

Stratified turbulence in the 21st century – new insights on an increasingly important problem

Monday 21 – Tuesday 22 March 2016 | The Royal Society at Chicheley Hall, home of the Kavli Royal Society Centre

Organised by: Professor Paul Linden FRS, Professor Richard Kerswell FRS, Dr Colm-cille Caulfield, Dr Stuart Dalziel and Dr John Taylor

Monday 21 March 2016				Tuesday 22 March 2016			
Session 1 Chair Colm-cille Caulfield		Session 2		Session 3		Session 4	
09.00	Welcome by the Royal Society and scientific organisers	Chair Richard Kerswell FRS		Chair John Taylor		Chair Stuart Dalziel	
09.05	Jennifer MacKinnon Stratified turbulent mixing in the ocean: patterns, processes, and parameterisation	13.10	Predrag Cvitanović Periodic orbits theory of turbulent flows	9.00	Ross Griffiths Experiments with mixing in stratified flow over a ridge	13.10	Sutanu Sarkar From topographic internal gravity waves to instabilities and turbulence
09.40	Greg Ivey Mixing in density-stratified, free shear flows and the implications for mixing in the ocean	13.50	Philip Marcus The zombie vortex instability – a new, fast, robust instability in rotating, horizontally-shearing, vertically-stratified flows	09.40	Henrik Alfredsson Rotating plane Couette flow – instabilities, structures and turbulence	13.50	W Richard Peltier Flavours of stratified turbulence
10.20	Tea	14.30	Coffee	10.20	Tea	14.30	Coffee
10.50	Sonya Legg Parameterising mixing in the stably stratified ocean interior	15.00	James Riley The turbulent/non-turbulent interface in stably stratified fluids	10.50	Thomas Mullin Transition in unstratified pipe flow	15.00	Pascale Lelong Near-inertial energy propagation inside an anticyclone: a pathway to stratified turbulence
11.30	Simon Bittleston Mixing processes in the oil and gas industry	15.40	Roberto Camassa Mixing and critical entrainment phenomena in stratified fluids	11.30	Tim Palmer FRS Stochastic parametrisation and inexact computing for weather and climate prediction	15.40	Kraig Winters The turbulent transition of a supercritical downslope flow: sensitivity to downstream conditions
		16.20	Discussion			16.20	Discussion
12.10	LUNCH	17.00	CLOSE	12.10	LUNCH	17.00	CLOSE