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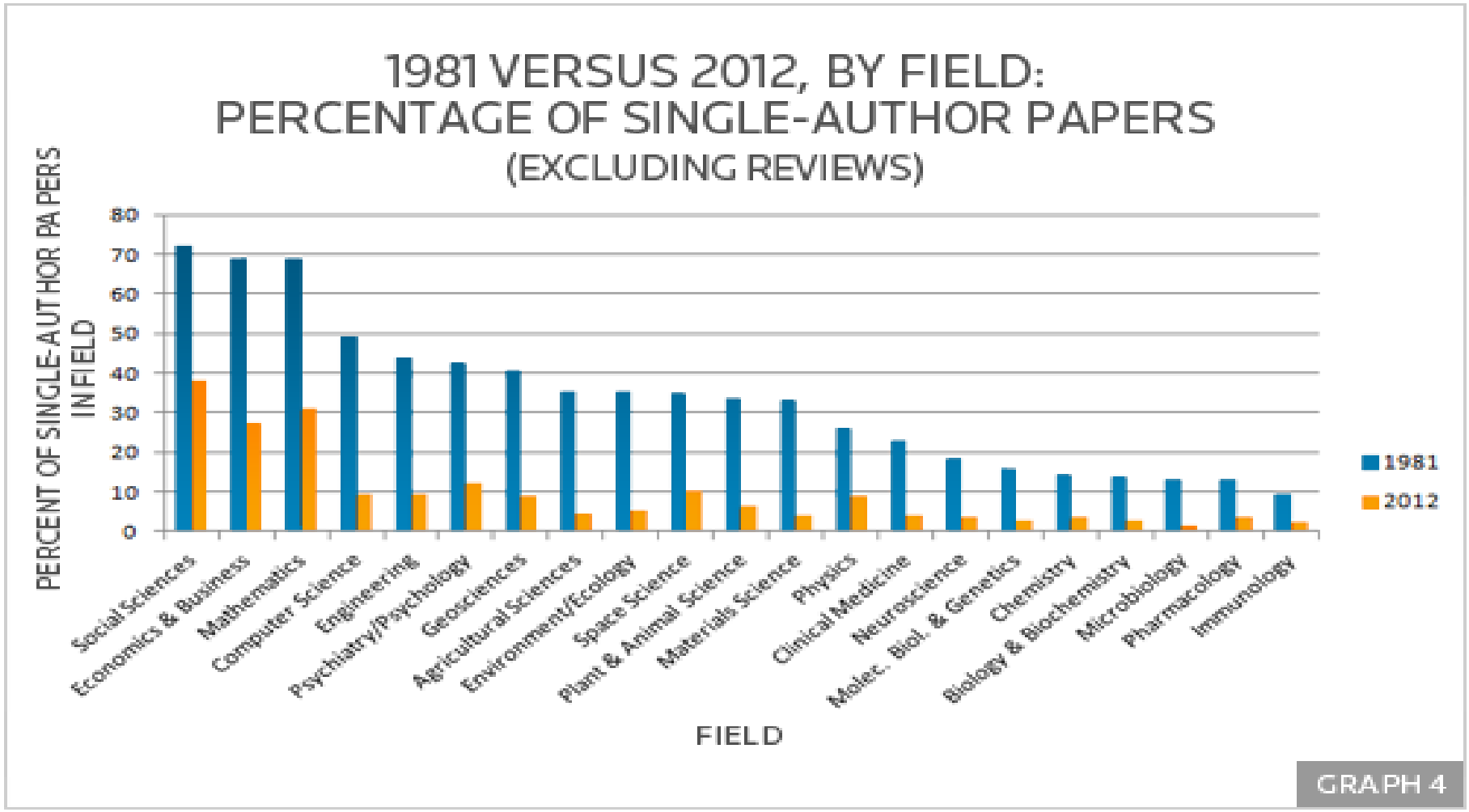
  - ***there is no way you can be an expert** on **everything!***
  - *internal "peer-review" allows cross validation of results…*
- Can potentially accelerate research:
  - *sharing the workload…*
  - *pressure of working to timescales…*
- Great way to learn:
  - *new mathematical skills…*
  - *different approaches to research, writing etc…*

Moreover…

- It is the norm in academia, even mathematics…



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Terence Tao

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Professor of Mathematics, UCLA
Analysis, Combinatorics, Random Matrix Theory, PDE
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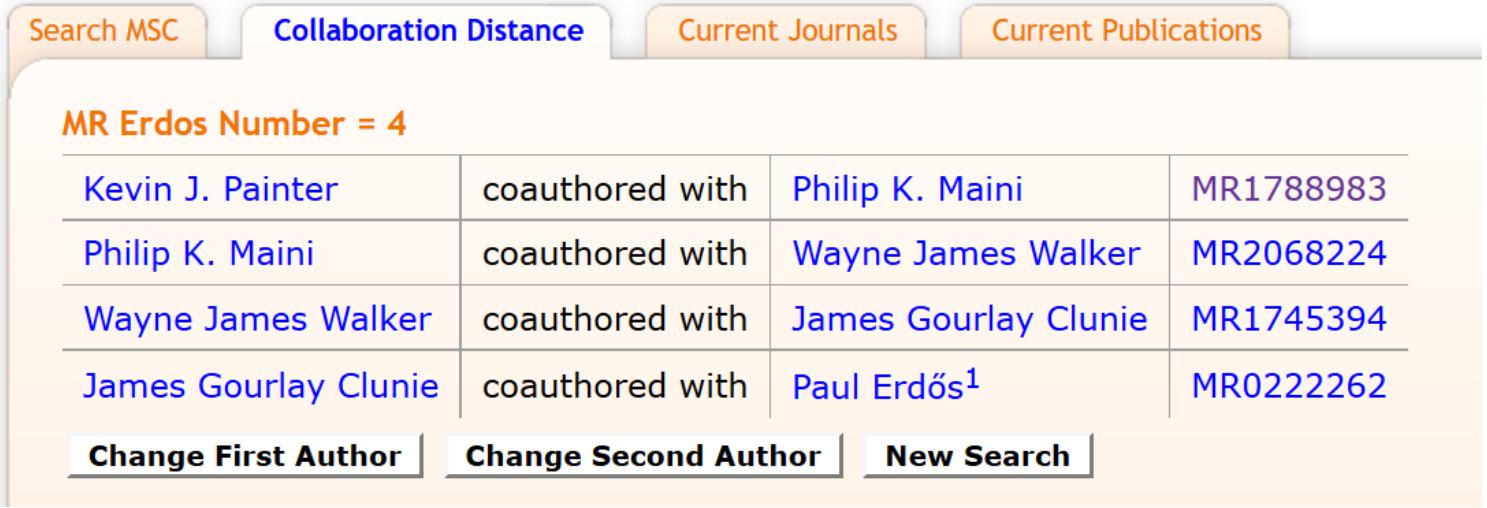

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- **Author order.**
  - In *many* areas of mathematics, authors are ordered alphabetically.
  - In *some* areas of mathematics, authors are ordered by contribution.
  - In other disciplines, other (often complicated) rules apply.
  - Interdisciplinary fields often apply the standard practice of the journal/field of publication.
  - Sometimes, different conventions apply in different countries.

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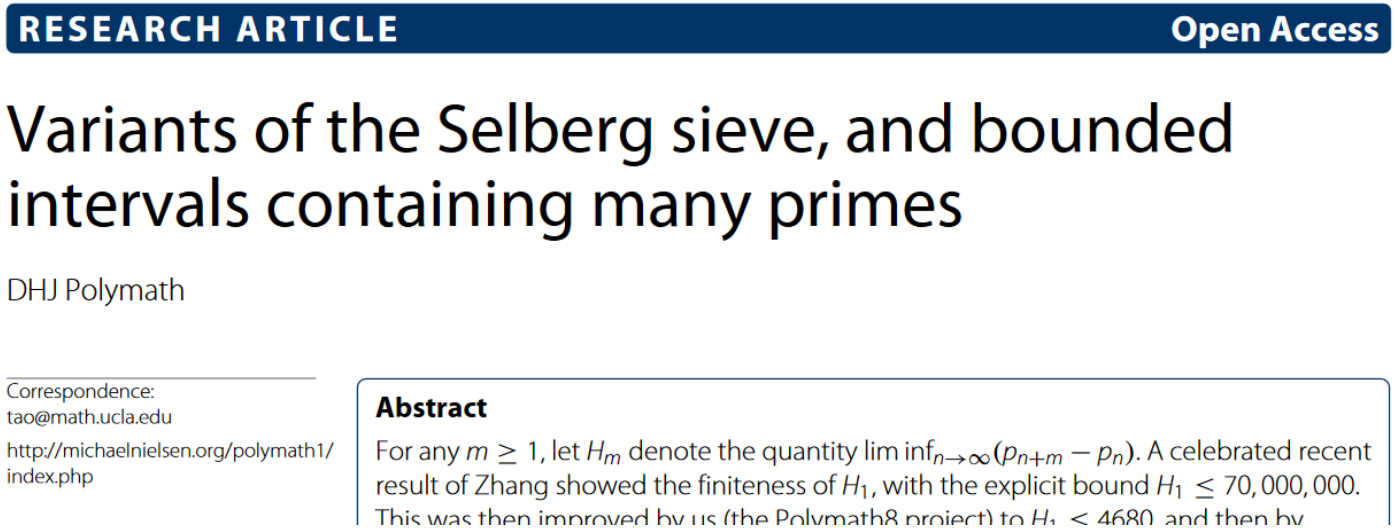

RESEARCH ARTICLE Open Access

Variants of the Selberg sieve, and bounded intervals containing many primes

DHJ Polymath

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http://michaelnielsen.org/polymath1/index.php

Abstract

For any $m \geq 1$, let H_m denote the quantity $\liminf_{n\to\infty}(p_{n+m} - p_n)$. A celebrated recent result of Zhang showed the finiteness of H_1, with the explicit bound $H_1 \leq 70,000,000$. This was then improved by us (the Polymath8 project) to $H_1 \leq 4680$, and then by

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- **When should you be an "author"?**

  Different journals have slightly different guidelines, but typically an author should have made a "substantial contribution" to the work and must "bear accountability" for its contents.

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- **Looking forward…**

  Lots of collaborative papers is attractive, but hiring committees will also want to see serious evidence of research where you are a major contributor, such as single author papers, papers where you are the "first author" or where you have played an equally important role with coauthors.

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- Agree "the basics" at an early stage: for example, all write in latex rather than using "wysiwyg" software such as Lyx….