

SEMINARIO DI GEOMETRIA

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Politecnico di Torino,
Dipartimento di Scienze Matematiche,
AULA BUZANO

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New complex structures on \mathbb{R}^4

In this talk we show that \mathbb{R}^4 admits an integrable complex structure that contains compact holomorphic curves. This is in contrast with the standard complex structure of \mathbb{C}^2 . A similar result has been obtained in the Fifties by Calabi and Eckmann for higher-dimensional Euclidean spaces. In our work (joint with Antonio J. Di Scala and Naohiko Kasuya) we make use of results from topology and from complex geometry. The talk will be rather informal and suitable for a broad audience.