Telemetry and Data Transmission
Seminars

summer semester 2023/2024

1. Signals and their characteristics.
2. Autocorrelation function and spectral density.
3. Basic system parameters of communication systems I.
4. Basic system parameters of communication systems II.
5. AWGN, frequency bands.
6. Line codes. Data protection during transmission.
7. Digital modulations.
8. QPSK and MQAM modulations, PAPR in OFDM.
9. Antennas.
10. Link budget.
11. Analysis of DS SS and FH SS systems.
12. High-speed data transmission and channel capacity.

Conditions for admittance to the exam: submission of completed assignments or participation in exercises.

For active participation in exercises (= solving examples), students can get points that are added to the exam so that the total number of points is max. 100. More detailed conditions for obtaining points at exercises are published at: http://www.ktl.elf.stuba.sk/~rakus/

Recommended literature:

1. B. Sklar and F. Harris: „Digital Communications“, Pearson Education.
2. Dixon R.C.: „Spread Spectrum with Commercial Applications“, J. Wiley & Sons, Inc.
3. Goldsmith A.: “Wireless Communications“, Stanford University
4. Pahlavan K., Levesque A. H.: “Wireless Information Networks“ , J. Wiley & Sons, Inc.

in Bratislava, 11.1.2024

leader of the seminar:
Assoc. Prof. Ing. Martin Rakús, PhD.