

*The Electrical and Computer Engineering Program presents*  
**ECEN Seminar Series**

**SOFTWAREZATION AND VIRTUALIZATION IN  
 COMMUNICATION NETWORKS**

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**Wednesday, 1<sup>st</sup> November, 2017**

**12 – 1 PM**

**Lecture Hall 144**

The concepts of Software Defined Networking (SDN) and Network Function Virtualization (NFV) recently emerged as novel paradigms to foster innovation in communication networks. Indeed, the capability to detach the control logic from the hardware infrastructure provided by SDN and the conversion of networking devices to pure software appliances provided by NFV seem suitable solutions to enable the telecommunications infrastructure to evolve and provide proper support to a plethora of different services and application scenarios, including the Internet of Things, low latency vehicular and robots' communications, etc. To such unprecedented adaptability and programmability, the relevance of such novel schemes is increasing dramatically, as they conquer the data centers, providers' network infrastructure and most likely future developments of 5G networks.

The seminar will start with an overview of ongoing research activities of the Future Networks research group at the University of Trento, to introduce the speaker and his research group.

Then, recent results achieved in the area of software defined networking and virtualization in different scenarios will be reviewed and detailed, including Cloud RAN design and network slicing in 5G systems, support to Internet of Things through SDN/slicing, smart cities, security. Finally, research challenges, open issues and future perspectives will be presented.



Fabrizio Granelli is Associate Professor at the Dept. of Information Engineering and Computer Science (DISI) of the University of Trento (Italy) and IEEE ComSoc Director for Online Content (2016-17).

He received the «Laurea» (M.Sc.) and Ph.D. degree from the University of Genoa, Italy, in 1997 and 2001, respectively. Since 2000 he collaborates with the University of Trento (Italy), currently as coordinator of the Networking Laboratory. Between 2004 and 2015 for a total of six months, he was visiting professor at the State University of Campinas (Brasil) and in 2016 he was visiting professor at the University of Tokyo (Japan).

He was IEEE ComSoc Distinguished Lecturer for the period 2012-15 (2 terms) and Delegate for Education at DISI in 2015-2017.

He is author or co-author of around 200 papers published in international journals, books and conferences.

Prof. Granelli is General Vice-Chair of the First International Conference on Wireless Internet (WICON'05) and General Chair of the 11th, 15th and 18th IEEE Workshop on Computer-Aided Modeling, Analysis, and Design of Communication Links and Networks (IEEE CAMAD '06 - '10 - '13). He is TPC Co-Chair of GLOBECOM 2007-2009 and 2012 Symposia on "Communications QoS, Reliability and Performance Modeling" an TPC Co-Chair of GLOBECOM 2014 Symposium on "Selected Areas in Communications – Green Communications Track".

He is Senior Member of IEEE, Associate Editor in Chief of IEEE Communications Surveys and Tutorials, and Area Editor of the IEEE Transactions on Green Communications and Networking.

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