

MODELING, SIMULATION, AND AI FOR ULTRASONIC NDT AND SHM

*Fangsen Cui*¹ and Menglong Liu²*

*¹Institute of High Performance Computing (IHPC), Agency for Science, Technology and Research
(A*STAR), Singapore*

²Harbin Institute of Technology, Shenzhen, China

MINISYMPOSIUM

Non-destructive testing (NDT&E) and structural health monitoring (SHM) are very important for quality assurance of manufacturing and in-service of various structures. The aim of this mini-symposium is to report and discuss the recent progress of using ultrasonic technologies: i) Computational modeling methods of various waves (such as guided wave, special bulk or surface waves); ii) New methods/approaches/software with advanced sensor technologies; iii) Signal processing algorithms and damage indicators (high-order, time/frequency domains, adaptive etc); and iv) AI methods for effective ultrasonics NDT and SHM.