

A dynamic display

The first annual Dynamics Research Group (DRG) Showcase took place in January 2017 with the aim to encourage collaboration and provide networking opportunities.



The DRG showcase gives students, researchers and academics from the research group the opportunity to display their current research (via posters), to encourage collaboration and provide networking opportunities.

The event was well attended by staff and students from across the Engineering Faculty and maths research groups, with an award for the best poster presented by Vice President and Head of the Faculty of Engineering, Professor Mike Hounslow.

Following an afternoon of discussing their research and learning about that of their peers, the event concluded with the announcement of the winner, Ramon Fuentes with his poster titled 'In process monitoring of automated carbon fibre tape layup using ultrasonic guided waves'.

Ramon's project was about monitoring defects during automated lamination of carbon fibre composites. Ramon explains how it's done: "To do

this we use ultrasound together with statistical inference. Defects that occur during carbon fibre layup can have severe consequences to the integrity of the structure, so you want to avoid them at all costs. Monitoring them in-situ, on the other hand, is difficult because the process is happening in real time and continuously changing. We tried monitoring this with ultrasound and used some statistical inference techniques to model the changes in the wave propagation during this process, so were able to highlight defects during the process.

"This was a feasibility study, and being very pleased with the results we've now secured some funding for a full time PhD student to work on this problem in more detail."

Professor Kirill Horoshenkov says, "Paul Gardner and Tim Rogers did an excellent job organising the event in which 34 posters were presented to promote the research in the Dynamics Research Group and to obtain feedback from colleagues from other departments across the University."

