String Comparison, and Biological Pathway Analysis
1. Özgür Kafalı (Spring 2008–present, Boğaziçi University), Supervisor: Pınar Yolum Birbil
   Handling Exceptions in Multiagent Systems

MASTERS COMMITTEE MEMBER

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 Gülaçtı (Summer 2008, Sabancı University), Supervisor: Devrim Gözüaçık
   Search for Atg5 Interacting Proteins by Using Yeast Two Hybrid System
3. Ferhan Türe (Summer 2008, Sabancı University), Supervisor: Kemal Oflazer
   A Hybrid Machine Translation System from Turkish to English
2. Önsel Armağan (Fall 2007, Sabancı University), Supervisor: Kemal Oflazer
   LingBrowser – A NLP Based Browser For Linguistic Information
1. Müge Erdoğmuş (Summer 2007, Sabancı University), Supervisor: Uğur Sezerman
   Application of automatic mutation-gene pair extraction to diseases

SENIOR PROJECT SUPERVISOR

11. Ozan Erdem (Fall 2009–present)
    Semantic web and life sciences
10. Erdi Aker (Fall 2009–present)
    Intelligent robots: low-level control meets high-level reasoning
9. Selen Başol, Sinan Eğilmez (Fall 2008–Spring 2009)
   Semantic web and life sciences

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

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

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

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

4. Fırat H. Tahaoğlu (Fall 2008–Spring 2009)
Semantic web and life sciences

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

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

1. Betül Keleş (Fall 2006–Spring 2007), Co-Supervisors: Devrim Gözüaçık and Volkan Patoğlu
Drug discovery-establishment of a cell-based drug testing system

FRESHMAN PROJECT SUPERVISOR

15. Burak Aydın, Fehmi C. Aksakal (Fall 2009)
Co-Supervisors: Ozan Erdem, Halit Erdoğan, Fırat H. Tahaoğlu, Tansel Uras
AI4PUZZLES

14. Ferit C. Kocagil, Adnan Emiroğlu (Fall 2009)
Co-Supervisors: Ozan Erdem, Halit Erdoğan, Fırat H. Tahaoğlu, Tansel Uras
AI4PUZZLES

13. Berker Sarıgün, Mehmet S. Basmacı (Fall 2009)
Co-Supervisors: Ozan Erdem, Halit Erdoğan, Fırat H. Tahaoğlu, Tansel Uras
AI4PUZZLES

12. Özge Öz, Can Terzihan (Fall 2009), Co-Supervisor: Volkan Patoğlu
Collecting expert knowledge from medical professionals

11. Ahmet D. İhtiyar, Merve Çebi (Fall 2009), Co-Supervisor: Volkan Patoğlu
Collecting expert knowledge from medical professionals

10. Yiğit S. Güçer, Birkan Süzer (Fall 2009), Co-Supervisor: Volkan Patoğlu
Collecting expert knowledge from medical professionals

9. Mehmet Ç. Yılmaz (Fall 2009), Co-Supervisor: Volkan Patoğlu
Collecting expert knowledge from medical professionals

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

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

6. Fatma E. Kavalcı, Gökçe Tuncer, Fatih Ö. Yılmaz (Fall 2009), Co-Supervisor: Volkan Patoğlu
   Collecting expert knowledge from medical professionals
5. İrem Aydın, Dilara Yeğenoğlu (Fall 2009), Co-Supervisor: Volkan Patoğlu
   Collecting expert knowledge from medical professionals
4. Utku Kaymaz (Fall 2009), Co-Supervisor: Volkan Patoğlu
   Collecting expert knowledge from medical professionals
3. Abdullah Çalışkan (Fall 2009), Co-Supervisor: Volkan Patoğlu
   Collecting expert knowledge from medical professionals
2. Gökhan Murtezaoğlu (Fall 2009), Co-Supervisor: Volkan Patoğlu
   Collecting expert knowledge from medical professionals
1. Can Yıldız, Elif Özdoğan, Deniz Altunlu (Fall 2007), Co-Supervisor: Ferhan Türe
   Solving challenging grid puzzles with answer set programming

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PROFESSIONAL ACTIVITIES

EVENT COORDINATION

- 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

PROGRAM COMMITTEE MEMBER

- International Joint Conference on Artificial Intelligence (IJCAI), 2009
- AAAI Conference on Artificial Intelligence (AAAI), 2004, 2005, 2006, 2007, 2008, 2010
- European Conference on Artificial Intelligence (ECAI), 2006, 2008, 2010
- Australasian Joint Conference on Artificial Intelligence (AI), 2008, 2009
- International Colloquium on Theoretical Aspects of Computing (ICTAC), 2008
- International Symposium on Computer and Information Sciences (ISCIS), 2008, 2009
- International Workshop on Non-Monotonic Reasoning (NMR), 2004, 2008, 2010
- International Workshop on Constraint Modelling and Reformulation (ModRef), 2008
- International Conference on Logic Programming (ICLP), 2007, 2009, 2010
- International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR), 2003, 2009
- International Symposium on Logical Formalizations of Commonsense Reasoning (CommonSense), 2005, 2007, 2009
- International Knowledge Representation and Automatic Reasoning Workshop (RCRA), 2009
- Workshop on Constraint Based Methods for Bioinformatics (WCB), 2009
- Workshop on Dynamics of Knowledge and Belief Representation, Annual German Conference on Artificial Intelligence (KI), 2007

REVIEWER: JOURNALS AND BOOK CHAPTERS

- Artificial Intelligence Journal (AIJ)
- Journal of Logic and Computation (JLC)
- ACM Transactions on Computational Logic (TOCL)
- Theory and Practice of Logic Programming (TPLP)
- Parallel Computing (PC)
- IEEE/ACM Transactions on Computational Biology and Bioinformatics (TCBB)
- BioMed Central
- Logic Journal of the IGPL
- Data and Knowledge Engineering (DKE)
- Intelligent Techniques for Planning (edited by Ioannis Vlahavas and Dimitris Vrakas)

REVIEWER: CONFERENCES AND WORKSHOPS

- International Joint Conference on Artificial Intelligence (IJCAI), 2003, 2005, 2007, 2009
- AAAI Conference on Artificial Intelligence (AAAI), 2002, 2004, 2005, 2006, 2007, 2008
- European Conference on Artificial Intelligence (ECAI), 2004, 2006, 2008
- International Conference on Principles of Knowledge Representation and Reasoning (KR), 2006, 2008
- European Conference on Logics in Artificial Intelligence (JELIA), 2002, 2006
- International Conference on Logic Programming (ICLP), 2006, 2007, 2008, 2009
- 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
- International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR), 2001, 2003, 2009
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2007
- Australasian Joint Conference on Artificial Intelligence (AI), 2008, 2009
- International Symposium on Artificial Intelligence and Mathematics (ISAIM), 2008
- International Symposium on Logical Formalizations of Commonsense Reasoning (CommonSense), 2003, 2005, 2007, 2009
- 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

- International Colloquium on Theoretical Aspects of Computing (ICTAC), 2008
- International Workshop on Non-Monotonic Reasoning (NMR), 2004, 2008
- International Workshop on Constraint Modelling and Reformulation (ModRef), 2008
- International Knowledge Representation and Automatic Reasoning Workshop (RCRA), 2009
- Workshop on Constraint Based Methods for Bioinformatics (WCB), 2009
- Workshop on Dynamics of Knowledge and Belief Representation, Annual German Conference on Artificial Intelligence (KI), 2007

REVIEWER: PROJECTS AND PROPOSALS

- The Scientific and Technical Research Council of Turkey, Technology and Innovation Funding Programs Directorate (TEYDEB), 2007, 2008, 2009
- The Scientific and Technical Research Council of Turkey, Academic Research Funding Program Directorate (ARDEB), 2009

FACULTY SERVICES

- Gürsel Sönmez Award Committee Member (Spring 2009, Sabancı University)
- CS Seminar Coordinator (Fall 2007–present, Sabancı University)
- Diploma Area Advisor (Fall 2007–Fall 2008, Sabancı University)

OTHER

- Co-Organizer, Computer Science and Engineering Student Workshop (CSW), 2010
- Organizer, Oberseminar Talks, 2010
- 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, Int'l Conf. on Principles of Knowledge Representation and Reasoning (KR), 2004

INVITED TALKS

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. Boğaziçi 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[1]

BOOKS

1. Esra Erdem, Fangzhen Lin, and 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.

JOURNAL ARTICLES

7. Thomas Eiter, Esra Erdem, and Wolfgang Faber. Undoing the Effects of Action Sequences. In *Journal of Applied Logic (JAL)*, 6(3):380–415, 2008.

6. Daniel R. Brooks, Esra Erdem, Selim T. Erdoğan, James W. Minett, and Don Ringe. Inferring Phylogenetic Trees using Answer Set Programming. In *Journal of Automated Reasoning (JAR)*, 39(4):471–511, 2007.

5. Thomas Eiter, Esra Erdem, Michael Fink, and Ján Senko. Comparing Action Descriptions Based on Semantic Preferences. In *Annals of Mathematics and Artificial Intelligence (AMAI)*, 50(3-4):273-304, 2007.

4. Thomas Eiter, Esra Erdem, Wolfgang Faber, and Ján Senko. A Logic-Based Approach to Finding Explanations for Discrepancies in Optimistic Plan Execution. In *Fundamenta Informaticae (FI)*, 79(1-2):25–69, 2007.

3. Esra Erdem, Vladimir Lifschitz, and Don Ringe. Temporal Phylogenetic Networks and Logic Programming. In *Theory and Practice of Logic Programming (TPLP)*, 6(5):539–558, 2006.

2. Esra Erdem and Vladimir Lifschitz. Tight Logic Programs. In *Theory and Practice of Logic Programming (TPLP)*, 3(4–5):499–518, 2003.

1. Esra Erdem and Pierre Flener. Completing Open Logic Programs by Constructive Induction. In *International Journal of Intelligent Systems (IJIS)*, 14(10):995–1020, 1999.

[1] `http://people.sabanciuniv.edu/esraerdem/papers.html`

REFEREED CONFERENCE AND WORKSHOP PAPERS

34. Mehmet Çelik, Halit Erdoğan, Fırat Hamit Tahaoğlu, Tansel Uras, and Esra Erdem. Comparing ASP and CP on Four Grid Puzzles. In *Proceedings of Knowledge Representation and Automated Reasoning International Workshop (RCRA'09)*, 2009.

33. Ozan Çaldıran, Kadir Haspalamutgil, Abdullah Ok, Can Palaz, Esra Erdem, and Volkan Patoğlu. Robot Kontrolü için Mantıksal Akıl Yürütme. In *Proceedings of Otomatik Kontrol Türk Milli Komitesi Otomatik Kontrol Ulusal Toplantısı*, 2009.

32. Ozan Çaldıran, Kadir Haspalamutgil, Abdullah Ok, Can Palaz, Esra Erdem, and Volkan Patoğlu. From Discrete Task Plans to Continuous Trajectories. In *Proceedings of ICAPS'09 Workshop, Bridging The Gap Between Task And Motion Planning (BTAMP'09)*, 2009.

31. Esra Erdem. PHYLO-ASP: Phylogenetic Systematics with Answer Set Programming. In *Proceedings of the Tenth International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR'09)*, pages 567–572, 2009.

30. Esra Erdem, Ozan Erdem, and Ferhan Türe. HAPLO-ASP: Haplotype Inference using Answer Set Programming. In *Proceedings of the Tenth International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR'09)*, pages 573–578, 2009.

29. Duygu Çakmak, Esra Erdem, and Halit Erdoğan. Computing Weighted Solutions in Answer Set Programming. In *Proceedings of the Tenth International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR'09)*, pages 416–422, 2009.

28. Ozan Çaldıran, Kadir Haspalamutgil, Abdullah Ok, Can Palaz, Esra Erdem, and Volkan Patoğlu. Bridging the Gap between High-Level Reasoning and Low-Level Control. In *Proceedings of the Tenth International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR'09)*, pages 342–354, 2009.

27. Thomas Eiter, Esra Erdem, Halit Erdoğan, and Michael Fink. Finding Similar or Diverse Solutions in Answer Set Programming. In *Proceedings of the Twenty-Fifth International Conference on Logic Programming (ICLP'09)*, pages 342–356, 2009.

26. Esra Erdem and Reyyan Yeniterzi. Transforming Controlled Natural Language Biomedical Queries into Answer Set Programs. In *Proceedings of the Workshop on BioNLP (BioNLP'09)*, pages 117-124, 2009.

25. Olivier Bodenreider, Zeynep H. Çoban, Mahir C. Doğanay, Esra Erdem and Hilal Koşucu. A Preliminary Report on Answering Complex Queries related to Drug Discovery using Answer Set Programming. In *Proceedings of the Third International Workshop on Applications of Logic Programming to the (Semantic) Web and Web Services (ALPSWS'08)*, pages 85–90, 2008.

24. Elvin Çoban, Esra Erdem and Ferhan Türe. Comparing ASP, CP, ILP on two Challenging Applications: Wire Routing and Haplotype Inference. In *Proceedings of the Second International Workshop on Logic and Search (LaSh'08)*, 2008.

23. Esra Erdem and Ferhan Türe. Efficient Haplotype Inference with Answer Set Programming. In *Proceedings of the Twenty-Third AAAI Conference on Artificial Intelligence (AAAI'08)*, pages 436–441, 2008.

22. Merve Çaylı, Ayşe Gül Karatop, Emrah Kavlak, Hakan Kaynar, Ferhan Türe and Esra Erdem. Solving Challenging Grid Puzzles with Answer Set Programming. In *Proceedings of the Fourth International Workshop on Answer Set Programming (ASP'07)*, pages 175–190, 2007.

21. Esra Erdem and Paolo Ferraris. Forgetting Actions in Domain Descriptions. In *Proceedings of the Twenty-Second AAAI Conference on Artificial Intelligence (AAAI'07)*, pages 409–414, 2007.

20. Thomas Eiter, Esra Erdem, Wolfgang Faber. On Reversing Actions: Algorithms and Complexity. In *Proceedings of the Twentieth International Joint Conference on Artificial Intelligence (IJCAI'07)*, 2007.

19. Thomas Eiter, Esra Erdem, Michael Fink, and Ján Senko. Comparing Action Descriptions based on Semantic Preferences. In *Proceedings of the Tenth European Conference on Logics in Artificial Intelligence (JELIA'06)*, Lecture Notes in Computer Science, Vol. 4160, pages 124–137, 2006.

18. Esra Erdem and Alfredo Gabaldon. Representing Action Domains with Numeric-Valued Fluents. In *Proceedings of the Tenth European Conference on Logics in Artificial Intelligence (JELIA'06)*, Lecture Notes in Computer Science, Vol. 4160, pages 151–163, 2006.

17. Thomas Eiter, Esra Erdem, Michael Fink, and Ján Senko. Resolving Conflicts in Action Descriptions. In *Proceedings of the Seventeenth European Conference on Artificial Intelligence (ECAI'06)*, pages 424–433, 2006.

16. Thomas Eiter, Esra Erdem, Michael Fink, and Ján Senko. Comparing Action Descriptions based on Semantic Preferences. In *Proceedings of ECAI'06 Multidisciplinary Workshop on Advances in Preference Handling*, 2006.

15. Thomas Eiter, Esra Erdem, Michael Fink, and Ján Senko. Resolving Conflicts in Action Descriptions. In *Proceedings of the Eleventh Workshop on Nonmonotonic Reasoning (NMR'06), Action and Change Track*, pages 353–361, 2006.

14. Esra Erdem and Elisabeth Tillier. Genome Rearrangement and Planning. In *Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI'05)*, pages 1139–1144, 2005.

13. Esra Erdem and Alfredo Gabaldon. Cumulative Effects of Concurrent Actions on Numeric-Valued Fluents. In *Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI'05)*, pages 627–632, 2005.

12. Thomas Eiter, Esra Erdem, Michael Fink, and Ján Senko. Updating Action Domain Descriptions. In *Proceedings of the Nineteenth International Joint Conference on Artificial Intelligence (IJCAI'05)*, pages 418–423, 2005.

11. Esra Erdem and Alfredo Gabaldon. Cumulative Effects of Concurrent Actions on Numeric-Valued Fluents. In *Working Notes of the Sixth Workshop on Nonmonotonic Reasoning, Action, and Change (NRAC'05)*, pages 28–33, 2005.

10. Daniel R. Brooks, Esra Erdem, James W. Minett, and Don Ringe. Character-Based Cladistics and Answer Set Programming. In *Proceedings of the Seventh International Symposium on Practical Aspects of Declarative Languages (PADL'05)*, Lecture Notes in Computer Science, Vol. 3350, pages 37–51, 2005.

9. Esra Erdem and Martin Wong. Rectilinear Steiner Tree Construction using Answer Set Programming. In *Proceedings of the Twentieth International Conference on Logic Programming (ICLP'04)*, Lecture Notes in Computer Science, Vol. 3132, pages 386–399, 2004.

8. Thomas Eiter, Esra Erdem, and Wolfgang Faber. Plan Reversals for Recovery in Execution Monitoring. In *Proceedings of the Tenth Workshop on Nonmonotonic Reasoning (NMR'04), Action and Causality Track*, pages 147–154, 2004.

7. Esra Erdem, Vladimir Lifschitz, Luay Nakhleh and Don Ringe. Reconstructing the Evolutionary History of Indo-European Languages using Answer Set Programming. In *Proceedings of the Fifth International Symposium on Practical Aspects of Declarative Languages (PADL'03)*, Lecture Notes in Computer Science, Vol. 2562, pages 160–176, 2003.

6. Esra Erdem and Vladimir Lifschitz. Fages' Theorem for Programs with Nested Expressions. In *Proceedings of the Seventeenth International Conference on Logic Programming (ICLP'01)*, Lecture Notes in Computer Science, Vol. 2237, pages 242–254, 2001.

5. Esra Erdem and Vladimir Lifschitz. Transitive Closure, Answer Sets and Predicate Completion. In *Proceedings of American Association for Artificial Intelligence (AAAI) Spring Symposium*, pages 60–65, 2001.

4. Esra Erdem and Pierre Flener. A New Declarative Bias for ILP: Construction Modes. In *Work-in-Progress Reports of the Tenth International Conference on Inductive Logic Programming (ILP'00)*, pages 60–78, 2000.

3. Esra Erdem, Vladimir Lifschitz, and Martin D. F. Wong. Wire Routing and Satisfiability Planning. In *Proceedings of the First International Conference on Computational Logic (CL'00)*, Lecture Notes in Computer Science, Vol. 1861, pages 822–836, 2000.

2. Yuliya Babovich, Esra Erdem and Vladimir Lifschitz. Fages' Theorem and Answer Set Programming. In *Proceedings of the Eighth International Workshop on Non-Monotonic Reasoning (NMR'00)*, 2000.

1. Esra Erdem and Vladimir Lifschitz. Transformations of Logic Programs Related to Causality and Planning. In *Proceedings of the Fifth International Conference on Logic Programming and Nonmonotonic Reasoning (LPNMR'99)*, Lecture Notes in Computer Science, Vol. 1730, pages 107–116, 1999.

ABSTRACTS AND POSTERS

5. Ozan Çaldıran, Kadir Haspalamutgil, Abdullah Ok, Can Palaz, Esra Erdem, and Volkan Patoğlu. From High-Level Reasoning to Low-Level Control. In *RSS'09 Workshop, Bridging the Gap between High-Level Discrete Representations and Low-Level Continuous Behaviors*, 2009.

4. Ferhan Türe and Esra Erdem. Efficient Haplotype Inference with Answer Set Programming. In *Proceedings of the Twenty-Third AAAI Conference on Artificial Intelligence (AAAI'08)*, pages 1834-1835, 2008.

3. Zeynep H. Çoban, Mahir C. Doğanay, Esra Erdem and Hilal Koşucu. A New Approach to Integrating Biomedical Ontologies and Answering Complex Queries related to Drug Discovery. In *Proceedings of the Third International Symposium on Health Informatics and Bioinformatics (HIBIT'08)*, 2008.

2. Esra Erdem and Ferhan Türe. Efficient Haplotype Inference with Answer Set Programming. In *Proceedings of the Third International Symposium on Health Informatics and Bioinformatics (HIBIT'08)*, 2008.

1. Esra Erdem and Feng Wang. Reconstructing the Evolutionary History of Chinese Dialects. Accepted for presentation at the *39th International Conference on Sino-Tibetan Languages and Linguistics (ICSTLL'06)*, 2006.

OTHER: TECHNICAL REPORTS, THESES

6. Thomas Eiter, Esra Erdem, and Wolfgang Faber. Diagnosing Plan Execution Discrepancies in a Logic-Based Action Framework. Technical Report INFSYS RR-1843-04-03, Vienna University of Technology, 2004.

5. Thomas Eiter, Esra Erdem, and Wolfgang Faber. Undoing the Effects of Action Sequences. Technical Report INFSYS RR-1843-04-05, Vienna University of Technology, 2004.

4. Esra Erdem. Theory and Applications of Answer Set Programming. Ph.D. Thesis, Technical Report CS-TR-02-69, Department of Computer Sciences, University of Texas at Austin, 2002.

3. Esra Erdem. Applications of Logic Programming to Planning: Computational Experiments. At URL `http://people.sabanciuniv.edu/~esraerdem/experiments/experiments.html`, 1999.

2. Esra Erdem and Pierre Flener. A re-definition of least generalizations, and construction modes as a new declarative bias for ILP. Technical Report BU-CEIS-9718, Bilkent University, 1997.

1. Esra Erdem. An MSG Method and a Schema-Guided Logic Program Synthesis. Undergraduate thesis, Bilkent University, 1996.