# International Conference on Nonlinear Partial Differential Equations
# In Honour of Professor Neil Trudinger's 80th Birthday
*New Law School Lecture Theatre 024, F10A New Law Building Annex, The University of Sydney*

**Sponsored by:** *Australian Mathematical Sciences Institute (AMSI), Australian Mathematical Society, The Australian National University, The University of New England, The University of Wollongong, and The University of Sydney*

| Monday | 10 July 2023 |
|---|---|
| 08:45–09:00 | *Registration* |
| 09:00–09:10 | *Opening remarks* |
| 09:15–10:00 | **Leon Simon** (Stanford University) <br> A Liouville type theorem for stable minimal hypersurfaces |
| 10:05–10:30 | *Morning tea/coffee* |
| 10:30–11:15 | **Xu-Jia Wang** (The Australian National University) <br> Free boundary problems in the Monge-Ampere equation |
| 11:20–11:50 | **Jonathan Mui** (The University of Sydney) <br> A semigroup approach to the Landau-Lifshitz-Gilbert equation |
| 12:00–14:30 | *Lunch break* |
| 14:30–15:15 | **Zhouping Xin** (The Chinese University of Hong Kong) <br> On some free boundary value problems arising from subsonic-sonic jet flows and rigidity |
| 15:20–15:45 | *Afternoon tea/coffee* |
| 15:45–16:30 | **Enrico Valdinoci** (The University of Western Australia) <br> A strict maximum principle for nonlocal minimal surfaces |
| 16:30–17:00 | *Free discussion* |
| 18:30–20:30 | *Drinks Reception at* **Fossix Gateway Lounge**, 1 Macquarie Place, Sydney |

| Tuesday | 11 July 2023 |
|---|---|
| 09:15–10:00 | **Gang Tian** (BICMR and Peking University) <br> Some recent progress on Ricci flow |
| 10:05–10:30 | *Morning tea/coffee* |
| 10:30–11:15 | **Nalini Joshi** (The University of Sydney) <br> Monodromy and asymptotics |
| 11:20–11:50 | **Hosea Wondo** (The University of Sydney) <br> Independence of singularity type for long time solutions to the Kähler-Ricci Flow |
| 11:50–12:00 | *Conference Photo* |
| 12:00–14:30 | *Lunch break* |
| 14:30–15:15 | **Peter Kloeden** (Eberhard Karls Universität Tübingen) <br> Dissipative lattice dynamical systems |
| 15:20–15:45 | *Afternoon tea/coffee* |
| 15:45–16:30 | **Brian Krummel** (The University of Melbourne) <br> Analysis of singularities of area minimizing currents |
| 16:30–17:00 | *Free discussion* |
| 18:30–21:00 | *Conference Dinner at* **Thai Pothong**, 294 King St, Newtown |

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| Wednesday | 12 July 2023 |
|---|---|
| 09:15–10:00 | **John Ball** (Heriot-Watt University and Maxwell Institute for Mathematical Sciences, Edinburgh)<br>Image comparison and scaling via nonlinear elasticity |
| 10:05–10:30 | *Morning tea/coffee* |
| 10:30–11:15 | **Gaven Martin** (Massey University)<br>From Teichmüller to Shoen-Yau: Extremal mappings between Riemann surfaces |
| 11:20–12:05 | **Serena Dipierro** (The University of Western Australia)<br>Boundary continuity of nonlocal minimal surfaces in domains with singularities |
| 12:10–14:30 | *Lunch break* |
| 14:30–17:00 | *Free discussion* |

| Thursday | 13 July 2023 |
|---|---|
| 09:15–10:00 | **Mikhail Safonov** (University of Minnesota Twin Cities)<br>Growth theorems as substitution for iteration procedures |
| 10:05–10:30 | *Morning tea/coffee* |
| 10:30–11:15 | **Valentina Wheeler** (The University of Wollongong)<br>Free boundary mean curvature flow: what works and what doesn't |
| 11:20–11:50 | **Jack Thompson** (The University of Western Australia)<br>On an overdetermined problem involving the fractional Laplacian |
| 12:00–14:30 | *Lunch break* |
| 14:30–15:15 | **Elton Hsu** (Northwestern University)<br>Nonlinear PDE and a Stochastic Analysis Approach to in the Parisi Formula in Spin Glass Theory |
| 15:20–15:45 | *Afternoon tea/coffee* |
| 15:45–16:30 | **Ravi Shankar** (Princeton University)<br>Hessian estimate for the sigma-2 equation in dimension four |
| 16:30–17:00 | *Free discussion* |

| Friday | 14 July 2023 |
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| 09:15–10:00 | **Robert McCann** (University of Toronto)<br>Locally Lipschitz product selection in the principal-agent problem |
| 10:05–10:30 | *Morning tea/coffee* |
| 10:30–11:15 | **Daniel Hauer** (The University of Sydney)<br>Existence of a self-similar solution to a nonlocal doubly nonlinear parabolic equation on the whole Euclidean space |
| 11:20–12:05 | **Cristian Gutiérrez** (Temple University)<br>Fine properties of monotone mappings arising in optimal transport problems for non-quadratic costs |
| 12:10–14:30 | *Closing and Lunch* |

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