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Il Nuovo Cimento in the changing landscape of physics: A network-historical analysis

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In the last years, historians have increasingly turned to network concepts and methods for analyzing historical sources and assessing past dynamics. Our group has further extended these approaches by applying multi-layer network techniques to the study of recent science combining social network analysis, citation network analysis and the analysis of the knowledge space generated by scientific publications. This approach, called socio-epistemic networks, is particularly useful to evaluate the role of specific journals in the general system of knowledge production.

In this talk, I use this approach to analyze the changing position of Il Nuovo Cimento in the global field of physics through the 20th century. I discuss how the role of the journal of the Italian Physical Society developed both in the publications'co-citation network and in the knowledge space of topics created by all physics journals indexed by on-line repositories. By comparing these results with those retrieved from the analysis of Physical Review journals, this approach allows to highlight the specificities of Il Nuovo Cimento and to identify crucial moments of transformation.

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