

MSc diploma subject proposals 2018/19

Specialization: Teleinformation Networks and Systems

- 1. Optical resource reservation in multidomain ASON/GMPLS network architecture**
- 2. ASON/GMPLS architecture simulation model with optical connection protection mechanism**
- 3. Methods of the measurement of QoE parameters**
- 4. Analytical traffic model of a multidomain IMS/NGN including service and transport stratum**
- 5. Design of a multidomain IMS/NGN architecture elements**
- 6. Data analysis collected and processed in the IP PBX system and their anonymization using the SBC system, based on the Oracle ESBC system**
- 7. Implementation of the SDN with OpenStack environment to automatically launch the Next-Generation UTM firewalls with Stormshield virtual machines**
- 8. Implementation of the transport network controller based on Openconfig model**
- 9. Review and research of features extractors for steganalysis**
- 10. Review and research of of steganalytic feature vectors classifiers**
- 11. Encrypted signal processing**
- 12. Review of signal processing methods using quaternions**
- 13. An application demonstrating a data transmission system with Faster-Than-Nyquist signaling**
- 14. Deterministic chaos in digital modulation**
- 15. Investigation of polar codes properties**
- 16. Investigation of properties of instantaneous entropy for recorded conversation**
- 17. Analysis of communication protocol libraries in complex teleinformation systems**
- 18. Public key infrastructure laboratory**
- 19. Analysis of systems for orchestration of software containers environments for virtualization of telecommunication servers**

- 20. Analysis of microservices technology for application in telecommunication services**
- 21. Analysis of next-generation passive optical network transmission capabilities**
- 22. Maximizing the rate of digital transmission for symmetrical cop-per pairs in the access network**
- 23. Quality measurement methods for coherent optical transmission at very high speed**