Mechanical Metamaterials SIG Townhall

Event report | 15 September 2026

Event lead	Shruti Mandhani
Format	Discussion-based community townhall
Delegates	Academics and representatives spanning research, education, manufacturing and standards

Building a shared vision for mechanical metamaterials

The Mechanical Metamaterials Special Interest Group brought the community together to shape its next phase of activity following the acceptance of the academic roadmap in *Smart Materials and Structures*. Through an open, discussion-led format, participants explored how stronger coordination could raise the field's visibility, deepen engagement and connect fundamental research more effectively with education, manufacturing, commercialisation and societal need.

Contributions were led by Dr Shruti Mandhani and Dr Olly Duncan from the SIG leadership team, alongside Peter Woolliams of the National Physical Laboratory. The event also reflected expertise connected with Engineering, Materials and Built Environment Research (EMBER), part of Sheffield Hallam University's School of Engineering and Built Environment.

Priorities identified

- **Communicate with greater clarity:** use visual, hands-on and application-led approaches to explain mechanical metamaterials and demonstrate their societal and commercial value.
- **Build shared resources:** develop educational materials and coordinated outreach for schools, alongside wider engagement with industry, policymakers and investors.

- Strengthen routes to impact: improve connections between research, manufacturing and commercialisation, supported by a clearer and more consistent community narrative.
- Develop future initiatives: explore an EU COST Action spanning design for manufacturing, manufacturing, standardisation and design methodologies, while preparing the ground for future doctoral training activity.
- Grow the community: create more opportunities for cross-disciplinary collaboration, industrial participation and public-facing events.

What happens next

A summary of the discussion will be shared with the wider SIG leadership team for consideration. The principal themes will then inform a strategy report for circulation to the community, helping translate the townhall's ideas into a coordinated programme of activity.