

# The 7th International Workshop on Parallel and Distributed Computing for Large Scale Machine Learning and Big Data Analytics

May 21, 2018

<http://parlearning.ecs.fullerton.edu>



In Conjunction with

**32nd IEEE International Parallel  
& Distributed Processing  
Symposium  
May 21-25, 2018  
JW Marriott Parq Vancouver  
Vancouver, British Columbia  
CANADA**



## CALL FOR PAPERS

Scaling up machine-learning (ML), data mining (DM) and reasoning algorithms from Artificial Intelligence (AI) for massive datasets is a major technical challenge in the time of "Big Data". We invite novel works that advance the trio-fields of ML/DM/AI through development of scalable algorithms or computing frameworks. Ideal submissions should describe methods for scaling up  $X$  using  $Y$  on  $Z$ :

### *Scaling up*

- Recommender systems
- Optimization algorithms (gradient descent, Newton methods)
- Deep learning
- Sampling/sketching techniques
- Clustering (agglomerative techniques, graph clustering, clustering heterogeneous data)
- Classification (SVM and other classifiers)
- SVD and other matrix computations
- Probabilistic inference (Bayesian networks)
- Logical reasoning
- Graph algorithms/mining and knowledge graphs
- Semi-supervised learning
- Online/streaming learning
- Generative adversarial networks

### *Using*

- Parallel architectures/frameworks (OpenMP, OpenCL, OpenACC, Intel TBB)
- Distributed systems/frameworks (GraphLab, Hadoop, MPI, Spark)
- Machine learning frameworks (TensorFlow, PyTorch, Theano, Caffe)

### *On*

- Clusters of conventional CPUs
- Many-core CPU (e.g. Xeon Phi)
- Specialized ML accelerators (e.g. FPGA, GPU, and TPU)

## IMPORTANT DATES

- Paper submission: February 16, 2018 AoE
- Notification: March 16, 2018
- Camera Ready: March 30, 2018

## PAPER GUIDELINES

Submitted manuscripts should be upto **10** single-spaced double-column pages using 10-point size font on 8.5x11 inch pages (IEEE conference style), including figures, tables, and references.

## TRAVEL AWARDS

Students with accepted papers can apply for a travel award. Please find details at [www.ipdps.org](http://www.ipdps.org).