

Talk title:

Engineering nucleic acids: from bio-orthogonal nanostructures to dynamic stack memories for potential in vivo applications

Date: April 16th room Perucca at 9:30

Hosted by: Prof. Enzo Di Fabrizio



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A short resume of the seminar.

It will be presented, the as the main challenge of the speaker, the design and synthesis of

- i) nanostructures and memory devices in living cells as potentially generic interface to cell processes;
- ii) self-assembled origami as nano system for therapeutic relevant information transfer to cells. Toward this goal, the author, successfully designed and in vitro tested a co-transcriptionally self-assembled RNA origami nanoribbon and a dynamic DNA stack data structure, suggesting future potential as bio-circuit board and memory architecture, respectively.

Furthermore, it will be shown the in silico developed and in vitro validated novel computational tool, a multi-objectives algorithm, to assist the packaging of specific sequences that can potentially contain relevant biological information.