

Laboratorio ASTREA: Report Annuale sull'Attività Scientifica

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Abstract

Questo documento riporta la produzione scientifica del laboratorio ASTREA per l'anno solare 2016.

Descrizione

Il laboratorio Automated Strategic Reasoning (ASTREA) fa parte del Dipartimento di Ingegneria Elettrica e Tecnologie dell'Informazione ed ha come responsabile scientifico il Prof. Aniello Murano. Nel 2016, il laboratorio ha potuto contare sull'apporto scientifico di un nutrito gruppo di ricercatori, studenti di dottorato e tesisti, nonché della visita di diversi ricercatori da università Italiane ed estere. Inoltre, sono stati organizzati meeting di gruppo a cadenza settimanale che si sono rivelati di enorme utilità per la realizzazione dell'attività di ricerca programmata. Il laboratorio ha lavorato in stretto contatto con gruppi di ricerca esteri, tra i quali si riportano quelli di Moshe Vardi della Rice University, Alessio Lomuscio dell'Imperial College di Londra, Michael Wooldridge della Oxford University, Benjamin Aminof e Florian Zueleger della Wien University, Giuseppe De Giacomo dell'Università La Sapienza di Roma, Wojtek Jamroga della Polish Academy of Sciences, per citarne alcuni.

Tra le persone che localmente hanno partecipato alle attività del laboratorio nel 2016 si elencano, in aggiunta al responsabile scientifico, Sasha Rubin (Marie Curie Fellowship with Indam), Bastien Maubert (Marie Curie Fellowship), Dario Della Monica (Assegno di Ricerca Regione Campania e Indam Fellowship), Loredana Sorrentino, Vadim Malvone, Rossella Arcucci, Antonio di Stasio e Umberto Marotta. In aggiunta hanno partecipato alle attività del laboratorio i colleghi Luigi Sauro e Walter Balzano del dipartimento.

L'attività scientifica centrale del laboratorio ASTREA realizzata nel 2016 ha riguardato gli aspetti formali per il ragionamento strategico nel campo dei sistemi multi-agente. Altre attività non sono riportate per motivi di sintesi. Segue una lista dei lavori realizzati nel 2016 che hanno visto il coinvolgimento totale o parziale del laboratorio.

References

- [1] Benjamin Aminof, Vadim Malvone, Aniello Murano, and Sasha Rubin. Extended graded modalities in strategy logic. In *Proceedings of the 4th International Workshop on Strategic Reasoning, SR 2016, New York City, USA, 10th July 2016.*, pages 1–14, 2016.
- [2] Benjamin Aminof, Vadim Malvone, Aniello Murano, and Sasha Rubin. Graded strategy logic: Reasoning about uniqueness of nash equilibria. In *Proceedings of the 2016 International Conference on Autonomous Agents & Multiagent Systems, Singapore, May 9-13, 2016*, pages 698–706, 2016.
- [3] Benjamin Aminof, Aniello Murano, Sasha Rubin, and Florian Zuleger. Automatic verification of multi-agent systems in parameterised grid-environments. In *Proceedings of the 2016 International Conference on Autonomous Agents & Multiagent Systems, Singapore, May 9-13, 2016*, pages 1190–1199, 2016.
- [4] Benjamin Aminof, Aniello Murano, Sasha Rubin, and Florian Zuleger. Prompt alternating-time epistemic logics. In *Principles of Knowledge Representation and Reasoning: Proceedings of the Fifteenth International Conference, KR 2016, Cape Town, South Africa, April 25-29, 2016.*, pages 258–267, 2016.
- [5] Walter Balzano, Aniello Murano, and Fabio Vitale. V2V-EN - vehicle-2-vehicle elastic network. In *The 7th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN 2016)/The 6th International Conference on Current and Future Trends of Information and Communication Technologies in Healthcare (ICTH-2016)/Affiliated Workshops, September 19-22, 2016, London, United Kingdom*, pages 497–502, 2016.
- [6] Walter Balzano, Aniello Murano, and Fabio Vitale. Wifact - wireless fingerprinting automated continuous training. In *30th International Conference on Advanced Information Networking and Applications Workshops, AINA 2016 Workshops, Crans-Montana, Switzerland, March 23-25, 2016*, pages 75–80, 2016.
- [7] Walter Balzano, Maria Rosaria Del Sorbo, and Aniello Murano. M-DGPS: an algorithm for the post-processing of geodetic tracks based on multiple DGPS. In *30th International Conference on Advanced Information Networking and Applications Workshops, AINA 2016 Workshops, Crans-Montana, Switzerland, March 23-25, 2016*, pages 58–63, 2016.
- [8] Walter Balzano, Maria Rosaria Del Sorbo, Aniello Murano, and Silvia Stranieri. A logic-based clustering approach for cooperative traffic control systems. In *Advances on P2P, Parallel, Grid, Cloud and Internet Computing, Proceedings of the 11th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing, 3PGCIC 2016, Soonchunhyang University, Asan, KoreaNovember 5-7, 2016.*, pages 737–746, 2016.
- [9] Raphaël Berthon, Bastien Maubert, and Aniello Murano. Quantified CTL with imperfect information. *CoRR*, abs/1611.03524, 2016.
- [10] Dario Carotenuto, Aniello Murano, and Adriano Peron. Ordered multi-stack visibly pushdown automata. *Theor. Comput. Sci.*, 656:1–26, 2016.
- [11] Salvatore Cuomo, Rosanna Campagna, Pasquale De Michele, Aniello Murano, Serena Crisci, Ardelio Galletti, and Livia Marcellino. A novel split bregman algorithm for MRI denoising task in an e-health system. In *Proceedings of the 9th ACM International Conference on PErvasive Technologies Related to Assistive Environments, PETRA 2016, Corfu Island, Greece, June 29 - July 1, 2016*, page 78, 2016.

- [12] Giuseppe De Giacomo, Aniello Murano, Sasha Rubin, and Antonio Di Stasio. Imperfect-information games and generalized planning. In *Proceedings of the Twenty-Fifth International Joint Conference on Artificial Intelligence, IJCAI 2016, New York, NY, USA, 9-15 July 2016*, pages 1037–1043, 2016.
- [13] Gaëlle Fontaine, Fabio Mogavero, Aniello Murano, Giuseppe Perelli, and Loredana Sorrentino. Cycle detection in computation tree logic. In *Proceedings of the Seventh International Symposium on Games, Automata, Logics and Formal Verification, GandALF 2016, Catania, Italy, 14-16 September 2016.*, pages 164–177, 2016.
- [14] Vadim Malvone and Aniello Murano. Additional winning strategies in two-player games. In *Proceedings of the 17th Italian Conference on Theoretical Computer Science, Lecce, Italy, September 7-9, 2016.*, pages 251–256, 2016.
- [15] Vadim Malvone, Aniello Murano, and Loredana Sorrentino. Concurrent multi-player parity games. In *Proceedings of the 2016 International Conference on Autonomous Agents & Multiagent Systems, Singapore, May 9-13, 2016*, pages 689–697, 2016.
- [16] Vadim Malvone, Aniello Murano, and Loredana Sorrentino. Hiding actions in concurrent games. In *ECAI 2016 - 22nd European Conference on Artificial Intelligence, 29 August-2 September 2016, The Hague, The Netherlands - Including Prestigious Applications of Artificial Intelligence (PAIS 2016)*, pages 1686–1687, 2016.
- [17] Vadim Malvone, Aniello Murano, and Marco Tafuto. Nwin: A tool for counting winning strategies (demonstration). In *Proceedings of the 2016 International Conference on Autonomous Agents & Multiagent Systems, Singapore, May 9-13, 2016*, pages 1501–1503, 2016.
- [18] Fabio Mogavero, Aniello Murano, and Moshe Y. Vardi. Relentful strategic reasoning in alternating-time temporal logic. *J. Log. Comput.*, 26(5):1663–1695, 2016.
- [19] Alberto Molinari, Angelo Montanari, Aniello Murano, Giuseppe Perelli, and Adriano Peron. Checking interval properties of computations. *Acta Inf.*, 53(6-8):587–619, 2016.
- [20] Alberto Molinari, Angelo Montanari, Aniello Murano, Giuseppe Perelli, and Adriano Peron. Checking interval properties of computations. *CoRR*, abs/1601.03195, 2016.
- [21] Dario Della Monica, Angelo Montanari, Aniello Murano, and Pietro Sala. Prompt interval temporal logic. In *Logics in Artificial Intelligence - 15th European Conference, JELIA 2016, Larnaca, Cyprus, November 9-11, 2016, Proceedings*, pages 207–222, 2016.
- [22] Antonio Di Stasio, Aniello Murano, Giuseppe Perelli, and Moshe Y. Vardi. Solving parity games using an automata-based algorithm. In *Implementation and Application of Automata - 21st International Conference, CIAA 2016, Seoul, South Korea, July 19-22, 2016, Proceedings*, pages 64–76, 2016.