



Land Surveying Division

Sr Dr Conrad Tang LSD Council Chairman

Two Task Forces Formed to Pursue Legislative Changes and Be Led by Sr Tony Tse

In his attentive reply to our call in the January 2018 LSD Divisional News & Activities for votes to support a nominee for the Architectural, Surveying, Planning and Landscape Functional Constituency, Sr Tony Tse agreed to bring up the Institute's concerns in his communications with prospective voters. They include increasing the number of resident land surveyor posts in public construction projects, building up spatial data infrastructure in a smart city, and amending the Land Survey Ordinance [Cap 473].

While attending the gathering to support Sr Tony Tse on 4 March, the LSD delegates were granted an audience with him, during which he discussed his future plans concerning LSD issues. He frankly stated that the LSD must work on its own issues based on its studies, which feed him with statistics and rationales for the ways to contribute to improvements in our society. He would be happy to bring up the LSD's concerns to the Directors and Secretaries and eventually to the Legislative Council.



During the LSD's March meeting, members decided to immediately form two Task Groups to communicate with Sr Tse. He agreed to be the Division's honorary leader and attend its meetings to help formulate decisions. The Smart City Task Group is led by Sr Dr Lesly Lam. The Land Survey Ordinance Amendment Task Group is led by Sr Prof Leung Shou Chun. The Institute's engineering surveyor councils are working to form a new task force to promote resident land surveyors.

The LSD Belt and Road Project

In this \$1.93 million PASS-supported LSD project, the LSD intends to promote two of its advanced land surveying technologies: remote sensing, which is led by Dr Charles Wong, is one of them. To promote the "Belt and Road Initiative," which is an initiative of the Chinese Government, Dr Wong published a conference paper during Quarter 4 of 2017 that studied the variations in the environmental factors in response to population changes using remote sensing. Pakistan and Kazakhstan are two countries that would lie along the Belt and Road alignment and have undergone massive urbanisation in recent years. Also employing geospatial analysis, Dr Wong collected data between 2002 and 2006, as well as 2008 and 2012 – mainly focusing on various environmental factors for data processing purposes including air pollution, temperature, cropland, urban areas, etc, for the purpose of reviewing and analysing their association with the population growth of these two countries.

The findings showed that there were environmental impacts on both countries' populations to varying degrees. Anthropogenic activities, for example, could lead to potential changes in land cover and worse air quality,



The Aral Sea observed from satellite images in 1989 (L) and 2014 (R)
Source: "Aral Sea's Eastern Basin Is Dry for First Time in 600 Years," National Geographic (<http://news.nationalgeographic.com/news/2014/10/141001-aral-sea-shrinking-drought-water-environment/>).

which could have an adverse effect on a wide-spectrum of current valuable assets (ie, natural resources).

This high-end land surveying application has been commonly applied by municipal, state, and national governments. The LSD intends to introduce its technical details to its land surveying practitioners at a one-day workshop and international conference in 2019. Also, it will demonstrate the application in the targeted Belt and Road Countries.

RECRUITMENT

Professional Services Advancement Support Scheme

Reference Number: PS173005

Project Title: Land Surveying Technological Services for Smart City Development in Belt and Road Countries – Mainland China, Sri Lanka, Pakistan, and Kazakhstan

The project seeks to hire three Research Assistants.

Qualifications: A degree in Geomatics or a relevant engineering field, such as electronic or computer science, is necessary. A master's or higher degree in a technical field is preferred.

The Research Assistants will each be offered a 12-month contract. The first Research Assistant (RA) will develop web tools to visualise, share, and analyse 3D objects. S/he should have some knowledge of online 3D tools that employ technologies such as ThreeJS, Openlayers, Cesium, WebGL, HTML5, and the like.

The second RA will work in remote sensing applications and the third RA will work on the collections of survey laws and regulation data possessed by each Belt and Road country.

All RAs may be asked to perform project demonstrations in the abovementioned Belt and Road Countries. Hotel and airfare will be provided by the Government.

Salary: \$22,500/month plus 5% allowance to contribute to the RA's personal MPF account, along with a matching 5% from the employer.

REQUIREMENTS

- Proven experience with popular 3D engines (e.g. Unity, ThreeJS, PotreeJS)
- Excellent knowledge of web standards: HTML5, CSS3, JavaScript, DOM, WebGL, WebGPU, WebVR
- Excellent knowledge of modern software engineering principles and techniques (e.g. continuous delivery, code reviews, test-driven development, refactoring, incremental delivery, effective git)
- Good sense of user experience and usability
- Strong analytical, assessment, and problem-solving skills
- Excellent written and spoken English communication skills
- Experience with map technologies (e.g. Openlayers, Google Earth, Cesium, Web-GIS)

Please submit your application by email to lsd@hkis.org.hk. Interview will be arranged. The earliest starting date is 1 April 2018.