

## **Data-driven approach to understand environmental corrosion and materials design**

The talk will first summarise the key findings that arose from the landmark project of ‘Corrosion Status and Control Strategies in China’, which estimated that the cost of corrosion in China was approximately 2127.8 billion RMB (~ 310 billion USD), representing about 3.34% of the gross domestic product. The recent Materials Genome Engineering (MGE) initiative in China provides new opportunities to demystify the complex corrosion problems and to more effectively design corrosion-resistant steels. A data-driven approach is proposed within the MGE by integrating data accumulation, data mining, data modelling and data applications.