

Learning for Networking

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Held in conjunction with SIGMETRICS/Performance 2009

June 15, 2009 - Seattle, WA

Goal: Communication and computer networks are becoming increasingly complex in their architecture and control features to accommodate growing diversity of services. For example, heterogeneity arises from the different types of networks and technologies and leads to high dimensional models with inter-dependent variables. The scalability challenge arises as networks serve increasing numbers of users and communities and are required to offer wider arrays of computations and services.

More and more automated and intelligent approaches have been applied to networking to tackle these challenges. Adaptive learning provides a theoretical and algorithmic foundation to those intelligent approaches. But the potential of learning in networking is yet to be explored. For example, it will require combining techniques from adaptive learning with new architectural concepts in networking to make the network self-aware and self-managing.

Scope: This workshop hopes to stimulate further interest in the interdisciplinary area of learning for networking by facilitating sharing of lessons learned and exploring potential future directions. This workshop is organized for the first time at Sigmetrics, combining knowledge in both learning and networking. The workshop encourages original contributions that address how adaptive learning contributes to the science and applications of networking. In particular, the submissions may address the following, but not limited to, topics:

- Networking models, mechanisms and protocols which facilitate and utilize learning to enhance performance.
- Approaches for acquiring and modeling the knowledge needed for control and management of heterogeneous and large networks.
- Learning approaches for network control and management.
- Learning approaches for analyzing network performance.
- Learning approaches for extracting information from large amount of heterogeneous network data.

The workshop also intends to provide a forum for active discussions among speakers and participants.

Acknowledgement: Support from Microsoft Research, Sigmetrics, Georgia Tech Broadband Institute

Submission Guidelines

Authors are welcome to submit a 4-page abstract in the standard [ACM format](#) to [EDAS](#) by the below deadline. The extended abstract will be reviewed by the Workshop TPC. Accepted

abstracts will be published by Performance Evaluation for distribution in the community. Authors of high quality selected abstracts will be encouraged to submit extended papers to a potential special issue at an IEEE Journal.

Important Dates

- Abstract submission : May 5, 2009
- Author notification: May 20, 2009
- Final abstract due: May 30, 2009
- Workshop: June 15, 2009

Organization

Program Committee:

Timothy Brown, *Univ. of Colorado*

Ritu Chadha, *Telecordia*

Mark Coates, *McGill University*

Tin-Kan Ho, *Bell-labs Alcatel-Lucent*

Chuanyi Ji, *Georgia Tech* (Workshop Co-Chair)

Vladimir Marbukh, *NIST*

Craig Partridge, *BBN*

Guy Pujolle, *Pierre et Marie Curie University*

Chris Ramming, *Intel*

Fei Sha, *USC*

Johnathan Smith, *Univ. of Pennsylvania*

Pravin Varaiya, *UC Berkeley*

Anwar Walid, *Bell-Labs Alcatel-Lucent* (Workshop Co-Chair)