

# The University of Newcastle

## -Nihon University joint workshop

### on Applied Mathematics

Date: 1st (Sat) – 4th (Tue) November, 2025

Location: E203, Nihon University Newcastle Campus

#### Program

2025/10/31 Arrival

2025/11/1

13:50~14:00 Opening Remark

14:00~14:30 Miki Aoyagi  
Singular models in learning theory and information criteria

14:45~15:15 James McCoy  
Isoperimetric inequality for multiply-winding curves

15:30~16:00 Masashi Mizuno  
A stochastic model of grain boundary motion

16:15~16:45 Stephan Tournier  
Groups acting on trees

17:00~17:30 Ravi Pethiyagoda  
Water waves big and small

## 2025/11/2

11:00~11:30	Mike Meylan The abstract linear wave equation and applications to hydrodynamics
11:45~12:15	Dave Smith Fokas diagonalization
12:30~14:00	Lunch
14:00~14:30	Takanori Nagamine Problems in Affine Algebraic Geometry: An Introduction
14:45~15:15	Masaru Ito Geometry of convex cones and conic optimization
15:30~16:00	Florian Breuer On Modular Polynomials
16:15~16:45	Kota Saito Prime-representing constants
17:00~17:30	Andreas Heinecke Duality for frames and application to multivariate wavelet frame construction

## 2025/11/3

11:00~11:45	Discussion
12:00~14:00	Lunch
15:00~15:20	Kouta Araki Long-time behavior of the dissipation function for free energy in the nonlinear Fokker-Planck equation with spatial inhomogeneous diffusion of porous medium type
15:30~15:50	Yuki Miyazaki Gradient methods for multiobjective optimization problems
16:00~16:20	Afnan Abdullah M Aldosri Wave scattering at a rectangular junction of four waveguides
16:30~16:50	Jahne Meyer Hyperbolic motion of polygons via semi-discrete linear geometric flows

## 2025/11/4

11:00~12:00	Discussion
12:00~14:00	Lunch
14:00~17:00	Group discussion
17:00~17:30	Closing