Surendra Adhikari, Ph.D.
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Professional Appointments

- Research Scientist III, Jet Propulsion Laboratory, 2019 onwards
- Research Scientist II, Jet Propulsion Laboratory, 2017-2018

Education and Academic Preparation

- NASA Postdoctoral Program (NPP) Fellow, Jet Propulsion Laboratory, 2015-2016
- Postdoctoral Scholar in Geophysics, California Institute of Technology, 2013-2014
- Ph.D., Geography, University of Calgary, Canada, 2008-2012
- M.Sc., Engineering Geology, Vrije Universiteit Brussel, Belgium, 2006-2007
- B.Eng., Agricultural Engineering, Tribhuvan University, Nepal, 2000-2004

Select Awards and Honors

- John Wahr Early Career Award, AGU Geodesy Section, 2021.
- AGU-Eos Geodesy Section Science Advisor, 2021-2023.
- Charles Elachi Early Career Award, Jet Propulsion Laboratory, 2020
  [For providing new insights into the interactions between ice sheets and the solid Earth.]
- NASA Early Career Public Achievement Medal, 2019
  [For achievements in diverse areas of glaciology and geodesy, fostering a deep understanding of the physics of mass transport at all scales, from global to local.]
- NASA Group Achievement Award for the Ice-sheet and Sea-level System Model, 2019
- JPL Outstanding Postdoctoral Research Award, 2016
- Member of the GRACE and GRACE-FO Science Team, 2016-2023
- Member of the NASA Sea-Level Change Team (N-SLCT), 2015-2024
- Member of the NASA Earth Surface and Interior (ESI) Science Team, 2020-2022.
- Syvitski Student Modeler Award, 2013
  [For innovative model development in the field of Earth-surface dynamics.]
- University of Calgary Outstanding Doctorate Student Presentation Award, 2010
- University of Calgary Dean's Entrance Scholarship, 2008
- Flemish Interuniversity Council (VLIR) Scholarship, 2005-2007

Peer-Reviewed Publications (* = postdoc/student)

Submitted

1. E.R. Ivins, L. Caron, **S. Adhikari**, E. Larour, 2021: Notes on Extended Burgers Model of rheology, submitted to *Geophysical Journal International*, Ref. #GJI-21-0815.
2. F. Beaud, S. Aati, I. Delaney*, **S. Adhikari**, J.-P. Avouac, 2021: Generalized sliding law applied to the surge dynamics of Shisper Glacier and constrained by timeseries

correlation of optical satellite images, *The Cryosphere Discussions*, doi: 10.5194/tc-2021-96.

3. R.S. Nerem, B.D. Hamlington, J. Fasullo, **S. Adhikari**, T.C. Harvey, 2020: Extrapolating satellite measurements for understanding future regional sea level change, under review for *Geophysical Research Letters*, Ref. #2019GL086936.
4. T. Frederikse, **S. Adhikari.**, L. Caron, B.D. Hamlington, E.R. Ivins, M. Karegar, F.W. Landerer, R. Rietbroek, R. Riva, K. Simon, A. Slangen, B. Uebbing, 2019: Towards closure of the contemporary regional sea-level budget, under review for *Environmental Research Letters*, Ref. #ERL-105673.

Published

5. **S. Adhikari**, G.A. Milne, L. Caron, S.A. Khan, K.K. Kjeldsen, J. Nilsson, E. Larour, E.R. Ivins, 2021: Decadal to centennial timescale mantle viscosity inferred from modern crustal uplift rates in Greenland, *Geophysical Research Letters*, 48, e2021GL094040.
6. K. Hansen, M. Truffer, A. Aschwanden, K. Mankoff, M. Bevis, A. Humbert, M. van den Broeke, B. Noel, A. Bjork, W. Colgan, K. Kjaer, **S. Adhikari**, V. Barletta, S.A. Khan, 2021: Estimating ice discharge at Greenland's three largest outlet glaciers using local bedrock uplift, *Geophysical Research Letters*, 48, e2021GL094252.
7. T. Frederikse, **S. Adhikari**, T.J. Daley, S. Dangendorf, R. Gehrels, F. Landerer, M. Marcos, T. Newton, G. Rush, A. Slangen, G. Woppelmann, 2021: Constraining 20th-century sea-level rise in the South Atlantic Ocean, *Journal of Geophysical Research: Oceans*, 126, e2020JC016970.
8. E. Larour, L. Caron, M. Morlighem, **S. Adhikari**, T. Frederikse, N.-J. Schlegel, E.R. Ivins, B.D. Hamlington, R. Kopp, S. Nowicki, 2020: ISSM-SLPS: geodetically compliant Sea-Level Projection System for the Ice-sheet and Sea-level System Model v4.14, *Geoscientific Model Development*, 13, 4925-4941, doi: 10.5194/gmd-13-4925-2020.
9. E.R. Ivins, L. Caron, **S. Adhikari**, E. Larour, M. Scheinert, 2020: A linear viscoelasticity for decadal to centennial time scale mantle deformation, *Reports on Progress in Physics*, 83, 106801, doi: 10.1088/1361-6633/aba346.
10. **S. Adhikari**, E.R. Ivins, E. Larour, L. Caron, H. Seroussi, 2020: A kinematic formalism for tracking ice-ocean mass exchange on the Earth's surface and estimating sea-level change, *The Cryosphere*, 14, 2819-2833, doi: 10.5194/tc-14-2819-2020.
11. T. Frederikse, F.W. Landerer, L. Caron, **S. Adhikari.**, D. Parkes, V. Humphrey, S. Dangendorf, P. Hogarth, L. Zanna, L. Cheng, H. Wu, 2020: The causes of sea-level rise since 1900, *Nature*, 584, 393-397, doi: 10.1038/s41586-020-2591-3. [Picket up by 19 news outlets | Altmetric score: 772]
12. B.D. Hamlington and 50 others including **S. Adhikari**, 2020, Understanding of contemporary regional sea-level change and the implications for the future, *Review of Geophysics*, 58(3), e2019RG000672, doi: 10.1029/2019RG000672.
13. B.D. Hamlington, T. Frederikse, R.S. Nerem, J.T. Fasullo, **S. Adhikari**, 2020, Investigating the acceleration of regional sea-level rise during the satellite altimetry era, *Geophysical Research Letters*, 47, e2019GL086528, doi: 10.1029/2019GL086528.
14. I. Delaney*, **S. Adhikari**, 2020: Increased subglacial sediment discharge in a warming climate: consideration of ice dynamics, glacial erosion and fluvial sediment transport, *Geophysical Research Letters*, 47, e2019GL085672, doi: 10.1029/2019GL085672.

15. R.R. Wijngaard, J.F. Steiner, P.D.A. Kraaijenbrink, C. Klug, **S. Adhikari**, A. Banerjee, F. Pellicciotti, L.P.H. van Beek, M.F.P. Bierkens, A.F. Lutz, W.W. Immerzeel, 2019: Modelling the response of the Langtang Glacier and the Hintereisferner to a changing climate since the Little Ice Age, *Frontiers in Earth Science*, 7, 143, doi: 10.3389/feart.2019.00143.
16. **S. Adhikari**, E.R. Ivins, T. Frederikse, F.W. Landerer, L. Caron, 2019: Sea-level fingerprints emergent from GRACE mission data, *Earth System Science Data*, 11, 629-646, doi: 10.5194/essd-11-629-2019.
17. E. Larour, H. Seroussi, **S. Adhikari**, E.R. Ivins, L. Caron, M. Morlighem, N. Schlegel, 2019: Slowdown in Antarctic mass loss from solid-Earth and sea-level feedbacks, *Science*, 364, eaav7908, doi: 10.1126/science.aav7908. [6 news outlets | Altmetric score: 214]
18. **S. Adhikari**, L. Caron, B. Steinberger, J.T. Reager, K.K. Kjeldsen, B. Marzeion, E. Larour, E.R. Ivins, 2018: What drives 20th century polar motion? *Earth and Planetary Science Letters*, 502, 126-132, doi: 10.1016/j.epsl.2018.08.059. [Picked up by 34 news outlets]
19. C. Milliner, K. Materna, R. Burgmann, Y. Fu, A.W. Moore, D. Bekaert, **S. Adhikari**, D. Argus, 2018: Tracking the weight of Hurricane Harvey's stormwater using GPS data, *Science Advances*, 4, eaau2477, doi: 10.1126/sciadv.aau2477. [Picked up by 6 news outlets | Altmetric score: 102]
20. B.D. Hamlington, A. Burgos, P.R. Thompson, F.W. Landerer, C.G. Piecuch, **S. Adhikari**, L. Caron, J.T. Reager, E.R. Ivins, 2018: Observation-driven estimation of the spatial variability of 20th century sea level rise, *Journal of Geophysical Research – Oceans*, 123, 2129-2140, doi: 10.1002/2017JC013486.
21. L. Caron, E.R. Ivins, E. Larour, **S. Adhikari**, J. Nilsson, G. Blewitt, 2018: GIA model statistics for GRACE hydrology, cryosphere and ocean science, *Geophysical Research Letters*, 45, 2203-2212. doi: 10.1002/2017GL076644.
22. E. Larour, E.R. Ivins, **S. Adhikari**, 2017: Should coastal planners have concern over where land ice is melting? *Science Advances*, 3, e1700537, doi: 10.1126/sciadv.1700537. [Picked up by 99 news outlets | Altmetric score: 1242]
23. **S. Adhikari**, E.R. Ivins, E. Larour, 2017: Mass transport waves amplified by intense Greenland melt and detected in solid Earth deformation, *Geophysical Research Letters*, 44, 4965-4975, doi: 10.1002/2016GL070552. [AGU/EOS journal highlights | Picked up by 40 news outlets | Altmetric score: 387]
24. P.R. Thompson, B.D. Hamlington, F.W. Landerer, **S. Adhikari**, 2016: Are long tide gauge records in the wrong place to measure global mean sea level rise? *Geophysical Research Letters*, 43, 10403-10411, doi: 10.1002/2016GL070552. [AGU/EOS research spotlights | Picked up by 25 news outlets | Altmetric score: 318]
25. **S. Adhikari**, E.R. Ivins, 2016: Climate-driven polar motion: 2003-2015, *Science Advances*, 2, e1501693, doi: 10.1126/sciadv.1501693. [Feature story by AAAS | Featured in NASA's Earth Observer & CORE report | Picked up by 89 news outlets | Altmetric score: 1033]
26. **S. Adhikari**, E.R. Ivins, E. Larour, 2016: ISSM-SESAW v1.0: Mesh-based computation of gravitationally consistent sea level and geodetic signatures caused by cryosphere and climate driven mass change, *Geoscientific Model Development*, 9, 1087-1109, doi: 10.5194/gmd-9-1087-2016. [Highlighted by the Caltech President to the Caltech Board of Trustee as a modeling breakthrough]

27. **S. Adhikari**, V.C. Tsai, 2015: A model for subglacial flooding through a preexisting hydrological network during the rapid drainage of supraglacial lakes, *Journal of Geophysical Research*, 120, 580-603, doi: 10.1002/2014JF003339.
28. **S. Adhikari**, E.R. Ivins, E. Larour, H. Seroussi, M. Morlighem, S. Nowicki, 2014: Future Antarctic bed topography and its implications for ice sheet dynamics, *Solid Earth*, 5, 569-584, doi: 10.5194/se-5-569-2014.
29. **S. Adhikari**, S.J. Marshall, 2013: Influence of high-order mechanics on simulation of glacier response to climate change: insights from Haig Glacier, Canadian Rocky Mountains, *The Cryosphere*, 7, 1527-1541, doi: 10.5194/tc-7-1527-2013.
30. **S. Adhikari**, S.J. Marshall, 2012: Glacier volume-area relation for high-order mechanics and transient glacier states, *Geophysical Research Letters*, 39, L16505, doi:10.1029/2012GL052712.
31. **S. Adhikari**, S.J. Marshall, 2012: Parameterization of lateral drag in flowline models of glacier dynamics, *Journal of Glaciology*, 58, 1119-1132, doi: 10.3189/2012JoG12J018.
32. **S. Adhikari**, S.J. Marshall, 2012: Modeling dynamics of valley glaciers, in *Numerical Modeling* (edited by P. Miidla), InTech Publ., 115-142, ISBN: 978-953-51-0219-9.
33. **S. Adhikari**, S.J. Marshall, 2011: Improvements to shear-deformational models of glacier dynamics through a longitudinal stress factor, *Journal of Glaciology*, 57, 1003-1016, doi: 10.3189/002214311798843449.
34. **S. Adhikari**, S.J. Marshall, P. Huybrechts, 2011: On Characteristic timescales of Glacier AX010 in the Nepalese Himalayas, *Bulletin of Glaciological Research*, 29, 19-29, doi: 10.5331/bgr.29.19.
35. **S. Adhikari**, P. Huybrechts, 2009: Numerical modeling of historical front variations and the 21st century evolution of Glacier AX010, Nepal Himalaya, *Annals of Glaciology*, 50, 27-34, doi: 10.3189/172756409789624346.

Major Datasets

- **S. Adhikari**, E.R. Ivins, T. Frederikse, F.W. Landerer, L. Caron, 2019: Changes in relative sea level, geoid height, and bedrock displacement derived from the Release-06 GRACE Level-2 monthly Stokes coefficients, *Harvard Dataverse*, V2, doi: 10.7910/DVN/8UC8IR.

Other Publications

- B. Hawley and others including **S. Adhikari**, 2017, *GNET 2017 Forward: The Future Shape of a Greenland GNSS Observation Network*, A whitepaper produced by the participants of the NSF-supported GNET workshop, NASA GSFC, 26-27 January 2017.
- C. Boening and 82 others including **S. Adhikari**, 2017, *Refining Global Sea Level Rise Over the Next Century*, A white Paper submitted to NASA's Earth Science Decadal Survey.
- M. Morlighem, H. Serousi, E. Larour, N. Schlegel, C. Borstad, B. de Fleurian, **S. Adhikari**, J. Bondzio, 2016, *Ice Sheet System Model 2016 (4.10): User Guide*, 166 pp, JPL & UCI.
- **S. Adhikari**, 2012, *Advances in Modeling of Valley Glaciers*, PhD Thesis, 228 pp, University of Calgary (supervised by Shawn Marshall).
- **S. Adhikari**, 2007, *Numerical Modeling of Glacier AX010 in the Nepalese Himalaya*, MSc Thesis, 116 pp, Vrije Universiteit Brussel (supervised by Philippe Huybrechts).

Scientific Tools and Software

- Science PI and co-developer of the Ice-sheet and Sea-level System Model (ISSM)
  - ISSM is aimed at modeling ice sheets and sea level in a warming world
  - More than 100 ISSM-enabled articles are published (by dozens of researchers across the globe) in thematic and high-impact journals
- Lead developer of the ISSM Solid Earth and Sea-level Adjustment Workbench (SESAW)
  - SESAW is aimed at modeling high-resolution glacial changes and global-scale geodetic phenomena simultaneously and efficiently
  - 20+ SESAW-enabled articles are published in thematic and high-impact journals
- Science co-leader of the ISSM Visual Earth System Laboratory (VESL)
  - VESL is aimed at disseminating ISSM's products to scientists and educators
- Contributor to the NASA Sea level change website science contents

Major Grants

Principal Investigator (a total of $1,363,536 over the past 5 years)

- 2022-2024 (pending): NASA Earth Surface and Interior Program ($550,432 for 3 years)
  Title: Bedrock GNSS for constraining glacier discharge and GIA in Greenland
  Team: **Surendra Adhikari**, Eric Larour, Justin Quinn, Shfaqat Abbas Khan, Erik Ivins
- 2020-2022: NASA Earth Surface and Interior (ESI) Program ($599,396 for 3 years)
  Title: Solid earth interactions with a changing Greenland ice sheet
  Team: **Surendra Adhikari**, Nicole Schlegel, Erik Ivins
- 2019: JPL R&TD Spontaneous Concept ($32,500 for 4 months)
  Title: Earth's interior stress field perturbed by the Chandler Wobble
  Team: **Surendra Adhikari**, Erik Ivins, Richard Gross
- 2018-2019: Caltech/JPL President's and Director's Fund ($200,000 for 1 year)
  Title: Climate change, glacier dynamics, and subglacial erosion in High Mountain Asia
  Team: **Surendra Adhikari**, Jean-Philippe Avouac, Eric Larour
- 2017-2020: JPL R&TD Strategic Initiative Fund ($384,450 for 3 years)
  Title: Linking solid Earth and climate
  Team: **Surendra Adhikari**, Susan Owen, Paul Lundgren
- 2014-2016: NASA Postdoctoral Program Fellowship ($147,190 for 2 years)
  Title: Dynamic modeling of the West Antarctic Ice Sheet
  Team: **Surendra Adhikari**, Erik Ivins (advisor)

Co-Investigator

- 2021-2027 (pending): NASA Earth Venture Mission 3 (roughly $200,000,000 for 6 years)
  Title: DeepIce: Probing Antarctica's bed topography and its impact on future sea level
  Team: Ala Khazendar (PI), Joe MacGregor, Helene Seroussi, Yonggyu Gim, Mark Haynes, Jack Holt, John Paden, Robert Beauchamp, Dustin Schroeder, Bruce Cambell, Duncan Young, Eric Larour, Mathieu Morlighem, **Surendra Adhikari**, Alex Gardner
- 2022-2024 (pending): NASA Earth Surface and Interior Program ($557,336 for 3 years)
  Title: Towards an Ice-sheet and Sea-level System Model (ISSM) based computational/modeling infrastructure to help and synergize the solid Earth community
  Team: Eric Larour (PI), Lambert Caron, Ramon Ramirez-Linan, Justin Quinn, **Surendra Adhikari**

- 2020-2024: NASA Sea-Level Change Science Team ($2,499,906 for 4 years)
  Title: From grounding lines to coastlines: an integrated approach to sea-level projections
  Team: Eric Larour (PI), **Surendra Adhikari**, Nicole Schlegel, Justin Quinn, Alex Gardner, Erik Ivins, Lambert Caron, Helene Seroussi, Dimitris Menemenlis, Ian Howat, Chunli Dai
- 2020-2023: NASA GRACE-FO Science Team ($600,012 for 4 years)
  Title: Glacial isostasy and space gravimetry
  Team: Erik Ivins (PI), Eric Larour, **Surendra Adhikari**, Lambert Caron
- 2020-2023: NASA Modeling Analysis Predictions (MAP) Program ($999,985 for 4 years)
  Title: Mass transport driven coastal sea level
  Team: Eric Larour (PI), Alex Gardner, Sophie Nowicki, **Surendra Adhikari**, Lambert Caron, Dimitris Menemenlis
- 2020-2022: NASA Earth Surface and Interior (ESI) Program ($600,000 for 3 years)
  Title: Unraveling episodic tremor and slow-slip variability in Cascadia and relationship to large earthquakes
  Team: Zhen Liu (PI), Yingdi Luo, **Surendra Adhikari**
- 2019-2021: NASA Earth Surface and Interior (ESI) Program ($524,999 for 3 years)
  Title: Ice sheet collapse and soft mantle rheological response
  Team: Eric Larour (PI), Erik Ivins, **Surendra Adhikari**
- 2018-2022: NASA MEASURES (Making Earth System Data Records for Use in Research Environments) Program ($2,551,631 for 5 years)
  Title: HOMAGE: Heat and Ocean Mass from Gravity ESDR
  Team: Felix Landerer (PI), Minkang Cheng, Veronica Nieves, David Wiese, Lambert Caron, Robert Nerem, Erik Ivins, John Ries, Don Chambers, **Surendra Adhikari**
- 2018-2020: JPL R&TD Strategic Initiative Fund ($1,804,000 for 3 years)
  Title: Developing a solid-Earth/hydrosphere modeling infrastructure for science and mission formulation
  Team: Paul Lundgren (PI), Susan Owen, Zhen Liu, Eric Fielding, **Surendra Adhikari**, Yingdi Luo, David Bekaert, Erik Ivins, Eric Larour, John Worden
- 2017-2020: NASA Sea-Level Change Science Team ($1,953,380 for 3 years)
  Title: Global interconnections of the cryosphere and solid Earth, sea-level change and ice-sheet mass balance
  Team: Erik Ivins (PI), Eric Larour, Geoffrey Blewitt, **Surendra Adhikari**, Helene Seroussi, Dimitris Menemenlis, Nicole Schlegel, Alex Gardner, William Hammond, David Wiese
- 2016-2019: NASA Earth Surface and Interior (ESI) Program ($434,930 for 3 years)
  Title: Geodetic responses to Little Ice Age and Anthropocene Loading of the Mantle
  Team: Erik Ivins (PI), Alex Gardner, Gregory Lyzenga, **Surendra Adhikari**, David Wiese

Collaborator

- 2017-2020: NASA MAP Program (Eric Larour, PI; $925,010 for 4 years)
  Title: Data assimilation of altimetry/gravimetry/InSAR/GPS data towards better reconstructions/projections of the Greenland Ice Sheet evolution
- 2016-2019: NASA GRACE Science Team (Erik Ivins, PI; $610,610 for 4 years)
  Title: Glacial isostatic adjustment and ice mass balance
- 2015-2019: NASA Sea Level Rise (Erik Ivins, PI; roughly $1,389,890 for 4 years)
  Title: Ice-sheet basal conditions and sea-level rise: Interface with Erath structure & GIA

Teaching Experience (at the Department of Geography, University of Calgary)

- Geog 503: Climate Change (Shawn Marshall, Instructor), Winter 2012
  Roles: Co-Instructor, Grader of exam papers
- Geog 305: Weather and Climate (Shawn Marshall, Instructor), Fall 2009
  Roles: Teaching Assistant, Occasional lecturer, Grader of lab reports
- Geog 403: Oceanography and Climate Variability (John Yackel, Instructor), Winter 2009
  Roles: Teaching Assistant, Occasional lecturer, Grader of lab reports and exam papers
- Geog 305: Weather and Climate (Shawn Marshall, Instructor), Fall 2008
  Roles: Teaching Assistant, Occasional lecturer, Grader of lab reports
- Geog 403: Oceanography and Climate Variability (John Yackel, Instructor), Winter 2008
  Roles: Teaching Assistant, Grader of lab reports

Students/Postdocs Advised and Mentored (co-advised students not included)

- Ian Delany, Postdoc (ETH Zurich Geophysics Ph.D.), 2019-2020
  Topic: Modeling subglacial erosion processes
- Alex Tarter, Intern (USC Math Ph.D. candidate), 2018-2019
  Topic: Ocean tidal forcing and its impact on ice shelf flexure and stability
- Monica Perez, Intern (Cal Poly Pomona undergrad), 2015
  Topic: Solid earth deformation due to surface loading
- Emily Schwans, Mentee (Penn State Ph.D. candidate), 2020-present
  Topic: Diverse, Antarctic ice sheet dynamics
- Azamat Tolipov, Mentee (University of Iceland), 2020-present
  Topic: Diverse, career development, geophysical methods for glaciological observations
- Tenzing Sherpa, Mentee (Kathmandu University), 2015-2016
  Topic: Modeling glacier flow in the Nepal Himalaya

PhD Committee

- Mohammad Afzal Shadab, University of Texas Austin, 2021 onwards
  Topic: Two-phase percolation in a viscous compacting matrix
  Committee members: Mark Hesse (research advisor), Clint Dawson, Bjorn Engquist, Ian Hewitt, **Surendra Adhikari**, Cyril Grima

Editorial and Review Activity Summary

- Scientific Editor for international journal *Annals of Glaciology*
  - 5 articles edited for volume #55 (issue #66)
  - 5 articles edited for volume #57 (issue #71)
- Review Editor for international journal *Frontiers in Earth Sciences* since 2015
- Review Panel for NASA ESI Earth and Space Science Fellowship, April/May 2018
  - 3 proposals as a primary reviewer
  - 7 proposals as a secondary reviewer
- Reviewer for 10+ international journals, NASA, and NSF
  - 29 articles reviewed for *The Cryosphere* (7), *Journal of Glaciology* (6), *Journal of Geophysical Research* (4), *Earth and Planetary Science Letters* (2), *Environmental*

Research Letter (2), *Geoscientific Model Development* (2), *Geophysical Research Letters* (2), *Remote Sensing* (2), *Science* (1), *Arctic, Antarctic and Alpine Research* (1)
  - 50+ articles and proposals declined to review (due to time constraints)
  - 1 NSF proposal.

Other Community Activities

- ISSM Town Hall Meeting at the AGU Fall Meeting, December 2018.
- Convener of Ice Sheet Dynamics Workshop, National Institute of Mathematical Sciences (NIMS), Daejeon, South Korea, October 2018
- Convener of ISSM Sea-level Workshop, University of Hawaii, June 2018
- ISSM Town Hall Meeting at AGU Ocean Science Meeting, February 2017.
- ISSM Town Hall Meeting at AGU Fall Meeting, December 2017.
- ISSM Town Hall Meeting at AGU Fall Meeting, December 2015.
- Member of the Science Steering Committee, International Glaciological Society (IGS) Symposium on Glaciology in High Mountain Asia, Kathmandu, March 2015.
- Young Scientist Panel Discussion, IGS Kathmandu Symposium, March 2015.
- Member of the Science Steering Committee, IGS Symposium on Changes in Glaciers and Ice Sheets: observations, modeling and environmental interactions, Beijing, July 2013.

Presentations

Invited Seminars and Lectures

1. AGU Geodesy Section Inaugural Lecture (Virtual), November 2021. **upcoming**
   Title: Ice-Earth interactions in Greenland across timescales: Probing mechanics of Earth deformation and glacial mass transport
2. Joint PALSEA-SERCE Meeting, Lamont-Doherty Earth Observatory, September 2021.
   Title: Reconciliation of the paleo sea-level record with modern crustal uplift of Greenland
3. INSTAAR Seminar Series, University of Colorado at Boulder. April 2021.
   Title: Earth's rotation and its climate connection
4. MG&G/SGT Seminars at Lamont-Doherty Earth Observatory, February 2021
   Title: Solid earth interactions with a changing Greenland ice sheet
5. Dix Seismo Lab Seminar, Caltech, January 2021
   Title: Modern crustal motion of Greenland: Probing mechanics of solid earth deformation and transport with the ice sheet
6. JPL Earth Surface and Interior (ESI) Group Seminar, August 2020
   Title: Earth's surface mass transport and the solid Earth response
7. American Geophysical Union (AGU) Fall Meeting, Washington DC, December 2018
   Title: What drives 20th-century polar motion?
8. Korean Polar Research Institute (KOPRI), South Korea, October 2018
   Title: How does melting of global cryosphere affect sea-level at the Korean Peninsula?
9. Conference on Frontiers in Oceanic, Atmospheric, and Cryospheric Boundary Layers, Kavli Institute of Theoretical Physics, UC Santa Barbara, May 2018
   Title: Massive pulse of glacial mass loss from a Greenland glacier
10. UNAVCO Science Workshop, Broomfield, Colorado, March 2018

Title: Solitary waves of glacial mass transport detected in Greenland crustal motion
11. AGU Fall Meeting, New Orleans, December 2017
    Title: Solitary waves of ice loss detected in Greenland crustal motion
12. Dix Seismo Lab Seminar, Caltech, November 2017
    Title: Massive pulse of glacial mass transport detected in Greenland crustal motion
13. Institute of Geophysics and Planetary Physics, UC San Diego, October 2017
    Title: Massive pulse of glacial mass transport detected in Greenland crustal motion
14. Yuk Lunch Seminar, Caltech, October 2016
    Title: Can GRACE explain some of the enigmatic features of polar motion?
15. JPL Postdoc Award Ceremony, September 2016
    Title: Climate and polar motion during the GRACE period
16. Seminar for a JPL Scientist–III Geology/Geophysics Job Interview, August 2016
    Title: Can GRACE explain some of the enigmatic features of polar motion?
17. JPL Ocean & Cryosphere Seminar Series, June 2016
    Title: Km-scale cryospheric changes captured in a global model of postglacial sea level
18. Geology Department, Cal Poly Pomona, May 2016
    Title: Earth's rotation and its climate connection
19. Community Earth System Model Group Meeting, Boulder, February 2016
    Title: Ice sheet modeling on a global computational framework
20. JPL Postdoc Seminar Series, February 2016
    Title: Earth's surface mass transport: implications for Earth's rotation
21. European Geosciences Union (EGU) Annual Meeting, Vienna, Austria, April 2015
    Title: Advances in Antarctic mantle and crustal physics and implications for ice sheet models and isostatic adjustment measurements
22. Kathmandu University, Kathmandu, Nepal, March 2015
    Title: Some avenues of glaciological research
23. National Academy of Science and Technology (NAST), Nepal, March 2015
    Title: Ongoing global glacier retreat and its impact on water resources
24. JPL Ocean & Cryosphere Seminar Series, August 2014
    Title: Subglacial flooding during supraglacial lake drainage
25. Caltech Brown Bag Seminar, November 2013
    Title: Future evolution of Antarctic ice sheet and isostatic adjustment
26. University of Colorado at Boulder, Boulder, August 2013
    Title: Subglacial hydrology and ice-sheet dynamics
27. JPL Climate Science Seminar, March 2013
    Title: Dynamical and statistical modeling of valley glaciers
28. University of Calgary Ph.D. Public Talk, Calgary, Canada, August 2012
    Title: Advances in modeling of valley glaciers

Conference Presentations *(select first-authored)*

28. AGU Fall Meeting, New Orleans, December 2021 **upcoming**
    Talk title: A proposal for continuous monitoring of glacial discharge from the measurement of Earth-Ice interactions
29. AGU Fall Meeting, New Orleans, December 2021 **upcoming**
    Talk title: Time-varying mantle viscosity as an explanation for the high modern crustal uplift rates in Greenland

30. AGU Fall Meeting, San Francisco, December 2019
    Talk title: Toward explaining the causes of GPS-derived crustal uplift rates in Greenland
31. Glacial Isostatic Adjustment (GIA) workshop, Ottawa, Canada, September 2019
    Talk title: Explaining the causes of GPS-derived vertical crustal motion in Greenland
32. International Union of Geodesy and Geophysics (IUGG) General Assembly, Montreal, Canada, July 2019
    Talk title: Ongoing solid-earth response to Greenland mass loss since the Little Ice Age
33. AGU Fall Meeting, Washington DC, December 2018
    Talk title: Climate-driven bedrock displacements in Greenland
34. Conference on Regional Sea-level Changes and Coastal Impacts, New York, July 2017
    Poster title: Mass transport waves derived from geodetic observation of Greenland crustal deformation during the intense melt years
35. AGU Fall Meeting, San Francisco, December 2016
    Talk title: Can GRACE explain some of the main interannual polar motion signatures?
36. JPL Postdoc Research Day, August 2016
    Poster title: Climate and polar motion during the GRACE observing period
37. NASA Sea-level Change Team Meeting, Norfolk, September 2016
    Talk title: Modes of water transport in Greenland
38. EGU Annual Meeting, Vienna, Austria, April 2016
    Talk title: Climate and polar motion during the GRACE period: Implications for decadal scale oscillations during the 20^{th} century
39. AGU Fall Meeting, San Francisco, December 2015
    Poster title: Rapid ice-sheet changes and mechanical coupling to solid-earth/sea-level and space geodetic observation
40. NASA Sea-level Change Team Meeting, Lake Arrowhead, November 2015
    Poster title: Mesh-based computation of relative sea-level for Earth system modeling
41. Interdisciplinary Antarctic Earth Science Conference, Loveland, CO, September 2015
    Talk title: An efficient computation of relative sea-level for Earth system modeling and space geodesy
42. West Antarctic Ice Sheet (WAIS) Annual Meeting, Loveland, CO, September 2015
    Poster title: Integrating relative sea level model within the Ice Sheet System Model
43. JPL Postdoc Research Day, Pasadena, August 2015
    Poster title: Earth system model for ice-sheet/solid-Earth/sea-level coupling
44. IGS Symposium on Glaciology in High Mountain Asia, Kathmandu, Nepal, March 2015
    Talk title: The sea-level fingerprint of recently calibrated ongoing global glacier retreat
45. AGU Fall Meeting, San Francisco, December 2014
    Poster title: A model for subglacial flooding through a preexisting hydrological network during the rapid drainage of supraglacial lakes
46. WAIS Annual Meeting, Julian, CA, September 2014
    Talk title: A model for subglacial flooding during the rapid drainage of supraglacial lakes
47. Caltech/JPL Workshop on Ice and Ocean Research, September 2014
    Talk title: Subglacial flooding during the rapid drainage of supraglacial lakes
48. AGU Fall Meeting, San Francisco, December 2013
    Talk title: Future Antarctic bed topography and its implications for ice sheet dynamics
49. Antarctic Ice Rises Workshop, Tromso, Norway, August 2013

Poster title: Future evolution of Antarctic bed topography

50. IGS Symposium on Glaciers and Ice Sheets in a Warming Climate, Fairbanks, June 2012
    Poster title: Glacier volume-area relation for high-order mechanics
51. AGU Fall Meeting, San Francisco, December 2011
    Poster title: Dynamics of Haig Glacier: assessment of glacier physics
52. AGU Fall Meeting, San Francisco, December 2010
    Poster title: Introducing a longitudinal stress factor to improve shear-deformational models of glacier dynamics
53. Western Canadian Cryosphere Network (WC2N) Annual Meeting, Prince George, Canada, November 2010
    Talk title: A method to improving shear-deformational models of glacier dynamics
54. The University of Calgary Graduate Conference, May 2010
    Talk title: Role of longitudinal stress gradients on glaciers' response to changing climate
55. University of Calgary 47th Geography Department Annual Conference, March 2010
    Talk title: Diagnostic simulation of two-dimensional glacier models
56. AGU Fall Meeting, San Francisco, December 2009
    Poster title: Englacial velocity fields: simulation of a full-Stokes problem with finite-element approximations
57. WC2N Annual Meeting, Lake Louise, Canada, October 2009
    Poster title: Summer field investigations at Haig Glacier
58. WC2N Annual Meeting, Prince George, Canada, October 2008
    Talk title: A three-dimensional numerical ice-flow model applied to alpine icefields and valley glaciers: theory
59. WC2N Annual Meeting, Prince George, Canada, October 2008
    Talk title: On understanding the response characteristics of a small valley glacier
60. IGS Symposium on Dynamics in Glaciology, Limerick, Ireland, August 2008
    Talk title: Numerical modeling of past and future evolution of Glacier AX010
61. WC2N Annual Meeting, Banff, Canada, September 2007
    Talk title: Dynamic response of Glacier AX010 to ongoing climate warming

Media Coverage (of first-authored research only)

Highlight

- Adhikari et al. (2018, *Earth Planet. Sci. Lett.*) got picked up by 34 news outlets.
- Adhikari et al. (2017, *Geophysical Research Letters*) has an Altmetric score of 388.
- Adhikari & Ivins (2016, *Science Advances*) has an Altmetric score of 1020.
- Interview, more than 20 (inter)national leading newspapers, including *The Washington Post*, *The Huffington Post*, *The Guardian*, *Associated Press*, *National Geographic*, *Climate Central*, *The Christian Science Monitor*, *BBC*, *The Himalayan Times, The Hindustan Times*.
- Radio Interview, more than 10 (inter)national radios including *BBC World Service*.
- Television Interview, *Aljazeera UK* and *Nepal Television*.
- Guest appearance in short videos and podcasts, including *Surely, You're Joking!*

Press Release

- JPL (September 19, 2018): Scientists ID Three Causes of Earth Spin Axis Drift
- JPL (May 25, 2017): NASA Discovers a New Mode of Ice Loss in Greenland

- JPL (April 8, 2016): NASA Study Solves Two Mysteries About Wobbling Earth
  [Also printed in NASA's bulletin The Earth Observer, vol 24, issue 4, pages 24-25]
- AAAS (April 8, 2016): Changes in Land Water Storage and Melting Ice Drive Polar Motion
- JPL (March 30, 2016): A NASA first: Computer model links glaciers, global sea level

Select Feature Stories and Interviews

- The Himalayan Times -- Nepal's No. 1 English Daily, Frontpage Exclusive coverage, Nepali-led team makes NASA discoveries, vol. XV, No. 139, April 9, 2016
- Featured Geophysicist on Transverse RANGES, article no 008, September 2018
- Interview with NASA Scientist Surendra Adhikari, Sujhaab Chautari -- a portal for advising Nepalese students on their academic pursuit, , March 4, 2018
- Scroll Interview First Person: NASA scientist on how Earth is tipping (and spinning slowly) because of climate change, May 7, 2016

Miscellaneous

- Participated in the Ice-sheet Modeling Summer School, Portland, August 2008 (2 weeks)
- Conducted Ground Penetrating Radar Survey at Haig Glacier, August 2009 (1 week)
- Conducted Hydrometeorological Survey at Haig & Opabian glaciers, 2008-2011 (6 times)
- Conducted Hydrogeological Survey of Katunje Valley, Nepal, Jan-June 2005 (6 months)
- Completed Civil Engineering Survey Camping, Dharan, Nepal, December 2002 (1 month)