

Call for Papers
Workshop on
Workshop on Optimization in Virtualized Environments
WOVE

In conjunction with ICTON
16th International Conference on Transparent Optical Networks,
Graz, Austria, July 6-10, 2014
<http://www.nit.eu/icton2014>
Technically (co-)sponsored by the IEEE

Scope: Virtualization has become common in datacenters (DC), enabling mixed workloads (e.g., web applications and high-performance computing). By encapsulating jobs in virtual machines, a cloud resource manager can make jobs migrate from one server to another seeking to reduce cost while ensuring the committed QoS. Software defined networks (SDN) can help to manage datacenters, enabling resource owners to deal with complex infrastructures independently of their applications. Creating datacenter federations, where two or more cloud providers interconnect their datacenters, allows further load balancing to accommodate spikes in demand. Datacenters can be interconnected through an optical-based network controlled using a centralized SDN, allowing dynamic connectivity. That architecture provides benefits by reducing the amount of over-provisioned network resources and facilitating elastic DC operation.

All the above must be performed with minimum capital and operational expenditures (including energy), and under demand uncertainty. In fact, dynamicity leads to non-optimal utilization of network resources. This suggests that some kind of optimization (off-line and/or in-operation optimization) must be applied to enhance the effectiveness of the utilization in question.

Recent advances in high performance computer architectures such as many-core processors potentially enable obtaining exact and near-optimal solutions to the above mentioned optimization problems in acceptable time, so that developing planning/ optimization tools to be used within operating networks becomes feasible.

Prospective authors must send original contributions addressing optimization problems related with the context described before. Topics of interest include (but are not limited to):

- Linear and non-linear programming models
- Stochastic and robust optimization
- Decomposition, relaxations, and column generation techniques
- Branch-and-cut, branch-and-price, and cutting-plane methods
- Heuristics and meta-heuristics for near optimal solutions
- Concurrent optimization
- Implementation issues in high-performance computer architectures

WOVE Technical Program Committee Co-Chairs:

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Paper submission: according to ICTON submission rules at <http://www.itl.waw.pl/icton> (4 pages in MS Word accompanied by a PDF version), **please write WOVE in the subject line** when submitting your contribution. All accepted WOVE papers will be included in ICTON 2014 Proceedings (published on IEEE Xplore).

Important dates: Submission deadline: March 31, 2014
Notification of acceptance: April 30, 2014
Post-deadline papers with very recent results are requested by June 1, 2014

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