



Università degli studi di Udine  
Dipartimento Politecnico di Ingegneria e Architettura

# **Power converter and digital control**

*Energy management from data  
center to embedded systems*

8 aprile 2016



# Outline

- **Computing power conversion system**
  - *Embedded system power management*
  - *Data center power management*



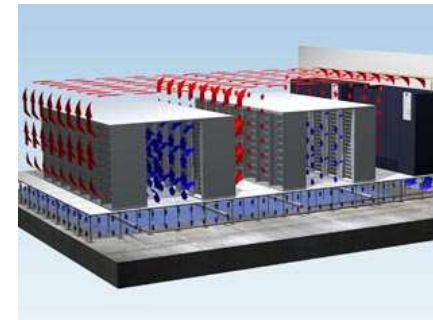
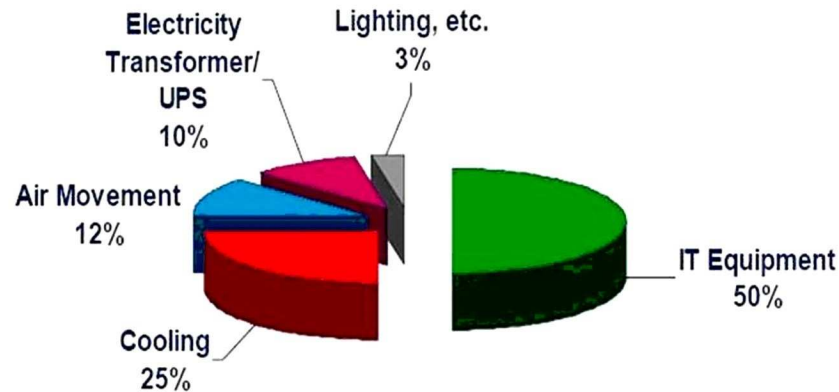
- **Energy scavenging and “Internet of Things”**
  - *Energy harvesting for sensor node*



# Data center power management

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- **Data center power breakout**

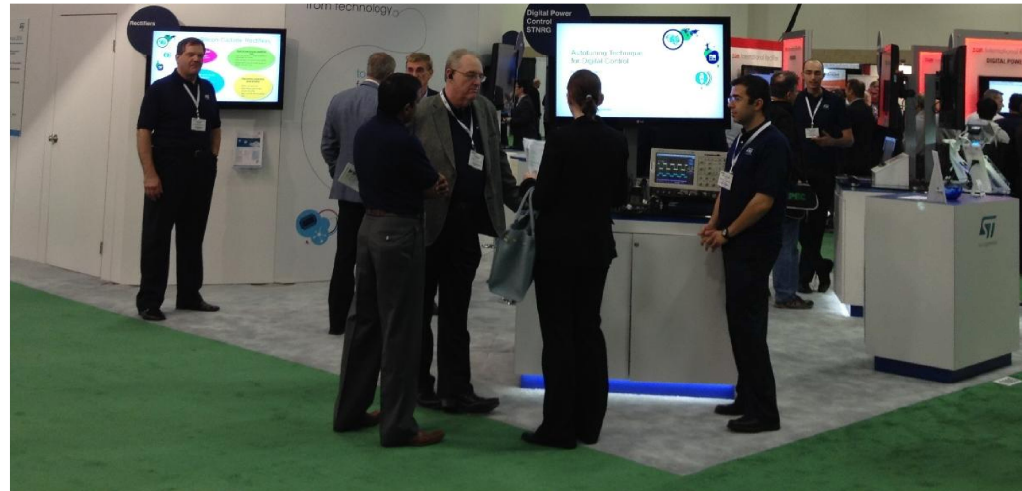




# Data center

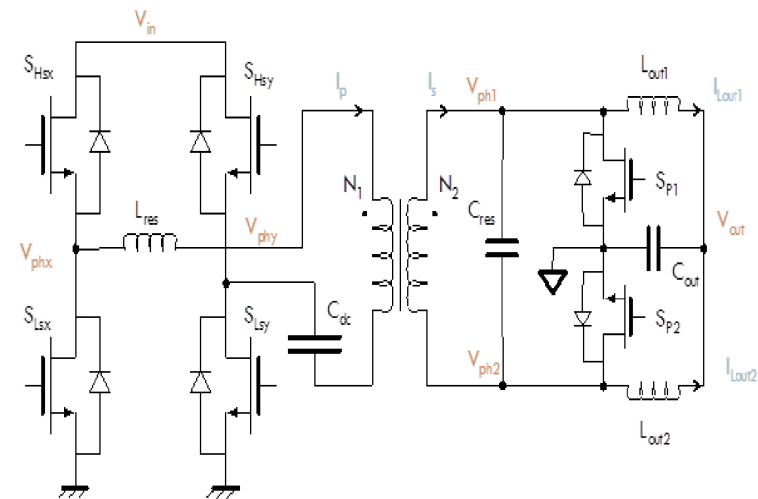
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- *The auto-tuning feature of power supply controller PM6776 from STMicroelectronics was designed in University of Udine*



- *The architecture of New ICs from STMicroelectronics Deliver Highest Power-Conversion Efficiency for Next-Gen 48V Datacenter Architecture Presented by Google was designed in University of Udine*

ICs for 48V isolated resonant multiphase power conversion





# Energy harvesting

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- **Land slide monitor system power management used in Lecco**

