

Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

The Knowledge Economy BRUNO GONÇALVES, Aix-Marseille Université, NICOLA PERRA, FABIO CIULLA, QIAN ZHANG, ALESSANDRO VESPIGNANI, Northeastern University — Although the study of scientific and citation networks is well developed, the way in which ideas and concepts flow between scientific groups scattered around the world is still an open problem. We take a first step in this direction by using the citation patterns over the course of decades to shed light on how areas and fields in the general area of physics have evolved both temporally and geographically. By geocoding the affiliations associated with each article published by the APS journals to the country level, and by borrowing concepts from the field of economics and international trade we can explore how ideas produced in one country are exported, through citations, to other countries. An objective way of ranking countries based on their contributions to the overall scientific effort is also proposed as well as a map of how the different subfields of Physics are related to each other.

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Date submitted: 15 Nov 2012

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