



## **Can trends in citations and altmetrics predict the next big breakthrough?**

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The 20th century saw a number of geologic revolutions, fuelled in part by the availability of increasing amounts of data from under-explored regions, and technological advances that made it possible to glean more insights from the rock record. But it has been suggested that the era of great discoveries is over, and we are in a period of incremental advance. Major discoveries like plate tectonic theory and the evolution of fields like palaeoclimate are recorded by influential publications. Here we analyse publishing trends across the geosciences, from a data perspective, using citation and Altmetric patterns of geoscience papers published in the 1990s, 2000s, and 2010s, to assess changes in the number of highly influential papers published in each decade. We also assess the most influential fields within the geosciences, pinpoint the emerging trends and consider the potential for breakthroughs in each.