

**The 26<sup>th</sup> IAESREC Science Cafe**  
**2026-07-06 (Mon)**

**Salvatore Federico**

The University of Calgary, Canada  
[salvatore.federico@ucalgary.ca](mailto:salvatore.federico@ucalgary.ca)



**Title**

Continuum Mechanist by Chance

**Abstract**

Life can present us with a sequence of completely random events capable of changing our trajectory drastically, in ways that we could never imagine. This talk presents a case study: an academic career and specific field of research and teaching that have been determined almost entirely by random events. The field of research is Continuum Mechanics: the study of matter at a large enough scale that the existence of the atomic structure can be neglected. Continuum Mechanics is the “mother discipline” of Solids Mechanics and Fluid Mechanics. A few results will be presented, along with some suggestions for those who wish to pursue an academic career.

**Biography**

Salvatore Federico received his Laurea in Mechanical Engineering in 2000 and his PhD in Structural Mechanics in 2004 from the University of Catania (Italy). In 2005, he joined the University of Calgary (Canada), where he has been a post-doctoral fellow in the Human Performance Laboratory (2005-2007) and subsequently a faculty member in the Department of Mechanical and Manufacturing Engineering and the Department of Biomedical Engineering (2008-present), with an adjunct position in Kinesiology, Human Performance Laboratory (2012-present). In June 2021, he received a Bachelor of Arts in Greek and Roman Studies from the University of Calgary. He teaches Mechanics of Solids, Biomechanics and Continuum Mechanics, and his research focuses on the mathematical and geometrical foundations of Continuum Mechanics and its applications to non-linear elasticity, porous materials, materials with coupled mechanical and electromagnetic properties and soft tissue biomechanics.