# Call for Papers: ALT 2007

## The 18th International Conference on Algorithmic Learning Theory

## Sendai International Center, Sendai, Japan, October 1 - 4, 2007

The 18th International Conference on Algorithmic Learning Theory (ALT 2007) will be held in Sendai, Japan, during 1–4 October 2007. The conference is on the theoretical foundations of machine learning. The conference will be co-located with the 10th International Conference on Discovery Science (DS 2007).

**Topics of Interest**: We invite submissions that make a wide variety of contributions to the theory of learning including the following: Comparison of the strength of learning models and the design and evaluation of novel algorithms for learning problems in established learning-theoretic settings such as inductive inference, the PAC model, on-line learning, query models.

Analysis of the theoretical properties of existing algorithms, where families of algorithms could include: boosting, kernel-based methods, Bayesian networks, methods for reinforcement learning or learning in repeated games, graph- and/or manifold-based methods, methods for latent-variable estimation and/or clustering, methods based on Dirichlet processes, MDL, decision tree methods, information-based methods. Analyses could include generalization, convergence or computational efficiency.

Elucidation of new theoretical principles to guide the design of learning algorithms, possibly including new measures of algorithm quality, general algorithm-design techniques, hypothesis classes, inductive biases.

Definition and analysis of new learning models. Models might identify and formalize classes of learning problems inadequately addressed by existing theory or capture salient properties of important applications.

The use of theory to improve the efficiency of existing principles.

Definition and analysis of models for active learning.

**Invited Talks.** There will be several invited talks by prominent researchers in the field.

**Submissions**. Papers should be submitted electronically. Details are given at the ALT 2007 web-page.

**Important Dates.**

Submission deadline: May 18, 2007
Notification of acceptance: June 22, 2007
Camera ready due: July 20, 2007

**Format**. Submissions should be no longer than 15 pages in the standard format for Springer's Lecture Notes in Artificial Intelligence series. The 15 page limit includes title, abstract, acknowledgments, references, illustrations and any other parts of the paper. Appendixes bypassing the page limit are not allowed.

**Policy**. Each submitted paper will be reviewed by the members of the program committee and be judged on clarity, significance, and originality. *Joint submissions to other conferences with published proceedings are not allowed. Papers that have appeared in journals or other conferences are not appropriate for ALT 2007.*

**Proceedings** will be published as a volume in the Lecture Notes Series in Artificial Intelligence, Springer, and will be available at the conference.
Selected papers of ALT 2007 will be invited to a special issue of the journal *Theoretical Computer Science*.

**E.M. Gold Award.** One scholarship of 555€ will be awarded to a student author (please *mark student submissions* on the title page) of an excellent paper.

**Conference Chair**:

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**Program Committee Chairs**:

Marcus Hutter (Australian National University)
Rocco Servedio (Columbia University)

**Program Committee**:

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**Conference Homepage:**

http://www-alg.ist.hokudai.ac.jp/~thomas/ALT07/alt07.jhtml