Automatic Quantification Of Subsurface Defects By Analyzing Laser Ultrasonic Signals Using Convolutional Neural Networks And Wavelet

Haowen Feng, Gaolong Lv, Dan Chen and Shifeng Guo*
Shenzhen Institutes of Advanced Technology, University of Chinese Academy of Science, China

- Establish validated numerical model to obtain sufficient laser ultrasonic signals for training the CNN model
- Convert the laser ultrasonic signals int o the scalograms (images) via wavelet transform
- Input scalograms to the pre-trained C-NNs model to identify the defect featur es automatically