



UK Resonant Acoustic Mixing Workshop and Birmingham Symposium on Mechanochemistry and Sustainability (BSMS)



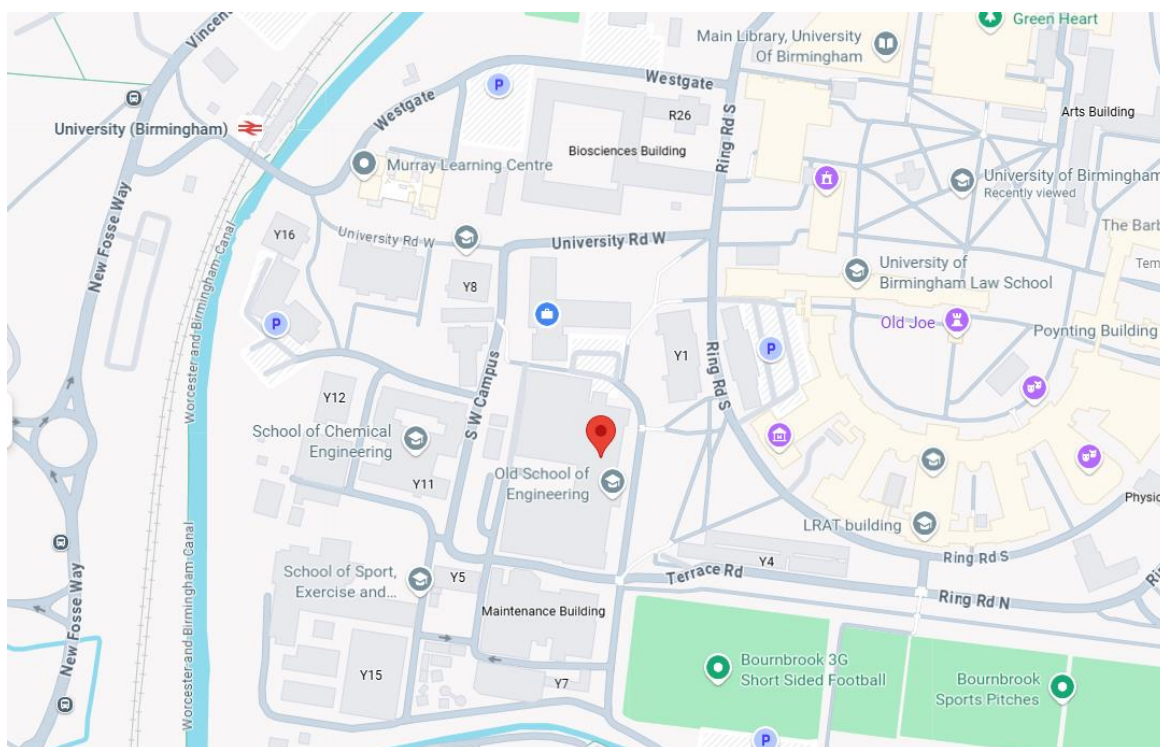
UNIVERSITY OF
BIRMINGHAM

The RAM-BSMS meeting will be held from the 30th of July to the 1st of August 2025 in the Old School of Engineering Building, Edgbaston campus of the University of Birmingham (see map below).

For directions, please use the university travel guidelines www.birmingham.ac.uk/contact/directions/getting-here-edgbaston

Registration will run from 0900-1000 on Wednesday (30th of July) in the ground floor atrium of the building, easily accessible from the main car park entrance of the Old Engineering building.

Car parking is available but should be prearranged to ensure an appropriate amount of spaces are allocated, if you require parking please contact k.waldron@bham.ac.uk



Day One

Wednesday 30th July

09:00 – 10:00 Registration/ Coffee and Biscuits

Session 1

10:00 - 10:20	Opening Speaker: Larry Farrar, Resodyn (20 min) <i>Resodyn Acoustic Mixers Technology Overview and Business Introduction</i>
10:20 - 11:00	Joseph Mayne, Resodyn (40 min) <i>RAM Continuous Acoustic Reaction: Technology and Applications</i>
11:10 - 11:20	Coffee break (10 min)
11:20 - 12:00	Joseph Mayne, Resodyn (40 min) <i>RAM Continuous Acoustic Crystallization: Technology and Applications</i>
12:00 - 12:40	Joseph Mayne, Resodyn (40 min) <i>RAM Continuous Acoustic Microreactor</i>
12:40 – 14:00	Lunch (80 min)

Session 2

14:00 - 14:25	Zachary Martineau, Resodyn (25 min) <i>Resonator Design & Capacity</i>
14:25 - 14:50	Nicholas Vukotic, University of Windsor, Canada (25 min) <i>Accelerating Solid Form Discovery through a Semi-Automated Workflow</i>
14:50 - 15:00	Coffee break (10 min)
15:00 - 15:25	Tomislav Friščić, University of Birmingham (25 min) <i>Chemical Synthesis in the RAM Environment</i>
15:25 - 15:50	Peter Slater University of Birmingham & Birmingham Centre for Energy Storage (25 min) <i>Mechanochemistry & Battery Materials</i>
15:50 - 16:00	Coffee break (10 min)

Session 3

16:00 - 16:40	Justin Whaley, Resodyn, <i>The Power of Resonance RAM Driver Systems (20 min)</i> <i>RAM Control Features (20 min)</i>
16:40 - 16:50	Coffee break (10 min)
16:50 - 17:35	Justin Whaley, Resodyn, <i>Mix Power Calculation and Application (30 min)</i> <i>Mixed Mass Coupling (15 min)</i>
5:30 - 6:45	Poster/reception

Day Two

Thursday 31st July

Session 4

10:00 - 10:30	<p>Magda Titirici, Imperial College London (30 min) <i>PET Recycling into Valuable Chemicals and Fuels</i></p>
10:30 - 10:55	<p>Kit Windows-Yule, University of Birmingham (25 min) <i>3D imaging and 4D modelling of RAM dynamics: from fundamental understanding to industrial optimisation</i></p>
10:55 - 11:05	<p>Coffee break (10 min)</p>
11:05 - 11:30	<p>Sven Grätz, Ruhr-Universität Bochum, Germany (25 min) <i>Combining RAM with different activation modes</i></p>
11:30 - 11:55	<p>Jason Stafford, University of Birmingham (25 min) <i>Sustainable mechanical synthesis of 2D materials using predictive models and feedstock re-use</i></p>
12:20 - 12:45	<p>Tristan H. Borchers, University of Birmingham (25 min) <i>Real-time monitoring of RAM processes</i></p>
12:45 - 14:15	<p>Lunch (90 min)</p>

Session 5

14:15 - 15:45	<p>Stephanie Trent, Resodyn <i>Batch Mixing of Solids (30 min)</i> <i>Batch Mixing of Pastes (30 min)</i> <i>Continuous Mixing of Solids (30 min)</i></p>
15:45 - 16:00	<p>Coffee break (15 min)</p>

Session 6

16:00 - 16:30	<p>Stephanie Trent, Resodyn <i>Continuous Mixing of Pastes (30 min)</i></p>
16:30 - 17:20	<p>Rose Tavary, Resodyn <i>Engaging Multiple Transducers (Batch Continuous) (20 min)</i> <i>OmniRAM Demonstration (30 min)</i></p>
7 pm	<p>Dinner at La Galleria 5a Ethel Street, Birmingham, B2 4BG</p>

Day Three

Friday 1st August

Session 7

10:00 - 10:30	Paul Anderson, University of Birmingham & Birmingham Centre for Strategic Elements and Critical Materials (30 min) <i>The Elements of Sustainability</i>
10:30 - 10:55	Deborah Crawford, University of Birmingham (25 min) <i>Pushing the Limits: Evolving Twin-Screw Extrusion for Next-Gen Mechanochemical Processing</i>
10:55 - 11:05	Coffee break (10 min)

Session 8

11:05 - 11:30	Patrick A. Julien, Royal Military College of Canada (25 min) <i>In situ Fluorescence Monitoring of Milling Reactions</i>
11:30 - 11:55	Javier Castells-Gil, University of Birmingham (25 min) <i>Mechanochemical synthesis and structural studies of cation disordered LiNiO₂ cathodes</i>
11:55-12:20	Erli Lu, University of Birmingham (25 min) <i>Dawn of a Sodium Era: Combine Mechanochemistry and Sodium in Sustainable Organic Synthesis & PTFE Upcycling</i>
12:20 - 13:30	Lunch and poster prizes (70 min)

Session 9

13:30 - 13:55	Hui Luo, University of Surrey (25 min) <i>High purity monomer recovery from polyester via mechanochemical depolymerisation</i>
13:55 - 14:20	Adam A. L. Michalchuk, University of Birmingham (25 min) <i>Resonant Acoustic Mixing as a Mechanochemical Reactor for Sensitive Materials</i>
14:20 - 14:50	Closing speaker: James D. Batteas (30 min) <i>"Advancing Predictability: Research in the NSF Center for the Mechanical Control of Chemistry"</i>