

## *Avviso di corso di dottorato “Electromechanics of Soft Materials”*

by Luis Dorfmann

Il prof. Luis Dorfmann della Tufts University (Boston, MA, USA) terrà il corso di dottorato di ricerca

### Electromechanics of Soft Materials

al Dipartimento di Ingegneria Civile, Architettura, Territorio e Ambiente e di Matematica dell'Università degli Studi di Brescia (via Branze 43) nelle seguenti date, quattro ore al giorno dalle 9:30 alle 11:30 e dalle 14:30 alle 16:30:

- 1) Giovedì 23/05/19 (aula B1.8)
- 2) Martedì 28/05/19 (9:30–11:30 aula B1.6; 14:30–16:30 aula B2.8)
- 3) Giovedì 30/05/19 (aula B1.8)
- 4) Martedì 04/06/19 (9:30–11:30 aula B1.6; 14:30–16:30 aula B2.8)
- 5) Martedì 11/06/19 (aula B1.8)
- 6) Giovedì 13/06/19 (aula B1.8)
- 7) Martedì 18/06/19 (aula B1.8)
- 8) Giovedì 20/06/19 (aula B1.8)

### **Programma del corso**

*The theory of electroelasticity has received considerable interest in the last few years because of the development of elastomeric and polymeric materials that respond to the application of an electric field. Such materials, often referred to as 'smart materials', are being used in a variety of applications, ranging from high-speed actuators, soft robotics to electromechanical transducers of various geometries.*

*The purpose of the course is to present a state-of-the-art overview of the continuum theory of electro-sensitive materials capable of large deformations. The presentations will include a review of vector and tensor algebra and basic equations necessary to describe nonlinear elastic material behavior. This is followed by a carefully crafted overview of the fundamental formulation of the three-dimensional theory of electroelasticity from several points of view. The lectures will also include solutions to boundary-value problems, which are amenable to experimental verification. A further aspect of the course will be a discussion of stability of equilibria in the presence of electroelastic coupling.*

Chi desideri seguire il corso è pregato di comunicarlo via email a [lorenzo.bardella@unibs.it](mailto:lorenzo.bardella@unibs.it)

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