Scattering of EM waves

Outline:

- Introduction to EM waves scattering
- Basic scattering parameters
- Completely solvable cases
- Layered media
- Rough surfaces
- Small particles (Rayleigh scattering)
- High frequency techniques

References:

- L. Tsang, J. A. Kong, and K.-H. Ding, **Scattering of Electromagnetic Waves: Theory and Applications**, John Wiley & Sons, 2000.
- L. Tsang, J. A. Kong, K.-H. Ding, and C. O. Ao, **Scattering of Electromagnetic Waves: Numerical Simulations**, John Wiley & Sons, 2001.
- L. Tsang, J. A. Kong, **Scattering of Electromagnetic Waves: Advanced Topics**, John Wiley & Sons, 2001.
- C. A. Balanis, , **Advanced Engineering Electromagnetics**, John Wiley & Sons, 2012.

Evaluation:

- Project (40%)

  Read a technical paper (IEEE, IET, Springer, Elsevier, John Wiley, etc.) and re-perform the simulations and calculations and report (power-point presentation)

- Final Exam (60%)

  From course slides