

Giovanni Bacci
Lektor
Institut for Datalogi
Det Tekniske Fakultet for IT og Design
Distributed, Embedded and Intelligent Systems
Artificial Intelligence and Machine Learning

Postadresse:

Selma Lagerløfs Vej 300
1-2-10
9220
Aalborg Ø
Danmark

E-mail: giovbacci@cs.aau.dk

Telefon: 9940 9859

Web: <http://people.cs.aau.dk/~giovbacci/>, <http://people.cs.aau.dk/~giovbacci/>,
<http://people.cs.aau.dk/~giovbacci/>



Publikationer

***-based learning of Markov decision processes: Extended version**

Tappler, M., Aichernig, B. K., Bacci, G., Eichlseder, M. & Larsen, K. G., 31 mar. 2021, I: *Formal Aspects of Computing*. 33, 4-5, s. 575-615 41 s.

Computing Probabilistic Bisimilarity Distances for Probabilistic Automata

Bacci, G., Bacci, G., Larsen, K. G., Mardare, R., Tang, Q. & van Breugel, F., 2 feb. 2021, I: *Logical Methods in Computer Science*. 17, 1, s. 1-36 9.

Efficient Local Computation of Differential Bisimulations via Coupling and Up-to Methods

Bacci, G., Bacci, G., Larsen, K. G., Tribastone, M., Tschaikowski, M. & Vandin, A., 2021, *36th Annual ACM/IEEE Symposium on Logic in Computer Science (LICS)*. IEEE, s. 1-14 14 s.

Optimal and robust controller synthesis using energy timed automata with uncertainty

Bacci, G., Bouyer, P., Fahrenberg, U., Larsen, K. G., Markey, N. & Reynier, P-A., 2021, I: *Formal Aspects of Computing*. 33, 1, s. 3-25 23 s.

Quantitative Analysis of Interval Markov Chains

Bacci, G., Delahaye, B., Larsen, K. G. & Mariegaard, A., 2021, *Model Checking, Synthesis, and Learning: Essays Dedicated to Bengt Jonsson on The Occasion of His 60th Birthday*. Olderog, E-R., Steffen, B. & Li, W. (red.). Springer, Bind 13030. s. 57-77 20 s. (Lecture Notes in Computer Science). (Theoretical Computer Science and General Issues, Bind 13030).

Approximating Euclidean by Imprecise Markov Decision Processes

Jaeger, M., Bacci, G., Bacci, G., Larsen, K. G. & Jensen, P. G., 2020, *International Symposium on Leveraging Applications of Formal Methods (ISoLA 2020)*. Margaria, T. & Steffen, B. (red.). Springer, s. 275-289 15 s. (Lecture Notes in Computer Science, Bind 12476).

L*-Based Learning of Markov Decision Processes

Tappler, M., Aichernig, B. K., Bacci, G., Eichlseder, M. & Larsen, K. G., 23 sep. 2019, *Formal Methods – The Next 30 Years - 3rd World Congress, FM 2019, Proceedings: FM 2019: Formal Methods – The Next 30 Years*. ter Beek, M. H., McIver, A. & Oliveira, J. N. (red.). Springer, s. 651-669 19 s. (Lecture Notes in Computer Science, Bind 11800).

Model checking constrained markov reward models with uncertainties

Bacci, G., Hansen, M. & Larsen, K. G., 1 sep. 2019, *Quantitative Evaluation of Systems - 16th International Conference, QEST 2019, Proceedings*. Parker, D. & Wolf, V. (red.). Springer, s. 37-51 15 s. (Lecture Notes in Computer Science, Bind 11785).

Converging from branching to linear metrics on Markov chains

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R., jan. 2019, I: *Mathematical Structures in Computer Science*. 29, Special Issue 1, s. 3-37 35 s.

Computing Probabilistic Bisimilarity Distances for Probabilistic Automata

Bacci, G., Bacci, G., Larsen, K. G., Mardare, R., Tang, Q. & van Breugel, F., 2019, *30th International Conference on Concurrency Theory (CONCUR 2019)*. Fokkink, W. & van Glabbeek, R. (red.). Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik GmbH, s. 9:1-9:17 17 s. 9. (Leibniz International Proceedings in Informatics, Bind 140).

Complete Axiomatization for the Total Variation Distance of Markov Chains

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R., 16 apr. 2018, I: *Electronic Notes in Theoretical Computer Science*. 336, s. 27-39 13 s.

On the Verification of Weighted Kripke Structures Under Uncertainty

Bacci, G., Hansen, M. & Larsen, K. G., 1 jan. 2018, *Quantitative Evaluation of Systems - 15th International Conference, QEST 2018, Proceedings: 15th International Conference, QEST 2018, Beijing, China, September 4-7, 2018, Proceedings*. Horvath, A. & McIver, A. (red.). Springer, s. 71-86 16 s. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), Bind 11024 LNCS).

Optimal and robust controller synthesis: Using energy timed automata with uncertainty

Bacci, G., Bouyer, P., Fahrenberg, U., Larsen, K. G., Markey, N. & Reynier, P. A., 1 jan. 2018, *Formal Methods - 22nd International Symposium, FM 2018, Held as Part of the Federated Logic Conference, FloC 2018, Proceedings*. Havelund, K., Roscoe, B., de Vink, E. & Peleska, J. (red.). Springer, s. 203-221 19 s. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), Bind 10951 LNCS).

A complete quantitative deduction system for the bisimilarity distance on markov chains

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R., 2018, I: *Logical Methods in Computer Science*. 14, 4, 15.

A Complete Quantitative Deduction System for the Bisimilarity Distance on Markov Chains

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R., 2017, I: *Logical Methods in Computer Science*.

Models, Algorithms, Logics and Tools: Essays Dedicated to Kim Guldstrand Larsen on the Occasion of His 60th Birthday

Aceto, L. (red.), Bacci, G. (red.), Bacci, G. (red.), Ingolfsdottir, A. (red.), Larsen, K. G. (red.), Legay, A. (red.) & Mardare, R. I. (red.), 2017, Springer. 1 s. (Lecture Notes in Computer Science). (Theoretical Computer Science and General Issues, Bind 10460).

On-the-Fly Computation of Bisimilarity Distances

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R. I., 2017, I: *Logical Methods in Computer Science*. 13, 2

On the Metric-Based Approximate Minimization of Markov Chains

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R., 2017, I: *Leibniz International Proceedings in Informatics*. 80, 44, s. 1 14 s.

Complete Axiomatization for the Bisimilarity Distance on Markov Chains

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R. I., 2016, *27th International Conference on Concurrency Theory (CONCUR 2016)*. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik GmbH, s. 21:1--21:14 14 s. (Leibniz International Proceedings in Informatics, Bind 59).

Converging from Branching to Linear Metrics on Markov Chains

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R. I., 2015, *Theoretical Aspects of Computing - ICTAC 2015: 12th International Colloquium, Cali, Colombia, October 29-31, 2015, Proceedings*. Leucker, M., Rueda, C. & Valencia, F. D. (red.). Springer, s. 349-367 18 s. (Lecture Notes in Computer Science; Nr. 9399).

On the Total Variation Distance of Semi-Markov Chains

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R. I., 2015, *Foundations of Software Science and Computation Structures: 18th International Conference, FOSSACS 2015, Held as Part of the European Joint Conferences on Theory and Practice of Software, ETAPS 2015, London, UK, April 11-18, 2015, Proceedings*. Pitts, A. (red.). Springer, Bind 9034. s. 185-199

15 s. (Lecture Notes in Computer Science).

Bisimulation on Markov Processes over Arbitrary Measurable Spaces

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R. I., 2014, *Horizons of the Mind. A Tribute to Prakash Panangaden: Essays Dedicated to Prakash Panangaden on the Occasion of His 60th Birthday*. van Breugel, F., Kashefi, E., Palamidessi, C. & Rutten, J. (red.). Springer Publishing Company, Bind 8464. s. 76-95 (Lecture Notes in Computer Science).

The Behavior of Probabilistic Systems: From Equivalences to Behavioral Distances

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R. I., 2014, *Essays for the Luca Cardelli Fest: Essays dedicated to Luca Cardelli, on the Occasion of His 60th Birthday*. Abadi, M., Gardner, P., Gordon, A. D. & Mardare, R. (red.). Microsoft Research, s. 15-26

Computing Behavioral Distances, Compositionally

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R. I., 2013, *Mathematical Foundations of Computer Science 2013: 38th International Symposium, MFCS 2013, Klosterneuburg, Austria, August 26-30, 2013. Proceedings*. Chatterjee, K. & Sgall, J. (red.). Springer Publishing Company, Bind 8087. s. 74-85 (Lecture Notes in Computer Science, Bind 8087).

On-the-Fly Exact Computation of Bisimilarity Distances

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R. I., 2013, *Tools and Algorithms for the Construction and Analysis of Systems: 19th International Conference, TACAS 2013, Held as Part of the European Joint Conferences on Theory and Practice of Software, ETAPS 2013, Rome, Italy, March 16-24, 2013. Proceedings*. Piterman, N. & Smolka, S. A. (red.). Springer Publishing Company, Bind 7795. s. 1-15 (Lecture Notes in Computer Science, Bind 7795).

The BisimDist Library: Efficient Computation of Bisimilarity Distances for Markovian Models

Bacci, G., Bacci, G., Larsen, K. G. & Mardare, R. I., 2013, *Quantitative Evaluation of Systems: 10th International Conference, QEST 2013, Buenos Aires, Argentina, August 27-30, 2013. Proceedings*. Joshi, K., Siegle, M., Stoelinga, M. & D'Argenio, P. R. (red.). Springer Publishing Company, Bind 8054. s. 278-281 4 s. (Lecture Notes in Computer Science, Bind 8054).