

## Media Release

### Space Junk Endangers the Final Frontier

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The world's top space environment researchers will meet in Canberra this week to discuss ways to clean up the masses of space debris currently orbiting earth.



The Space Environment Research Centre's (SERC) International Research Colloquium, to be held from 31 May – 1 June, is the premier event of the year for the Canberra-based international research collaboration organisation. The Research Colloquium will bring together researchers, industry groups and space agencies to collaborate and share research as they develop methods to track and remove the estimated 170 million pieces of man-made space debris endangering access to space and space-based services.

Around USD\$700 billion worth of global space infrastructure is currently at risk from collisions with an ever increasing amount of space debris. Globally, space infrastructure delivers essential and highly efficient services including communications, navigation, resource management and climate change monitoring. This infrastructure is at risk from space debris ranging in size from spent rocket stages as large as busses, to flakes of paint measuring only 5mm. This debris can travel at speeds in excess of 27,000km/h, so even a flake of paint can badly damage or destroy satellites.

SERC Chief Executive Officer, Dr Ben Greene believes international collaboration is essential for a global problem like space debris.

"We can currently track around 22,000 of the estimated 170 million items of debris orbiting the earth. There is so much debris that it is colliding with itself, and creating more debris. A



catastrophic avalanche of collisions which could quickly destroy all orbiting satellites is now possible.” Dr Greene said.

“Light from lasers can be used to move debris objects in space. SERC’s initial aim is to reduce the rate of debris proliferation caused by new collisions, and to subsequently demonstrate the cost effective removal of debris using ground-based lasers”.

The resource commitments for SERC have come from every tier of space activity and are an indication of the international importance of this initiative.”

Working at SERC’s \$20 million research facility, SERC researchers are tackling the problem by enhancing capability in tracking, characterising and identifying objects in orbit, orbit determination and predicting behaviours of space objects.

### **About SERC**

Funded by the Australian Government’s Cooperative Research Centre Programme and Participants, SERC is a partnership between Canberra-based company EOS Space Systems, the ANU, RMIT University, Optus Satellite Systems, Lockheed Martin and the Japanese National Institute of Information and Communications Technology (NICT).

SERC brings together leading debris mitigation programs from around the world to create a team with the required critical mass of researchers, technology, funding and equipment to address the problem of space debris.

### **SERC subject matter experts:**

1. Astrodynamics, space situational awareness (SSA), international collaboration on space debris mitigation – Professor Moriba Jah, University of Texas
2. Adaptive optics, early career research– Dr Doris Grosse , Australian National University
3. Early career research – Ms Jessica Todd, SERC
4. SERC, international collaboration on space debris mitigation, Australian expertise and world leading technology in SSA, debris mitigation and SERC research programs – Dr Ben Greene (Chief Executive Officer)

**To arrange a media interview with any of our research team, please contact:**

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