



IEEE Photonics Society (Formerly IEEE Lasers and Electro-Optics Society)
French Chapter/Chapitre Français
Seminar announcement/Annonce de séminaire

Title/Titre: Optical data movement: how nanophotonics is poised to revolutionize interconnection networks in future systems

Speaker/Orateur: **Professor Keren Bergman**
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Date : Wednesday April 13, 2016 at 3:00 pm/Mercredi 13 avril 2016 à 15h00.

Location/Lieu: TELECOM ParisTech
Ecole Nationale Supérieure des Télécommunications, CNRS/LTCI
46 rue Barrault, 75634 Paris Cedex 13
Room/Pièce: **Amphi JADE**

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Abstract/Résumé:

Performance scalability of next generation computing systems is becoming increasingly constrained by limitations in memory access, power dissipation and chip packaging. The processor-memory communication bottleneck, a major challenge in current multicore processors due to limited pin-out and power budget, becomes a detrimental scaling barrier to data-intensive computing. These challenges have emerged as some of the key hardware barriers to realizing the required memory bandwidths and system wide data movement. Recent manufacturing advances in nanoscale silicon photonic interconnect and switching technologies are providing the infrastructure for developing energy-efficient high-bandwidth optical interconnection networks. Importantly, the insertion of photonics into next-generation computing systems is not a one-to-one replacement. This talk examines the design and potential impact of photonic-enabled architectures for creating new classes of future extreme scale computing

Biographie/Biography

Keren Bergman is the Charles Batchelor Professor and Chair of Electrical Engineering at Columbia University where she also directs the Lightwave Research Laboratory (<http://lightwave.ee.columbia.edu/>). She leads multiple research programs on optical interconnection networks for advanced computing systems, data centers, high-performance embedded computing, and chip multiprocessor nanophotonic networks-on-chip. Dr. Bergman holds a Ph.D. from M.I.T. and is a Fellow of the IEEE and of the OSA

For more information, please feel free to contact/Pour tout renseignement complémentaire, merci de contacter:

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