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Implementation of network theory in the design of a physics curriculum

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This paper proposes the use of network theory tools, such as the adjacency matrix and the Louvain algorithm, to prioritize content and competencies in Physics programs. This process was automated using Python code based on the NetworkX library, which significantly reduced analysis time. The proposal solves historical computational limitations and optimizes the logical construction of knowledge, improving teaching. The analysis guarantees an efficient and consistent hierarchy, providing an innovative approach to the improvement of curricula in Physics.

Education level

All ages

Physics topic

Other

Research focus

Other

Research method

Other

Organizing preference criteria

Other

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