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## KEYNOTE8: Nanotechnology/NanoBiology/NanoMedicine Interplay

Abstracts:

Two Lectures

1. Introduction to physics of biological systems.

In this lecture I will summarise the current state of study of biological systems from a physicist perspective, going from the nanoscale of proteins and DNA and to their assembly into whole organisms. I will also discuss briefly the implications for other fields, including computer science and materials science.

2. Bionanotechnology and medicine

In this lecture I will summarise the latest research at the interface of nanotechnology and medicine; this will include biosensing, nanomedicine, nanovaccines, tissue engineering and protein nanotechnology.

Lecturer: Sonia Contera is a Professor of Biological Physics at the University of Oxford, where she is also the associate head of the Department of Physics for Equality, Diversity and Inclusion.

She has lived in many countries, she got her undergrad degree in Physics in Madrid, and her PhD from Osaka University in Japan. She is an expert in atomic force microscopy and in mechanics in biology. She is also the author of the book "Nano comes to life: how nanotechnology is transforming medicine and the future of biology" (Text informed by the Lecturer).

**Presenter:** Prof. CONTERA, Sonia (Oxford, Physics Department, UK)