NATIONAL UNIVERSITY OF SINGAPORE

School of Computing

C S   S E M I N A R

Title: **Privacy issues in video surveillance systems**

Speaker: Dr. Pavel Korshunov
              Postdoctoral Researcher
              Multimedia Signal Processing Group
              Ecole Polytechnique Federale de Lausanne, Switzerland

Date/Time: 17 September 2014, Wednesday, 10:00 AM to 12:00 PM

Venue: SR7, COM1-02-07

Chaired by: Dr Ooi Wei Tsang, Associate Professor, School of Computing
              (ooiwt@comp.nus.edu.sg)

ABSTRACT:

The widespread usage of digital video surveillance systems has increased the concerns for privacy violation. Emerging new visual sensing technologies, such as Ultra High Definition (UHD) video, High Dynamic Range (HDR) video, and video from mini-drones, threaten to eradicate boundaries of private space even more. Since video surveillance systems are invasive, it is a challenge to find an acceptable balance between privacy of the public under surveillance and security related features of the systems. Tools for protection of visual privacy available today lack either all or some of the important properties such as security of protected visual data, reversibility (ability to undo privacy protection), simplicity, and independence from the video encoding used. Commonly used video surveillance datasets focus on evaluation of video analytics and are not designed with privacy issues in mind.

This talk will focus on the following aspects of visual privacy research in video surveillance:
- Subjective methodologies and objective metrics of visual privacy
- Reversible methods for protection of visual privacy
- Public video datasets designed for evaluation of visual privacy, including HD, UHD, HDR, and mini-drone datasets - Benchmarking of visual privacy protection tools

BIODATA:

Pavel Korshunov is a postdoctoral researcher in the Multimedia Signal Processing Group (MMSPG) at EPFL since 2011. He received his Ph.D. in Computer Science from National University of Singapore and Dipl. Sci.(M.Sc.) in Mathematics from Saint-Petersburg State University (Russia). He is a recipient of ACM TOMM Nicolas D. Georganas Best Paper Award in 2011, a contributor to the new JPEG XT standard for HDR images, and has over

30 publications. His research interests include computer vision and video analysis, video streaming, video and image quality assessment, crowdsourcing, high dynamic range imaging, ultra-high definition imaging, focus of attention, and privacy issues in video surveillance systems.