



Ropesh Goyal

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Brief Summary

I am a joint doctoral degree student of Curtin University and IIT Kanpur. My present research focuses on studying, analysing and implementing the various methods of gravimetric geoid modelling over India, a country with topography varying from the Gangetic plains to the Himalayas. One of the main goals of this research is to account for a few of possibly many 'research gaps' that are present in the practical implementation of the theories under the term 'assumption'.

Education: Bachelor of Technology from Govind Ballabh Pant University of Agriculture and Technology (G.B.P.U.A.&T.), Pantnagar, India.

Research interests: Gravity field modelling, Altimetry, Sea Level Rise

Thesis title: Development of gravimetric geoid model for India

Supervisors: Prof. Will Featherstone and Dr. Sten Claessens (at Curtin University)
Prof. Onkar Dikshit and Prof. B. Nagarajan (at Indian Institute of Technology Kanpur)

Publications:

Goyal, R., Dikshit, O., Nagarajan, B. (2019). Evaluation of different Global Geopotential Models: A case study of India. *Survey Review*, 51 (368), 402-412. DOI:10.1080/00396265.2018.1468537

Goyal, R., Featherstone, W. E., Tsoulis, D., Dikshit, O. (2020). Efficient spatial-spectral computation of local planar gravimetric terrain corrections from high-resolution digital elevation models. *Geophysical Journal International*, 221 (3), 1820-1831. DOI: 10.1093/gji/ggaa107

Conferences:

Goyal, R., Nagarajan, B., Dikshit, O. (2017). Status of precise geoid modelling in India: A review. *Proceedings of 37th Indian National Cartographic Association International Congress, Dehradun, India.* pp. 308-313.

Nagarajan, B., **Goyal, R.** (2019). Development of precise Digital Elevation Model (DEM) for aiding in Ganga rejuvenation programme. In: *Workshop on Geospatial Technology: An aid to Ganga Rejuvenation. Survey of India, Dehradun, India.*

Goyal, R., Devaraju, B., Featherstone, W. E., Nagarajan, B., Claessens, S. J, Dikshit, O. (2019). A gravimetric geoid model for India: Challenges and current status. In: *27th International Union of Geodesy and Geophysics General Assembly, July 8-18, 2019. Montreal, Canada.*

Goyal, R., Featherstone, W. E., Claessens, S. J, Devaraju, B., Nagarajan, B., Dikshit, O. (2019). A numerical approach to the mass-prism integration for fast determination of terrain corrections. In: *27th International Union of Geodesy and Geophysics General Assembly, July 8-18, 2019. Montreal, Canada.*

Goyal, R., Claessens, S.J., Featherstone, W.E., Dikshit, O. (2020). Subtleties in spherical harmonic synthesis of the gravity field. In: *European Geosciences Union General Assembly, 3-8 May 2020. Vienna, Austria.* DOI: 10.5194/egusphere-egu2020-59

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