



THEME:

Research and Innovation

FUNDING (ERDF+MATCH):

€8,518,406.33

MATCH FUNDERS:

The Department for the Economy, Northern Ireland and the Department of Enterprise, Trade and Employment, Ireland

LEAD PARTNER:

Catalyst

PROJECT PARTNERS:

University of Glasgow; Ulster University; Sligo Institute of Technology; Letterkenny Institute of Technology; LPE; Armstrong Medical; Denroy Plastics; Axial 3D; Leckey; Nuprint; Causeway Sensors; Abbott and GSK; and Clyde Biosciences.

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Project Case Study: Researchers in Focus - NWCAM Project

The numerous activities of the North West Centre for Advanced Manufacturing include training and developing the next generation of researchers and innovators. In this case study we focus on two of these researchers.

Dr. Ramesh Ghosh is currently working at the University of Glasgow. As part of the NWCAM project Dr Ghosh is investigating the *Integration of Injection Moulded Plasmonic Nanostructures into a Biosensor Device*. The project relates to the creation of injection moulded plasmonic nanopillars arrays for integration into a plasmonic biosensor device for rapid biological sensing of animal and human disease pathogens. In close collaboration with Causeway Sensors, the overall aim is to create a 'point of care' microfluidic diagnostic platform which is rapid, highly sensitive, simplistic to use and has low sample consumption.

"Being a part of NWCAM allows me to interact with people from different backgrounds, both in academia and industry. I have got opportunities to acquire my knowledge, skills, creativity at the best possible way with dynamism.

The multidisciplinary research opens up huge inspiration to utilize technology for mankind."

Dr Ammara Ejaz, Research Assistant in the School of Engineering, University of Glasgow is working on pre/post functionalisation of electro spun fibres with nanoparticles. This project exploits covalent, electrostatic, and $\pi - \pi$ stacking interactions for non-invasive wireless medical diagnosis, and food quality monitoring by embedding colorimetric sensors on the packaging. Dr Ejaz's research activities and directions are dedicated to the advancement of novel solutions and techniques for future m-healthcare technologies, global warming, and food quality monitoring.

"I think of my involvement in the NWCAM project as an invaluable addition of skills for my career growth where I learned a set of new skills on electrospinning, printing material for point-of-care, wireless and disposable sensors. I will be able to advance this experience to tackle grave challenges of global warming, energy crisis, food quality monitoring, and m-health by combining my fundamental chemistry background and interest of Material's Insightful investigation and its modelling through DFT and computational chemistry".