



# Pluto Program: The Andy Thomas Space Foundation and cosine Remote Sensing Project Award

Applications are now invited for the Andy Thomas Space Foundation and cosine Remote Sensing Project Award

A prize of up to \$15,000 is available for researchers or doctoral candidates currently enrolled in an Australian university.

Applicants must be Australian citizens and special consideration will be given to eligible Australians with an indigenous background, female applicants and applicants from rural or regional areas.

## Overview

cosine Remote Sensing develops and builds advanced optical instruments for remote sensing from spacecraft and aircraft and has more than 25 years' experience in the development of miniaturized, intelligent optical instrumentation for space-based remote sensing. Applications include scientific and operational Earth observation, navigation in space and planetary science as well as agriculture management. One of the products for space-based remote sensing is the HyperScout (r) instrument, a world-leading hyperspectral camera with on-board image processing and artificial intelligence that operates in the visible, near-infrared and thermal infrared regime and has an exceptionally large field of view. For more information, see <http://cosine.nl>.

In partnership with the Andy Thomas Space Foundation, cosine encourages applications from Australian researchers or doctoral candidates to apply for a Foundation-cosine research award in one or more of the following areas:

- Verification and validation of rapid detection methods for draughts, fire hazards, early bush fire occurrence, agricultural abnormalities and water quality using HyperScout (r) imagery from Kanyini and other hyperspectral sources
  - Acquisition, collection, processing and fusion of high-resolution, hyperspectral and thermal data for Australia in support of these applications
- Development of novel conventional and artificial intelligence algorithms, both on board and on ground, for these applications
  - Design and analysis of operational systems designed for these applications, including constellation properties, communications, on-board and on-ground processing and low-latency information distribution for end users.

## Specific Requirements

Applicants are required to submit a short (maximum 6 pages) research project proposal outlining their motivation, expected results and discuss the potential impact the project may have on the space science community. Projects with clear demonstrable practical applications will be strongly considered. In addition, applicants should attach a

copy of their CV outlining their knowledge, achievements and academic record in the field of space instrumentation, remote sensing and/or the application listed above.

Applicants should be willing and able to travel to Europe for short term visits and act as a liaison for the academic collaboration between Australia and the Netherlands in the context of the Kanyini mission and related research and development activities.

The proposals will be assessed on the following criteria:

- Novelty and practicality. Projects should present a novel approach to solve a problem with a practical implementation period of less than 5 years [30%]; TBC
- Clarity. The project should be clearly explained within the specified page limit [30%]; TBC
- Contribution to the field of operational remote sensing research and engineering [40%].

## Timeline

- 18 March 2022 – Applications open
- 27 May 2022 – Applications close (must be received by midnight CST)
- 10 June 2022 – Successful recipients notified

## Submission content and format

The application must include:

### 1. A completed application form

- To download the application form or complete the application on-line, go to

<https://andythomas.foundation/applications>

Please keep a record of your Application Keyword

### 2. A research proposal (maximum 6 pages)

- Please see Specific Requirements above

- To upload in PDF format, go to <https://andythomas.foundation/applications> and enter your Application ID from step 1

OR email the document in PDF format to [educationfund@andythomas.foundation](mailto:educationfund@andythomas.foundation), quoting your Application ID from step 1

### 3. A copy of the applicant's academic transcripts

- To upload in PDF format, go to <https://andythomas.foundation/applications> and enter your Application ID from step 1

OR email the document in PDF format to [educationfund@andythomas.foundation](mailto:educationfund@andythomas.foundation), quoting your Application ID from step 1

To be considered, completed applications must be lodged before midnight SA time on the closing date set out above.

## Selection process

A selection committee will review and short-list recipients. The selection committee will consist of representatives from the Foundation and cosine.

## Publicity

The Foundation reserves the right to publish information about successful applicants as set out in the personal application documents Foundation.

The successful applicant agrees to complete both a written and recorded (video recording) testimonial/ reflection of the program following their completion or as requested by the Foundation. These testimonials are able to be used in all printed and virtual media published by the Foundation.

The successful applicant agrees to complete a short survey at the commencement and completion of their program to provide feedback to the Foundation

## **More Information**

If you need further information or have particular questions, please email: [educationfund@andythomas.foundation](mailto:educationfund@andythomas.foundation)