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Dipartimento
di Ingegneria Chimica,
dei Materiali e della
Produzione Industriale
Università degli Studi
di Napoli Federico II



AVVISO DI SEMINARIO

**Martedì 30 Gennaio, alle ore 15:30
in Aula Malquori**

il Prof. Carlo Manzo

Universitat de Vic - Universitat Central de la Catalunya, Vic (Barcelona) SPAIN

terrà un seminario dal titolo

Heterogeneous behavior of membrane proteins: new insights from AI

Abstract: Understanding the dynamics of living cells and subcellular components is crucial for comprehending fundamental biological processes. Nowadays, time-lapse microscopy at the cellular and molecular level provides unprecedented insights with remarkable resolution. Nonetheless, extracting meaningful quantitative information remains a formidable challenge, primarily due to the heterogeneous behaviors arising from intricate patterns of interactions.

In this presentation, I will showcase our experimental results on the motion of membrane proteins and highlight recent strides in theoretical modeling and data-driven methods dedicated to interpreting their anomalous behaviors. Additionally, I will introduce innovative deep-learning strategies aimed at gaining further insight into the intricate motion of biological components. These strategies are poised to contribute significantly to uncovering novel aspects of the interactions between cellular components, thereby shedding light on their pivotal roles in signaling and function regulation.

Short Bio: Carlo Manzo obtained his PhD from the University "Federico II" in 2005. He held postdoctoral positions at Emory University (USA), IBEC (Spain), and ICFO (Spain). In 2017, Dr. Manzo received the "Ramón y Cajal" Fellowship and the "Perez Payà" prize from the Spanish Biophysical Society. Currently, he serves as an Associate Professor at UVic-UCC (Spain) and leads the Quantitative BioImaging lab. Prof. Manzo's research is dedicated to providing a quantitative understanding of biological processes in living cells, employing advanced image analysis methods and state-of-the-art imaging tools with single-molecule sensitivity.