# Engineering

August 2020

QK2048727

## Geodesy and Survey Engineering

Pages 860–935

万方数据

Engineering Contents
Volume 6 • Issue 8 • August 2020

## Editorial



## News & Highlights



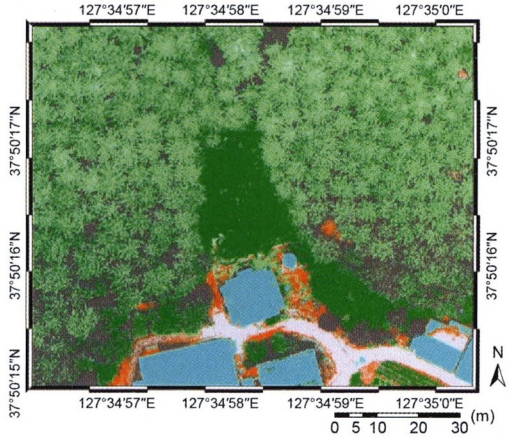
## Topic Insights



## Research

### Geodesy and Survey Engineering—Article





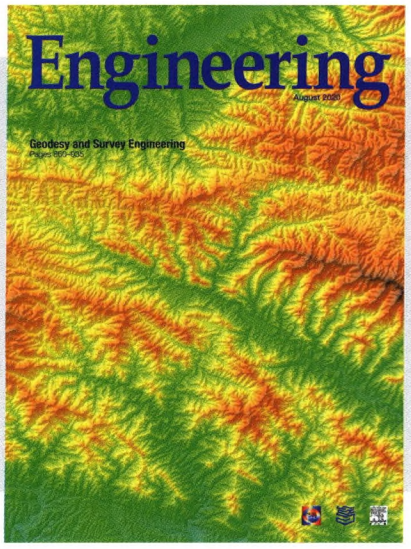

Page 922



万方数据

# Contents



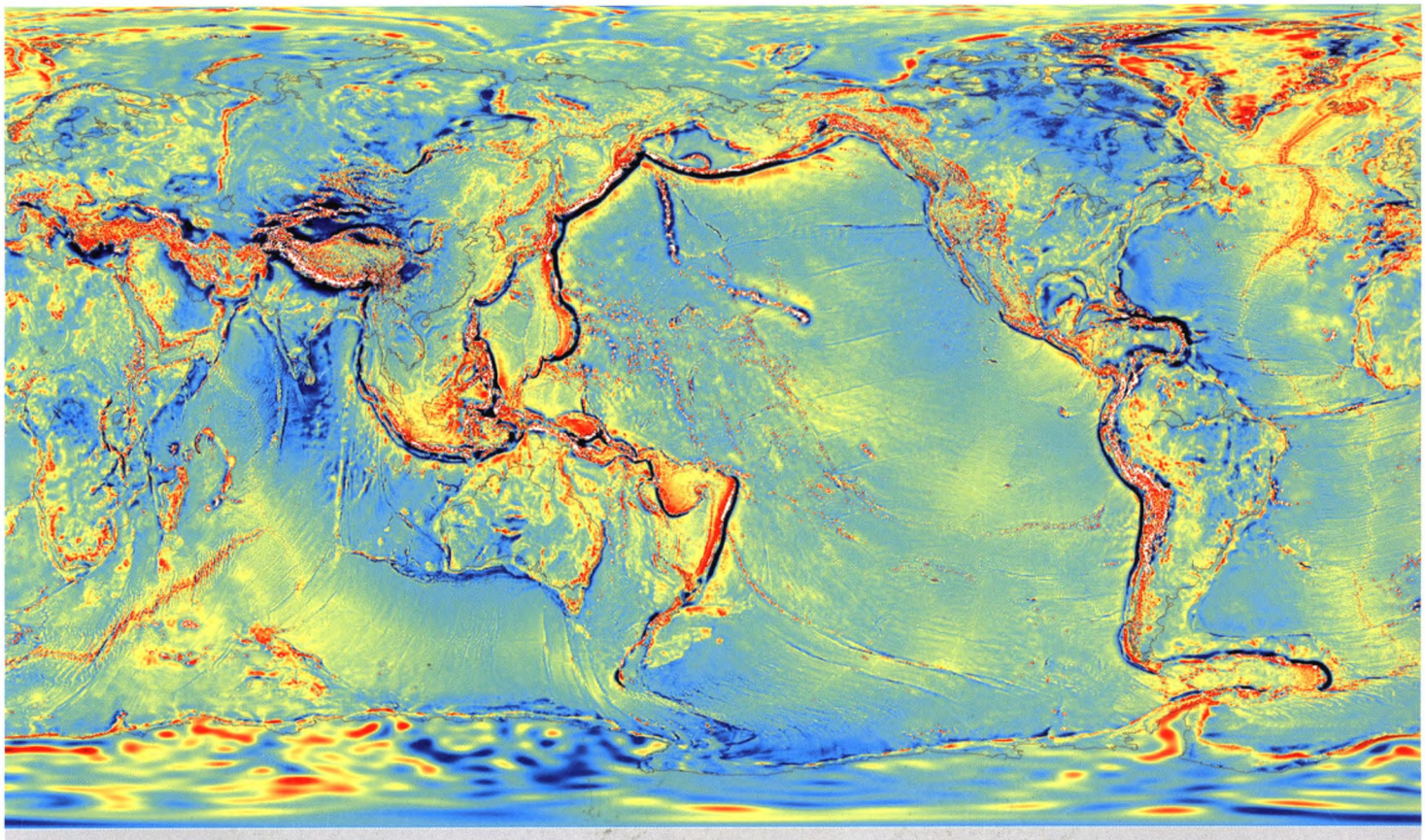



## ON THE COVER

Promptly updated digital elevation models (DEMs) that reflect the topography of the Earth are essential for many purposes, including geohazard mitigation. Current technologies for generating DEM are mainly based on images from airborne and low-earth-orbiting (LEO) space-borne sensors. The DEM update rates from such sensors are limited due to the low revisit frequency of the sensor platforms. It is therefore important to explore new ways for generating promptly updated DEM. Research on generating daily DEM based on future geostationary synthetic aperture radar (GEOSAR) data is published in this special issue entitled *Geodesy and Surveying Engineering*. The research demonstrates that daily DEM generation based on GEOSAR data and the interferometric SAR (InSAR) concept is possible, although further research is needed to enhance the accuracy of such DEM. The cover image shows the topography of an area generated from NASA's Shuttle Radar Topography Mission and used to simulate the quality of GEOSAR interferograms in the research.


万方数据

# Engineering Science and Technology Create a Better Future



The back cover image shows global gravity anomalies at a 5′ × 5′ spatial resolution from SGG-UGM-2, an Earth's gravity field model. This new high-resolution model, which extends up to degree 2190 and order 2159, was constructed by scholars at Wuhan University based on the theory of ellipsoidal harmonic analysis and coefficient transformation. Gravity data was derived from satellite gravimetry (GRACE and GOCE), satellite altimetry, and Earth Gravitational Model 2008 (EGM2008).

***Engineering*** is intended to provide a high-level platform where academic achievements of great importance in engineering science and technology can be disseminated and shared.

ISSN 2095-8099 工程(英文)
CN 10-1244/N
Distribution code Q1849
国内发行代号 80-744
Available online http://www.engineering.org.cn

万方数据