

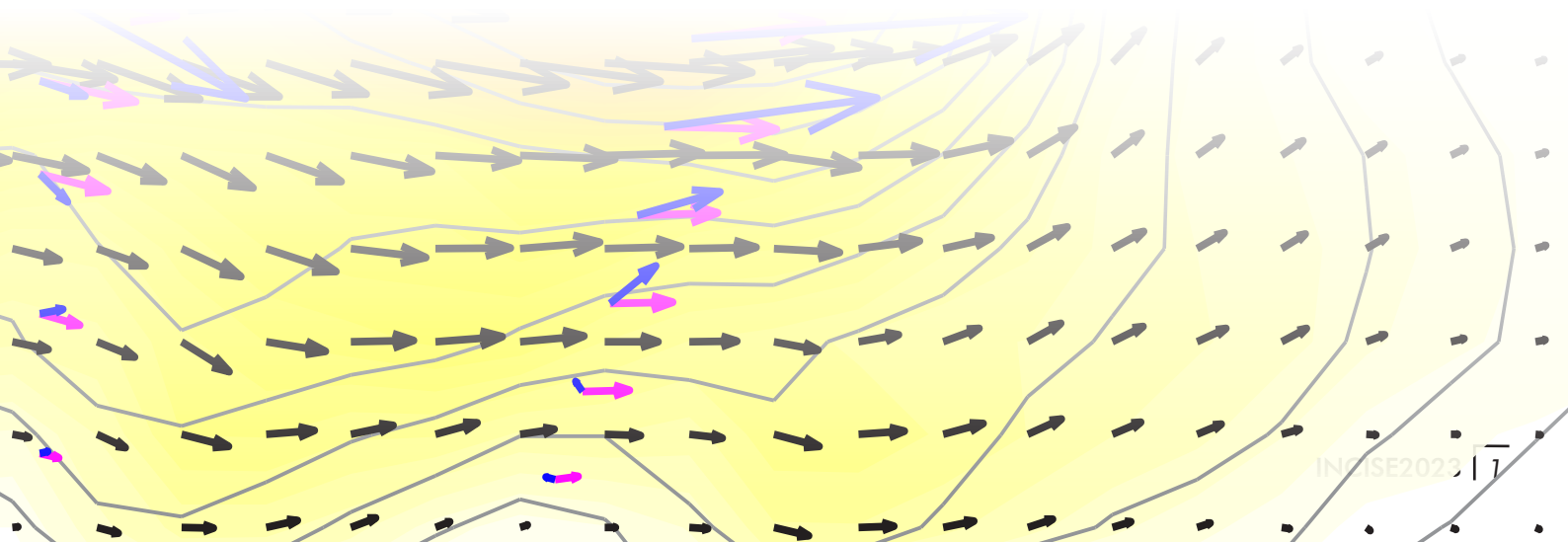
Monday, December 4

WORKSHOP: Internal waves in submarine canyons

	Rutherford House	
09:00	Welcome	Jaime Davies and Veerle Huvenne
09:10	Internal wave basics	Rob Hall
10:00	Coffee break	
10:30	Internal waves in submarine canyons and how to measure them	Rob Hall
11:15	Upper ocean biogeochemical responses to internal tides	Jonathan Sharples
12:00	Lunch break	
13:00	Mixing rates from seismic oceanography	Kathy Gunn
13:45	Interaction of internal waves with the seafloor	Marta Ribó
14:30	Coffee break	
15:00	Practical session	Rob Hall
16:15	Discussion: Future research into internal wave interactions with the whole submarine canyon system	Lead by Marta Ribó
16:55	Wrap up	Jaime Davies and Veerle Huvenne
17:00	Close	

17:00 **INCISE Icebreaker**

Rutherford House



Programme

Tuesday, December 5

08:00 Registration
08:30 INCISE 2023 Opening

SESSION 1: carbon through canyons (chairs: V. Huvenne, F. de Leo)

09:00	<u>Keynote 1: Katie L. Maier</u>	Sediment and carbon transfer and sequestration in Kaikōura Canyon, offshore Aotearoa/New Zealand
09:30	K. Kiriakoulakis	Controls on Carbon storage in near-surface sediments from the Whittard Canyon, N.E. Atlantic.
09:45	C.C. Tung	Carbon cycling in the benthic food web of a river-connected, higher-energy submarine canyon
10:00	S.D. Nodder	Is organic carbon enriched in submarine canyons around Aotearoa/New Zealand?
10.15	M. Clare	First monitoring in an anoxic deep-sea canyon reveals how powerful river flood- and earthquake-triggered turbidity currents efficiently sequester organic carbon and iron
10:30	Flash poster presentations (5')	
	H. Close	Sorting of sedimentary organic matter along a marginal submarine canyon
	S. Paradis	Global distribution of organic carbon content and age in submarine canyons: results from the "Factors influencing the Accumulation of organic Carbon and its Transfer in Submarine canyons" (FACTS) project.
10:40	Coffee break	

SESSION 2: processes shaping canyons (chair: J. Mountjoy, D. Amblas)

11:00	L. Gonçalves de Freitas	New AUV bathymetric data unveils the shaping potential of dense shelf water cascades on the seafloor of Cap de Creus Canyon
11:15	C. Cabrera	Geomorphology and evolution of the Blanes Canyon (NW Mediterranean). New insights from high resolution mapping of vertical cliffs.
11:30	D. Amblas	Simulating the dynamics of Antarctic dense water overflows over complex topographies. A local process with global significance
11:45	S. Ceramicola	Preliminary results from the ERODOTO cruise (EROSive Dynamics Of The squillace submarine canyon), Ionian Sea, Central Mediterranean
12:00	Flash poster presentations (5')	
	G. Carter	An Integrated Approach to Assessing Structural Controls on Canyon Morphology; A Case Study from the Whittard Canyon (Celtic Sea).
	S.J. Watson	The form and history of submarine canyons offshore Taranaki, Aotearoa New Zealand

	S. Bull	Standing on the edge of an exhumed, MTD-filled submarine canyon: the early Pleistocene Castlepoint Formation, eastern Wairarapa, New Zealand.
	L. Gnesko	Upper Kaikōura Canyon: Shaken by de-fault.
	A. Henneker	Understanding gravel transport and bedrock erosion in canyons: Comparison between ancient and present-day submarine canyons
12:30	Lunch	
13:30	L. Verweirder	Sculpting a land-detached large-scale canyon-channel system: influence of margin processes before, during and after incision
13:45	M. Pierdomenico	Recent sedimentary processes along submarine canyons of southern Italy: insight from morphobathymetric data and ROV observations
14:00	C. Paull	Assessing the cumulative impact of sediment gravity flows within Monterey Canyon over the last quarter century
14:15	Y.J. Yang	Observation evidences on typhoon-triggered landslide in the submarine canyon.
14:30	R. Gwiazda	Near-Bed Structure of Sediment Gravity Flows Measured by Motion-Sensing Boulder-Like "Benthic Event Detectors" in Monterey Canyon
14:45	Flash poster presentations (5')	
	M. Ribo	Insights into understanding how internal waves control the shape of the continental margin
	S.Y.J. Lai	Exploring the evolution of submarine canyon-fan systems in active fault settings: Insights from physical experiments and morphodynamic modeling
	M. Bono	Identification and classification of the Antarctic submarine canyons based on the latest IBCSO Bathymetric Chart v2 and analysis of their oceanographic significance
15:00	Coffee break	

SESSION 3: canyon sediment transport (chair: K. Maier)

15:30	P. Puig	Sediment transport mechanisms and downward particle fluxes in Blanes Canyon and their influence on cold water coral benthic communities.
15:45	B.B. Ma	Characterize Acoustic Environment in the Kao-Ping Submarine Canyon – can we the hear the hyperpycnal flows?
16:00	E. Lundsten	Sediment gravity flows independent of submarine channels erode regularly dispersed pockmarks offshore Big Sur, California
16:15	A. Shorrock	Influence of submarine canyons on long-term sedimentation dynamics in the northern Hikurangi Subduction Margin, New Zealand during the late Quaternary
16:30	Poster session	
18:00	Finish	

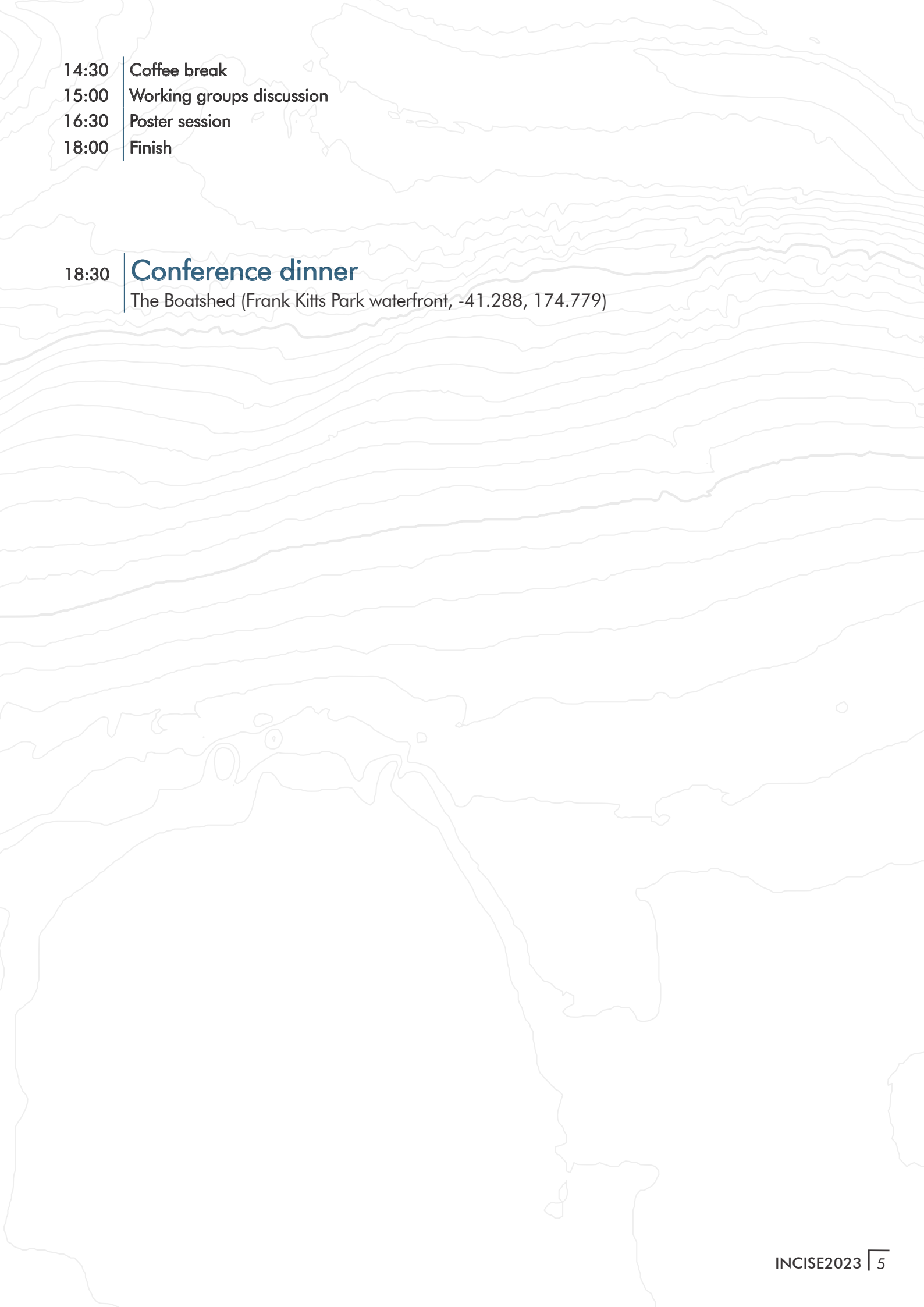
Wednesday, December 6

SESSION 4: canyons as havens for biodiversity (chairs: A. Rowden, K. Bigham)

09:15	Keynote 2: Louise Allcock	Exploiting and conserving deep-sea genetic resources – an exploration of biopharmaceutical opportunities in submarine canyons
09:45	R. Hale	Faunal-mediated ecosystem functioning in a benthic deep-sea canyon community recovering from a severe seabed disturbance
10:00	K. Bigham	Resilience of benthic fauna to turbidity flow disturbance in Kaikōura Canyon, New Zealand
10:15	V.A.I. Huvenne	Cold-water coral habitat responses to natural and anthropogenic disturbance: initial results from repeat observations in the Whittard Canyon system
10:30	Coffee break	
11:00	A. Parimbelli	Selecting the best framework to model Antipatharia distributions in the Northeast Atlantic deep sea
11:15	C. Lo Iacono	Ecology and hydrodynamic drivers of black coral assemblages in Barkley Canyon, at the core of NE Pacific Oxygen Minimum Zone.
11:30	I. Anell	The Fourth Slope – Curvature analysis of continental margins and the link between shape and processes
11:45	B. Robison	The bathypelagic community of Monterey Canyon
12:00	A. Leitner	Trapped! Sunrise Topographic Blocking of Vertical Migrators at Steep Canyon Walls
12:15	Flash poster presentations (5')	
	R. Sherlock	Between a rock and a hard place: when midwater animals bump into the benthos
	M. Bilan	Cold-water coral assemblages along the canyon walls of Blanes Canyon (NW Mediterranean Sea) with notes on vulnerability to increased resuspended sediment
	G.E. Frontin-Rollet	Bringing new life to legacy imagery data: Developing methodologies to enhance geospatial use of legacy Deep Towed Imaging System (DTIS) imagery.
12:30	Lunch	

SESSION 5: anthropogenic impacts (chairs: J. Davies, P. Puig)

13:30	J. Davies	Towards standardising reporting of macro-litter (and interactions) in Submarine Canyons to better understand effects of litter on habitats and fauna to aid conservation efforts
13:45	J.P. Xu	How does plastic litters aggregate in submarine canyons? A field scale simulation study
14:00	E. Keavney	Submarine microplastic segregation: bypass and storage in the Whittard Canyon, NE Atlantic
14:15	Flash poster presentation (5')	
	M. Pierdomenico	A geoscience perspective on transport mechanisms and global accumulation of litter in submarine canyons
	R. Duran	Assessment of the morphological impact on fishing grounds along canyon flanks using AUV high-resolution side scan sonar and bathymetry
	A. Palanques	Direct and deferred trawling-induced sediment transport events downslope a fishing ground on the flank of Blanes Canyon



14:30 | Coffee break
15:00 | Working groups discussion
16:30 | Poster session
18:00 | Finish

18:30 | **Conference dinner**
The Boatshed (Frank Kitts Park waterfront, -41.288, 174.779)

Thursday, December 7

SESSION 6: canyon current dynamics and influence on sediment transport (chairs: M. Ribo, R. Hall)

09:00	Keynote 3: Rob Hall	Intensified shelf break exchange through submarine canyons: upwelling and internal tides
09:30	F. Butschek	A Combined Morphological – Oceanographic Investigation of Baroclinic Tides Interacting with the Seabed in a Submarine Canyon
09:45	D. Lyu	Internal tides regulate the sediment dynamic processes in the deep-sea bottom boundary layer
10:00	E. MacDonald	Mapping Spatial and Temporal Variability of Turbidity Within the Whittard Canyon System to Investigate Mechanisms of Sediment Resuspension and the Triggering of Turbidity Currents
10:15	A. Sanchez-Vidal	Assessing the monitoring capacities of CMEMS (Copernicus Marine Environment Monitoring Service) to investigate dense shelf water cascading in submarine canyons of the Gulf of Lions, Western Mediterranean
10:30	Coffee break	
11:00	B. Sloyan	Linking East Australian Current dynamics and submarine canyon geomorphology to marine ecosystem hotspots
11:15	W. Ruan	Seasonal Variations of Nonlinear Internal Waves and Sediment Transport in the Northeastern South China Sea
11:30	J.T. Eggenhuisen	Quantifying lateral fluxes of matter down submarine canyons to the deep sea with a simplified process model for turbidity currents.
11:45	M. Yokokawa	Change in subaqueous debris flow and their deposits with or without gravel: an experimental study
12:00	G. Zhong	Morpho-depositional characteristics of a large downstream-narrowing submarine canyon (Xisha Trough) in the South China Sea
12:15	C. Stevens	Observations of the internal tide at the head of Cook Strait Canyon, Aotearoa New Zealand
12:30	Lunch	
13:30	S. Li	Submarine canyon morphology along the Chilean marine forearc (19°S-45°S)
13:45	W. Li	The role of sediment gravity flows on the morphological development of a large land-detached submarine canyon (Taiwan Canyon), northeast South China Sea
14:00	Working groups feedback discussion	
14:30	Next INCISE?	
15:00	coffee break	
15:30	Close of meeting	

