Publication List
Alexander Feldman

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Books and Collections

[1] Alexander Feldman, Meir Kalech, and Gregory Provan, editors. *Proceedings of the Twenty-Fourth International Workshop on Principles of Diagnosis: DX-2013*, 2013.

[2] Yannick Pencolé, Alexander Feldman, and Alban Grastien, editors. *Proceedings of the Diagnostic REAsoning: Model Analysis and Performance Workshop DREAMAP-2012 at ECAI-2012*, 2012.

[3] Alexander Feldman. *Approximation Algorithms for Model-Based Diagnosis*. PhD thesis, Delft University of Technology, 2010.

Journal Papers

[1] Alexander Feldman, Johan de Kleer, Tolga Kurtoglu, Sriram Narasimhan, Scott Poll, David Garcia, Lukas Kuhn, and Arjan van Gemund. The diagnostic competitions. *AI Magazine*, 2014.

[2] Alexander Feldman, Gregory Provan, and Arjan van Gemund. A model-based active testing approach to sequential diagnosis. *Journal of Artificial Intelligence Research*, 39:301–334, 2010.

[3] Alexander Feldman, Tolga Kurtoglu, Sriram Narasimhan, Scott Poll, David Garcia, Johan de Kleer, Lukas Kuhn, and Arjan van Gemund. Empirical evaluation of diagnostic algorithm performance using a generic framework. *International Journal of Prognostics and Health Management*, pages 1–28, 2010.

[4] Alexander Feldman, Gregory Provan, and Arjan van Gemund. Approximate model-based diagnosis using greedy stochastic search. *Journal of Artificial Intelligence Research*, 38:371–413, 2010.

Conferences

[1] Alexander Feldman, Gregory Provan, Rui Abreu, and Johan de Kleer. Model-based diagnosis using component model ensembles. In *Proceedings of the Ninth IFAC Symposium on Fault Detection, Supervision and Safety of Technical Processes (SAFEPROCESS'15)*, pages 1–6, 2015.

[2] Roni Tzvi Stern, Meir Kalech, Shelly Rogov, and Alexander Feldman. How many diagnoses do we need? In *Proceedings of the Twenty-Ninth Conference on Artificial Intelligence (AAAI'15)*, 2015.

[3] Alexander Feldman and Gregory Provan. Diagnosing analogue linear systems using dynamic topological reconfiguration. In *Proceedings of the Twenty-Eighth Conference on Artificial Intelligence (AAAI'14)*, 2014.

[4] Alexander Feldman, Helena Vicente de Castro, Arjan van Gemund, and Gregory Provan. Model-based diagnostic decision-support system for satellites. In *Proceedings of the IEEE Aerospace Conference, Big Sky, Montana, USA*, pages 1–14, March 2013.

[5] Lior Rokach, Meir Kalech, Gregory Provan, and Alexander Feldman. Machine-learning-based circuit synthesis. In *Proceedings of the Twenty-Third International Joint Conference on Artificial Intelligence (IJCAI'13)*, pages 1635–1641, 2013.

[6] Lior Rokach, Alexander Feldman, Meir Kalech, and Gregory Provan. Machine-learning-based circuit synthesis. In *Proceedings of the Twenty-Seventh IEEE Convention of Electrical & Electronics Engineers in Israel (IEEEI'12)*, pages 1–5. IEEE, 2012.

[7] Roni Stern, Meir Kalech, Alexander Feldman, and Gregory Provan. Exploring the duality in conflict-directed model-based diagnosis. In *Proceedings of the Twenty-Sixth Conference on Artificial Intelligence (AAAI'12), Toronto, Canada*, July 2012.

[8] Alexander Bahr, Alexander Feldman, James Colli-Vignarelli, Stephan Robert, Catherine Dehollain, and Alcherio Martinoli. Modeling and benchmarking ultra-wideband localization for mobile robots. In *Proceedings of the 2012 IEEE International Conference on Ultra-Wideband (ICUWB'12)*, pages 443–447, September 2012.

[9] Alexander Feldman, Alexander Bahr, James Colli-Vignarelli, Stephan Robert, Catherine Dehollain, and Alcherio Martinoli. Toward the deployment of an ultra-wideband localization test bed. In *Proceedings of the Seventy-Fourth IEEE Conference on Vehicular Technology (VTC'11-Fall), San Francisco, California, USA*, pages 1–5, 2011.

[10] James Colli-Vignarelli, Alexander Feldman, Stephan Robert, and Catherine Dehollain. A discrete-component Impulse-Radio Ultra-Wide Band (IR-UWB) receiver with I/Q demodulation. In *Proceedings of the Seventh Ph.D. Conference on Research in Microelectronics and Electronics (PRIME'11), Trento, Italy*, pages 245–248, July 2011. **Gold Leaf Certificate**.

[11] Alexander Feldman, Gregory Provan, and Arjan van Gemund. Computing multiple minimal diagnoses. In *Proceedings of the First Annual Conference of the Prognostics and Health Management Society (PHM'09), San Diego, California, USA*, September 2009.

[12] Alexander Feldman, Gregory Provan, and Arjan van Gemund. Solving strong-fault diagnostic models by model relaxation. In *Proceedings of the Twenty-First International Joint Conference on Artificial Intelligence (IJCAI'09), Pasadena, California, USA*, pages 785–790, July 2009.

[13] Alexander Feldman, Gregory Provan, and Arjan van Gemund. FRACTAL: Efficient fault isolation using active testing. In *Proceedings of the Twenty-First International Joint Conference on Artificial Intelligence (IJCAI'09), Pasadena, California, USA*, pages 778–784, July 2009.

[14] Alexander Feldman, Gregory Provan, and Arjan van Gemund. A framework and algorithm for model-based active testing. In *Proceedings of the First International Conference on Prognostics and Health Management (PHM'08), Denver, Colorado, USA*, October 2008. **Best Student Paper Award**.

[15] Alexander Feldman, Gregory Provan, and Arjan van Gemund. Computing observation vectors for max-fault min-cardinality diagnoses. In *Proceedings of the Twenty-Third National Conference on Artificial Intelligence (AAAI'08), Chicago, Illinois, USA*, pages 911–918, July 2008.

[16] Alexander Feldman, Gregory Provan, and Arjan van Gemund. Computing minimal diagnoses by greedy stochastic search. In *Proceedings of the Twenty-Third National Conference on Artificial Intelligence (AAAI'08), Chicago, Illinois, USA*, pages 919–924, July 2008.

[17] Alexander Feldman, Marco Caporicci, Oscar Gracia, and André Bos. Advances in intelligent health reasoning and its application to IBDM. In *Proceedings of the IEEE Aerospace Conference, Big Sky, Montana, USA*, March 2007.

[18] Alexander Feldman, Jurryt Pietersma, and Arjan van Gemund. All roads lead to fault diagnosis: Model-based reasoning with LYDIA. In *Proceedings of the Eighteenth Belgium-Netherlands Conference on Artificial Intelligence (BNAIC'06), Namur, Belgium*, October 2006.

[19] Alexander Feldman and Arjan van Gemund. A two-step hierarchical algorithm for model-based diagnosis. In *Proceedings of the Twenty-First National Conference on Artificial Intelligence (AAAI'06), Boston, Massachusetts, USA*, July 2006.

[20] Jurryt Pietersma, Alexander Feldman, and Arjan van Gemund. Modeling and compilation aspects of fault diagnosis complexity. In *Proceedings of IEEE AUTOTESTCON'06, Anaheim, California, USA*, September 2006.

Workshops & Symposia

[1] Alexander Feldman and Gregory Provan. Optimizing model-based diagnosis complexity for analogue linear systems. In *Proceedings of the Twenty-Fourth International Workshop on Principles of Diagnosis (DX'13), Jerusalem, Israel*, pages 2–8, 2013.

[2] Anibal Bregon, Alexander Feldman, Gregory Provan Belarmino Pulido, and Carlos Alonso González. Improving the diagnostic performance for dynamic systems by using conflict-driven model decomposition. In *Proceedings of the Twenty-Fourth International Workshop on Principles of Diagnosis (DX'13), Jerusalem, Israel*, pages 105–110, 2013.

[3] Alexander Feldman, Helena Vicente de Castro, Arjan van Gemund, and Gregory Provan. Model-based diagnostic decision-support system for satellites. In *Proceedings of the Twenty-Fourth International Workshop on Principles of Diagnosis (DX'13), Jerusalem, Israel*, pages 111–122, 2013.

[4] Roni Stern, Meir Kalech, Alexander Feldman, Shelly Rogov, and Tom Zamir. Finding all subset minimal diagnoses is redundant. In *Proceedings of the Twenty-Fourth International Workshop on Principles of Diagnosis (DX'13), Jerusalem, Israel*, pages 15–21, 2013.

[5] Roni Stern, Meir Kalech, Alexander Feldman, and Gregory Provan. Exploring the duality in conflict-directed model-based diagnosis. In *Proceedings of the Twenty-Third International Workshop on Principles of Diagnosis (DX'12), Great Malvern, United Kingdom*, 2012.

[6] Alexander Feldman, Johan de Kleer, and Gregory Provan. Computing manifestations of max-size min-cardinality ambiguity groups. In *Proceedings of the Diagnostic Reasoning: Model Analysis and Performance ECAI Workshop (DREAMAP'12)*, pages 26–33, 2012.

[7] Alexander Feldman, Tom Janssen, and Arjan van Gemund. Modeling diagnostic stochastic search. In *Proceedings of the Twenty-Second International Workshop on Principles of Diagnosis (DX'11), Munich, Germany*, pages 1–6, October 2011.

[8] Alexander Feldman, Gregory Provan, Johan de Kleer, Stephan Robert, and Arjan van Gemund. Solving model-based diagnosis problems with Max-SAT solvers and vice versa. In *Proceedings of the Twenty-First International Workshop on Principles of Diagnosis (DX'10), Portland, Oregon, USA*, pages 185–192, October 2010.

[9] Tolga Kurtoglu, Sriram Narasimhan, Scott Poll, David Garcia, Lukas Kuhn, Johan de Kleer, Arjan van Gemund, and Alexander Feldman. First international diagnosis competition - DXC'09. In *Proceedings of the Twentieth International Workshop on Principles of Diagnosis (DX'09), Stockholm, Sweden*, pages 383–396, June 2009.

[10] Tolga Kurtoglu, Sriram Narasimhan, Scott Poll, David Garcia, Lukas Kuhn, Johan de Kleer, Arjan van Gemund, and Alexander Feldman. Towards a framework for evaluating and comparing diagnosis algorithms. In *Proceedings of the Twentieth International Workshop on Principles of Diagnosis (DX'09), Stockholm, Sweden*, pages 373–382, June 2009.

[11] Alexander Feldman, Gregory Provan, and Arjan van Gemund. The Lydia approach to combinational model-based diagnosis. In *Proceedings of the Twentieth International Workshop on Principles of Diagnosis (DX'09), Stockholm, Sweden*, pages 403–408, June 2009.

[12] Alexander Feldman, Gregory Provan, Johan de Kleer, Lukas Kuhn, and Arjan van Gemund. Automated redesign with the General Redesign Engine. In *Proceedings of the Twentieth International Workshop on Principles of Diagnosis (DX'09), Stockholm, Sweden*, pages 307–314, June 2009.

[13] Alexander Feldman, Gregory Provan, Johan de Kleer, Lukas Kuhn, and Arjan van Gemund. Automated redesign with the General Redesign Engine. In *Proceedings of the Eighth Symposium on Abstraction, Reformulation, and Approximation (SARA'09), Lake Arrowhead, California, US*, July 2009.

[14] Alexander Feldman, Gregory Provan, and Arjan van Gemund. A framework and algorithm for model-based active testing. In *Proceedings of the Nineteenth International Workshop on Principles of Diagnosis (DX'08), Blue Mountains, Australia*, pages 71–78, September 2008.

[15] Alexander Feldman, Gregory Provan, and Arjan van Gemund. Approximate model-based diagnosis using greedy stochastic search. In *Proceedings of the Seventh Symposium on Abstraction, Reformulation, and Approximation (SARA'07), Whistler, Canada*, pages 139–154, July 2007.

[16] Alexander Feldman, Gregory Provan, and Arjan van Gemund. Approximate model-based diagnosis using greedy stochastic search. In *Proceedings of the Eighteenth International Workshop on Principles of Diagnosis (DX'07), Nashville, Tennessee, USA*, pages 290–297, May 2007.

[17] Alexander Feldman, Gregory Provan, and Arjan van Gemund. Generating manifestations of max-fault min-cardinality diagnoses. In *Proceedings of the Eighteenth International Workshop on Principles of Diagnosis (DX'07), Nashville, Tennessee, USA*, pages 83–90, May 2007.

[18] Alexander Feldman, Gregory Provan, and Arjan van Gemund. Interchange formats and automated benchmark model generators for model-based diagnostic inference. In *Proceedings of the Eighteenth International Workshop on Principles of Diagnosis (DX'07), Nashville, Tennessee, USA*, pages 91–98, May 2007.

[19] Alexander Feldman, Jurryt Pietersma, and Arjan van Gemund. A multi-valued SAT-based algorithm for faster model-based diagnosis. In *Proceedings of the Seventeenth International Workshop on Principles of Diagnosis (DX'06), Peñaranda de Duero, Burgos, Spain*, June 2006.

[20] Alexander Feldman, Arjan van Gemund, and André Bos. A hybrid approach to hierarchical fault diagnosis. In *Proceedings of the Sixteenth International Workshop on Principles of Diagnosis (DX'05), Monterey, California, USA*, pages 101–106, June 2005.

Technical Reports

[1] Alexander Feldman, Gregory Provan, and Arjan van Gemund. A family of model-based diagnosis algorithms based on Max-SAT. Technical Report ES-2009-02, Delft University of Technology, 2009.

[2] Alexander Feldman and Arjan van Gemund. Reducing the diagnostic uncertainty of a paper input module by active testing. Technical Report ES-2009-04, Delft University of Technology, 2009.

[3] Alexander Feldman and Arjan van Gemund. LYDIA user guide. Technical Report ES-2009-05, Delft University of Technology, 2007.

[4] Alexander Feldman and Arjan van Gemund. Building a LYDIA model of an Océ printer's paper input module. Technical Report TUD-SERG-2007-16, Delft University of Technology, 2007.