PALSEA-SERCE meeting 2021

September 13th – 16th 2021

Agenda and oral presentations:

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| Monday, September 13th 2021 (all times EDT = UTC-4) |
| 8.30 |  | Introduction |
| 8.40 | Marie-France Loutre | Past Global Changes celebrating its 30th Anniversary |
| 8.55 | Lauren Gregoire (invited) | Simulating past ice sheet collapse to prepare for the future |
| 9.15 | Benoit S. Lecavalier | History matching analysis of the Antarctic ice sheet evolution over the last glacial cycle |
| 9.35 | Natalya Gomez | Resolving GIA in response to modern and future ice loss at marine grounding lines in West Antarctica. |
| 9.55 | Sophie Coulson | The Global Fingerprint of Modern Ice-Mass Loss on 3-D Crustal Motion |
| 10.15 | Discussion  |  |
| 10.25 | Break  |  |
| 10.50 | Christopher Halsted | Rapid Laurentide Ice Sheet mass loss (and associated sea level rise) during the Bølling/Allerød constrained by 10Be elevation transects in the northeastern United States |
| 11.10 | Oliver Pollard | Reconstructing the MIS 6 Eurasian Ice Sheet to Improve Our Understanding of Last Interglacial Sea-Level Change |
| 11.30 | Ana Carolina Moraes Luzardi | Effect of topography and isostatic adjustment on Antarctic Ice Sheet evolution using a simple ice sheet model |
| 11.50 | Anna Glueder | Paleo ice history of Petermann Glacier, NW Greenland, constrained by relative sea level and isostatic adjustment modeling |
| 12.10 | Discussion |  |
| 12.30 | End of Day 1 |  |

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| Tuesday, September 14th 2021 (all times EDT = UTC-4) |
| 8.30 | Tanghua Li | Deglacial relative sea-level changes and Glacial Isostatic Adjustment modelling in the Russian Arctic |
| 8.50 | Danielle LeBlanc | Northern Hemisphere ice sheet persistence across Pleistocene interglacials |
| 9.10 | Udita Mukherjee | Partitioning early Holocene North American v. Antarctic ice melt from high-resolution reconstructions of sea-level rise and glacial isostatic adjustment modeling |
| 9.30 | Andrew Christ | Resolving the global mean sea level budget during MIS 11: direct terrestrial evidence for an ice-free northwest Greenland in the Camp Century subglacial sediment |
| 9.50 | Discussion  |
| 10.00 | Break  |
| 10.20 | Kerry Callaghan (invited) | Incorporating lake and groundwater volumes into global sea-level estimates during the deglaciation |
| 10.40 | Surendra Adhikari (invited) | Reconciliation of the Paleo Sea-level Record with Modern Crustal Uplift of Greenland |
| 11.00 | Poster overview 1 |
| 11.30 | Virtual poster session 1 |
| 12.30 | End of Day 2 |

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| Wednesday, September 15th 2021 (all times EDT = UTC-4) |
| 8.30 | Matt King | Geodetic evidence for spatially-varying upper mantle viscosity along a 1000 km transect of the Antarctic Peninsula |
| 8.50 | Caroline van Calcar | The effect of GIA feedback on the evolution of the Antarctic Ice sheet over the last glacial cycle using a coupled 3D GIA – Ice Dynamic model |
| 9.10 | Wouter van der Wal | Stress-dependent viscosity in GIA models for Greenland and Antarctica |
| 9.30 | Parviz Ajourlou | Inference of 3D Earth structure beneath Greenland and eastern Canada using a joint inversion of regional datasets |
| 9.50 | Discussion  |
| 10.00 | Break  |  |
| 10.20 | Linda Pan | Rapid postglacial rebound amplifies global sea level rise following West Antarctic Ice Sheet collapse |
| 10.40 | Joerg Schaeffer | GreenDrill Project overview and update |
| 11.00 | Poster overview 2 |
| 11.30 | Virtual poster session 2 |
| 12.30 | End of Day 3 |

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| Thursday, September 16th 2021 (all times EDT = UTC-4) |
| 8.30 | Glenn Milne | Quantifying the influence of glacial isostatic adjustment on current and future sea-level change using 3-D Earth models |
| 8.50 | Andrew J Lloyd | 3D Viscosity Inversions of Post-Glacial Deformation as Recorded by Relative Sea Level: Proof of Concept |
| 9.10 | Evelyn Powell | Exploring the Resolving Power of Antarctic Datasets Using the Adjoint Method: A Novel Route to Improving GIA Models |
| 9.30 | Rene Gassmoeller | Benchmarking and output sharing - lessons learned from the geodynamics community |
| 9.50 | Benchmarking discussion  |
| 10.20 | Break  |
| 10.40 | Kaixuan Kang | The Effects of Non-Newtonian Rheology in the Upper Mantle on Relative Sea Level Change and Geodetic Observables Induced by Glacial Isostatic Adjustment Process |
| 11.00 | Shijie Zhong | Can non-Newtonian rheology help reconcile far-field and near-field relative sea-level observations? |
| 11.20 | Erik R. Ivins | Island Subsidence During Melt Water Pulse Events and the Extended Burgers Model of Transient Mantle Rheology |
| 11.40 | Harriet Lau (invited) | Frequency Dependent Mantle Viscoelasticity via the Complex Viscosity: cases from Antarctica |
| 12.00 | Code and output sharing discussion  |
| 12.30 | End of Day 4 |

Poster session 1:

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| Roger Creel | Relative Sea Level in Norway since Last Glacial Maximum |
| Jennifer Walker | A 5000-year record of relative sea-level change in New Jersey: implications for glacial isostatic adjustment models |
| Juliet Sefton | Relative sea-level changes in Micronesia, Western Pacific Ocean |
| Kayla M. Cahoon | Coastal Highstand Deposits Archive Late-Pleistocene Regional Sea-Level Variability Along the US Mid-Atlantic Coast |
| Andrew Wickert | Glacial-isostatic deformation of the Last Glacial Maximum Mississippi River terrace |
| Oana A. Dumitru | Last Interglacial global mean sea level derived from U-series dated coral reefs of the Bahamian islands |
| Matias Romero | Holocene sea level change in the South Shetland Islands revisited |
| Audrey Baril | Postglacial Relative Sea-Level Changes in the Gulf of Maine, USA: A Challenge for GIA Models |
| Karla Rubio-Sandoval | A standardized database of last interglacial (MIS 5e) sea-level indicators in the Western Atlantic and Southwestern Caribbean, from Brazil to Honduras |
| Geoff Richards | Exploring new archives of Holocene relative sea-level changes and their importance in enabling the assessment of Glacial Isostatic Adjustment models. |
| Sebastian Garzón | WALIS Explorer: A tool to visualize sea level indicators. |
| Tijn Berends | On the Cause of the Mid-Pleistocene Transition |
| Volker Klemann | A Holocene relative sea-level database for the Baltic Sea |

Poster session 2:

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| Linda Pan | The Impact of 3D Earth Structure on Predictions of Far-Field Sea-Level Changes Since the Last Glacial Maximum |
| Kai Tawil-Morsink | Searching for the sea level fingerprint of recent melt in the Amundsen Sea Embayment, West Antarctica |
| Evelyn Powell | The Impact of 3-D Earth Structure on Far-Field Sea Level Following Interglacial West Antarctic Ice Sheet Collapse |
| Alex Simms | Does glacial isostatic rebound provide a stabilizing mechanism along rapidly retreating marine-based ice streams? |
| Jeremy | Global Temperature and Sea-Level Change Over the Last 4.5 Myr |
| Guy Paxman | Reconciling inferences of Greenland’s upper mantle viscosity across a range of timescales using transient rheology |
| Peter Clarke | GPS-observed elastic deformation due to surface mass balance variability in the Southern Antarctic Peninsula |
| Soran Parang | Towards an improved understanding of vertical land motion and sea-level change in eastern North America |
| K. Simon | Examining patterns of transient deformation in predictions of relative sea level |
| Maryam Yousefi | The influence of the solid Earth on the contribution of marine sections of the Antarctic ice sheet to sea level change |
| Marisa Borreggine | The Potential Role of Late-Holocene Regional Ice History and Sea-Level Change in Viking Out-Migration from Southwest Greenland |
| Jesse Reusen | Compressibility in finite element GIA models |