**Future Applications Based on Mobile Cloud Computing and Software-Defined Networks**

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**DATE** 25 July 2014 (Friday)  
**TIME** 10:30 am - 11:30 am  
**VENUE** Room B5-122, 5th Floor  
College Conference Room B6605, 6th Floor  
Blue Zone, Academic 1  
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**ABSTRACT**

We consider an emerging class of challenging networked applications called Real-Time Online Interactive Applications (ROIA). ROIA are networked applications connecting a potentially very high number of users who interact with the application and with each other in real time, i.e., a response to a user's action happens virtually immediately. Typical representatives of ROIA are multiplayer online computer games, advanced simulation-based e-learning and serious gaming. All these applications are characterized by high performance and QoS requirements, such as short response times to user inputs (about 0.1-1.5 s); frequent state updates (up to 100 Hz); large and frequently changing numbers of users in a single application instance (up to tens of thousands simultaneous users). This talk will address two challenging aspects of future Internet-based ROIA applications: a) using Mobile Cloud Computing for allowing high application performance when a ROIA application is accessed from multiple mobile devices and b) managing dynamic QoS requirements of ROIA applications by employing the emerging technology of Software-Defined Networking (SDN).

**BIOGRAPHY**

Prof Sergei Gorlatch is an internationally acknowledged expert in the area of algorithms, architectures, software and applications for modern parallel and distributed systems. He has been Full Professor of Computer Science at the University of Muenster (Germany) since 2003. Earlier he was Associate Professor at the Technical University of Berlin, Assistant Professor at the University of Passau, and Humboldt Research Fellow at the Technical University of Munich, all in Germany. Prof Gorlatch has about 200 peer-reviewed publications in renowned international books, journals and conferences. He was principal investigator in several international research and development projects in the field of parallel, distributed, Grid and Cloud algorithms, networking and computing, as well as e-Learning, funded by the European Commission and by German national bodies. Among his recent achievements in the area communications and future Internet is the novel Real-Time Framework (www.real-time-framework.com) developed in his group as a platform for high-level development of real-time, highly interactive applications. In the area of high-performance computing, his group has been recently developing a high-level SkeiCL library (skeluni-muenster.de/) for efficient programming of parallel algorithms on emerging parallel and distributed many-core systems with accelerators.

All are welcome!