

Dr. Vikram Goel

CONTACT INFORMATION	<p>National Centre for Polar & Ocean Research, +91-8076-837-687 Headland Sada, Vasco Da Gama, Goa 403804</p> <p>vikram@ncpor.res.in vikram.goel@outlook.com ORCID: 0000-0002-8393-0195</p>
RESEARCH INTERESTS	Glaciology, geophysical data collection and analysis (incl. ground-penetrating radar and GNSS systems), ice-flow modelling, Geographical Information Systems (GIS).
EDUCATION	<p>University of Oslo, Oslo, Norway</p> <p>Ph.D., Antarctic Glaciology, June 2019</p> <ul style="list-style-type: none"> Thesis Topic: <i>Current status and past changes of ice rises in Dronning Maud Land, Antarctica</i> Advisors: Kenichi Matsuoka, Jon Ove Hagen and Thamban Meloth <p>Indian Institute of Technology Kharagpur, Kharagpur, WB, India</p> <p>M.Tech., Earth System Science & Technology, May 2013</p> <ul style="list-style-type: none"> Thesis Topic: <i>Application of mid-latitude postfrontal shower characteristics to adverse weather avoidance model in aviation</i> Advisors: Thomas Hauf, and M K Dash <p>University of Petroleum and Energy Studies, Dehradun, UK, India</p> <p>B.Tech., Aerospace Engineering, May 2011</p> <ul style="list-style-type: none"> Thesis Topic: <i>Analysis of advanced deep space propulsion techniques</i> Advisors: Ugur Guven
RESEARCH EXPERIENCE	<p>National Center for Polar & Ocean Research, Headland Sada, Vasco Da Gama, India Apr 2018 to Present</p> <p>Project Scientist - II (April 2022 - Present) Project Scientist - B (April 2018 to March 2022)</p> <ul style="list-style-type: none"> Undertook the <i>41st Indian Scientific Expedition to Antarctica</i>. Conducted 500 km+ deep-sounding radar survey over Kamelryggen and Verbljud Ice Rises and other geophysical data. Leading the data analysis. Undertook the <i>38th Indian Scientific Expedition to Antarctica</i> collecting various geophysical data in Nivlisen Ice Shelf and Leningrad Ice Rise. Analyzed field-based and satellite data to determine mass balance of several ice rises. Investigated the past evolution of several ice rises by using an ice-flow model to simulate observed internal stratigraphy. Examined the regional characteristics of ice rises and suggested future direction of ice rise research. <p>Norwegian Polar Institute, Tromsø, Norway Jan 2014 to Aug 2017</p> <p>Research Fellow (Apr 2014 - Aug 2017)</p> <ul style="list-style-type: none"> Investigated the current status and past evolution of ice rises in Dronning Maud Land, Antarctica. <p>Research Technician (Jan 2014 - Feb 2014)</p>

- Participated in the *Norwegian Antarctic Research Expedition to Dronning Maud Land Antarctica*. Made glaciological measurements.

Leibniz University Hannover, Hannover, Germany Sep 2012 to Mar 2013

Masters Student

- Studied the safety and efficiency relationship for an adverse weather avoidance model in aviation for mid-latitude postfrontal showers
Supervisor: Thomas Hauf

University of Massachusetts Dartmouth, MA, USA Jun 2012 to Jul 2012

Masters Intern

- Worked on enhanced web availability of satellite derived SST data for western North Atlantic Ocean for local fishermen
Supervisor: James J. Bisagni

PUBLICATIONS

Peer-reviewed Papers

1. Frémand, A. C., Fretwell, P., Bodart, J., Pritchard, H. D., Aitken, A., Bamber, J. L., Bell, R., Bianchi, C., Bingham, R. G., Blankenship, D. D., Casassa, G., Catania, G., Christianson, K., Conway, H., Corr, H. F. J., Cui, X., Damaske, D., Damm, V., Drews, R., Eagles, G., Eisen, O., Eisermann, H., Ferraccioli, F., Field, E., Forsberg, R., Franke, S., Fujita, S., Gim, Y., **Goel, V.**, Gogineni, S. P., and 50 others: Antarctic Bedmap data: FAIR sharing of 60 years of ice bed, surface and thickness data [**Preprint**], *ESSD – Ice/Glaciology*, <https://doi.org/10.5194/essd-2022-355>, 2022. [Accepted]
 2. **Goel, V.**, Morris, A., Moholdt, G., Matsuoka, K. 2022. Synthesis of field and satellite data to elucidate recent mass balance of five ice rises in Dronning Maud Land, Antarctica. *Frontiers in Earth Science* 10, <https://doi.org/10.3389/feart.2022.975606>, 2022.
 3. Pratap, B., Dey, R., Matsuoka, K., Moholdt, G., Lindback, K., **Goel, V.**, Laluraj, C.M., Meloth, T. Three-decade spatial patterns in surface mass balance of the Nivlisen Ice Shelf, central Dronning Maud Land, East Antarctica, *Journal of Glaciology*, 2021, 1–13, <https://doi.org/10.1017/jog.2021.93>, 2021.
 4. **Goel V**, Matsuoka K, Berger CD, Lee I, Dall J, Forsberg R (2020). Characteristics of ice rises and ice rumpled in Dronning Maud Land and Enderby Land, Antarctica. *Journal of Glaciology* 1–15. <https://doi.org/10.1017/jog.2020.77>, 2020.
 5. Morlighem, M., Rignot, E., Binder, T., Blankenship, D., Drews, R., Eagles, G., Eisen, O., Ferraccioli, F., Forsberg, R., Fretwell, P., **Goel, V.**, Greenbaum, J.S., and 25 others. Deep glacial troughs and stabilizing ridges unveiled beneath the margins of the Antarctic ice sheet. *Nature Geoscience* 1–6. <https://doi.org/10.1038/s41561-019-0510-8>, 2019.
 6. **Goel, V.**, Martin, C., and Matsuoka, K. (2018). Ice-rise stratigraphy reveals changes in surface mass balance over the last millennia in Dronning Maud Land. *Journal of Glaciology*, 64(248), 932–942. <https://doi.org/10.1017/jog.2018.81>, 2018
 7. **Goel, V.**, Brown, J., and Matsuoka, K.: Glaciological settings and recent mass balance of Blåskimen Island in Dronning Maud Land, Antarctica, *The Cryosphere*, 11, 2883–2896, <https://doi.org/10.5194/tc-11-2883-2017>, 2017.
- Goel, V.**, Martin, C., and Matsuoka, K. Evolution of ice rises in the Fimbul Ice Shelf, Dronning Maud Land, over the last millennium, *Antarctic Science*, [In review]

Published Data

Published datasets at NPI data center (data.npolar.no)

White Papers

1. Matsuoka, K., Clifton, R., Blankenship, D., Cui, X., Eagles, G., Eisen, O., **Goel, V.** and 15 others: International collaboration is urgently needed for airborne surveys in Enderby Land to fill the largest RINGS data gap. *Zenodo*. <https://doi.org/10.5281/zenodo.7818281> , 2023.

JOURNAL REVIEWER

- [Journal of Glaciology](#)
- [Earth and Space Science](#)
- [Journal of Geophysical Research: Earth Surface](#)

AWARDS

- Support of 7000 Norwegian Kroner (700 Euro) to attend SCAR (Scientific Committee on Antarctic Research) RINGS Action Group Workshop in Tromsø, Norway, June 2022
- Travel award of \$500 from the SCAR Physical Sciences group to attend Polar 2018, Davos, Switzerland, Jun 2018.
- Best oral presentation at the International Glaciological Society Nordic Branch Meeting, Reykjavik, Iceland, Oct 2014
- DAAD (German Academic Exchange Service) IIT Master Thesis Scholarship

CONFERENCES

Talks

- SCAR Open Science Conference 2022 Online
Title: *“Glaciological site survey to determine an optimal coring site in coastal Dronning Maud Land, Antarctica ”* Aug 2022
- IGS Nordic Branch Meeting 2020 Online
Title: *“Characteristics of ice rises in Dronning Maud Land, Antarctica”* Nov 2020
- SCAR Open Science Conference 2020 Online
Title: *“Present and past evolution of Fimbul Ice Shelf region, East Antarctica: Ground-based investigations over three ice rises”* Aug 2020
- Climate Change Impacts, Vulnerabilities, and Adaptation (CCIVA), Indian Institute of Technology, Kharagpur, West Bengal, India
Title: *“Characteristics of ice rises and rumples in Dronning Maud Land, Antarctica”* Mar 2019
- International Glaciological Society Nordic Branch Meeting, Tromsø, Norway
Title: *“Glaciological settings and recent mass balance of Blaskimen Ice Rise, Antarctica”* Oct 2016
- International Glaciological Society International Symposium on Interactions of Ice Sheets and Glaciers with the Ocean, San Diego, USA
Title: *“Glaciological settings and recent mass balance of Blaskimen Ice Rise, Antarctica”* Jul 2016
- 12th International Symposium on Antarctic Earth Sciences, Goa, India
Title: *“Recent thickening of the Blaskimen Ice Rise in Dronning Maud Land Antarctica”* Jul 2015
- International Glaciological Society Nordic Branch Meeting, Reykjavik, Iceland
Title: *“Current status and past changes of ice rises in Dronning Maud Land, Antarctica– Initial results from Blaskimen”* Oct 2014

Posters

- SCAR RINGS Action Group Workshop
Title: *“Geophysical survey to determine an optimal ice coring site in coastal Dronning Maud Land”*, at the SCAR RINGS Workshop, Tromsø, Norway June 2022
- *“Current Status and Past Evolution of Ice Rises in Dronning Maud Land, Antarctica”*, at the Polar 2018 conference, Davos, Switzerland Jun 2018

- “*This is APECS (Association of Polar Early Career Scientists)*”, at the CHES all staff meeting, Bergen, Norway Mar 2016

Attended

- “*Arctic Frontiers 2017 (Arctic - Hindu-Kush Himalayan Science Policy dialogue)*” Jan 2017
- “*APECS World Summit 2015, Sofia, Bulgaria,*” June 2015

LEADERSHIP AND OTHER ACTIVITIES

- **Early career researcher representative to the SCAR’s RINGS Action Group**, Oct 2021 - Present
 - Co-organized and chaired a panel discussion on ‘Lessons from previous projects’ during the SCAR RINGS Action Group workshop, Tromsø, Norway, June 2022
 - Led organising and chairing of Session 10 during the SCAR Open Science Conference 2020 Online, Aug 2020
- **Part of APECS (Association of Polar Early Career Scientists) leadership as a council member** from 2015-2021
 - Led the project group to organise “APECS annual online conference 2019: *Breaking Barriers*”
 - Co-organized and chaired a breakout session during the APECS World Summit 2018, Davos, June 2018
 - Organized APECS Panel discussion on “Work-Personal life balance” during the IGS Nordic Branch Meeting, Tromsø, 2016

Sessions chaired

- *Chaired a session during SCAR Open Science Conference 2020 Online* Aug 2020
- *Chaired a session during APECS annual online conference 2019: *Breaking Barriers** Mar 2018
- *Chaired a session during APECS annual online conference 2018: *Butterfly effect** Mar 2018
- *Chaired a session during APECS annual online conference 2017: *Outside the box** Mar 2017
- *Chaired a session at the International Glaciological Society Nordic Branch Meeting, Tromsø, Norway* Oct 2016
- “*Chaired a session at the CHES all staff meeting, Bergen*” Mar 2016