

PHYSICS **COLLOQUIA** 2015/16

Gli incontri si terranno alle **ore 14:30**
nell'**aula A** del **DIPARTIMENTO DI FISICA**
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Robots today are expected to operate in a variety of scenarios, being able to cope with uncertain situations and to react quickly to changes in the environment. In this scenario a strong relationship between nature and technology plays a major role, with the winning approach of evaluating natural systems to abstract principles for new designs. Bioinspired soft robotics is a worldwide known paradigm to develop new solutions for science and technology, giving way to a series of innovative robotic solutions assisting and supporting today's society. Such biological principles traditionally originate from animal models for robots that can walk, swim, crawl, or fly. In this talk I will present some scientific and technological challenges and solutions coming from both animals and plants. In the animal paradigm a function is often related to an organ or compartment. Instead plants are networked, decentralized, modular, redundant, and resilient. Plants are able to move, control, sense, but they do in a different way with respect animals or other living beings. I will compare ideas, biological features, and technological translations coming from the two Kingdoms and related to areas of interest in robotics: movement, sensing and control.

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LEARNING BY NATURE HOW TO BUILD SOFT ROBOTS



UNIVERSITÀ DEGLI STUDI DI MILANO
DOTTORATO DI RICERCA IN FISICA
ASTROFISICA E FISICA APPLICATA