# NATALYA GOMEZ

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#### **EDUCATION**

2014	Doctor of Philosophy in Earth and Planetary Sciences, Harvard University, Boston, USA
2009	Master of Science in Geophysics and Environmental Studies, University of Toronto, Canada
2006	Bachelor of Science with Honors in Physics Specialist, Math Minor, University of Toronto, Canada

### ACADEMIC AND RESEARCH POSITIONS

2015 – Present	Canada Research Chair in the Geodynamics of Ice Sheet – Sea Level Interactions
2015 - Present	Assistant Professor, Earth and Planetary Sciences, McGill University, Canada
2014 - 2015	Ed Lorenz Postdoctoral Fellow, New York University, USA, Center for Atmosphere and Ocean Science, Courant Institute of Mathematical Sciences

### RESEARCH INTERESTS

- Ice sheet sea level solid earth interactions, ice sheet stability and evolution, paleo and future sea level
- Geophysics, geodesy, earth rheology, glacial isostatic adjustment
- Climate science, paleoclimate
- Numerical modeling, remote sensing
- Coastal change mitigation and adaptation

# **EXPERIENCE**

2012 - 2014	Member of the Harvard Graduate Consortium on Energy and the Environment.
2012	Energy Policy Analyst for the Government of Aruba.
2007 -2008	Geophysical Consultant, University of Waterloo, Canada
2006	Modeler and Field Assistant, Université de Rennes, France.

### MAJOR GRANTS AND FELLOWSHIPS

- Renewed: Canada Research Chair Tier II, , CRC in the Geodynamics of Ice sheet sea level interactions, 2020-2025
- Trottier Institute for Science and Public Policy Fellowship (TISPP) PI: Gomez (McGill) "A transformatively accessible water level monitoring to inform Canadian coastal adaptation policies" 2020-2022
- SSHRC Insight Development Grant, Increasing the Adaptive Capacity of Subarctic and Arctic Aboriginal People to Climate and Sea Level Change Using Innovative, Web-Based, Informatics Tools, Co-investigator (PI: Leonard Tsuji, University of Toronto), 2017-2020
- FRQNT New Researchers Grant, Using GPS-Reflection to detect sea level change associated with glacier retreat in Greenland, 2017-2019
- NSERC Discovery Grant, Ice Sheet Sea Level Solid Earth Interactions, 2016-2021

- Canada Research Chair, Tier II, CRC in the Geodynamics of Ice Sheet Sea Level Interactions, 2015-2020
- Canadian Foundation for Innovation John R. Evans Leaders Fund, Ice Sheet Sea Level Solid Earth Interactions Modeling, 2015-2018
- McGill University Start-up Funding, 2015-2018
- CIHR Grant, Increasing the Adaptive Capacity of Subarctic and Arctic Aboriginal People to Environmental Change through Environmental Monitoring, Modelling, and Health Planning: The Use of Innovative, Web-Based, Informatics Tools, Co-investigator (PI: Leonard Tsuji, University of Toronto), 2015-2016

### International Grants

- CC-21 Horizons 2020 EU proposal (PIs: Kerim Hestnes Nisancioglu and William Helland-Hansen, University of Bergen, Noward) 2020-2025 (pending)
- NSF Exploring the New Arctic Grant, Greenland Rising (PIs: Robin Bell, Columbia University) 2019-2023
- European Research Council Starting Grant, Rates of Interglacial Sea-level Change, and Responses, Remote-team member (PI: Natasha Barlow, Leeds University, UK), 2019-2023
- NSF Polar Research Grant Polenet-ANET: Investigating Ice Sheet Solid Earth Feedbacks in West Antarctica: Implications for ice sheet evolution and stability, International Co-investigator (PI: Terry Wilson, Ohio State University), 2018-2022
- VILLUM foundation grant and Marie Curie fellowship, EROSIVE (The influence of Earth surface processes on Scandinavian Ice Sheet evolution and collapse), International Collaborator, (Aarhus University, Denmark), 2018-2023
- Norwegian Research Council Int. Partnerships for Excellent Education and Research, Advanced Climate Education and Research (ACER), 2018-2020

### TEACHING EXPERIENCE

# McGill University, Earth and Planetary Sciences

- EPSC 201 Understanding Planet Earth, Winter 2016, 2017, 2018
- EPSC 510 Geodynamics, Fall 2016, Winter 2019, Winter 2021
- EPSC 550 Cold Earth Science, Winter 2018
- ESYS 500 Earth System Science Applications Fall 2019, 2020
- EPSC 400 and 700-level independent research and reading courses

### Harvard University, Earth and Planetary Sciences Teaching Fellow

- E-PSCI 261 Sea Level Change, Spring 2013
- E-PSCI 205 Geophysics: A Primer, Spring 2012
- SPU 12 Natural Disasters, Fall 2010

## University of Toronto, Physics

• Laboratory Teaching Assistant, Fall 2008 – 2009

### University of Waterloo & Peetabeck Academy

• Science Outreach Teacher, Summer 2008

### **ADVISING**

#### Postdoctoral Researchers:

- Dr. Maryam Yousefi (arriving fall 2020), McGill University
- Dr. Thomas Navarro (2019- present), McGill University
- Dr. N. H. Erik Chan (2016-2019), McGill University

### Doctoral Students Supervised:

- Holly Han Ph.D. (2015-present), McGill University.
- David Purnell Ph.D. (2017-present), McGill University.
- Evelyn Powell PhD. (2015-present), Harvard University, Co-supervisor.
- Oliver Pollard PhD. (2020-present), Leeds University, Co-supervisor.

### Masters Students Supervised:

- Jeannette Wan Xiu Wen, M.Sc. (2019 present), McGill University.
- Julia Morales Aguire (2020-present), McGill University, Co-supervisor.
- Anna-Mireilla Hayden M.Sc. (2017 2019), McGill University.

### Undergraduate Students Supervised:

- Jeremy Roffman (2020 present), AOS and Physics, McGill University.
- Julia Morales (2020), Geophysics, McGill University.
- Tomas Milla-Koch, (2019 present), "Using sediments to reconstruct paleo sea levels." McGill University.
- Ingrid Gendron, (2019 present), "Measuring water level changes in St. Lawrence Estuary with GNSS-Reflectometry." McGill University.
- Linda Pan, (2018-2019), "Spatial variability and impacts of future sea level change." McGill University
- Jeannette Wan Xiu Wen, (2018-2019), McGill University.
- Asia Murphy, (2018), "Evaluation of multiple GNSS antennae for sea level monitoring." McGill University.
- Morgane Flament, (2018-2019), LaSalle University.
- Clovis Vinant-Tang, (2018), Physics Department, "Surface water detection and characterization in Antarctica using satellite images and machine learning algorithms." McGill University.
- Gabriel Tseng, (2017-2018), McGill University
- Jake Casselman, (2016-2017), "Global and local sea level projections and coastal adaptation." McGill University
- Katarina Kuhnert, (2016-2017), "Arctic sea level change and community response." McGill University.

# AWARDS AND HONOURS

2010

2019	American Geophysical Union (AGU) Cryosphere Early Career Award
2020	Trottier Fellow in Science and Public Policy
2020-2025	Tier II Canada Research Chair (renewal)
2015-2020	Tier II Canada Research Chair
2010-2013	NSERC PhD Level Post-Graduate Scholarship
2009-2010	NSERC Master's Level Post-Graduate Scholarship
2008-2009	University of Toronto Fellowship, University of Toronto
2008-2009	J.R.G. Smyth Scholarship in Physics, University of Toronto
2006	Grant for Collaborative Research, Canadian Institute for Advanced Research
2006	Bryan Statt Award for Experimental Physics, University of Toronto
2002-2003	Ted Mossman Scholarship in Mathematics, University of Toronto
2002-2006	Dean's List Scholar, University of Toronto

# PROFESSIONAL SOCIETY MEMBERSHIP

- GEOTOP
- Québec Oceans
- Canadian Geophysical Union

American Geophysical Union

### EDITING AND SOCIETAL SERVICES

- Nature
- Science
- Science Advances
- Nature Geoscience
- Nature Scientific Reports
- Journal of Geophysical Research

- Geophysical Research Letters
- Geoscientific Model Development
- ARCTIC
- SCAR
- NSF

### **OUTREACH**

- Panelist on Academic Careers at the Undergraduate Women in Physics Canada Conference, January 2021.
- The Quirks & Quarks listener question show, CBC Radio, June 2020.
- Skype-a-Scientist program connecting researchers with classrooms online, May 2020
- Broad Science storytelling slam co-hosted by Confabulation, Phi Centre, Montreal QC, November 2019.
- Lecturer at Advanced Climate Dynamics Courses summer school on The Anthropocene in Yosemite National Park (September, 2019)
- The science of climate change. Pint of Science Festival, McClean's Pub, Montreal QC, April 2019.
- Ice Sheets, sea level and the Solid Earth. AstroMcGill Public Lecture, April 2019.
- Women in STEM and Climate Science, Video, 2018. <a href="https://youtu.be/uOwZEwOzZro">https://youtu.be/uOwZEwOzZro</a>
- Heating H2O: The Chemistry of Sea Level Rise California Academy of Sciences, Video, 2018. https://www.calacademy.org/educators/heating-h2o-the-chemistry-of-sea-level-rise
- Ice, Sea Level and the Solid Earth. SCUGOG Memorial Public Lecture, London, Canada, February 2018.
- Earth and Climate Science and Women. Women in Science @McGill and Beyond, March 2018.
- Sea Level Change, Ice Sheets and the Solid Earth. Cutting Edge Lectures in Science, Montreal, Canada, February 2016.
- The Physics of Ice Sheets, Sea Level and the Solid Earth. Wide Science Festival, Montreal, Canada, May 2016.
- Sea Level, Ice and the Solid Earth. McGill Space Institute Jamboree, September 2015.
- Ice Sheets and Sea Level Change. McGill Soup and Science, September 2015.
- Ice and Sea Level Change. McGill Faculty of Science Meeting, October 2015.

### INTERNATIONAL RESEARCH COMMUNITY ACTIVITIES

- Theme leader for SCAR INStabilities & Thresholds in Antarctica (INSTANT) Scientific Research Programme Workshop February 16-18, 2021.
- Vice Chair of Subcommission 3.4 of the International Association of Geodesy on Cryopheric Deformation, 2019 2022.
- Partner on the Advanced Climate Education and Research (ACER) program, Norway, the USA and Canada, 2018-2020.
- Lecturer at the Advanced Climate Dynamics Course on The Anthropocene in Yosemite National Park, September 2019.
- Session Chair at American Geophysical Union Fall Meeting, San Francisco CA, USA, Dec. 2019
- Organizer of a Pages Workshop on Glacial Isostatic Adjustment, Ice Sheets and Sea Level Change, Canadian Museum of Nature, Ottawa, Canada, September 22-24, 2019.
- Lecturer at the Advanced Climate Dynamics Course on Hemispheric Asymmetry in Climate in Norway, September 2018.
- Expert, Structured Expert Judgement (SEJ) Ice Sheet Elicitation and assessment of the future contribution to sea level rise from ice sheets. Washington, DC, USA, January 2018.
- Conference organizing committee member for the International WCRP/IOC Conference on Regional Sea Level Changes and Coastal Impacts, held in New York, NY, USA, sealevel2017.org, July 10-14, 2017.
- Steering committee member of the "Solid Earth Response and influence on Cryosphere Evolution (SERCE)" Scientific Research Program of SCAR, 2016-present.
- Workshop Session Chair, International Association of Geodesy (IAG) 1st circular Workshop on Glacial Isostatic Adjustment and Elastic Deformation in Reykjavik, Iceland, September 5-7, 2017.
- Steering Committee Member for the World Climate Research Program (WCRP) "Grand Challenges Sea Level and Coastal Impacts," 2015-2025.
- Workshop Presenter and Report Writing Committee for the NSF Future Seismic and Geodetic Facility Needs in the Geosciences, 2014-2015.

• Invited instructor at the Princeton University Atmospheric and Oceanic Sciences workshop on Ice in the Climate System, 2014.

### McGILL UNIVERSITY ACTIVITIES

- Faculty of Science Academic Associate of Graduate Education Hiring Committee, 2020.
- Faculty of Sciences Equity and Working Climate Committee, 2018-2020.
- Faculty hiring committee for Geography Department, McGill University, 2020.
- Co-Chair McGill Space Institute Postdoctoral Fellowships Committee, 2018-2019.
- Faculty of Science Equipment Competition review committee, 2018.
- Poster judge, Faculty of Sciences Undergraduate Research Conference, 2016, 2017.
- Research Action Team Member for Vision 2020, McGill's Sustainability Strategy, 2016-present.
- Hosted Nature Magazine's senior editor in the field of climate research for a seminar and visit with the Atmosphere Ocean Sciences, Geography and Earth and Planetary Science Departments.
- Faculty hiring committee for Atmosphere Ocean Sciences Department, McGill University, 2016.
- Participated in a Faculty Student Speed Networking Event, McGill University.
- Participated in McGill Space Institute faculty retreat to design vision and mission statements.
- Colloquium in the Atmosphere Ocean Sciences and Physics Departments.
- Participated in Women in Physics breakfast.
- Presenter at McGill Soup and Science, 2015, 2019.

### McGill Department of Earth and Planetary Sciences Activities:

- Founder and Chair of the Equity and Working Climate Committee chair, 2019-present.
- Chair's Advisory Committee, 2017-2020.
- Faculty CRC selection committee member, 2019.
- EPS Learning Community member, 2018-2019.
- Academic Curriculum Committee, 2018-2019.
- Wares Postdoctoral Fellowships Committee, 2018-2019.
- Graduate Admissions Committee, 2018, 2019.
- Graduate Scholarship Committee, 2018.
- Departmental Seminar Organizer, 2015-2018.
- EPS Undergraduate recruitment/Outreach Committee, 2016-2018.
- Geobiology Faculty Hiring Search Committee (2016-2017)

### ACADEMIC / EDUCATIONAL WEBSITES

- Professional Website: http://www.natalyagomez.com
- Twitter: <u>@NatalyaGomezEPS</u>

# PROFESSIONAL PRESENTATIONS

### Invited Departmental Seminars:

- John's Hopkins University, USA, March, 2021
- Standard University, USA, October 2020.
- University of Quebec a Montreal, Canada, February 2020.
- University of Texas, Austin, USA, April 2019.
- California Institute of Technology, Pasadena, CA, USA, April 2019.
- University of Massachusetts Amherst, Amherst MA, USA, April 2018.
- University of Western Ontario, London, ON, Canada.
- Annual C. Gordon Winder Memorial SCUGOG Public Lecture in Earth Sciences.
- Washington University, St. Louis, IL, USA, November 2017.
- Ottawa University, Ottawa, ON, Canada, October 2017.
- Lehigh University, Pennsylvania, USA, March 2017.
- Washington University in Seattle, Washington, February 2017.
- Physics Department, McGill University, Montreal, Canada, September 2016.

- Earth Observatory of Singapore, Singapore, August 2016.
- Atmosphere Ocean Sciences Department, McGill University, Montreal, Canada, November 2015.
- Geophysics Department Seminar Series, Stanford University, California, USA, October 2015.
- IMAU / Utrecht University Colloquium, Netherlands, March 2015.
- Department of Geosciences, Princeton University, Princeton, NJ, USA, March 2014.
- National Center for Atmospheric Research (NCAR), Boulder, CO, USA, June 2014.
- Nonlinear Studies at Alamos National Laboratory, Los Alamos, NM, USA, October 2011.

### Invited Conference Presentations:

- PALSEA meeting online, September 2020.
- Quaternary Research conference in Leeds, January 2020.
- Quebec Oceans conference in March, 2020.
- Early Career Cryosphere Award talk, AGU Fall Meeting, San Francisco CA, Dec. 2019.
- Ice sheet sea level solid Earth interactions. Glacial Isostatic Adjustment Workshop, Ottawa, Canada, September 22-24, 2019.
- Ice-sheet/ocean interactions: drivers and impacts. International Conference on Paleoceanography, Sydney, Australia, September 1-6, 2019.
- INQUA Meeting, Dublin, Ireland, July 25-31, 2019.
- IUGG General Assembly, Montreal, Canada, July 8-18, 2019.
- The physics of ice sheets and sea level change in a warming climate. Women in Physics Canada Conference, Montreal, Canada, June 2019.
- Advanced Climate Dynamics Courses 10-year anniversary meeting, Norway, March 2019.
- PALSEA2 5<sup>th</sup> workshop: Phasing of ice sheet and sea-level responses to past climate change, Cancun, Mexico, November 6-9, 2017.
- Elizabeth and Frederick White Conference on the sensitivity of the Antarctic Ice Sheet to marine climate change: perspectives from the past, Hobart, Australia, July 5-7, 2017.
- Insights from coupled modeling on ice, sea level and solid Earth changes in Antarctica. International WCRP/IOC Conference on Regional Sea Level Changes and Coastal Impacts, Columbia University, New York, USA, July 10-14, 2017
- The Influence of Earth structure on a coupled ice sheet-sea level model of the Antarctic Ice Sheet. SCAR Open Science Conference, Kuala Lumpur, Malaysia (August 2016)
- Sea level Ice Sheet Solid Earth Interactions. Earth, Environmental and Planetary Sciences Colloquium, Brown University, Providence, Rhode Island, USA, November 2015.
- Glacial isostatic adjustment and sea level problems and the types of geodetic and seismological data that will be needed.
- NSF Future Seismic and Geodetic Facility Needs in the Geosciences Workshop, Washington, DC, USA, May 2015.
- Sea level ice sheet interactions. Mathematics and Climate Research Network Annual Meeting, Chapel Hill, NC, USA, September 2014.
- Princeton University AOS/GFDL Workshop, Princeton, NY, USA, September 2014.
- American Geophysical Union Fall Meeting, San Francisco, California, USA, December 9-13, 2013.
   The Impact of Gravitationally Self-Consistent Ice Age Sea-Level Variations on the Evolution of the Antarctic Ice Sheet"
- Coupled Ice Sheet Sea Level Model, Applied to Antarctica through the last 40 ky. CLIVAR WGOMD SOP Workshop on Sea Level Rise, Ocean/Ice Sheet, Hobart, Australia, Hobart, Australia, February 15-22, 2013.
- Stability and Evolution of a Coupled Ice Sheet Sea Level Model. PALSEA workshop on Past, Rapid Changes in Sea Level, Harvard University, Cambridge, MA, USA, August 25-27, 2011.
- Sea Level as a Stabilizing Factor for Marine Ice Sheets. WCRP Workshop on Regional Sea Level Change, UNESCO Headquarters in Paris, France, February 7-9, 2011.

#### Conference Abstracts:

- Antarctic Ice Dynamics Amplified by Northern Hemisphere Sea Level Forcing. American Geophysical Union (AGU) Fall Meeting Online, 2020.
- Influence of Northern Hemisphere on Antarctic Deglaciation. American Geophysical Union (AGU) Fall Meeting in San Francisco, USA, December 2018.
- The influence of Northern Hemisphere ice loss on Antarctic ice dynamics during the Last Deglaciation. Polar 2018: SCAR/IOC Open Science Conference in Davos, Switzerland, June 19-23, 2018.

- Interactions of ice sheet evolution, sea level and GIA in a region of complex Earth structure. American Geophysical Union (AGU) Fall Meeting in San Francisco, USA, December 2017.
- The influence of 3-D Earth Structure on a Coupled Antarctic Ice Sheet Sea Model. Oral Presentation at the American Geophysical Union (AGU) Fall Meeting in San Francisco, CA, USA, December 2016.
- Influence of Earth structure on the contribution of the Antarctic ice sheet to sea level change. PALSEA2 2016 Workshop: Sea level budgets at decadal to millennial time scales to bridge the paleo and instrumental records. Timberline Lodge, Mount Hood, Oregon, USA, September 2016.
- WCRP GC Steering Team Meeting on Regional Sea Level Change and Coastal Impacts, Paris, France, June 2016.
- An Integrated Approach to paleo timescale sea level estimates. WCRP GC Steering Team Meeting on Regional Sea Level Change and Coastal Impacts, New York University, New York NY, USA, February 2016.
- Coupled Ice Sheet Sea Level Modeling, Applied to Model Antarctic Ice Sheet Retreat. 2<sup>nd</sup> Annual PLIOMAX Meeting, Harvard University, Cambridge, MA, USA, January 2016.
- Paleo timescale sea level change. WCRP GC Steering Team Meeting on Regional Sea Level Change and Coastal Impacts, Utrecht, Netherlands, March 2015.
- The Influence of Earth structure on a coupled ice sheet-sea level model of the Antarctic Ice Sheet. American Geophysical Union Fall Meeting, San Francisco, CA, USA, December 15-19, 2014.
- The influence of sea-level changes on ice-sheet evolution in Antarctica. West Antarctic Ice Sheet Initiative (WAIS) Workshop, Julian, CA, USA, September 2014.
- Sea level change and ice sheet sea level interactions. Center for Sea-Level Change (CSLC) 3rd Annual Workshop, NYU Abu Dhabi, UAE, May 2014.
- Coupled Ice Sheet Sea Level Model, Applied to Antarctica Through the last 40 ky. IAG International Symposium: Reconciling Observations and Models of Elastic and Viscoelastic Deformation due to Ice Mass Change, Ilulissat, Greenland, May 30-June 2, 2013.
- Sea Level Predictions of the SeaRISE Ice Sheet Model Simulations. American Geophysical Union Fall Meeting, San Francisco, CA, USA, December 3-7, 2012.
- Evolution of a Coupled Ice Sheet Sea Level Model. European Geosciences Union Spring Meeting, Vienna, Austria, April 22-27, 2012.
- Evolution of a Coupled Ice Sheet Sea Level Model. American Geophysical Union Fall Meeting, San Francisco, CA, USA, December 5-9, 2011.
- Sea Level as a Stabilizing Factor for Marine Ice Sheets. American Geophysical Union Fall Meeting, San Francisco, CA, USA, December 13-17, 2010.
- Sea Level Change and the Stability of Marine Ice Sheets. ACDC Summer School on Ice Sheet Ocean Interactions, MIT FabLab in Lyngen, Norway, June 8-19, 2010.
- The Sensitivity of Sea-Level Fingerprints to the Geometry of Ice Sheet Mass Balance. American Geophysical Union Fall Meeting, San Francisco, CA, USA, December 14-18, 2009.

### **PUBLICATIONS**

Note: **Bold & underlined** indicates a student/postdoc under Gomez's supervision.

### In Review:

- 1. <u>Purnell, D.</u>, Gomez, N., Minarik, W. & Porter, D.. Precise water level measurements using low-cost GNSS antenna arrays. ESurfD https://esurf.copernicus.org/preprints/esurf-2020-108/ (in review).
- 2. <u>Pan, L., Powell, E.M.</u>, Latychev, K., Mitrovica, J.X., Creveling, J.R., **Gomez, N.**, Hoggard, M.J. and Clark, P.U.. Rapid post-glacial rebound amplifies global sea-level rise following West Antarctic ice sheet collapse. *Science Advances* (in review).
- 3. <u>Powell, E.M.</u>, Latychev, K., **Gomez, N**. and Mitrovica, J.X.. Potential bias in GNSS-derived 1D viscosity models in the presence of 3D structure beneath the West Antarctic. *J. Geophys. Res.* (submitted)

Published or Accepted:

- DeConto, R. M., Pollard, D., Alley, R. B., Velicogna, I., Gasson, E., Gomez, N., Rogstad, S., Condron, A., Gilford, D. M., Ashe, E. L. and Kopp, R. E. The Paris Climate Agreement and future sea level rise from Antarctica. *Nature* (Accepted).
- 2. <u>Han, H., Gomez, N., Pollard, D. and DeConto, R.. Modeling Northern Hemisphere ice sheet dynamics, sea level change and solid Earth deformation throughout the last glacial cycle. *J. Geophys. Res.* (Accepted).</u>
- 3. **Gomez, N.,** Weber, M., Clark, P.U., Mitrovica, J.X. and <u>Han, H.</u> Interhemispheric sea-level forcing on Antarctic Ice Sheet stability during the last Ice Age. (2020) *Nature*. doi: 10.1038/s41586-020-2916-2
- 4. <u>Hayden, A. M., Gomez, N.</u>, Wilmes, S.B., Green, J.A.M., <u>Pan, L., Han, H.</u>, and Golledge, N.R. Multi-century impacts of ice sheet retreat on sea level and tides in Hudson Bay. 22pp. *Journal of Geophysical Research: Oceans* (in press).
- 5. Noble, T. L., McCormack, F. S, Rohling, E. J., Aitken, A. R. A., Bostock, H. C., Chase, Z., **Gomez, N.**, Jong L. M., King, M. A., Mackintosh, A. N., McKay, R. M, Menviel, L., Phipps, S. J., Fogwill, C. J., Gayen, B., Golledge, N. R., Gwyther, D. E., McC. Hogg, A., Martos, Y. M., Pena-Molino, B., Roberts, J., van de Flierdt, T., Weber, M. E., Williams T. (2020) The sensitivity of the Antarctic Ice Sheet to a changing climate: Past, present and future. *Reviews of Geophysics*. Published online: https://doi.org/10.1029/2019RG000663.
- 6. **Purnell, D.J.**, **Gomez, N.**, Chan, N.H., Strandberg, J., Holland, D.H. and Hobiger, T. (2020) Quantifying the uncertainty in ground-based GNSS-Reflectometry sea level measurements. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS) doi: 10.1109/JSTARS.2020.3010413.*
- 7. Lane, T., Paasche, O, Kvinsvik, B., Adamson, K., Rodes, A., Patton, H., **Gomez, N.**, Gheorghiu, D., Baake, & Hubbard, A. (2020) Elevation changes of the Fennoscandian Ice Sheet during the last deglaciation. *Geophys. Res. Lett.* doi: https://doi.org/10.1029/2020GL088796
- 8. **Powell, E., Gomez, N.**, Hay, C., & Mitrovica, J.X. Viscous Effects in the Solid Earth Response to modern Antarctic ice mass flux: Implications for geodetic studies of WAIS stability in a warming world. *Journal of Climate* 33, no. 2 (2020): 443-459.
- 9. Gregory, J. M., Griffies, S. M., Hughes, C. W., Lowe, J. A., Church, J. A., Fukimori, I., **Gomez, N.**, Kopp, R. E., Landerer, F., Cozannet, G. L., Ponte, R. M., Stammer, D., Tamisiea, M. E. & Van De Wal, R. S. W. (2019). Concepts and Terminology for Sea Level: Mean, Variability and Change, Both Local and Global. *Surveys in Geophysics*. doi: 10.1007/s10712-019-09525-z
- Golledge, N. R., Keller, E. D., Gomez, N., Naughten, K. A., Bernales, J., Trusel, L. D., & Edwards, T. L. (2019). Global environmental consequences of twenty-first-century ice-sheet melt. *Nature*, 566(7742), 65-72. doi:10.1038/s41586-019-0889-9
- 11. Whitehouse, P. L., **Gomez, N.**, King, M. A., & Wiens, D. A. (2019). Solid Earth change and the evolution of the Antarctic Ice Sheet. *Nature Communications*, 10(1), 503. doi:10.1038/s41467-018-08068-y
- 12. Pollard, D., **Gomez, N.**, DeConto, R. M., & <u>Han, H. K.</u> (2018). Estimating Modern Elevations of Pliocene Shorelines Using a Coupled Ice Sheet-Earth-Sea Level Model. *Journal of Geophysical Research: Earth Surface, 123*(9), 2279-2291. doi:10.1029/2018JF004745
- 13. <u>Chan, N.-H.</u>, Perron, J. T., Mitrovica, J. X., & Gomez, N. (2018). New Evidence of an Ancient Martian Ocean From the Global Distribution of Valley Networks. *Journal of Geophysical Research: Planets, 123*(8), 2138-2150. doi:10.1029/2018JE005536
- 14. **Gomez, N.**, Latychev, K., & Pollard, D. (2018). A Coupled Ice Sheet–Sea Level Model Incorporating 3D Earth Structure: Variations in Antarctica during the Last Deglacial Retreat. *Journal of Climate*, *31*(10), 4041-4054. doi:10.1175/JCLI-D-17-0352.1

- 15. <u>Han, H. K.</u>, & Gomez, N. (2018). The impact of water loading on postglacial decay times in Hudson Bay. *Earth and Planetary Science Letters*, 489, 156-165. doi:10.1016/j.epsl.2018.02.043
- 16. Wilmes, S.-B., Green, J. A. M., **Gomez, N.**, Rippeth, T. P., & Lau, H. (2017). Global Tidal Impacts of Large-Scale Ice Sheet Collapses. *Journal of Geophysical Research: Oceans, 122*(11), 8354-8370. doi:10.1002/2017JC013109
- 17. Pollard, D., **Gomez, N.**, & Deconto, R. M. (2017). Variations of the Antarctic Ice Sheet in a Coupled Ice Sheet-Earth-Sea Level Model: Sensitivity to Viscoelastic Earth Properties. *Journal of Geophysical Research: Earth Surface*, 122(11), 2124-2138. doi:10.1002/2017JF004371
- 18. Hay, C. C., Lau, H. C. P., **Gomez, N.**, Austermann, J., **Powell, E.**, Mitrovica, J. X., Latychev, K., Wiens, D. A. (2016). Sea Level Fingerprints in a Region of Complex Earth Structure: The Case of WAIS. *Journal of Climate*, *30*(6), 1881-1892. doi:10.1175/JCLI-D-16-0388.1
- Tsuji, L. J. S., Daradich, A., Gomez, N., Hay, C., & Mitrovica, J. X. (2016). Sea Level Change in the Western James Bay Region of Subarctic Ontario: Emergent Land and Implications for Treaty No. 9. Arctic, 69(1), 99. doi:10.14430/arctic4542
- 20. Gomez, N. (2015). Small glacier has big effect on sea-level rise. Nature, 526, 510. doi:10.1038/526510a
- 21. **Gomez, N.,** Pollard, D., & Holland, D. (2015). Sea-level feedback lowers projections of future Antarctic Ice-Sheet mass loss. *Nature Communications*, *6*, 8798. doi:10.1038/ncomms9798
- 22. **Gomez, N.**, Gregoire, L. J., Mitrovica, J. X., & Payne, A. J. (2015). Laurentide-Cordilleran Ice Sheet saddle collapse as a contribution to meltwater pulse 1A. *Geophysical Research Letters*, 42(10), 3954-3962. doi:10.1002/2015GL063960
- Hay, C., Mitrovica, J. X., Gomez, N., Creveling, J. R., Austermann, J., & E. Kopp, R. (2014). The sea-level fingerprints of ice-sheet collapse during interglacial periods. *Quaternary Science Reviews*, 87, 60-69. doi:10.1016/j.quascirev.2013.12.022
- 24. **Gomez, N.**, Pollard, D., & Mitrovica, J. X. (2013). A 3-D coupled ice sheet sea level model applied to Antarctica through the last 40 ky. *Earth and Planetary Science Letters*, 384, 88-99. doi: 10.1016/j.epsl.2013.09.042
- 25. **Gomez, N.**, Pollard, D., Mitrovica, J. X., Huybers, P., & Clark, P. U. (2012). Evolution of a coupled marine ice sheet–sea level model. *Journal of Geophysical Research: Earth Surface*, 117(F1). doi:10.1029/2011JF002128
- 26. Mitrovica, J. X., **Gomez, N.**, Morrow, E., Hay, C., Latychev, K., & Tamisiea, M. E. (2011). On the robustness of predictions of sea level fingerprints. *Geophysical Journal International*, *187*(2), 729-742. Geophysical Journal International. <a href="doi:10.1111/j.1365-246X.2011.05090.x">doi:10.1111/j.1365-246X.2011.05090.x</a>
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- 33. Tsuji, L. J. S., **Gomez, N.**, Mitrovica, J. X., & Kendall, R. (2009). Post-Glacial Isostatic Adjustment and Global Warming in Subarctic Canada: Implications for Islands of the James Bay Region. *Arctic*, *62*(4), 458-467. doi:10.14430/arctic176

### Other Publications:

- 1. Article on climate change published in *The Sandbox: Stories of Sustainability at McGill University*. "Faculty Feature: Natalya Gomez" (2017) Published online.
- 2. Conference Proceedings (daily highlights and conference statement) from the International WCRP/IOC Conference on Regional Sea Level Changes and Coastal Impacts, Columbia University, New York, NY, USA (July 10-14, 2017). Published online. Gomez was the author of Day 4 highlights and contributed to editing the conference statement.
- 3. WCRP Grand Challenge: Regional Sea Level Change and Coastal Impacts Science and Implementation Plan (Version 2.1). Co-authored by the GC Sea Level Steering Team. Working document published <u>online</u>. Gomez led and wrote the implementation plan for Work Package 1 (WP1) of the GC with Mark Tamisiea and Roderik Van de Wal.
- 4. Future Geophysical Facilities Required to Address Grand Challenges in Earth Sciences: A community report to the National Science Foundation, Published online. (September 2015).
  Report Writing Committee: Rick Aster, Mark Simons, Roland Burgmann, Natalya Gomez, Bill Hammond, Steve Holbrook, Estelle Chaussard, Leigh Sterns, Gary Egbert, John Hole, Thorne Lay, Steve McNutt, Michael Oskin, Brandon Schmandt, John Vidale, Lara Wagner, Paul Winberry.
- 5. Meredith Langstaff, **Natalya Gomez.** (2012). Intermittent Renewable Electricity: Incentivizing Load Management Technologies in Aruba. 55. Aruban Government, Carbon War Room, Harvard University