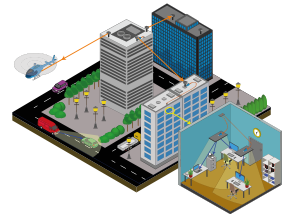


OPEN PhD RESEARCH POSITION:

Optical signal transmission over fiber and free-space optic links for emerging wavelengths

With the standard optical telecommunication bands being heavily used and ever increasing congestion of radio frequency spectra, new emerging spectral bands are becoming of great interest. Furthermore, in some areas it is necessary to extend fiber-optic connection by wireless transmissions. For example in the **NIR region**, wavelengths over 2000 nm are of particular interest thanks to the low attenuation of atmosphere or **VIS region** in connection with **visible light communications (VLC)** has great potential to be interconnected with **fiber and optical wireless communication (OWC)** systems.



FSO/VLC network.

The PhD research will be to focused on **joint fiber and OWC networks**. Optical signal behavior in **VIS and NIR (above 2000 nm)** regions will be studied with respect to **atmospheric effects such as turbulence, fog and rain**, both theoretically and experimentally. Furthermore, **new fiber fused components** (couplers, lenses, collimators) will be developed to ease the system implementation using our **cutting-edge CO₂ fusion station**. The successful candidate will join our research group and will work on a fully international level in cooperation with world-leading institutes in fiber and OWC based networks such as the Northumbria University in Newcastle.

