Dongju PENG

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Dr Dongju Peng studied precise orbit determination for Low Earth Orbiting satellite using high-precision geodetic data (e.g. Global Navigation Satellite System, Doppler Orbitography and Radio-positioning Integrated by Satellite, space-borne accelerometer) at the Shanghai Astronomical Observatory, Chinese Academy of Science and Royal Melbourne Institute of Technology, Australia. Her research focused on improving the accuracy of orbit determination by developing models to mitigate the errors in observation data and algorithms to combine data from multi-techniques in orbit calculation. She became interested in sea-level studies after successfully obtaining centimeter-level orbit accuracy for an altimetry satellite Jason-1 and investigated the short- and long-term sea level changes in the South China Sea region from satellite altimetry data and tide-gauge records at Laboratoire d'Etudes en Géophysique et Océanographie Spatiales, Toulouse, France. After joining the Earth Observatory of Singapore, Nanyang Technological University in 2015, her research now focusses on studying (1) postseismic deformation from observations (GNSS and Interferometric synthetic aperture radar) and dynamic models, and (2) sea-level changes in Singapore and the surrounding regions from a novel technique – GPS tide gauges - to identify the driving mechanisms responsible for the regional variability.