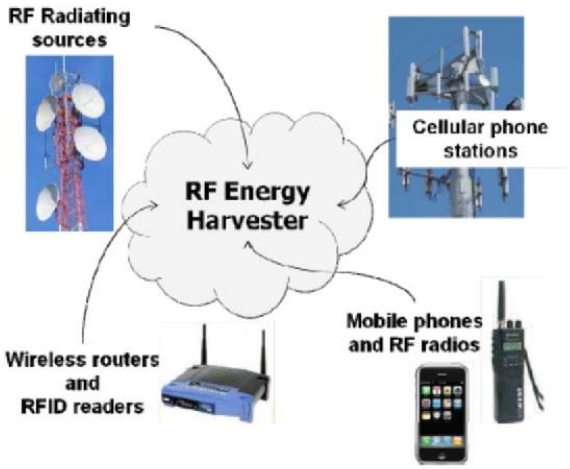
Frequency selective surfaces deployed as microwave absorbers for energy harvesting applications

Project Overview:

A potential approach to be more economical is by means of capturing ambient RF signals with microwave absorber structures and converting the induced electrical currents to DC power with a rectification system. To be practical, such an energy harvesting device should be highly efficient, compact in size, possess large bandwidth, and be polarization and angle of incidence independent.



The aim of the project is to follow design analysis previously developed to propose, design and simulate an efficient RF Energy Harvesting Absorber on different substrates for energy harvesting applications. For example, flexible substrates that can be used as Curtains to reduce the unwanted signal radiation as in hospitals. The primary advantage of this absorber is maximizing the energy density per load which is a highly critical consideration for wireless power transfer applications

Eligible Departments:

Electronics	
Communications	✓
Networking	

Software/Hardware:

CST simulations.

Fabrication for the design structure for fair measurements comparison.