Student	Title	Description	Objectives/Outcomes	Examiner
Keketso Malekela	Golden Arrow Bus routes	TBC	TBC	S Hull
Jason Schreiber	Land restitution	The Land Claims Commission's database is available to us through our partners at NGI. It needs some tidying up but the information is accessible for a variety of projects. The student might like to develop a spatial database relating claims and claimants, or a mobile app linked to a smartphone's GPS to make claiming easier, or perform a spatial analysis of areas claimed …	To be discussed with supervisor.	S Hull
	Application of GISc technologies for environmental monitoring	Monitoring of our natural environment is of critical importance to development planning and protecting of our natural resources. GISc technologies are a means of performing such monitoring and modelling of natural phenomenon. This project aims to: 1. Investigate the potential of GISc technologies for monitoring of the natural environment; or 2. Develop and evaluate GISc as a decision support tool for development of our natural resources; or 3. Develop and evaluate GISc based modelling solutions for natural phenomenon (for example in disaster management applications).	Develop and evaluate a GISc based solution for environmental monitoring or modelling of natural phenomenon.	J Smit
	Application of GISc technologies for urban scene modelling	In order to adequately plan for the development of our urban environments, government officials require up-to-date land cover and land use maps and spatial decision support systems which support holistic planning and decision making processes. This project aims to: 1. Develop and evaluate automated (or semi-automated) land use mapping algorithms; or 2. Develop and evaluate a spatial decision support system in support of spatial planning (for example housing township development)	Develop and evaluate land use mapping or spatial information support systems in support of spatial planning processes.	J Smit
	Spatial Data Infrastructures / Urban Observatory	The development of information / knowledge form spatial data in support of government development objectives is an integral components of the National Development Plan (CH8). South Africa is currently embarking on a process to develop the South African Spatial Data Infrastructure (SASDI), in accordance with	Development of a spatial information systems architecture for the proposed National 'Observatory', or development of web-based geo-processing tools in support of spatial planning.	J Smit

		the SDI Act of 2003. This project aims to: 1. Analyse and develop a theoretical spatial information systems design to be used for the proposed National 'Observatory'; or 2. Develop web-based spatial analysis geo-processing tools to generate information / knowledge from baseline spatial and non-spatial data in support of governments planning processes.		
	Accuracy assessment of NGI DEM	There is no real independent assessment of our DEM. I suggest that two three areas be chosen where there are high resolution DEM (such as CITY of Cape Town from very high res photography, there are also DEM from LIDAR done for Eskom strip surveys).		A Parker (Promoter)
	National Schools database	This has been updated and verified by NGI as part of an MOU with the Department of Education. In terms of the constitutional mandate to have education accessible to the population, there are many opportunities to analyse whether government is fulfilling this mandate. There are interesting factors such as topography and road access that complicated the simple radius around school approach.		A Parker (Promoter)
	Determining the area for which schools are closest	There has been a recent supreme court ruling that schools must prioritise learners for whom a school is the closest. This is not trivial. We have access to the entire schools database and it would be useful if a map can be drawn showing polygons for each school. This can definitely assist schools in the admission policy. This research should also look at how "closest is defined. Should it be as the crow flies, or distance to drive... or to walk? This would require the researcher to perhaps approach schools in a circuit and present this as a partial solution to the admission nightmare.		A Parker (Promoter)
	The use of GIS in the resolution of Constantia Land Claims.	There have been numerous land claims in Constantia, where the landscape has totally changed. The claimants find it very difficult to put all the pieces together and it		A Parker (Promoter)

		would be great to put all the Constantia claimants on one spatial database. There are possibly similar cases in Durban that remain unresolved.		
	Determining open space maps in informal settlements	Spatial analysis of informal settlements often involves directly identifying informal structures. This project aims to determine open spaces and then indirectly identifying informal structures.	The student is expected to perform classification on aerial imagery, satellite imagery and laser scanner data. From the classification the student is expected to extract open areas and indirectly informal structures. From the extracted features the student is expected to develop network diagrams that can be used in space syntax software.	G Sithole F Isaacs
	Geo-referencing of aerial images of Cape Town from 1927 to present	Various images of Cape Town exist from 1927 to present. For a temporal analysis of urban patterns it is necessary to geo-reference these images. This project will explore methods to achieve this geo-referencing.	The student is expected gather data required to achieve the geo-referencing. The student is then expected to try various techniques to geo-reference the images. An analysis of the geo-referencing is expected. Finally the student should outline how his/her method can be automated.	G Sithole F Isaacs