All-dielectric surface-wave antennas

Theory and Motivation:
• leaky-wave radiation from a dielectric waveguide offers large frequency bandwidth and directivity
• an all-dielectric design will increase radiation efficiency by eliminating conduction loss from any metal features
• advantage of high robustness against environmental influences

Application:
• directional-of-arrival estimation
• millimeter-wave communication
• near-field scanning

Tasks:
• antenna design and optimization
• design of planar feed structure to excite surface waves
• measurements in anechoic chamber

Information:
• requires some knowledge of high-frequency circuit design and concepts
• thesis can be written in either German or English language
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