ASIA-PACIFIC
SPATIAL EXCELLENCE AWARDS
— 2020 —

Surveying & Spatial Sciences Institute (SSSI) Individual Award Winners

PROFESSIONAL OF THE YEAR - Alistair Byrom

Alistair Byrom, Principal Surveyor at Veris in Brisbane, is held in the highest esteem by his peers. For over 20 years he has served on committees for ISAQ, SSI, SSSI and SIBA|GITA and in this time has supported the ongoing growth and development of the surveying profession and the spatial industry. Alistair has proven to be a vital source of knowledge for graduates and applicants seeking registration with the Surveyors Board of Queensland. He has been a constant contributor to events on a variety of topics. Alistair's affinity with land law, as it relates to surveying, has lead him into one of his core skills, being forensic consulting. He has prepared numerous Expert Reports for the Supreme Court, Land Court and the Planning & Environment Court which demonstrate achievement and performance considered beyond the normal for consulting surveyors. The judges said his consistent contributions to the industry through his advocacy, presentations, senior representative roles and particular his efforts to unify the profession's voice make him very worthy of recognition.

YOUNG PROFESSIONAL OF THE YEAR - Michael Topp

Michael actively demonstrates excellence in leadership capabilities and is a bright and budding young professional. He invests heavily into the development of his peers at Veris through internal mentoring, training and development programs, playing an active role in the development of his colleagues and the business. Alongside this, Michael displays strong professional performance technically across a range of significant projects in SEQ. Michael is the Principal Surveyor on multiple projects where he utilises his depth of experience to guide each project through construction to final delivery. Michael leads the projects through strong communications with colleagues, allied professionals and clients to achieve the required outcomes. The judges all agreed he is a fantastic role model and were pleased to see his commitment to engagement with universities and other young surveyors.

WOMEN'S LEADERSHIP - Melissa Harris

Melissa Harris is a leading light in the spatial profession, paving the way for greater diversity within a male-clustered profession. In 2019, she became the first woman to hold an office for ANZLIC in its 34-year history, where, as part of the leadership team, she developed the current ANZLIC Strategy ensuring the diverse views of industry and academia were included. Closer to home, Mel has been the dynamic leader of location-based intelligence and spatial services in DELWP, as the Executive Director of Strategic Land Administration and Information and now Victorian Registrar of Titles and acting Chief Executive of Land Use Victoria. Mel took the Victorian Government spatial data management agenda from a focus of ongoing management to one of leadership. "

EDUCATIONAL DEVELOPMENT - Ivana Ivanova

Dr Ivanova holds an engineering and doctoral degree from the Slovak University of Technology, in geodesy and cartography. Ivana has lectured and conducted research at several universities and across three continents. Dr Ivánová is currently a senior lecturer at Curtin University, teaching geoinformatics, spatial data quality and distribution, and spatial databases in the Bachelor of Surveying degree, and at a postgraduate level, undertakes lectures in the new Geospatial Intelligence courses. In her teaching, Ivana is a strong advocate for OSGeo tools; helping students to develop open standards compliant geoweb applications.

POSTGRADUATE STUDENT (Joint winners)

Wallace Boone Law

Recent graduate, Dr. W. Boone Law, commenced his PhD in spatial science and environmental remote sensing at the University of Adelaide in 2015. Over a short time he has used his spatial science knowledge and skills to make innovative and well-received academic contributions to Australian archaeology. His PhD is amongst the first in Australia to promote and utilise advanced aerial and satellite remote sensing technologies to better understand the Aboriginal archaeological record. The judges said Boone had fantastic engagement examples and was an innovative thesis.

Antara Dasgupta

Errors in model parameters, topographic inputs and streamflow forecasts result in large errors in flood predictions, which impedes actionable decision-making during disasters. The integration of independent remotely sensed flood observations from Synthetic Aperture Radar sensors with these model predictions has the potential to improve flood forecasts, resulting in greater flood preparedness and emergency services support. Accordingly, Antara's research successfully developed a new method for interpretation of the remotely sensed data. This research resulted in 3 journal publications in top journals.

UNDERGRADUATE STUDENT

Alexei Tiong (winner)

Alexei's final year project for his Bachelor of Applied GIS at Flinders University combined his skills in spatial science with those of virtual reality to produce Virtual Flinders: a project which demonstrated how the superior abilities of gaming engines to manage and render 3D data can be utilised to view 3D data captured in the spatial science world. Alexei was awarded the Flinders University Chancellor's Letter of Commendation in 2019. The judges particularly commended Alexei for the innovative video that accompanied his nomination.

Daniel Fowler (highly commended)

Hundreds of patients visit the emergency department at Liverpool Hospital (LH) with various illnesses and injuries every day. Daniel's undergraduate project with UNSW investigated the prevalence of admissions into LH using a patient's residential address. Chest pain accounted for 8% of all admissions to LH in 2018 and was the main focus of his thesis as it may result in significant disease (e.g. heart attacks). Census data was used to adjust the number of patients in an area based on population density to highlight cluster locations of chest pain. Socio-economic data relating to income and education levels was also used. These methods determined the strength of the relationship between the number of patients and socio-economic status in an area. The judges commended his use of spatial epidemiological research, especially given the current worldwide context. They felt this helps drive home the importance of socio-economic factors in health outcomes and is increasingly important to help target health resources to ensure funding is spent in the best way.

VOCATIONAL EDUCATION TRAINING (VET) STUDENT AWARD - Russell Commins

Russell was nominated Surveying and Spatial Information Services TAFE student of the year in 2019. Some of Russell's career highlights include:
- Refined and implemented a system of negotiation and approvals for effectively converting project planning to project action and outcomes for CORSnet-NSW
- Applied heritage, planning and environmental legislation in order to undertake operations in areas of significance
- Personally built and supervised the construction of CORSnet-NSW, the largest single owner GNSS reference station network in Australia and one of the largest in the world.

Judges felt he is clearly committed to the surveying and spatial industry, and role-models this commitment to others.

Spatial Industries Business Association (SIBA|GITA) Industry Award Winners

TECHNICAL EXCELLENCE & JK Barrie Winner
Building 22 - Osborne South Naval Precinct (360 Surveying)

360 Surveying was contracted to undertake high precision surveying for the structural steel wall and roof modules of the largest single span "shed" in the Southern Hemisphere and only the second building in the world to have been constructed by rotating walls at the Osborne South Naval Precinct. 360 Surveying was required to monitor the structural movement and accurate placement of the modules during wall rotations and roof lifts, as well as monitoring engineering tolerances. Several challenges were overcome which required specialised tools and solutions to be developed.

SPATIAL ENABLEMENT
Brisbane Airport Digital Twin Project (Brisbane Airport Corporation & Land Solution Australia)

The BAC Digital Twin project has provided the foundation that will spatially enable one of Australia's busiest transport hubs to become a world-class asset and allow alignment with industry best practice. The project enables data-based decisions and paves the way to transform the way the business operates, using state of the art planning and visualisation with actual 3D spatial data to inform everything from terminal planning, service and maintenance, enhanced border security, emergency response to building and tenancy management. Judges praised not only the intense scale and variability of the project, but the high-quality visual representation it allows.

PEOPLE & COMMUNITY
Satellite-based Augmentation System (SBAS) Test-Bed (Geoscience Australia, Land Information New Zealand & FrontierSI)

This project was led by Geoscience Australia in partnership with Land Information New Zealand and FrontierSI, and engaged broadly with industry, academia, and government to improve the technological, social, and environmental benefits of reliable positioning information. The program was internationally inclusive, and featured projects from across Australia and New Zealand, culminating in the first ever joint procurement of shared satellite infrastructure by both governments. Judges described the project as a world class initiative with far reaching benefits for the industry and praised its contribution to major improvements in location-based capabilities for Australia and New Zealand.

INNOVATION & COMMERCIALISATION
Rail Runner (Veris Australia)

Conceptualised, designed, and built by the Veris team, the innovative Rail Runner is a trolley system that enables the surveying of overhead, suspended, and hard-to-access rails. Custom designed to address regular problems confronted by surveyors working on mining assets in the Pilbara region, the project successfully eliminates working at height risks, and minimises the need to shutdown production assets. The custom solution incorporates a self-fabricated mechanism, allowing auto-levelling of the prism to occur, and can be deployed on difficult rails without risking safety. Judges praised the clever innovation of the project, and the larger commercial viability of such a bespoke asset.

AWARD FOR ENVIRONMENT & SUSTAINABILITY
Port Phillip Bay Coastal Hazard Assessment (CSIRO's Data61 and DELWP's Forest Fire and Regions and Local Infrastructure Groups)

The team co-designed a web-based 4D visualisation and analytics tool to support modelling and communicating coastal hazards in Victoria. The Port Philip Bay Coastal Assessment Hazard Decision Support System integrates 60 hazard layers across a range of sea-level rise scenarios, alongside showcasing DELWP's historical aerial imagery from as early as the 1930s. The system integrates various modules, 3D buildings and other datasets to allow informed analysis of various hazard scenarios for communities facing sea level rise and provides beneficial assets for marine and coastal management. Judges praised the project's high social, environmental, and economic value.