



# Module #3 HSE and Regulatory affairs

SEAM (South Eastern Applied Materials Research Centre) Workshop

Coordinated by:

Prathviraj Upadhyay (Raj)  
PhD Research Scholar



setu.ie  
INSPIRING FUTURES





# Workshop Agenda

- Powder Characterization (9:00 AM – 9:20AM)
- L-PBF Process (9:20 AM – 10:30 AM)
- Part/Support Removal (10:30 AM – 10:40)
- Break (10:40 AM – 11:00 AM)
- Surface Post Processing of the Part (11:00 AM – 11:15 AM)
- Destructive Analysis (11:15 AM – 11:30 AM)
- Mechanical Testing (11:30 AM – 12:00 AM)
- Non-Destructive Testing (12:00 PM – 1:00 PM)
- Q & A (1:00 PM – 1:15 PM)

# Powder Characterisation

- Particle Size Analysis



- Tapped/Apparent Density Analysis



- Powder Morphology Analysis















# L-PBF Process

- AM Safety Training (PPE)
- Digital Workflow
- Setting Up Build
- Removal of Powder
- Removal of the Build

















# Parts/Supports Removal

- Part Removal Through Wire E



- Support Removal











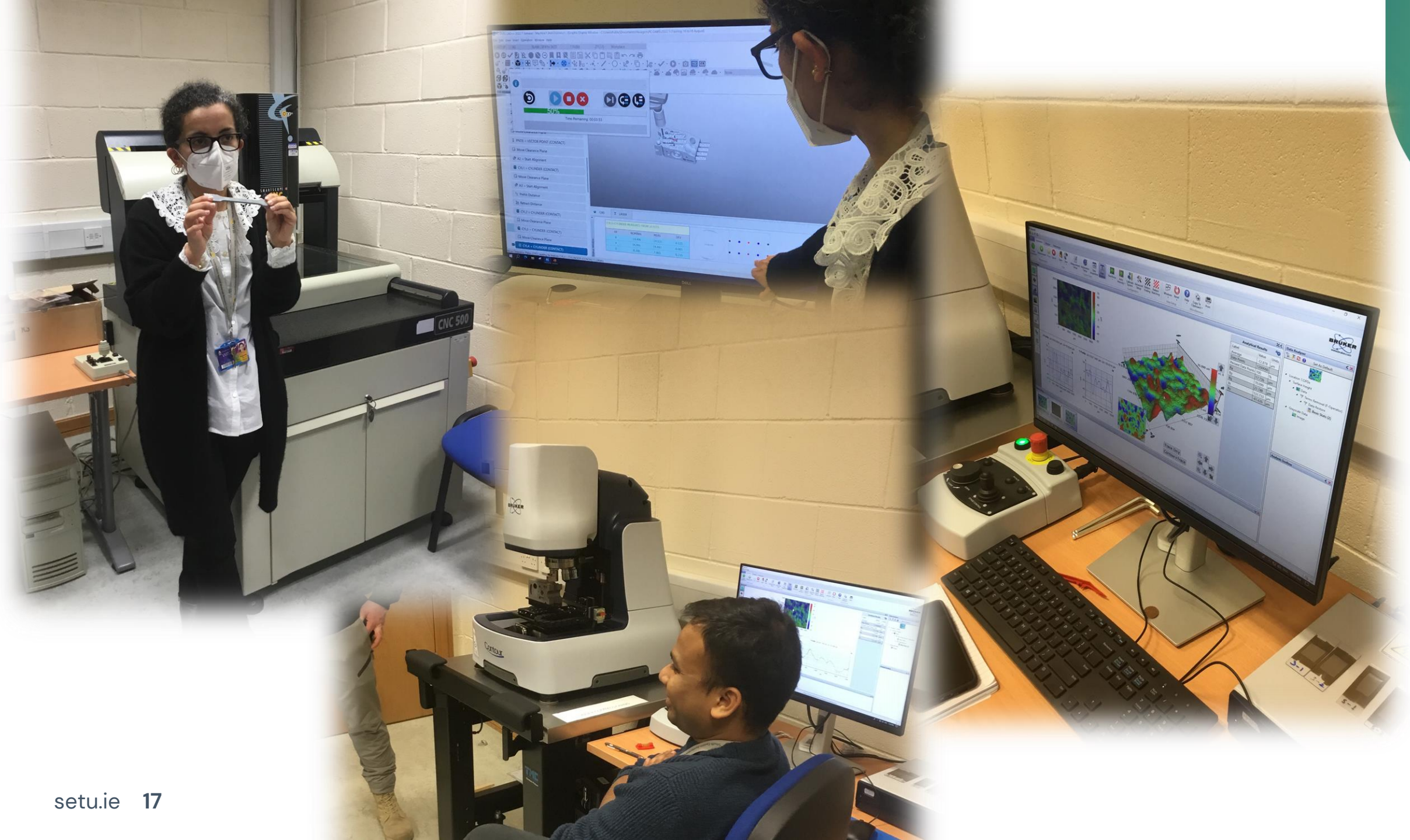
# Non-Destructive Testing

- Defect Detection
- Metrology Analysis
- Elemental Analysis
- Density Analysis

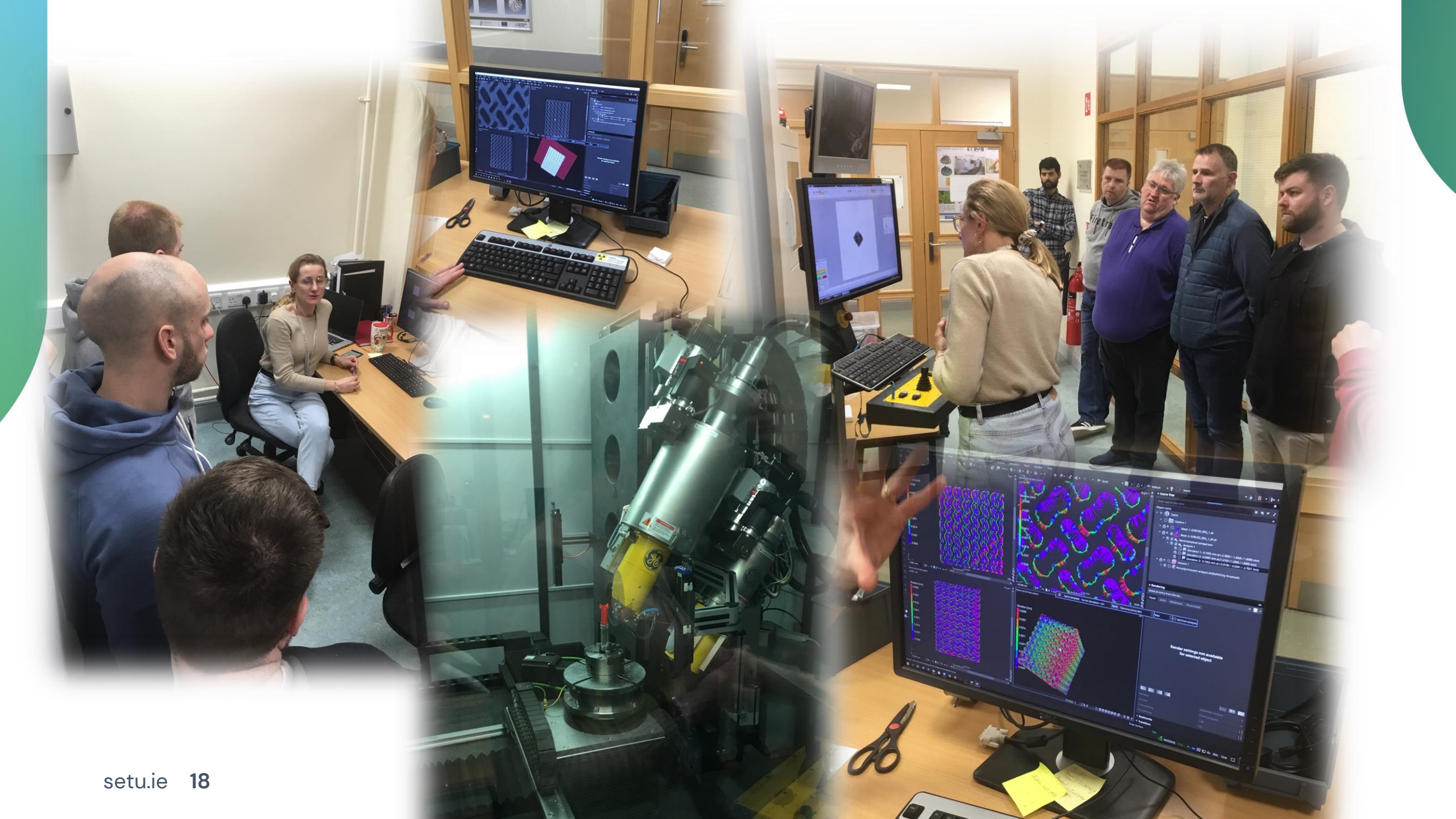












# Post Processing

- Heat Treatment

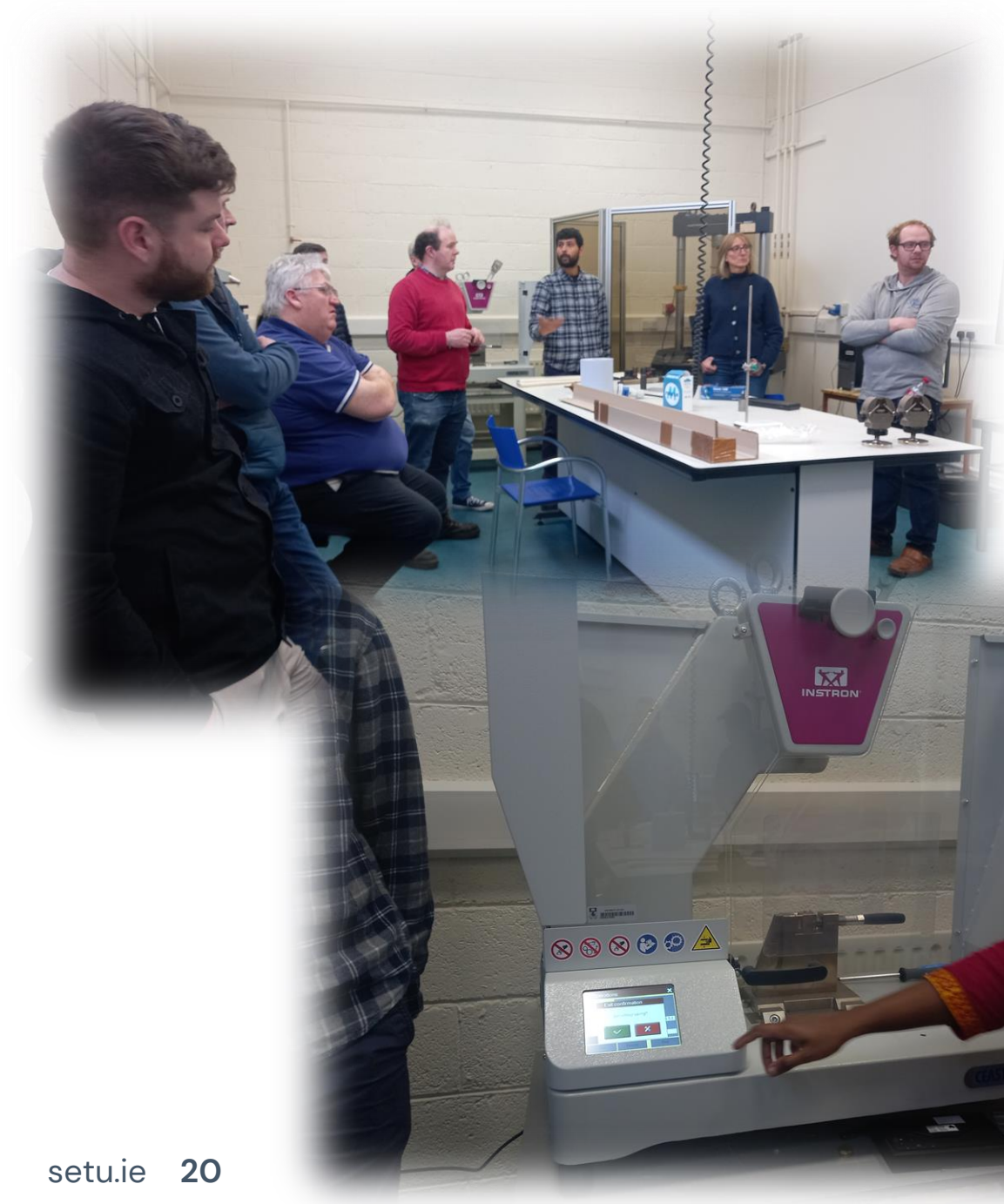
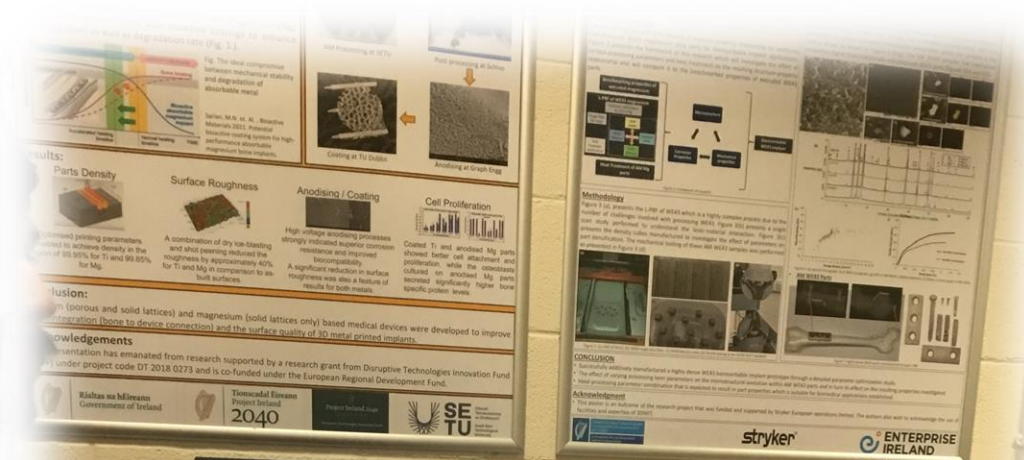


- Wet Blasting



- Grinding







# Destructive Testing

- Elemental Analysis
- 
- Microhardness
- Tensile Testing
- Impact Testing







# Thank you!

Special thanks to Raj for coordinating and to all the SEAM and 3DWIT experts that made this workshop possible

- Ramesh Raghavendra
- Carlos Garcia Pando
- Mark Shine
- Bruno Zluhan
- Sara Karam
- Agnieszka Furman
- Arun Antony
- Tommy Kelly
- Guru Vidhya Nedunchelian