## Department SEMINARS



We've got issues: Understanding the current strain on scientific publishing

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## FRIDAY, 7 MARCH 2025 2:00 PM

Seminar Room Bruguier Pacini, DEM

## ABSTRACT

Scientists are increasingly overwhelmed by the volume of articles being published. The total number of articles indexed in Scopus and Web of Science has grown exponentially in recent years; in 2022 the article total was 47% higher than in 2016, which has outpaced the limited growth—if any—in the number of practicing scientists.

Thus, publication workload per scientist has increased dramatically. We define this problem as "the strain on scientific publishing." To analyze this strain, we present five data-driven metrics showing publisher growth, processing times, and citation behaviors. We draw these data from web scrapes, and from publishers through their websites or upon request. Specific groups have disproportionately grown in their articles published per year, contributing to this strain. Some publishers enabled this growth by hosting "special issues" with reduced turnaround times.

Given pressures on researchers to "publish or perish" to compete for funding, this strain was likely amplified by these offers to publish more articles. We also observed widespread year-over-year inflation of journal impact factors coinciding with this strain, which risks confusing quality signals. Such exponential growth cannot be sustained. The metrics we define here should enable this evolving conversation to reach actionable solutions to address the strain on scientific publishing.

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