

**Notice of dissertation defense**

**26.10.2018**

# **Optimal control for energy-aware server farms**

## **A queueing theoretic and stochastic modeling approach**

<b>Title</b>	Optimal control for energy-aware server farms
<b>Content</b>	Data centers are known to consume substantial amounts of energy. A large portion of the energy supply is used to power the servers that provide information processing and storage capability. However, the number and capacity of these servers is usually designed to handle workload during peak traffic, which leads to poor utilization of servers and wastes energy during off-peak demand periods. Although servers can be switched off during low demand periods to save energy, switching them back on takes time and may hurt the response time of the system. This dissertation explores dynamic control policies that enable energy savings without compromising performance.
<b>Field of research</b>	Networking Technology
<b>Doctoral candidate</b>	Misikir Eyob Gebrehiwot, MSc
<b>Date and time</b>	26.10.2018 at 13:00
<b>Place</b>	Aalto University School of Electrical Engineering, hall AS1, Maarintie 8, Espoo
<b>Opponent</b>	Professor Benny Van Houdt, University of Antwerp, Department of Mathematics and Computer Science, Belgium
<b>Supervisor</b>	Professor Jukka Manner, Aalto University School of Electrical Engineering, Department of Communications and Networking
<b>Dissertation website</b>	<a href="https://aaltodoc.aalto.fi/handle/123456789/53">https://aaltodoc.aalto.fi/handle/123456789/53</a>
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