

Télécommunications

TLRS: Transmission lines and RF systems

IDENTIFICATION

CODE : IST-4-TLR
ECTS : 3.0

HOURS

Lectures : 0.0 h
Seminars : 20.0 h
Laboratory : 0.0 h
Project : 0.0 h
Teacher-student
contact : 20.0 h
Personal work : 20.0 h
Total : 40.0 h

ASSESSMENT METHOD

- Small project (with 4 hours of assistance) on computers
- 2 hours of presentation of the project by the students

TEACHING AIDS

TEACHING LANGUAGE

English

CONTACT

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AIMS

Knowledge about high frequency systems. Choice of right transmission line considering applications.
Matching circuit design. RF simulation tools. Basic principles of transmission lines.
Comprehensive study of high frequency propagation and standing waves.
Knowledge about matching circuits and applications. Different kinds of transmission lines. Link with the wireless propagation domain.

CONTENT

- Telegraphist Equations
- Reflection Coefficient
- Standing Waves
- Impedance Matching
- Smith Chart
- S parameters

BIBLIOGRAPHY

- [1] Brian C. Wadell, Transmission Line Design Handbook (Artech House), 1991
[2] Philip C. Magnusson, Andreas Weisshaar, Vijai K. Tripathi, Gerald C. Alexander, Transmission Lines and Wave Propagation, Fourth Edition, CRC Press, 2000

PRE-REQUISITE

Good basis in mathematics