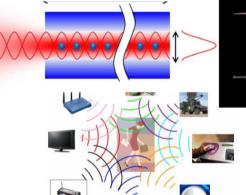
Photonics and Electromagnetic Engineering Lab

PhEm Lab

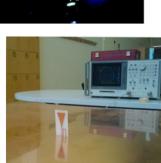
• Topics:

- Photonics, Optics, and Lightwave Technology
- Microwaves and RF systems
- ElectroMagnetic Compatibility EMC
- RFID Technology
- Activities:
 - Electromagnetic simulations (CST Studio ©, Comsol Multiphysics ©)
 - Electromagnetic characterization
 - Electromagnetic design
 - Collaborations:
 - Xlim-Univ. Limoges (Fr), Drexel
 Univ. (USA), Univ. Sydney (Aus)





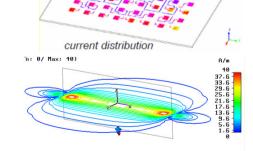
COMSOL







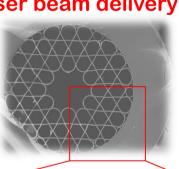


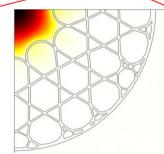


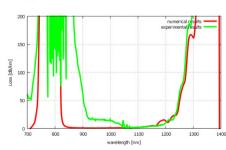
Photonics and Electromagnetic Engineering Lab

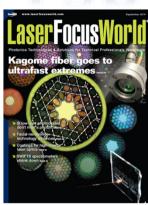
PhEm Lab

Hollow core optical fiber for high power laser beam delivery

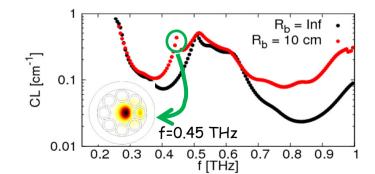












Photonics

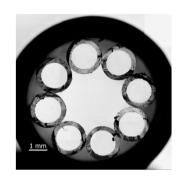
Analysis

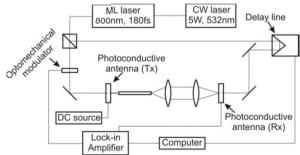
Design

Electromagnetic Simulations

Hollow core optical fiber for Terahertz imaging



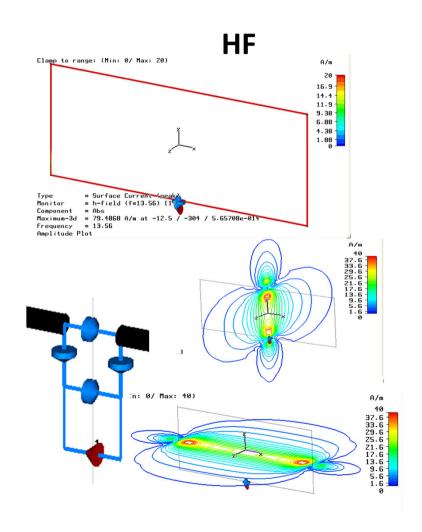




Photonics and Electromagnetic Engineering Lab PhEm Lab

RFID Technology Analysis Design Electromagnetic Simulations

UHF 400 mpedance [ohm] 350 300 250 200 150 ~~_00,- 100 RBOND LBOND I ICHIP INPUT IMPEDANCE Z_{chip} Radiation pattern experimental simulated



Photonics and Electromagnetic Engineering Lab Microwave antenna for fire detection RX $\Omega_{\rm B}$ T_{g} (dB) -15 -30 -20

-10 0 10 θ (degree)

Antennas

Analysis Design Electromagnetic Simulations

Wearable patch antenna

