## ADVANCES IN CONCRETE REINFORCEMENT CORROSION RESEARCH



**Prof. Igor Chaves** 

University of Newcastle, Australia

## Wednesday, 25<sup>th</sup> June 2025 10:00

Aula Albenga, DISEG (Entrance 1)

Reinforced concrete (RC) can be an excellent material for infrastructure applications. With high-quality materials and properly made, it can provide high structural strength and long-term durability, even in severe exposure environments. Long-term durability is less likely to be a design or maintenance consideration and a problem for asset owners if the structure is protected by a physical barrier, such as by ceramic tiles, protective coatings such durable paints or bituminous materials, or enclosed within the weather-proof skin of a building. However, local failures of such protective systems can cause serious problems, for the same underlying reasons as apply to unprotected RC structures. This presentation brings the discussion to the cutting edge of current research on understanding of the processes involved in leading up to reinforcement corrosion and to its quantitative modelling for new ways of increasing long-term durability.

## **Biosketch**

A/Prof. Chaves is a chartered materials professional academic specialised in civil structural material science, engineering, and technology. He is Deputy Director of the Critical Infrastructure Performance and Reliability Group and Deputy Director Research for the Centre for Innovative Energy Technologies. Having served as National President and currently serving as National Councillor to the Australasian Corrosion Association, he has received several accolades across industry and academia. He holds a MEngSci degree in structural engineering prototyping, and a PhD for his studies in long-term material durability analysis and prediction. His research interests also include structural serviceability and risk assessment of energy infrastructure.



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