

Programme



International Conference on
the Edges of Glaciology

University of Limerick, Ireland
2-7 July 2023

UL = University of Limerick
KBS = Kemmy Business School
[P] = Annals paper planned.

Saturday 1 July/Sunday 2 July: participants arrive

Sunday: Pre-symposium excursion to Sceilg Mhicíl. Bus leaves UL at 7 a.m. from Stables. Return to UL by 7 p.m. Icebreaker; light buffet, 7.30-9.30, KBS.

Monday 3 July

8.45 Introduction James Gleeson, MACSI

Mon1

9.00 8. 4371o Francisco Navarro, Madrid
Geodetic Mass Balance 1957-2000, 2000-2013 and 2013-2019
of Hurd and Johnsons glaciers, Livingston Island, Antarctica

9.30 5. 4363o Nicolas Jullien, Fribourg
Ice slab thickening drives surface runoff expansion from the
Greenland Ice Sheet's percolation zone - and vice versa

10.00 28. 4393o Matthew Siegfried, Colorado
The life and death of a subglacial lake in West Antarctica

10.30 coffee

Mon2

11.00 10. 4373o Ian Hewitt, Oxford

Glacier sliding modulated by cavitation

11.30 16. 4379o Marianne Haseloff, Madison [P]

Constraining subglacial properties from time-dependent data

12.00 25. 4390e Doug MacAyeal, Chicago [P]

Elastica's snowy edge: Spontaneous roll-up of a ruck in a thin, sliding snow sheet

12.30 lunch

Mon3

2.00 34. 4399o John Woodward, Northumbria [P]

Super slippery surfaces: theoretical implications for the dynamics and flow stability of glaciers and ice sheets

2.30 32. 4397o Rebecca McCerery, Northumbria

Hunting for Super Slippery Surfaces in Subglacial Environments

3.00 2. 4021o Dustin Schroeder Stanford [P]

Limits on the Orbital Sounding of Terrestrial Ice Sheets and Near-Surface Reflectors

3.30 tea

Mon4

4.00 35. 4400o Yongjij Wang, Princeton

Discovering the rheology of Antarctic Ice Shelves via physics-informed deep learning

4.30 4. 4267o Ginny Catania, Austin

Using big data to understand calving in Greenland (invited)

5.30 pub

7.00 dinner Stables bbq/Copper and Spice

9.00 pub (Scholars')

Tuesday 4 July

Tue1

9.00 1. 4016o Felix Ng, Sheffield

Isotopic diffusion in ice enhanced by vein-water flow

9.30 6. 4365o David Prior, Otago [P]

Anisotropy of the Priestley Glacier lateral shear margin, Antarctica

10.00 9. 4372o Olga Sergienko, Princeton

Dynamics and steady-state stability of marine ice sheets with arbitrary basal and lateral shears

10.30 coffee

Tue2

11.00 21. 4384o Kristin Schild, Maine [P]

Can we use ApRES to calculate iceberg ablation rates?

11.30 19. 4382o Iain Wheel, St Andrew's

Investigating calving dynamics at Jakobshavn Isbræ using a 3D full-Stokes calving model

12.00 37. 4402e Peter Nekrasov, Chicago

Interaction of flexural-gravity waves with periodic ice shelf structures: a proposed explanation of rolls on Arctic ice shelves

12.30 lunch

Tue3

2.00 24. 4387o Adrian Luckman, Swansea

How do suture zones allow ice shelves to grow so large?

Introducing the RiPIce Project

2.30 44. 4411o Bernd Kulesa, Swansea

Integrated geophysical exploration of the Joerg Peninsula suture zone, Larsen C Ice Shelf, Antarctic Peninsula

3.00 40. 4405o Katie Miles, Aberystwyth [P]

Physical properties and structure of meteoric and suture zone ice from boreholes on Larsen C Ice Shelf, Antarctica

3.30 tea

Tue4

4.00 39. 4404o Doug Benn, St. Andrew's [P]
Calving laws and lawlessness {invited)

5.00 Posters and drinks

7.00 dinner (Pavilion), open mic night[?]
[open Limerick competition/2nd circular image
identification/trivia quiz] [Magnús]

Wednesday 5 July

Mid-week excursion

9.00: Bus departs from Stables

10.00: Drumlins of south Clare, near Lissycasey

10.30: Boat to Scatterry Island; picnic lunch

1.30: Bus to Kilkee, Greyhound.

2.30: walk/bus to Bishop's Island via cliff path.

3.15 Walk/bus to Dunlicky Castle.

4.00: Bus to ring fort (e.g. Maigh Mhín).

4.30: Bus to reception at Marcheurl du Ciel.

5.30+ barbecue

8.00 Departure to Limerick.

9.30 Arrive UL.

Thursday 6 July

Thu1

9.00 7. 4370o Giacomo Traversa, NRC Italy [P]
Ablation areas in Antarctica: a hyperspectral analysis by in-situ
and remote sensing observations

9.30 45. 4412e Valeria Di Biase, Utrecht
Antarctic firn aquifers: detection algorithm based on Monte
Carlo simulations using satellite and regional climate model
data.

10.00 23. 4386o Ted Scambos, Colorado [P]
Ice Shelf Aquifers of Melt and Brine: a lot to explore

10.30 coffee

Thu2

11.00 36. 4401o Nathan Teder, Adelaide
How swell instigated the Wilkins and Voyeykov calvings in 2007—2008

11.30 38. 4403e Nicole Abib, Oregon
Persistent overcut regions dominate the terminus morphology of a rapidly melting tidewater glacier.

12.00 47. 4414 Geoff Evatt, Manchester
A reassessment of ice cliff dynamics

12.30 lunch

Thu3

2.00 12. 4375o Supratim Guha, Indian Institute of Technology, Ropar [P]

Quantification of Topographical and Morphological Factors Affecting Glacier Thinning in Different Himalayan Zones

2.30 46 4413o Andrew Fowler (Limerick), Mike Chapwanya (Pretoria), James Fannon (Met Éireann)
Drumlin: the movie

3.30 tea

Thu4

4.00 14. 4377o Collin Schohn, Iowa
Stress-dependent rheology of warm, watery ice in tertiary creep

4.30 31. 4396o Neal Iverson, Iowa [invited]
Till under glaciers: dilation, pore-pressure feedback, and rate-weakening friction

6.00 bus into town, visit St Mary's Cathedral.

7 for 7.30 Conference dinner, Strand Hotel, Limerick

Friday 7 July:

Fri1

9.00 26. 4391e Mikayla Pascual, Austin
Topographic and surface mass balance controls on Greenland glacier dynamics in a coupled ice-sediment model

9.30 17. 4380o Luke Zoet, Madison [P]
Constraining subglacial till properties from acoustic techniques
10.00 20. 4383o Adrian Luckman, Swansea
Diverse glacier surge dynamics in Svalbard suggest complexities in underlying processes

10.30 coffee

Fri2

11.00 general discussion
12.30: lunch (Pavilion), followed by
2.00 exit

Saturday 8 July-Monday 10 July:

Post-symposium excursion

Probably similar to IGS2008 (Galway/Mayo), though we could do Clare on Sat, Connemara on Sun and try and get to Westport that night, then Clew Bay and back.

Posters

49. 4417p Iain Moyles, York University, Toronto
The instability theory of drumlin formation.

50.4418p Andrew Fowler, Limerick.
The formation of ice sails.

48. 4415o Geoff Evatt, Manchester
The spatial flux of Earth's meteorite falls found via Antarctic data

30. 4395e Dougal Hansen, Madison
The impact of frozen sediments on basal friction during glacier sliding

22. 4385p Akash Patil, Munich
Improved Glacier volume-to-mass conversion by new density scenarios

13. 4376p Christina Hulbe, Otago
Internal conditions should not be ignored in simulations of ice-shelf rift propagation.

42. 4408e C.A. Fillekes, IBM [P]
Ice Shelf Calving: a Quantum Approach

18. 4381p Allie Berry, Maine [P]
What controls iceberg abundance and distribution in Northwest Greenland?

41. 4407p Stephen Cornford, Bristol
Continuum damage modelling of ice shelf rift propagation and arrest

27. 4392e Wilson Sauthoff, Colorado
Surface-deformation delineation algorithm reveals subglacial lake candidates and underestimates of subglacial volume fluxes

3. 4028e Dr Har Amrit Singh Sandhu, Punjab [P]
Spatio-temporal glaciers retreat and advances in Bhagirathi Basin, Gharhwal^[SEP]Himalayas using Remote Sensing Data

29. 4394e Jacob Fowler, Iowa
The relationship between the permeability and liquid water content of polycrystalline temperate ice

11. 4374e Denis Felikson, NASA Goddard
How well can we constrain uncertainties in calving and sliding parameterizations in ice sheet models using remote sensing observations?

15. 4378e Dominik Fahrner, Oregon
Quantifying ocean forcing on Greenland's tidewater glacier termini

33. 4398e Hui Gao, Buffalo
Evaluate the interaction between the Greenland Ice Sheet and atmosphere using reconstruction of elevation change and mass change from laser altimetry