Seven steps from molecules to mind

The SISSA Colloquia are back: appointment with Marcello Costa

29 October, 3pm
SISSA, “P. Budinich” Main Lecture Hall
Via Bonomea 265, Trieste

Everything that the Universe contains could, in theory, be observed using a single scientific method, an “extended” Physics capable of encompassing atoms as well as biological systems and intelligence. What principles should govern this science that observes everything? Marcello Costa, from Flinders University in Adelaide, Australia, will share his epistemological reflections with the
public at the next SISSA Colloquium, to be held on October 29 in the Main Lecture Hall of the International School for Advanced Studies (SISSA) of Trieste.

“It’s not a new Physics, but a way of extending this well-established discipline of modern science to include biological phenomena and the emergence of phenomenal experiences”: that’s how Marcello Costa, professor of Neurophysiology at Flinders University, summarises the topic he will be discussing during his conference at SISSA. The first of this year’s SISSA Colloquia will be held at 3pm on 29 October in the “P. Budinich” Main Lecture Hall, and will be open to the general public.

According to Costa, we need to bridge the gap between the res extensa and the res cogitans (matter and thought, intended in terms of Cartesian dualism) which are not qualitatively different “objects” but both the product of the same physical laws. To do that, we need to engage in epistemological reasoning, which the scientist will develop in “7 steps” during the conference, with examples “going from the crucial transition between the appearance of atoms and molecules up to the emergence of thinking beings”. He will therefore address the concept of existence, atoms and molecules, the laws of thermodynamics and the appearance of biological systems in our Universe, up to thought processes.

The conference will be in English and is open to the general public. No booking is required.

More in detail...

Marcello Costa is a physician and neurophysiologist. He is professor of Neurophysiology at Flinders University in Adelaide, Australia. He has published over 230 scientific papers in peer-reviewed international journals and over 50 review papers, and has written two books. He is co-founder of the association Friends of Science in Medicine, which fosters evidence-based medicine and is involved with debunking pseudoscientific medical practices.

IMAGE:

• Credits: Marcello Costa

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