

**“Convergent Networks of People, Places, and Content”**

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**Monday, April 22<sup>nd</sup>, 2013**  
**Lecture: 3:30 PM – 5:00 PM**  
**Engineering Center**  
**Room EC 3753**  
**10555 West Flagler Street**  
**Miami, FL 33174**

**Abstract:**

The accelerating convergence of present computer-communication technologies bridges online communities, digital content creation, and information processing in ways unforeseen before. I will present three related investigations at the intersection of graph signal processing, 3D video communications, and computer networks. First, I will describe how considering social and data networks jointly can lead to gains in information dissemination speed and operational efficiency of computer systems. Second, I will present an optimization framework for streaming interactive immersive video, captured simultaneously via multiple cameras, to a population of clients. Third, I will talk about online service provider networks and a methodology that I designed for jointly optimizing the location of their data centers and the allocation of network flows across their edges.

**Biography:**

Jacob Chakareski is a Senior Scientist at EPFL, where he conducts research, lectures, and supervises students. Topics he investigate presently include signal reconstruction and information dissemination in community-spanned multi-graphs, diverse network optimization & economics scenarios of online services, immersive interactive streaming, hybrid P2P-Cloud systems, QoE routing and scheduling in wireless mesh networks, and social computing in general. He also actively pursues ultrasound applications in telemedicine, sensing, and biomedicine.

Chakareski completed the M.S. and Ph.D. degrees in Electrical and Computer Engineering at WPI, Rice, and Stanford. He was a Postdoctoral Fellow at EPFL and a Research Scientist at Vidyo, a leading provider of Internet telepresence solutions. Chakareski received the Swiss NSF Ambizione Career Development Award. He has held research positions with Microsoft and Hewlett-Packard, and authored one monograph, three book chapters, and over 100 international publications. He actively participates in technical and organizing committees of major IEEE conferences on a yearly basis. He was the Technical Program Chair of Packet Video 2012 and the General Chair of the 2012 IEEE SPS Seasonal School on Social Media Processing. He is a Guest Editor of the Springer PPNA Journal's special issue on P2P Cloud Systems. Chakareski won the best student paper award at the IS&T/SPIE VCIP 2004 conference.

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