

## Publications

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1. MacGregor, J. A., Colgan, W. T., Paxman, G. J. G., Tinto, K. J., Csathó, B., Darbyshire, F. A., Fahnestock, M. A., Kokfelt, T. F., MacKie, E. J., Morlighem, M. & **Sergienko, O. V.** Geologic Provinces Beneath the Greenland Ice Sheet Constrained by Geophysical Data Synthesis. *Geophysical Research Letters* **51**. doi:10.1029/2023GL107357 (2024).
2. **Sergienko O.** & Wingham, D. Diverse behaviors of marine ice sheets in response to temporal variability of the atmospheric and basal conditions. *Journal of Glaciology*, 1–30. doi:10.1017/jog.2024.43 (2024).
3. Huth<sup>†</sup>, A., Duddu, R., Smith, B. & **Sergienko O.** Simulating the processes controlling ice-shelf rift paths using damage mechanics. *Journal of Glaciology*, 1–14. doi:10.1017/jog.2023.71 (2023).
4. **Sergienko, O.** & Haseloff, M. ‘Stable’ and ‘unstable’ are not useful descriptions of marine ice sheets in the Earth’s climate system. *Journal of Glaciology* **69**, 1483–1499. doi:10.1017/jog.2023.40 (2023).
5. Coffey<sup>†</sup>, N. B., MacAyeal, D. R., Copland, L., Mueller, D. R., **Sergienko, O. V.**, Banwell, A. F. & Lai, C.-Y. Enigmatic surface rolls of the Ellesmere Ice Shelf. *Journal of Glaciology*, 1–12. doi:10.1017/jog.2022.3 (2022).
6. Harrison, M., Adcroft, A., Hallberg, R. & **Sergienko O.** Improved Surface Mass Balance Closure in Ocean Hindcast Simulations. *Journal of Advances in Modeling Earth Systems* **14**, e2021MS002888. doi:10.1029/2021MS002888 (2022).
7. Haseloff, M. & **Sergienko, O. V.** Effects of calving and submarine melting on steady states and stability of buttressed marine ice sheets. *Journal of Glaciology*, 1–18. doi:10.1017/jog.2022.29 (2022).
8. Huth<sup>†</sup>, A., Adcroft, A. & **Sergienko, O.** Parameterizing Tabular-Iceberg Decay in an Ocean Model. *Journal of Advances in Modeling Earth Systems* **14**, e2021MS002869. doi:10.1029/2021MS002869 (2022).
9. Huth<sup>†</sup>, A., Adcroft, A., **Sergienko O.** & Khan<sup>†</sup>, N. Ocean currents break up a tabular iceberg. *Science Advances* **8**, 1–5. doi:10.1126/sciadv.abq6974 (2022).
10. **Sergienko, O. V.** Marine outlet glacier dynamics, steady states and steady-state stability. *Journal of Glaciology* **68**, 946–960. doi:10.1017/jog.2022.13 (2022).
11. **Sergienko, O. V.** No general stability conditions for marine ice-sheet grounding lines in the presence of feedbacks. *Nature Communications* **13**, 2265. doi:10.1038/s41467-022-29892-3 (2022).
12. **Sergienko, O. V.** & Wingham, D. J. Bed topography and marine ice-sheet stability. *Journal of Glaciology* **68**, 124–138. doi:10.1017/jog.2021.79 (2022).
13. Damsgaard<sup>†</sup>, A., **Sergienko, O.** & Adcroft, A. The Effects of Ice Floe-Floe Interactions on Pressure Ridging in Sea Ice. *Journal of Advances in Modeling Earth Systems* **13**, e2020MS002336. doi:10.1029/2020MS002336 (2021).
14. MacAyeal, D. R., **Sergienko, O. V.**, Banwell, A. F., Macdonald, G. J., Willis, I. C. & Stevens, L. A. Treatment of ice-shelf evolution combining flow and flexure. *Journal of Glaciology*, 1–18. doi:10.1017/jog.2021.39 (2021).
15. **Sergienko O. V.** & Wingham, D. J. Grounding line stability in a regime of low driving and basal stresses. *Journal of Glaciology* **65**, 833–849. doi:10.1017/jog.2019.53 (2019).
16. Stern<sup>†</sup>, A. A., Adcroft, A. & **Sergienko, O.** Modeling Ice Shelf Cavities and Tabular Icebergs Using Lagrangian Elements. *Journal of Geophysical Research: Oceans* **124**, 3378–3392. doi:10.1029/2018JC014876 (2019).
17. Bronselaer, B., Winton, M., Griffies, S. M., Hurlin, W. J., Rodgers, K. B., **Sergienko, O. V.**, Stouffer, R. J. & Russell, J. L. Change in future climate due to Antarctic meltwater. *Nature* **564**, 53–58. doi:10.1038/s41586-018-0712-z (2018).

18. Damsgaard<sup>†</sup>, A., Adcroft, A. & **Sergienko, O.** Application of Discrete Element Methods to Approximate Sea Ice Dynamics. *Journal of Advances in Modeling Earth Systems* **10**, 2228–2244. doi:10.1029/2018MS001299 (2018).
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25. Stern<sup>†</sup>, A. A., Adcroft, A. & **Sergienko, O.** The effects of Antarctic iceberg calving-size distribution in a global climate model. *Journal of Geophysical Research: Oceans* **121**, 5773–5788. doi:10.1002/2016JC011835 (2016).
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33. **Sergienko O. V.** Basal channels on ice shelves. *Journal of Geophysical Research* **118**, 1342–1355. doi:10.1002/jgrf.20105 (2013).
34. **Sergienko O. V.** Glaciological twins: basally controlled subglacial and supraglacial lakes. *Journal of Glaciology* **59**. doi:10.3189/2013JoG12J040 (2013).
35. **Sergienko O. V.** Normal modes of a coupled ice-shelf/sub-ice-shelf cavity system. *Journal of Glaciology* **59**, 76–80. doi:10.3189/2013JoG12J096 (2013).

36. **Sergienko O. V.**, Goldberg<sup>†</sup>, D. N. & Little<sup>†</sup>, C. M. Alternative ice-shelf equilibriums determined by ocean environment. *Journal of Geophysical Research* **118**, 970–981. doi:10.1002/jgrf.20054 (2013).
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39. Goldberg<sup>†</sup>, D. N., Little<sup>†</sup>, C. M., **O. V. Sergienko**, Gnanadesikan, A., Hallberg, R. & Oppenheimer, M. Investigation of land ice-ocean interaction with a fully coupled ice-ocean model, Part 1: Model description and behavior. *Journal of Geophysical Research* **117**. doi:10.1029/2011JF002246 (2012).
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