

## **ABSTRACT:**

Switchable magnetic media and shorting posts are popular in controlling the radiation characteristics and the size of microstrip patch antennas. In this paper, a ferrite based shorted circular patch antenna is designed to demonstrate magnetically switchable dual frequency response. The DC magnetic bias, applied normal to the ferrite substrate, allowed the antenna size to be reduced up to 80%. Optimized length and position of the reactive post exhibited improved impedance bandwidth with excellent frequency tuning capabilities. Commercial software is used to simulate resonance and radiation responses of the designed antenna.