

## SmartSat PhD students land internships with European Space Agency

Adelaide, 25 October 2023 – [SmartSat Cooperative Research Centre \(SmartSat\)](#), Australia's leading space research centre, has announced that two of its rising PhD students have been selected to work on groundbreaking satellite research in a new internship program at the [European Space Agency \(ESA\)'s Φ-lab \(Phi Lab\)](#).

Brandon Victor, from La Trobe University, and Nermine Hendy, from RMIT University, will travel to [ESRIN](#), ESA's Specialised Centre of Excellence for Earth Observation, in Frascati, Italy, in January 2024 for a three-month research internship funded by SmartSat.

The European Space Agency's Φ-lab is a world-leading research centre with a mission to accelerate the future of Earth Observation through transformational innovations and new technologies, including artificial intelligence (AI) and on-board processing. This research will create the next generation of predictive intelligence to forecast and monitor agricultural and environmental activities and disaster events from space with much greater accuracy.

Speaking at the SmartSat Annual Conference, SmartSat CRC Chief Executive Officer Professor Andy Koronios said the new internship program is a further step in the collaboration between the two organisations.

"Over the past few years, our relationship with Φ-lab has grown stronger through our shared strategic research initiatives in the Kanyini and Φ-sat satellite missions. We're delighted to send these talented students to Φ-lab, which is at the forefront of Earth Observation technologies. This international collaboration is a great testament to the progress being made in Australia's space industry and a chance to showcase our nation's expertise," he said.

**Brandon Victor** recently completed a Computer Science Honours in Deep Learning at La Trobe University.

Brandon said the internship will be a fantastic opportunity to further his work on '*Using Satellite Data to Locate and Phenotype Plants from Space Research*'.

"This internship with Φ-lab gives me the opportunity for international travel, to meet new people working at the intersection of AI and satellite images and – most importantly – to work on an exciting project with global experts. This will undoubtedly be an excellent experience for me."

Brandon's research supervisor, Dr Zhen He, Associate Professor, Computer Science and Information Technology at La Trobe University, said:

"International experience and collaboration are invaluable to further develop the skills of Australia's young scientists. Programs like this enable students like Brandon the chance to learn from some of the world's greatest aerospace engineers and scientists and forge international connections that will generate new ideas and innovation."

**Nermine Hendy** is an Electrical and Electronic Engineering PhD researcher at RMIT University.

Nermine, who will work on the *'Interference modelling, detection, and mitigation for improving spaceborne SAR performance Research'*, said she hopes to explore more about the future challenges of space technology during her time at  $\Phi$ -lab.

"Gaining an internship at ESA's  $\Phi$ -lab is a life-changing opportunity for me. The internship will provide me the opportunity to approach real space technology and understand a practical space environment at an advanced space agency. It will be a great experience that will benefit building my professional career."

Nermine's research supervisor, Associate Professor Akram Hourani, School of Engineering, STEM College, at RMIT University, said:

"We are delighted that Nermine will engage in cutting-edge research and innovation in the field of synthetic aperture radar and satellite technology with the European Space Agency. This internship with ESA exemplifies our commitment to fostering industry collaborations for our PhD students and serves as a significant example of how such partnerships promote excellence in research, while providing students with exceptional industry experience. Nermine is an exceptional PhD student, distinguished by her unwavering diligence and perseverance. Her dedication to pushing the boundaries and crafting unique solutions to complex problems promises a bright future career filled with groundbreaking contributions."

Dr Nicolas Longepe, Earth Observation Data Scientist at ESA, who will be their mentor at  $\Phi$ -lab for the internship, said:

"We welcome these stellar students and look forward to the ideas and learning this program will inspire. Earth observation has immense potential to improve life on Earth, particularly as we face climate change and increased natural disasters, combined with food security pressures of the world's expanding population. Bringing together the best scientific minds will further space research and foster stronger international relationships between nations."

END

### **SMARTSAT CRC ENQUIRIES:**

**Alison Bowman**

Communications and Media, SmartSat CRC

0481 273 462 | [alison.bowman@smartsatcrc.com](mailto:alison.bowman@smartsatcrc.com)

## **ABOUT THE SMARTSAT CRC**

The SmartSat Cooperative Research Centre brings together over 100 national and international partners who have invested over \$190 million, along with \$55 million in Federal Government funding under its Cooperative Research Centres Program, in a \$245 million research effort over seven years. Working closely with the Australian Space Agency & Defence, SmartSat is making a strong contribution to the Australian Government's goal of tripling the size of the space sector to \$12 billion and creating up to 20,000 jobs by 2030. Priority industry sectors for SmartSat include telecommunications, agriculture and natural resources, and defence and national security. <https://smartsatcrc.com>

## **ABOUT THE EUROPEAN SPACE AGENCY (ESA)**

The European Space Agency is Europe's gateway to space. ESA is an intergovernmental organisation, created in 1975, with the mission to shape the development of Europe's space capability and ensure that investment in space delivers benefits to the citizens of Europe and the world.