

Seminario di Dipartimento SMFI

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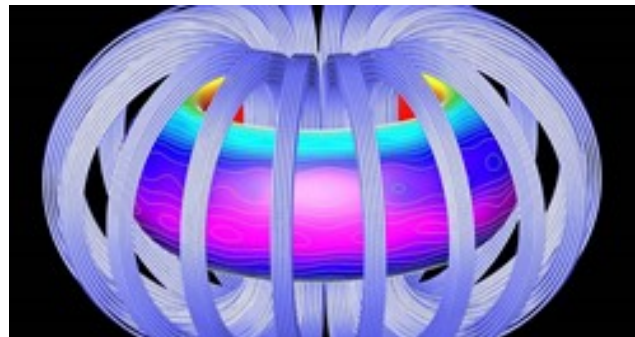
Directorate of EU Fusion programme
European Commission Headquarters, Brussels

terrà un seminario dal titolo

Way better than fission: a multi-dimensional outlook for fusion energy

Abstract:

Since Argentine President Perón's (March 1951) and ZETA at Harwell (January 1958) announcements, to Secretary Granholm's "ignition milestone" at NIF (December 2022) and China's "artificial Sun" achievements (April 2023) in Hefei, controlled nuclear fusion on Earth, continue to tease us, like an elusive fairy Morgane, with its promise of endless, safe, clean and sustainable energy. At the same time, the old joke that fusion was "always 20 years away" has now become "fusion is always 30 years in the future."



Why is this, when our Sun is an example of a perfectly functional nuclear fusion reactor? Will nuclear fusion be "simply better" than fission? And if so, is the approach envisaged for ITER the best "path"[1] to get there?

In exchange of skipping lengthy algebra derivations, impossible to cover in its time format, this series of lectures will cover an unusually wide spectrum of subjects: from the basics of the relevant cross sections and the statistical mechanics foundations of plasma theory, to key aspects of fusion technology and engineering, from issues of environmental impact, safety and non-proliferation of fusion energy to, finally, its social acceptability and institutional/political boundary conditions.

16-17-18 maggio 2023

Ore 14:30 aula Newton