Call for Papers

for the Special Issue on Grammatical Inference

of the Machine Learning journal

https://grammarlearning.org/mlj-gi-special-issue

Scope and Background:

The Machine Learning journal invites submissions on Grammatical Inference - the research discipline focusing on machine and computational learning of symbolic languages, at the crossroad of all research fields interested in learning formal models representing sets of symbolic sequences, trees or graphs (Artificial Intelligence, Computational Linguistics, Bioinformatics, Software Engineering, Robotics, Cybersecurity...). This special issue aims at gathering state-of-the-art practical, algorithmic and theoretical new results in Grammatical Inference.

Topics of interest:

We welcome original research papers on all aspects of grammatical inference including, but not limited to:

- Theoretical aspects of Grammatical Inference: learning paradigms, learnability and learning complexity of classes of languages/representations
- Efficient algorithms and novel approaches for learning language classes, representations and distributions, inside or outside the Chomsky hierarchy, on strings, trees or graphs
- Grammatical Inference paired with semantics representations or information, for instance for learning by situated agents or robots
- New problems and successful applications of Grammatical Inference in practice, for tasks such as unsupervised parsing, biological sequence modelling, web information processing, robot navigation, multi-agent adaptation, machine translation, pattern recognition, language acquisition, software engineering, computational linguistics, spam or malware detection, cognitive psychology, etc.
- Theoretical and experimental analysis of different approaches to language induction, including artificial neural networks, statistical methods, symbolic methods, logical and relational methods,

information-theoretic approaches, minimum description length, complexity-theoretic approaches, heuristic methods, etc.
- Fairness and transparency of inference, interpretability of learned models and explanation of predictions in Grammatical Inference

Papers which, at the time of submission, have appeared in archived conference proceedings (e.g., in the proceedings of ICGI 2018 or other related conferences) will be considered provided that the submission contains at least 30% of new material (i.e., important additional theoretical or empirical results, extensions of the method, etc.) as compared to the conference version of the paper. Authors of such submissions will be required to enclose an accompanying letter discussing the differences between the conference paper and their MLJ submission and to describe clearly the overlap at the beginning of the journal submission. The decision on whether the 30% difference requirement is met will be made by the guest editors.

Schedule:

June 15, 2019: Title and abstract submission to guest editors
July 15, 2019: Full paper submission to MLJ
October 30, 2019: Acceptance notification
December 1, 2019: Final version
December 20, 2019: Expected publication (online)

Submission instructions:

Resources for journal authors, including templates and style files, as well as frequency asked
questions can be found
at: Instructions For Authors (https://www.editorialmanager.com/mach/redirectToBanner.aspx?defaultTarget=AuthInstr.html)

Submissions should be made via the Machine Learning journal website (http://www.editorialmanager.com/mach/default.aspx). When submitting your paper, be sure to specify that the paper is a contribution for the special issue "S.I.: Grammatical Inference (2019)" so that your paper is assigned to the guest editors.

To help the reviewing process, we ask authors to declare to the guest editors their intention to submit by email (mlj-gi@inria.fr) with a title and an abstract (150 to 250 words) for their submission before June 15, 2019.

Guest editors:

Olgierd Unold, Wroclaw University of Science and Technology

François Coste, Inria Rennes - Bretagne Atlantique

Colin de la Higuera, University of Nantes