

SEMINAR INFORMATION for CPPM

Date of seminar: 28 September 2026

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TITLE: Radon research down under

ABSTRACT: The development of the Stawell Underground Physics Laboratory (SUPL), the only active deep underground laboratory in the Southern Hemisphere, has catalysed low-background research in Australia, spanning rare-event physics searches, underground radiobiology and quantum technologies. With radon representing a significant background for many of these activities, Australia's radon research program has grown alongside them, including the establishment of the DREAMR radon facility at the Australian National University.

This seminar will give an overview of radon research in Australia, from fundamental physics and activities at SUPL to emerging industrial applications. I will also discuss the development of Radon Zero Backgrounds, a new international network connecting laboratories and experiments to share expertise, facilities and measurements, building on established international collaborations including here at CPPM/CNRS/AMU.

BIO: Dr Robert Renz Marcelo Gregorio (Rob) is a Research Fellow at the Australian National University. He completed his PhD at the University of Sheffield, leading radon research for the international CYGNUS directional dark matter consortium and is now Technical Coordinator of the SUPL Radon Mitigation Working Group.

His research focuses on advancing and unifying radon research as a shared technical platform for collaboration across low-background experiments. As a technical collaborator, he contributes to low-background research groups internationally, including as a Visiting Scientist at UCL and Visiting Scholar at SJTU. Rob also has nearly a decade of experience in industrial radon applications and was elected a Chartered Physicist of the Institute of Physics.