Designing wireless telecommunication networks
Seminars

Summer semester 2023/2024

1. Noise figures, noise temperatures.
2. Signal propagation under direct line of sight conditions.
3. Mobile channels.
4. Suppression of effects caused by mobile channels.
5. Antennas and their basic parameters.
6. Link budget.
7. RF signal propagation in buildings and closed spaces.
8. RF signal propagation near the earth's surface.
9. Fading and characteristics of multipath propagation.
10. Attenuation caused by precipitation in the millimeter wave band.
11. Satellite communications.
12. RF safety.

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/

References :

1. John S. Seybold: „Introduction to RF Propagation“, J. Wiley & Sons, Inc.
2. William C.Y. Lee: „Mobile Communication Engineering – Theory and Applications“, McGraw Hill - Telecommunications.
3. ITU: “Handbook on Satellite Communications“, J. Wiley & Sons, Inc.

Bratislava, 7.02.2024 leader of the seminar: Assoc. Prof.Ing. Martin Rakús, PhD.