



**MSc Dissertation Supervisors – list of topics and Interests
April 2007**

Dr S A Power	Environmental Impact Assessment
Dr J Cheng	<p>Archaeological Assessment and Planning.</p> <p>Data integration for urban planning using multiple data sources</p> <p>Measure accessibility and integrate it into urban planning</p> <p>GIS for urban studies (urban systems, urban networks, urban form, housing price, crime, travel pattern)</p> <p>LBS (Location-based service) for urban activity modelling</p> <p>GIS support for regional sustainable transport strategy</p> <p>Land use change modelling</p> <p>Urban growth/sprawl modelling and management</p> <p>PSS (planning support system) development and applications</p> <p>MCE (Multi-Criteria Evaluation) and MOD (Multi-Objectives Decision) based spatial decision-making support</p> <p>Spatial statistics and applications</p> <p>Spatial pattern/process modelling</p> <p>Agent-based spatial behaviour simulation</p> <p>Data mining /machine learning for spatial analysis</p>
Dr S R Hoon	<p>Environmental Scientific Instrumentation – <i>in situ and ex situ</i>, remote sensing.</p> <p>CO₂ soil fluxes in dryland environments- sequestration and respiration, sensitivity to climate change.</p> <p>Environmental Magnetism – application to sediment transport and fingerprinting.</p>

	<p>Upland Peats – erosion and transport process.</p> <p>Environmental Process Modelling – gas fluxes, sediment transport, solar irradiance.</p>
Mr M P Cresswell	<p>Remote sensing - particularly of the natural environment</p> <p>Applications of remote sensing and GIS for human health or health emergencies</p> <p>Biological, climate/weather, ecological and disease applications</p> <p>GPS and electronic mapping</p>
Mr D E Reeve	<p>Open Source GIS</p> <p>Local Government issues, including PPGIS; socio-economic analysis; community GIS; Google/Yahoo/Microsoft mapping, spatial mash-ups</p>
Mr G R Smith	<p>My research interests are several-fold and focus on the applications of GIS and remote sensing. I am happy to supervise a broad range of dissertation topics in the following thematic areas: (a) census data analysis for inequality studies, (b) remote sensing and change detection, and (c) GPS, DEMs and terrain analysis.</p> <p>Potential MSc projects include:</p> <ul style="list-style-type: none"> • Remote sensing change detection of the urban environment • Modelling and monitoring peat erosion in the Peak District (UK) using DEMs and terrain analysis methods • Using the Global Positioning System to build high-resolution DEMs or to assess the accuracy of 'off-the-shelf' DEM-generated variables • Measuring poverty and socio-material deprivation using national census-based indicators • Identifying changes in open and green space in urban environments from temporal remotely sensed data and investigating their impact on people's use of recreational city-space • Investigating environmental factors of urban deprivation • Spatial analysis of rural/urban foodscapes (e.g. oases vs. deserts)

Prof F M Danson	Biophysical remote sensing Field spectroradiometry Land cover change analysis Airborn and terrestrial laser scanning
Dr R P Armitage	<ul style="list-style-type: none">• Spatial Analysis• Integrations of socio-economic and remotely sensed data• Landscape mapping and landscape characterisation• Ground-based remote sensing• Environmental Remote Sensing.
Dr D B Lambrick	TO FOLLOW