

The University of Chicago Computer Science Department

PRESENTS:

“Energy-efficient management of distributed Cloud infrastructures with on-site photovoltaic production”



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Abstract: Distributed Clouds are nowadays an essential component for providing Internet services to always more numerous connected devices. This growth leads the energy consumption of these distributed infrastructures to be a worrying environmental and economic concern. In order to reduce energy costs and carbon footprint, Cloud providers could resort to producing onsite renewable energy, with solar panels for instance. In this talk, I will present our approach SCORPIUS: Self-Consumption Optimization of Renewable energy Production In distribUted cloudS. It takes into account telecommunication network constraints and electrical grid requirements to optimize the Cloud's self-consumption by trading-off between VM migration and renewable energy exchange among the Cloud data centers.

Bio: Anne-Cécile Orgerie is a permanent research scientist at the Centre National de le Recherche (CNRS) in the IRISA laboratory in Rennes, France. She got her PhD in computer science in 2011 from Ecole Normale Supérieure de Lyon in France. Her research interests include green computing, cloud computing, and smart grids.

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Host: Andrew A. Chien

People in need of assistance should call 773-702-3508 in advance.

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