

**International Conference on Geophysical and Astrophysical Fluid Dynamics (ICGAFD)
23-25 June 2025, IUEM – Pole Numérique, Plouzané, France**

DAY 1: Monday 23 June 2025

Time	Speaker	Title	Page in booklet
9:00-9:40		Welcome coffee	
9:40-9:50	Carton Xavier	Opening remarks	
Session I		Chaired by Prof David Dritschel	
09:50-10:10	Zavala-Sanson Luis	Self-organized states in rotating turbulence in an oceanic basin with topography: decaying and continuously forced flows	2
10:10-10:30	Brown Joshua	Nonlinear dispersive spiral waves in accretion discs	4
10:30-11:00		Coffee break	
Session II		Chaired by Dr Jan-Bert Flór	
11:00-11:20	Sugimoto Norihiko	Spontaneous gravity wave radiation in the Venus atmosphere	5
11:20-11:40	Hughes Stephen	A shallow water model of variability in Mars' polar vortices	6
11:40-12:00	Cope Laura	The Dynamics of Jovian Polar Cyclones	7
12:00-12:20	Tsang Yue-Kin	Oscillatory double-diffusive convection in a rotating spherical shell at low Rayleigh numbers	8
12:20-14:00		Lunch time + setting posters	
Session III		Chaired by Prof Joseph LaCasce	
14:00-14:20	Hay Hamish	Tidally-driven mean flows in icy satellite subsurface oceans	9
14:20-14:40	Chang Xu	Zonal flows driven by libration in rotating spherical shells	10
14:40-15:00	Kiernan Murray	Lunar tides of a liquid iron core beneath a basal magma ocean	11
15:00-15:20	de Vries Nils	Fully compressible simulations of mixed modes in evolved low-mass stars	12
15:20-15:50		Coffee break + posters	
Session IV		Chaired by Prof Jonas Nycander	
15:50-16:10	Favier Benjamin	A laboratory model for Jovian polar vortices	13
16:10-16:30	Sutyrin Giorgi	Life cycles of coherent vortices and their transport properties in baroclinic zonal flows (online)	14
16:30-16:50	Riccardi Giorgio	Something about the time evolution of the Schwarz function of a vortex patch (online)	15

DAY 2: Tuesday 24 June 2025

Time	Speaker	Title	Page in booklet
Session V		Chaired by Dr Paul Billant	
09:00-09:20	Hajduk Hennes	Spin-up of a stratified ocean with topography	16
09:20-09:40	Deng Peng	Distinct Impacts of Topographic versus Planetary PV gradients on Baroclinic Turbulence	17
09:40-10:00	Lemasquerier Daphné	Experimental study of turbulent zonal flows interacting with local topography	18
10:00-10:20	Stanchieri Chiara	Jet formation in multi-layer fluid over topography	19
10:20-10:50		Coffee break + posters	
Session VI		Chaired by Dr Laura Cope	
10:50-11:10	Flor Jan-Bert	Vertical convection regimes in a three-dimensional cavity	10
11:10-11:30	LaCasce Joseph	Rossby waves over rough bathymetry	21
11:30-11:50	Aulnette Marine	Vertical velocities in laboratory surface vortices	22
11:50-12:10	Mokuenko Vincent	Topography-generated submesoscale coherent vortices near the mid-Atlantic ridge	23
12:10-14:00		Lunch time	
Session VII		Chaired by Dr Luis Zavala Sansón	
14:00-14:20	Oliver Marcel	The role of equatorial waves in spontaneous emission	24
14:20-14:40	Nycander Jonas	Steady baroclinic vortices radiating Rossby waves in vertically sheared flows	25
14:40-15:00	Barboni Alexandre	Relationship between mesoscale eddy surface temperature anomaly and its vertical structure : case study in the Arabian Sea.	26
15:00-15:20	Zoeller Victoria	An interaction mechanism sustaining near-equilibrium shielded geophysical vortices	27
15:20-15:50		Coffee break + posters	
15:50-16:30		Flash talks for posters (chaired by Dr Jean Reinaud)	
16:30-18:00		Poster session	
18:00		Cocktail	

DAY 3: Wednesday 25 June 2025

Time	Speaker	Title	Page in booklet
Session VIII		Chaired by Dr Daphné Lamasquerier	
9:00-09:20	Billant Paul	Mean flow generation in two-dimensional forced stratified turbulence: uprising of enslaved modes	42
09:20-09:40	Niu Zhaodong	Three-dimensional structure of anticyclonic vortices in a stratified rotating fluid	43
09:40-10:00	Reinaud Jean	Vortex vertical alignment over topography	44
10:00-10:20	Barabinot Yan	Defining Mesoscale Eddies Boundaries from in situ Observations and Theory	45
10:20-10:50		Coffee break + posters	
Session IX		Chaired by Dr Benjamin Favier	
10:50-11:10	Coppin Max	Experimental Observation of Oceanic Convection on the Coriolis Platform	46

11:10-11:30	Kafiabad	Hossein	Interaction of Near-Inertial Waves with an Anticyclone	47
11:30-11:50	Roulet	Guillaume	When GFD meets DDG	48
11:50-12:10	McKiver	William	Exploring cyclone-anticyclone asymmetry using the balanced ellipsoidal vortex at finite Rossby number	49
12:10-14:00	Lunch time			
Session X		Chaired by Dr Patrice Le Gal		
14:00-14:20	Miller	Lennard	The Impact of Stratification on Surface-Intensified Eastward Jets in Turbulent Gyres	50
14:20-14:40	Ding	Shan-shan	Turbulent Energy Spectra in a Convectively Driven Baroclinic Flow	51
14:40-15:00	Kobe	Simoens	Phytoplankton response to oceanic vortex perturbations	52
15:00-15:20	Allende	Sofia	Characterizing Mixing-Length Growth and Melt Rates at the Ice-Ocean Interface	53
15:20-15:50	Coffee break + posters			
Session XI		Chaired by Prof Xavier Carton		
15:50-16:10	Crowe	Matthew	Steadily propagating modons in 3D quasi-geostrophic models	54
16:10-16:30	Dritschel	David	Why Surface Quasi-Geostrophy is a poor model	55
16:30-16:40	Concluding remarks			

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Nath	Anu	Unveiling a Novel Particle-Induced Instability in Shear Flows	35
Ravasse	Raphael	Analytical study of instabilities in idealized shielded vortices	36
Saddier	Louis	Bistable Ocean Circulation Beneath Antarctic Ice Shelves: Insights from idealized numerical simulations	37
Campagnoli Napolitano	Dante	Velocity and Kinetic Energy Decomposition of the Deep Western Boundary Current in a Semi-Enclosed Basin	39
Volorio-Galea	Anastasia	Submesoscale SST fronts reconstruction	40
Geoffroy	Gaspard	Diffusion of internal tides by geostrophic turbulence	41