



# LSGI & RILS RESEARCH SEMINAR

## The Asia-Pacific Reference Frame (APREF) Project - Learnings from Operations over 15 Years and Recent Progress

 **30 MAR 2026 (MON)**

 **3:00 PM - 4:00 PM**

 **Z205, POLYU**

 **ENGLISH**

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### ABSTRACT

The Asia-Pacific Reference Frame (APREF) project is a joint initiative between the International Association of Geodesy (IAG) and the Regional Committee of United Nations Global Geospatial Information Management for Asia and the Pacific (UN-GGIM-AP) which has the primary aim to create and maintain an accurate geodetic framework to meet the growing needs of industries, science programs and the public using positioning applications in the Asia-Pacific region. The APREF is realized by over 1,000 GNSS Continuously Operating Reference Stations (CORS) and provides their weekly coordinate and long-term velocity solutions to improve access to the International Terrestrial Reference Frame (ITRF), currently ITRF2020. The APREF supports a broad range of applications including realization and monitoring of national geodetic reference systems and monitoring of crustal dynamics in the region. This talk summarizes what we have learnt from the APREF project over 15 years, recent progress and achievements, and future direction of the project.

### BIOGRAPHY

Dr. Guorong HU is a Geodetic Scientist at Geoscience Australia, specializing in high-precision GNSS data analysis, geodetic reference frames, and geodetic infrastructure development. Since joining Geoscience Australia in 2006, he has led and contributed to a number of practical scientific projects, including the development of validation strategies for GNSS absolute robotic antenna calibration, advanced analysis strategies for millimeter-level GNSS deformation monitoring, and high-precision GPS height determination supporting Australia's geoid modelling and national datum modernization. He plays a key role in international geodetic collaboration, serving as the manager of the Asia-Pacific Reference Frame (APREF) GNSS CORS network and coordinating the annual GNSS campaign of the Geodetic Reference Frame Working Group of the United Nations Global Geospatial Information Management for Asia and the Pacific (UN-GGIM-AP). He has also contributed to the operational coordination of International GNSS Service (IGS) products, including precise orbits, clocks, and Earth rotation parameters. Dr. Hu is an authorized GNSS analyst and approved signatory of the National Association of Testing Authorities (NATA), providing legally traceable GNSS position verification services under Australia's National Measurement Act, and also serves as a GPS expert for the Federal Court of Australia

### Moderator:

**Prof. Wu CHEN, Head of LSGI, member of RILS**

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