

# Publication List — Masaki Waga

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## Publications

- 2024** Jesse Reimann, Nico Mansion, James Haydon, Benjamin Bray, Agnishom Chattopadhyay, Sota Sato, Masaki Waga, Étienne André, Ichiro Hasuo, Naoki Ueda, Yosuke Yokoyama. "Temporal Logic Formalisation of ISO 34502 Critical Scenarios: Modular Construction with the RSS Safety Distance", *39th ACM/SIGAPP Symposium On Applied Computing (SAC)*, 2024, to appear.
- 2023** Amit Gurung, Masaki Waga, Kohei Suenaga. "Learning nonlinear hybrid automata from input-output time-series data.", *21st International Symposium on Automated Technology for Verification and Analysis (ATVA)*, 2023, LNCS 14215, pp. 33-52.
- Junya Shijubo, Masaki Waga, Kohei Suenaga. "Probabilistic Black-Box Checking via Active MDP Learning.", In *ACM Transactions on Embedded Computing Systems (TECS)* 22.5s (2023): 148:1-148:26.
- Masaki Waga. "Active Learning of Deterministic Timed Automata with Myhill-Nerode Style Characterization.", *35th International Conference on Computer Aided Verification (CAV)*, 2023, pp. 3-26.
- Masaki Waga, Étienne André, Ichiro Hasuo. "Parametric Timed Pattern Matching.", In *ACM Transactions on Software Engineering and Methodology (TOSEM)* 32.1 (2023): 10:1-10:35.
- 2022** Masaki Waga, Étienne André, Ichiro Hasuo. "Model-Bounded Monitoring of Hybrid Systems.", In *ACM Transactions on Cyber-Physical Systems (TCPS)* 6.4 (2022): 30:1-30:26.
- Atsushi Kikuchi, Kotaro Uchida, Masaki Waga, Kohei Suenaga. "BOREx: Bayesian-Optimization-Based Refinement of Saliency Map for Image- and Video-Classification Models.", *The 16th Asian Conference on Computer Vision (ACCV)*, 2022, pp. 274-290.
- Masaki Waga, Ezequiel Castellano, Sasinee Pruekprasert, Stefan Klikovits, Toru Takisaka, Ichiro Hasuo. "Dynamic Shielding for Reinforcement Learning in Black-Box Environments.", *International Symposium on Automated Technology for Verification and Analysis (ATVA)*, 2022, LNCS 13505, pp. 25-41.

Ryotaro Banno, Kotaro Matsuoka, Naoki Matsumoto, Song Bian, Masaki Waga, Kohei Suenaga. "Oblivious Online Monitoring for Safety LTL Specification via Fully Homomorphic Encryption.", *34th International Conference on Computer-Aided Verification (CAV)*, 2022, LNCS 13371, pp. 447-468.

Étienne André, Étienne André, Masaki Waga, Natsuki Urabe, Ichiro Hasuo. "Exemplifying parametric timed specifications over signals with bounded behavior.", *NASA Formal Methods Symposium (NFM)*, 2022, LNCS 13260, pp. 470-488.

**2021** Sota Sato, Atsuyoshi Saimen, Masaki Waga, Kenji Takao, Ichiro Hasuo. "Hybrid System Falsification for Multiple-Constraint Parameter Synthesis: a Gas Turbine Case Study.", *24th International Symposium on Formal Methods (FM)*, 2021, LNCS 13047, pp. 313-329.

Junya Shijubo, Masaki Waga, Kohei Suenaga. "Efficient Black-Box Checking via Model Checking with Strengthened Specifications.", *The 21st International Conference on Runtime Verification (RV)*, 2021, LNCS 12974, pp. 100-120.

Sota Sato, Masaki Waga, Ichiro Hasuo. "Constrained Optimization for Falsification and Conjunctive Synthesis.", *6th IFAC Conference on Analysis and Design of Hybrid Systems (ADHS)*, 2021, pp. 217-222.

Masaki Waga, Étienne André, Ichiro Hasuo. "Model-Bounded Monitoring of Hybrid Systems.", *12th ACM/IEEE International Conference on Cyber-Physical Systems (ICCPs)*, 2021, pp. 21-32.

**2020** Elena Gutiérrez, Takamasa Okudono, Masaki Waga, Ichiro Hasuo. "Genetic algorithm for the weight maximization problem on weighted automata.", *GECCO'20: Genetic and Evolutionary Computation Conference (GECCO)*, 2020, pp. 699-707.

Masaki Waga. "Falsification of cyber-physical systems with robustness-guided black-box checking.", *HSCC'20: 23rd ACM International Conference on Hybrid Systems: Computation and Control (HSCC)*, 2020, pp. 11:1-11:13.

- Takamasa Okudono, Masaki Waga, Taro Sekiyama, Ichiro Hasuo. "Weighted Automata Extraction from Recurrent Neural Networks via Regression on State Spaces.", *The Thirty-Fourth AAAI Conference on Artificial Intelligence, AAAI 2020, The Thirty-Second Innovative Applications of Artificial Intelligence Conference, IAAI 2020, The Tenth AAAI Symposium on Educational Advances in Artificial Intelligence, EAAI 2020 (AAAI)*, 2020, pp. 5306-5314.
- 2019** Masaki Waga. "Online Quantitative Timed Pattern Matching with Semiring-Valued Weighted Automata.", *Formal Modeling and Analysis of Timed Systems - 17th International Conference (FORMATS)*, 2019, LNCS 11750, pp. 3-22.
- Masaki Waga, Étienne André, Ichiro Hasuo. "Symbolic Monitoring Against Specifications Parametric in Time and Data.", *Computer Aided Verification - 31st International Conference, Part I (CAV)*, 2019, LNCS 11561, pp. 520-539.
- Masaki Waga, Étienne André. "Online Parametric Timed Pattern Matching with Automata-Based Skipping.", *NASA Formal Methods - 11th International Symposium (NFM)*, 2019, LNCS 11460, pp. 371-389.
- Masaki Waga, Ichiro Hasuo. "Moore-machine filtering for timed and untimed pattern matching: poster abstract.", *Proceedings of the 22nd ACM International Conference on Hybrid Systems: Computation and Control (HSCC)*, 2019, pp. 272-273.
- 2018** Étienne André, Ichiro Hasuo, Masaki Waga. "Offline Timed Pattern Matching under Uncertainty.", *23rd International Conference on Engineering of Complex Computer Systems (ICECCS)*, 2018, pp. 10-20.
- Masaki Waga, Ichiro Hasuo. "Moore-Machine Filtering for Timed and Untimed Pattern Matching.", In *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCADICS)* 37.11 (2018): 2649-2660.
- Masaki Waga, Ichiro Hasuo, Kohei Suenaga. "MONAA: A Tool for Timed Pattern Matching with Automata-Based Acceleration.", *3rd Workshop on Monitoring and Testing of Cyber-Physical Systems (MT@CPSWeek)*, 2018, pp. 14-15.
- 2017** Masaki Waga, Ichiro Hasuo, Kohei Suenaga. "Efficient Online Timed Pattern Matching by Automata-Based Skipping.", *Formal Modeling and Analysis of Timed Systems - 15th International Conference (FORMATS)*, 2017, LNCS 10419, pp. 224-243.

**2016** Masaki Waga, Takumi Akazaki, Ichiro Hasuo. "A Boyer-Moore Type Algorithm for Timed Pattern Matching.", *Formal Modeling and Analysis of Timed Systems - 14th International Conference (FORMATS)*, 2016, LNCS 9884, pp. 121-139.