# ENERGETICS

## ENI - Development of multi-physics numerical tools for the design of HTS magnets for fusion and accelerators

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| **Funded By** | ENI S.P.A. [P.iva/CF:00905811006] |
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| **Contact** | TROTTA ANTONIO |
| **Context of the research activity** | Numerical modelling of superconducting tapes, cables and coils. |
| **Objectives** | The activity focuses on the development of multi-physics numerical tools to contribute to the design of non-insulated High-Temperature Superconducting (HTS) magnets intended for use in nuclear fusion reactors and particle accelerators. These advanced tools consider and integrate various physics aspects such the electromagnetic, the structural, and the thermal ones, also accounting for the irradiation effects deriving in perspective from plasma operation or nuclear particle beams. The goal is to contribute to optimize the performance and robustness of HTS magnets, which are needed for the next generation of high field nuclear fusion machines and particle accelerators. |
| **Skills and competencies for the development of the activity** | M.Sc. degree in Physics, Energy Engineering or Nuclear Engineering, with know-how on superconductors. |