

## Optically Reconfigurable Microwave and MillimetreWave Circuits and Antennas

Reconfigurable (or tuneable) circuits have a huge number of applications from military and commercial radar systems to smart antennas for mobile phones. Conventional tuning is performed with diodes or Micro-Electro-Mechanical Systems (MEMS) switches.

However, these approaches have significant drawbacks as systems become more complex and move to higher frequencies, which is anticipated for 5G systems. This number of electrons are generated from a Plasma which acts like a metal at microwave frequencies.

Thus, light can be used to write microwave circuits and antennas. This project will study light generated microwave circuits and antennas and investigate the required light intensity, wavelengths and microwave performance. (<http://www.bristol.ac.uk/news/2017/november/5g-applications.html>)

More Details and Contact:

For informal enquiries please email [Prof Martin Cryan](#) and [Dr Souheil Ben Smida](#).

How To Apply:

Please submit a PhD application using the University's online application system: <http://www.bristol.ac.uk/study/postgraduate/apply/>. In the application form mention the project title above and list [Prof Martin Cryan](#) under "Proposed supervisor(1)" and [Dr Souheil Ben Smida](#) under "Proposed supervisor(2)".