# **Selected list of papers in archival conference proceedings**.

1. **Roni Stern**, Tamar Kulberis, Ariel Felner and Robert Holte: "Using Lookaheads with Optimal Best-First Search", in the Conference on Artificial Intelligence, (AAAI), 2010.
2. **Roni Stern**, Rami Puzis and Ariel Felner: “Potential search: a bounded-cost search algorithm” in the International Conference on Automated Planning and Scheduling (ICAPS), 2011.
3. Guni Sharon, **Roni Stern**, Meir Goldenberg, and Ariel Felner: “The Increasing Cost Tree Search for Optimal Multi-agent Pathfinding” in the International Joint Conference on Artificial Intelligence (IJCAI), 2011.
4. Levi Lelis, **Roni Stern** and Shahab Jabbari Arfaee: "Predicting Solution Cost with Conditional Probabilities", in the International Symposium on Combinatorial Search (SoCS), 2011.
5. **Roni Stern**, Ariel Felner and Robert Holte: "Probably Approximately Correct Heuristic Search", in the International Symposium on Combinatorial Search (SoCS), 2011.
6. Jordan Thayer, **Roni Stern**, Ariel Felner and Wheeler Ruml: “Faster Bounded-Cost Search Using Inadmissible Estimates”, in the International Conference on Automated Planning and Scheduling (ICAPS), 2012.
7. Asher Stern, **Roni Stern**, Ido Dagan and Ariel Felner: “Efficient Search for Transformation-based Inference”. in the conference of the Association for Computational Linguistics (ACL), 2012.
8. Ariel Felner, Meir Goldenberg **, Roni Stern**, Guni Sharon, Nathan Sturtevant, Jonathan Schaeffer and Robert Holte: “Partial-expansion A\* with Selective Node Generation”, in the conference on Artificial Intelligence [(AAAI),](file:///D:\homePage\publications\aaai12-duality.pdf) 2012.
9. Guni Sharon, **Roni Stern** and Ariel Felner: “Conflict-based search for multi-agent path finding”, in the conference on Artificial Intelligence [(AAAI),](file:///D:\homePage\publications\aaai12-duality.pdf) 2012.
10. Amit Metodi, **Roni Stern**, Meir Kalech and Michael Codish: "Compiling Model-Based Diagnosis to Boolean Satisfaction", in the conference on Artificial Intelligence [(AAAI),](file:///D:\homePage\publications\aaai12-duality.pdf) 2012.
11. **Roni Stern**, Meir Kalech, Alexander Feldman and Gregory Provan: "Exploring the Duality in Conflict-Directed Model-Based Diagnosis", in the conference on Artificial Intelligence [(AAAI),](file:///D:\homePage\publications\aaai12-duality.pdf) 2012.
12. Jordan Thayer, **Roni Stern** and Levi Lelis: "A Progress Bar for Search", in the International Symposium on Combinatorial Search (SoCS), 2012. Citations: 4.
13. Richard Valenzano, Shahab Jabbari Arfaee, Jordan Thayer and **Roni Stern**: "Alternative Forms of Bounded Suboptimal Search", in the International Symposium on Combinatorial Search (SoCS), 2012.
14. Guni Sharon, **Roni Stern**, Ariel Felner and Nathan Sturtevant: “Meta-agent Conflict-Based Search for Optimal Multi-Agent Path Finding”, in the International Symposium on Combinatorial Search (SoCS), 2012. **Selected as the best paper (chosen out of 60 papers). Also appeared in AAAI 2012 in the best paper from sister conferences track.**
15. **Roni Stern**, Ariel Felner and Robert Holte: "Search-aware Conditions for Probably Approximately Correct Heuristic Search”, in the International Symposium on Combinatorial Search (SoCS), 2012**.**
16. Carlos Linares López, **Roni Stern**, Ariel Felner: “Target-Value Search Revisited”, in the International Joint Conference on Artificial Intelligence (IJCAI), 2013.
17. Ofra Amir, Barbara J. Grosz, Edith Law and **Roni Stern: “**Collaborative Health Care Plan Support“, in the International Conference on Autonomous Agents and Multiagent Systems, (AAMAS), 2013. **Selected as the second prize winner** **of the Challenges and Vision track (second out of 24 peer reviewed paper).**
18. Richard Anthony Valenzano, Shahab Jabbari Arfaee, Jordan Thayer, **Roni Stern**, Nathan R. Sturtevant: “Using Alternative Suboptimality Bounds in Heuristic Search”, in the International Conference on Automated Planning and Scheduling (ICAPS), 2013.
19. **Roni Stern**, Liron Samama, Rami Puzis, Tal Beja, Zahy Benaya, Ariel Felner: "Target Oriented Network Intelligence Collection for the Social Web", in the conference on Artificial Intelligence (AAAI), 2013.
20. Matthew Hatem, **Roni Stern** and Wheeler Ruml: "Bounded Suboptimal Heuristic Search in Linear Space", in the International Symposium on Combinatorial Search (SOCS), 2013.
21. Zahy Bnaya, **Roni Stern**, Ariel Felner, Roie Zivan and Steven Okamoto: "Multi-Agent Path Finding for Self Interested Agents”, in the International Symposium on Combinatorial Search (SoCS) 2013.
22. [Liron Samama-Kachko](http://www.informatik.uni-trier.de/~ley/pers/hd/s/Samama=Kachko:Liron.html), [Rami Puzis](http://www.informatik.uni-trier.de/~ley/pers/hd/p/Puzis:Rami.html), **Roni Stern**, [Ariel Felner](http://www.informatik.uni-trier.de/~ley/pers/hd/f/Felner:Ariel.html): “Extended Framework for Target Oriented Network Intelligence Collection”, in the International Symposium on Combinatorial Search (SOCS), Prague, 2014.
23. [Max](http://www.informatik.uni-trier.de/~ley/pers/hd/s/Samama=Kachko:Liron.html) Barer, [Guni](http://www.informatik.uni-trier.de/~ley/pers/hd/p/Puzis:Rami.html) Sharon, **Roni Stern**, [Ariel Felner](http://www.informatik.uni-trier.de/~ley/pers/hd/f/Felner:Ariel.html): “Suboptimal variants of the conflict-based search algorithm for the multi-agent pathfinding problem”, in the International Symposium on Combinatorial Search (SOCS), Prague, 2014.
24. [Levi H. S. Lelis](http://www.informatik.uni-trier.de/~ley/pers/hd/l/Lelis:Levi.html), **Roni Stern**, [Nathan R. Sturtevant](http://www.informatik.uni-trier.de/~ley/pers/hd/s/Sturtevant:Nathan_R=.html): “Estimating Search Tree Size with Duplicate Detection”, in the International Symposium on Combinatorial Search (SOCS), Prague, 2014. *48*.
25. [Zhaoxing Bu](http://www.informatik.uni-trier.de/~ley/pers/hd/b/Bu:Zhaoxing.html), **Roni Stern**,[Ariel Felner](http://www.informatik.uni-trier.de/~ley/pers/hd/f/Felner:Ariel.html),[Robert Holte](http://www.informatik.uni-trier.de/~ley/pers/hd/h/Holte:Robert_C=.html):“A\* with Lookahead Re-Evaluated”, in the International Symposium on Combinatorial Search (SOCS), Prague, 2014.
26. Yedidya Bar-Zev, Meir Kalech, **Roni Stern**: Diagnosing Faults in a Temporal Multi-Agent Resource Allocation, in the International conference on Autonomous Agents and Multi-Agent Systems (AAMAS), Paris, 2014.
27. **Roni Stern**, Scott Kiesel, Rami Puzis, Ariel Felner, Wheeler Ruml: “Max is More than Min: Solving Maximization Problems with Heuristic Search”, in the International Symposium on Combinatorial Search (SOCS), Prague, 2014. **Awarded as the best paper (first out of 32 peer reviewed paper).**
28. Shlomi Maliah, Guy Shani, and **Roni Stern**: “Privacy Preserving Landmark Detection”, in the European Conference on Artificial Intelligence (ECAI), Prague, 2014.
29. Tom Zamir, **Roni Stern**, Meir Kalech: “Using Model-Based Diagnosis to Improve Software Testing”, in the conference on Artificial Intelligence [(AAAI),](file:///D:\homePage\publications\aaai12-duality.pdf) Quebec City, 2014.
30. Ofra Amir, Guni Sharon, **Roni Stern**: “Pathfinding as a combinatorial auctions”, in the conference on Artificial Intelligence [(AAAI),](file:///D:\homePage\publications\aaai12-duality.pdf) 2015.
31. **Roni Stern**, Meir Kalech, Shelly Rogov and Alexander Feldman: “How many diagnoses do we need?”, in the conference on Artificial Intelligence [(AAAI),](file:///D:\homePage\publications\aaai12-duality.pdf) 2015.
32. Eli Boyarski, Ariel Felner, Guni Sharon and **Roni Stern**, “Don't Split, Try To Work It Out:  Bypassing Conflicts in Multi-Agent Pathfinding”, in the International Conference on Automated Planning and Scheduling (ICAPS), 2015.
33. Eli Boyarski, Ariel Felner, **Roni Stern**, Guni Sharon, Oded Betzalel, Solomon Shimony, and David Tolpin: “ICBS: The Improved Conflict-based Search algorithm for Multi-Agent Pathfinding”, in the International Joint Conference on Artificial Intelligence (IJCAI) 2015.
34. Yisroel Mirsky, Aviad Cohen, **Roni Stern**, Ariel Felner, Lior Rokack, Yuval Elovici, and Bracha Shara: “Search Problems in the Domain of Multiplication: Case Study on Anomaly Detection Using Markov Chains” in the International Symposium on Combinatorial Search (SOCS), 2015.
35. Alon Palombo, **Roni Stern**, Rami Puzis, Ariel Felner, Scott Kiesel and Wheeler Ruml: “Solving the Snake in the Box Problem with Heuristic Search: First Results” in the International Symposium on Combinatorial Search (SOCS), 2015.
36. **Roni Stern**, Meir Kalech, and Hilla Shinitzky: “Implementing Troubleshooting with Batch Repair”, in the conference on Artificial Intelligence [(AAAI),](file:///D:\homePage\publications\aaai12-duality.pdf) 2016.
37. Amir Mishali, **Roni Stern**, and Meir Kalech: “Data-Augmented Software Diagnosis” in the 28th annual conference on Innovative Applications of Artificial Intelligence [(IAAI/AAAI),](file:///D:\homePage\publications\aaai12-duality.pdf) 2016*.*
38. Pavel Surynek, Ariel Felner, and **Roni Stern**: “Boolean Satisfiability Approach to Optimal Multi-agent Path Finding under the Sum of Cost Objective”. In the international joint conference on Autonomous Agents and Multi Agent Systems (AAMAS), 2016.
39. Shlomi Maliah,Guy Shani, and **Roni Stern**: “Stronger Privacy Preserving Projections for Multi-Agent Planning”. In the International Conference on Planning and Scheduling (ICAPS).
40. Reuth Dekel-Mirsky, Kobi Gal, **Roni Stern** and Meir Kalech. "Sequential Plan Recognition". In the International Joint Conference on Artificial Intelligence (IJCAI).
41. Netantel Hasidi, **Roni Stern**, Meir Kalech, Shulamit Rechet. “Anticipatory Troubleshooting". In the International Joint Conference on Artificial Intelligence (IJCAI).
42. Pavel Surynek, Ariel Felner, **Roni Stern**, Eli Boyarski. “Efficient SAT Approach to Multi-Agent Path Finding under the Sum of Costs Objective". In the European Conference on Artificial Intelligence (ECAI).
43. Levi Lelis, Richard Valenzano, Gabriel Nazar and, **Roni Stern**: “Searching with a Corrupted Heuristic” in the International Symposium on Combinatorial Search (SOCS), 2016.
44. Vitali Sepetnitsky, Ariel Felner and, **Roni Stern**: “Repair Policies for Not reopening Nodes in Different Search” in the International Symposium on Combinatorial Search (SOCS), 2016.
45. Daniel Gilon, Ariel Felner, and **Roni Stern**: “Dynamic Potential Search - a New Bounded Suboptimal Search Algorithm” in the International Symposium on Combinatorial Search (SOCS), 2016. **Awarded as the best paper**.

Refereed articles and refereed letters in scientific journals

1. Ariel Felner, **Roni Stern**, Asaph Ben-Yair, Sarit Kraus and Nathan Netanyahu: ”[PHA\*: Finding the Shortest Path with A\* in Unknown Physical Environments](http://www.ise.bgu.ac.il/faculty/felner/research/phajur.ps).”, Journal of Artificial Intelligence Research (JAIR), Volume 21, pages 631-670, 2004.
2. Ariel Felner, **Roni Stern** and Jeffery Rosenchein: "Searching for Close Alternative Plans", Journal of Autonomous Agents and Multi-Agent Systems. (JAAMAS)volume 14(3), pages: 211-237, 2007.
3. Guni Sharon, **Roni Stern**, Meir Goldenberg and Ariel Felner: “The Increasing Cost Tree Search for Optimal Multi-agent Pathfinding”, Artificial Intelligence Journal (AIJ). 2013.
4. **Roni Stern**, Meir Kalech and Ariel Felner: "Finding patterns in an unknown graph", AI Communication journal, volume 25(3), pages 229-256, 2013.
5. Zahy Bnaya, Rami Puzis, **Roni Stern**, Ariel Felner: “Social Network Search as a Volatile Multi-armed Bandit Problem”, ASE Human Journal. 2013.
6. Meir Goldenberg, Ariel Felner, **Roni Stern**, Guni Sharon, Nathan R. Sturtevant, Robert C. Holte, Jonathan Schaeffer: Enhanced Partial Expansion A\*. Journal of Artificial Intelligence Research (JAIR), 2014*.*
7. **Roni Stern**, Ariel Felner, Jur van den Berg, Rami Puzis, Rajat Shahs, Ken GoldbergC: Potential-based bounded-cost search and Anytime Non-Parametric A\*. Artificial Intelligence (AIJ), 2014*.*
8. Amit Metodi, **Roni Stern**, Meir Kalech and Michael Codish, A Novel SAT-based approach to Model Based Diagnosis. Journal of Artificial Intelligence Research (JAIR), 2014.
9. Levi H. S. Lelis, **Roni Stern**, Ariel Felner, Sandra Zilles, and Robert C. Holte: “Predicting Optimal Solution Cost with Conditional Probabilities”, Annals of Mathematics and Artificial Intelligence (AMAI), 2014.
10. **Roni Stern**, Meir Kalech, Model-Based Diagnosis Techniques for Internet Delay Diagnosis with Dynamic Routing. Applied Intelligence, 2014.
11. Guni Sharon, **Roni Stern,** Ariel Felner, Nathan Sturtevant: “Conflict-based Search for Optimal Multi-agent Pathfinding”, Artificial Intelligence Journal (AIJ), 2015.
12. Levi H. S. Lelis, **Roni Stern**, Shahab Jabbari Arfaee, Sandra Zilles, Ariel Felner, and Robert C. Holte: “Predicting and Learning Optimal Solution Costs with Bidirectional Stratified Sampling”, Artificial Intelligence Journal (AIJ), 2016.
13. Shlomi Maliah, Guy Shani, and **Roni Stern**:“Collaborative Privacy Preserving Multi-Agent Planning”, the Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS). 2016*.*

Patents

1. Rami Puzis and **Roni Stern**, System and method for identifying contacts of a target user in a social network, Patent accepted, 2014/0229406, USA, 2013
2. Meir Kalech and **Roni Stern**, Model and spectrum based planner for directed software testing**,** Patent application 61/936,370, USA, Provisional, 2013
3. **Roni Stern** and Meir Kalech, Data-augmented diagnosis of software bugs, patent application 62/300.951, USA, Provisional, 2016.