

Tauseef Ahmed, PhD student at T.J. Seebeck Department of Electronics at Tallinn University of Technology, participated in the international regional IEEE Conference in the areas of Telecommunications and Information Technology “23rd Telecommunications Forum TELFOR 2015”. The conference took place in Belgrade, Serbia, 24-26 November 2015. Some of the key research areas of the TELFOR 2015 are the Telecommunication Networks, Protocol and Signalization, Mobile communications, Teleinformatics, Satellite communications, Radio and Microwave engineering, Radio communications, etc.

Tauseef Ahmed presented his PhD research in the area of cognitive radio for the mobile communication systems. The research presented focus on the spectrum allocation techniques based on the machine learning algorithms and optimization techniques. In the paper, three novel schemes for spectrum management with the classical frequency reuse technique are compared and the results were presented at the conference. These schemes are based on reinforcement learning and power optimization algorithms. Simulation results showed that our reinforcement learning based schemes yield increased capacity and provide better user satisfaction. Moreover, these schemes provide better performance in high cell loads and can accommodate the femto cells with the same radio resources.



*Figure 1 Belgrade City*



*Figure 2 Tauseef Ahmed (R), In friendly mood at confernce dinner*