Introduction to tensor calculus

Professor

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Institution

Institute of Information Science and Technologies "A. Faedo", ISTI-CNR, Pisa

General Information

Course contents: Finite-dimensional vector spaces, scalar products, norms, bases, subspaces, maps, functionals, convergence of vectors, projections, differentiation. Second-order tensors, symmetric and skew-symmetric tensors, orthogonal tensors, eigenvalues, eigenvectors, spectral theorem, square-root theorem, polar decomposition theorem, Cayley-Hamilton theorem, coaxial tensors. Third and fourth-order tensors. Isotropic functions. Derivatives of tensor functions.

The lessons (in English) will be held in mixed mode: in person (ISTI-CNR, Via G. Moruzzi 1 Pisa, Building B, gate 19, 1st floor, room C 29) and online (the link will be provided by the teacher).

Schedule

Dates	Description
01/03/2024	h 10:00-12:00
05/03/2024	h 10:00-12:00
07/03/2024	h 10:00-12:00
12/03/2024	h 10:00-12:00
14/03/2024	h 10:00-12:00
19/03/2024	h 10:00-12:00
21/03/2024	h 10:00-12:00
26/03/2024	h 10:00-12:00
28/03/2024	h 10:00-12:00
	Total 18 Hours – 3 Credits

For any information www.indicee.unifi.it - dott-dicea@unifi.it