

El impacto de la Inteligencia Artificial en la Investigación Científica

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CONICET



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Computadoras



Katherine Johnson, NASA

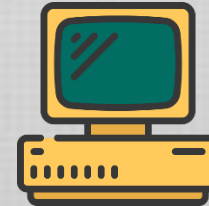
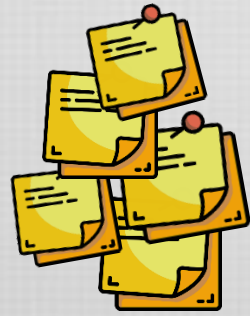


Melba Roy, NASA

Computadoras



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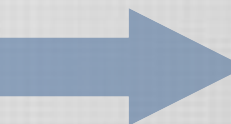
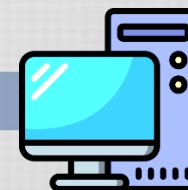
Computadoras



Computadoras



Inteligencia Artificial



Aritmética (1945)

Ordenar listas de enteros (1959)



Jugar juegos simples de tablero (1959)

Reconocer rostros en fotos (2008)

Traducción automática usable (2010)

Traducción en tiempo real del habla (2016)



Autos sin conductor

Interpretación de una imagen

Entender una historia y responder preguntas sobre ella

Traducción automatizada a nivel humano

Escribir historias interesantes

Interpretar una obra de arte

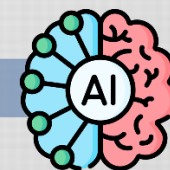


Michael Wooldridge - *A Brief History of Artificial Intelligence* (2020)

Inteligencia Artificial



Inteligencia Artificial



Herramientas
Confiables y
predecibles
Nada creativas

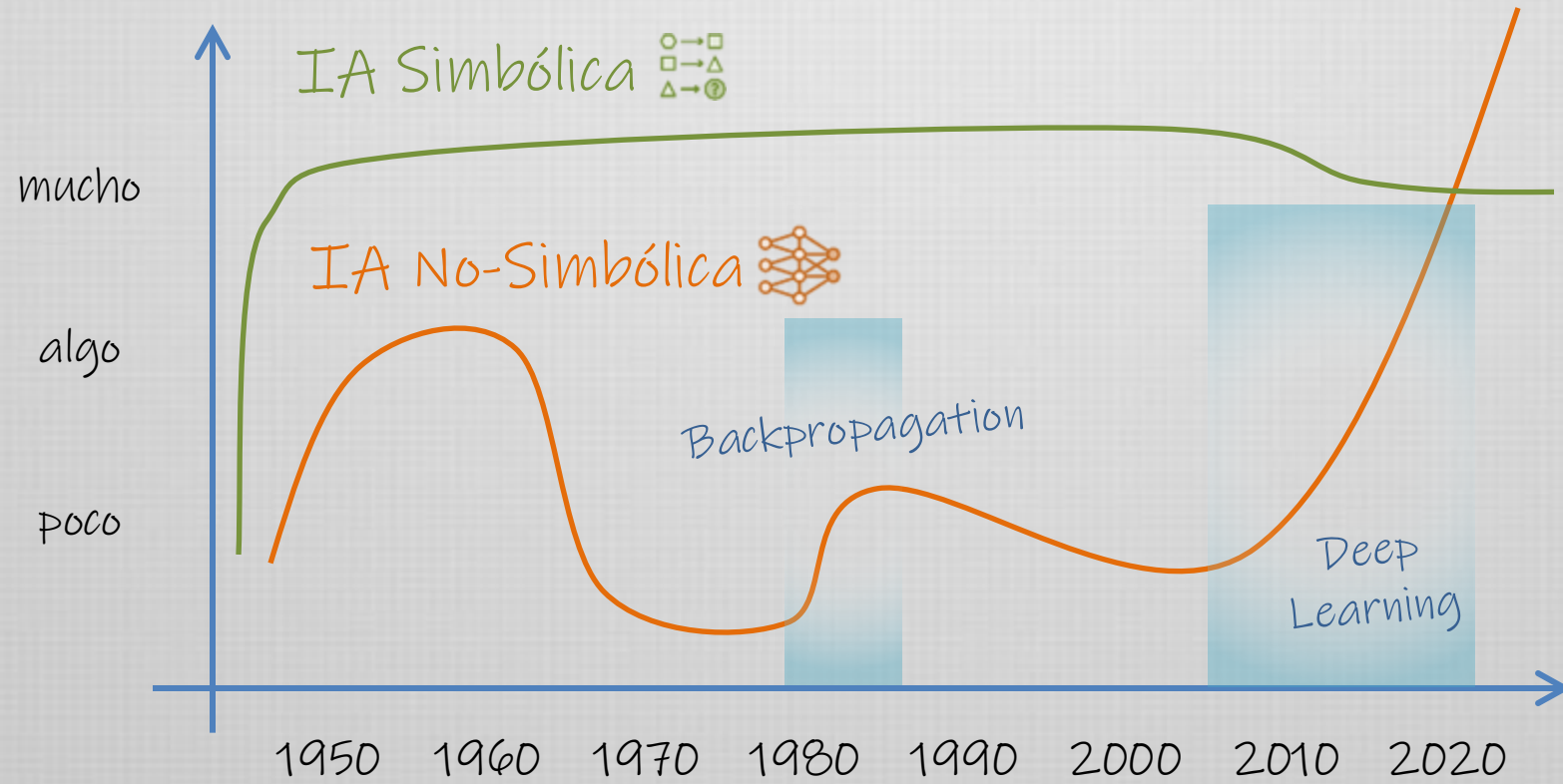


Terence Tao

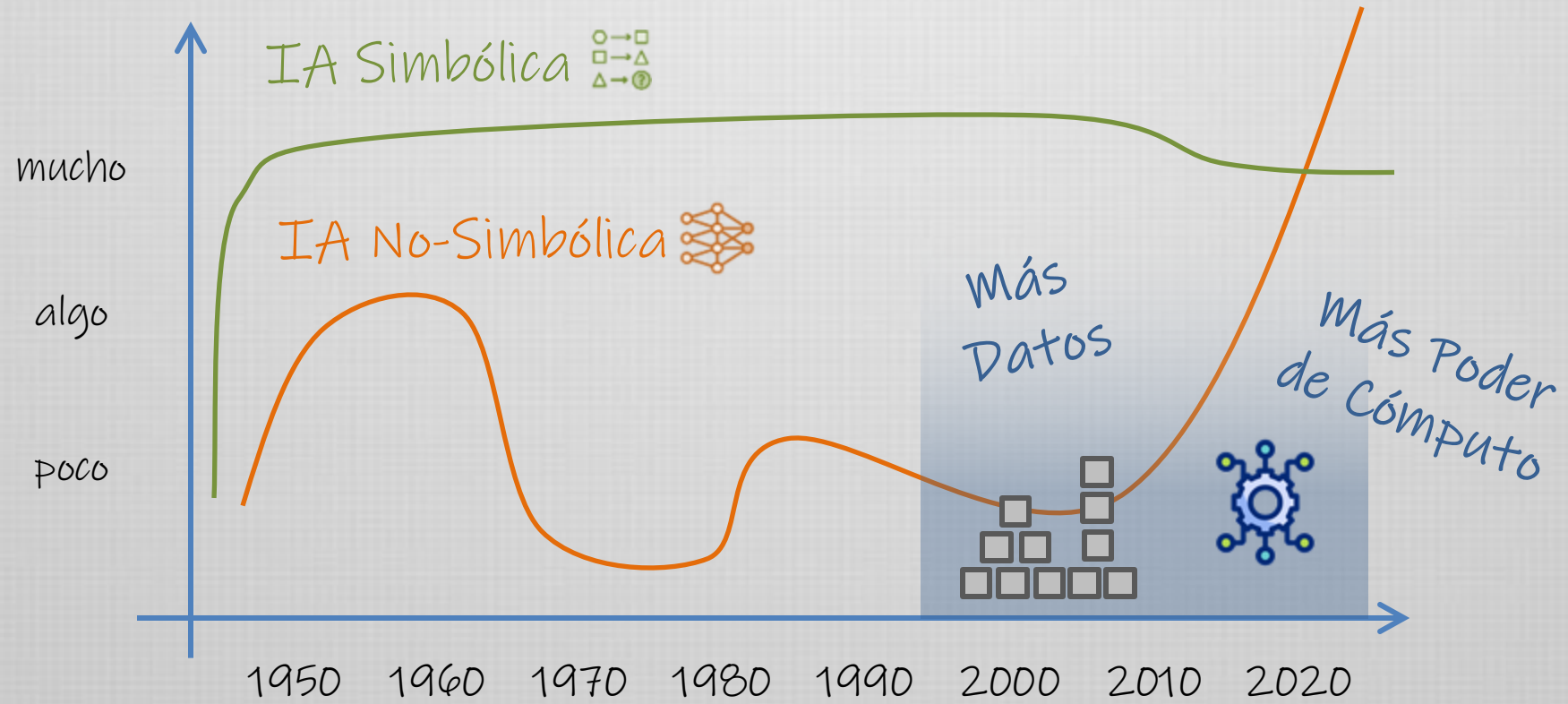
Herramientas
muy "creativas"
No tan confiables
ni predecibles



Interés general

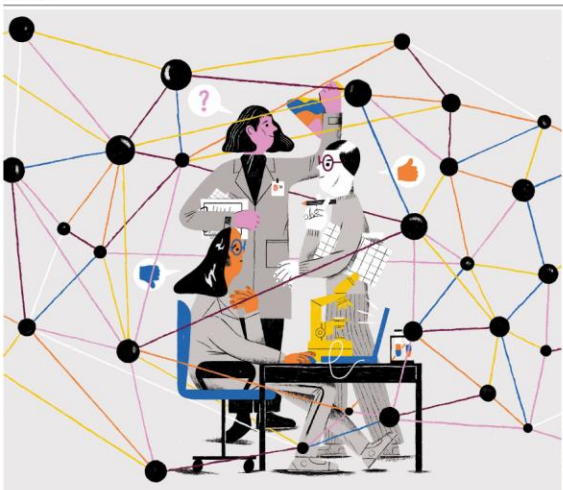


Interés general



nature

Feature



**AI AND SCIENCE:
WHAT 1,600
RESEARCHERS THINK**

A *Nature* survey finds that scientists are concerned, as well as excited, by the increasing use of artificial-intelligence tools in research.
By Richard Van Noorden and Jeffrey M. Perkel

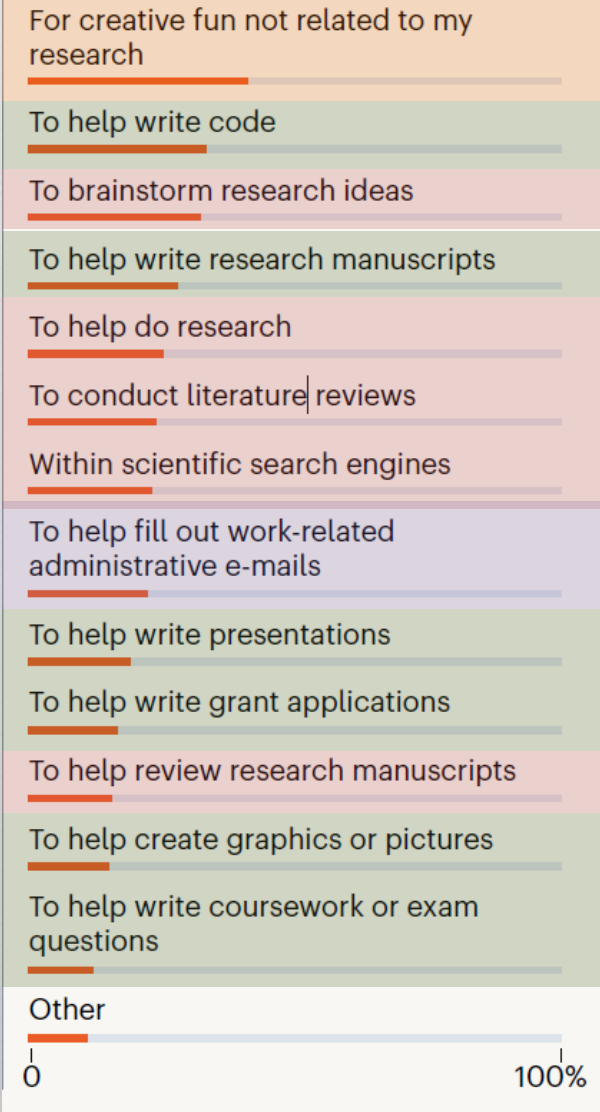
672 | *Nature* | Vol 621 | 28 September 2023

Arificial-intelligence (AI) tools are becoming increasingly common in science, and many scientists anticipate that they will soon be central to the practice of research, suggests a *Nature* survey of more than 1,600 researchers around the world.

When respondents were asked how useful they thought AI tools would become for their fields in the next decade, more than half expected the tools to be "very important" or "essential." But scientists also expressed strong concerns about how AI is transforming the way that research is done (see "AI and research: survey results").

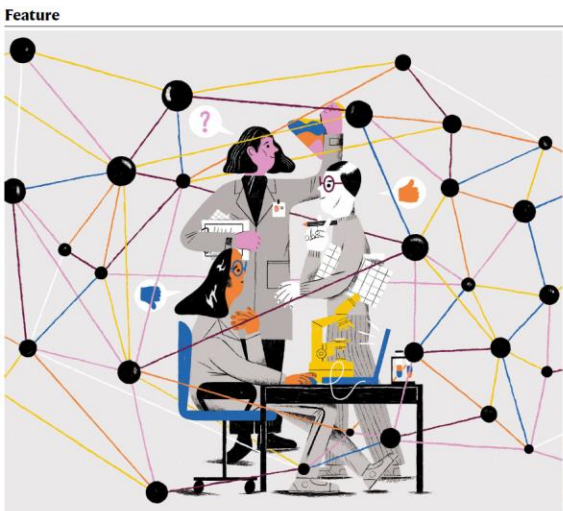
The share of research papers that mention AI terms has risen in every field over the past decade, according to an analysis for this article by *Nature*. Machine-learning statistical techniques are now well established, and the past few years have seen rapid advances in generative AI.

¿Para qué utilizan herramientas IA?



nature

Feature



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POSITIVE IMPACTS OF AI

Q: Considering machine-learning methods, what do you think are positive impacts of AI in research? (Choose all that apply.)

Provides faster ways to process data

Speeds up computations

Saves researchers time or money

Automates data acquisition

Makes it possible to process new kinds of data

Provides faster ways to write code

Answers questions that are otherwise very difficult to solve

Optimizes experimental set-ups for acquiring data

Makes new discoveries

Generates new research hypotheses

Other

0

100%

NEGATIVE IMPACTS OF AI

Q: Considering machine-learning methods, what do you think are negative impacts of AI in research? (Choose all that apply.)

Leads to more reliance on pattern recognition without understanding

Results can entrench bias or discrimination in data

Makes fraud easier

Ill-considered use leads to irreproducible research

Exacerbates power imbalances: only scientists at well-resourced universities or firms can be at the cutting edge

Expensive or energy-intensive tool

Other


0

100%



nature

Feature



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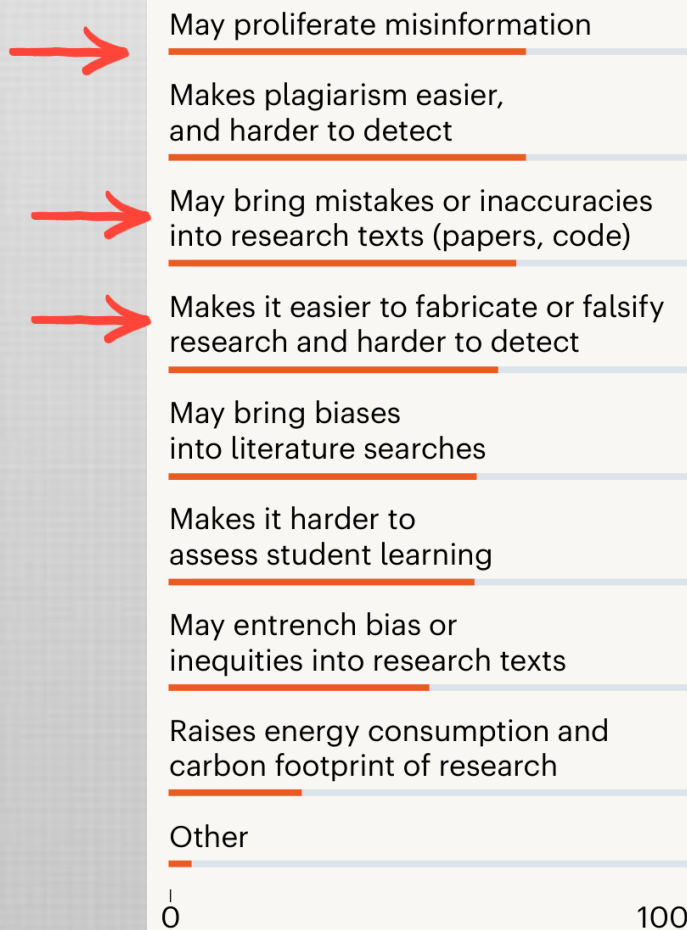
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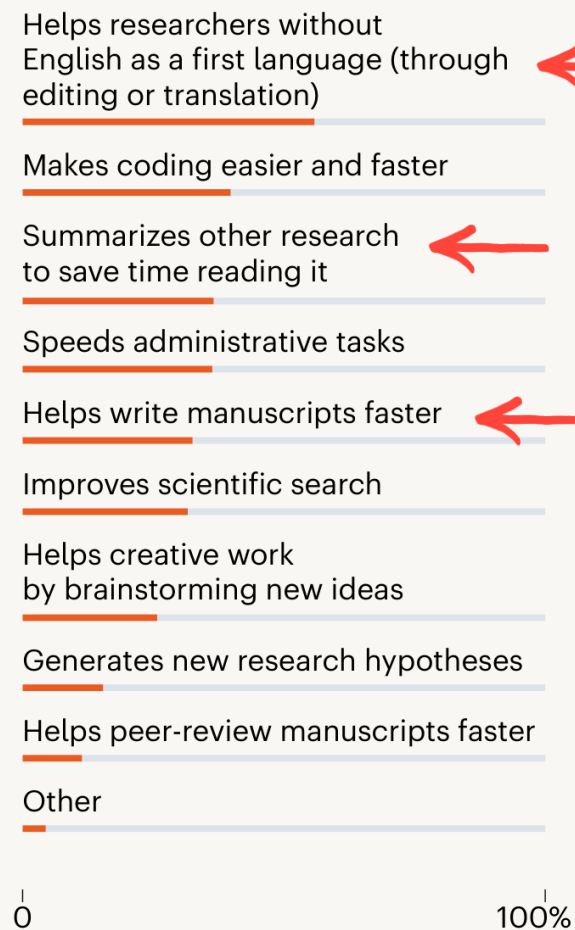
PROBLEMS OF GENERATIVE AI

Q: Where do you think generative AI may have negative impacts on research? (Choose all that apply.)



BENEFITS OF GENERATIVE AI

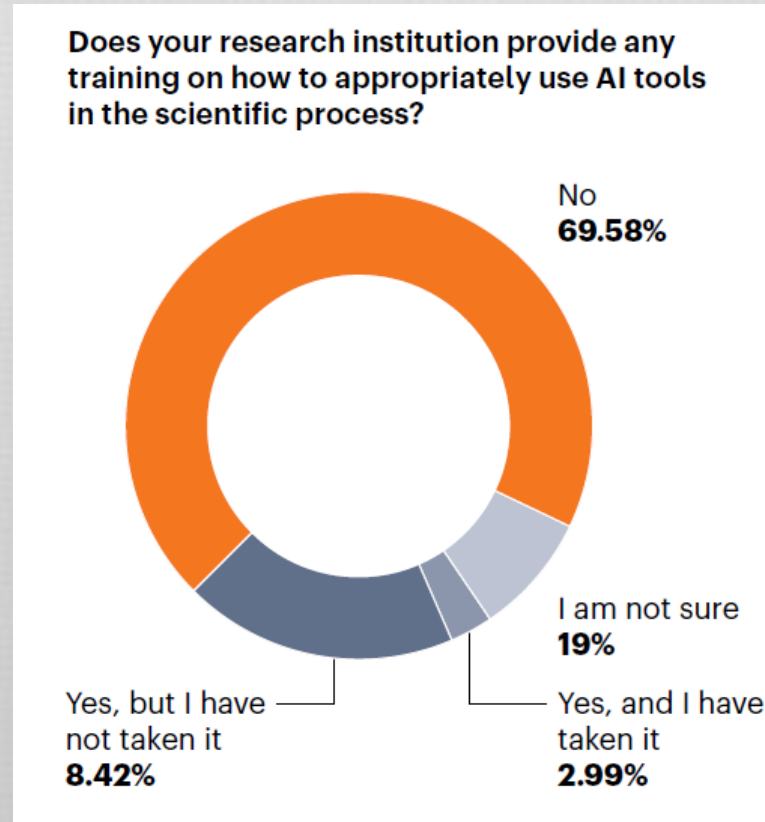
Q: What do you think are currently the biggest benefits of generative AI for research? (Choose all that apply.)



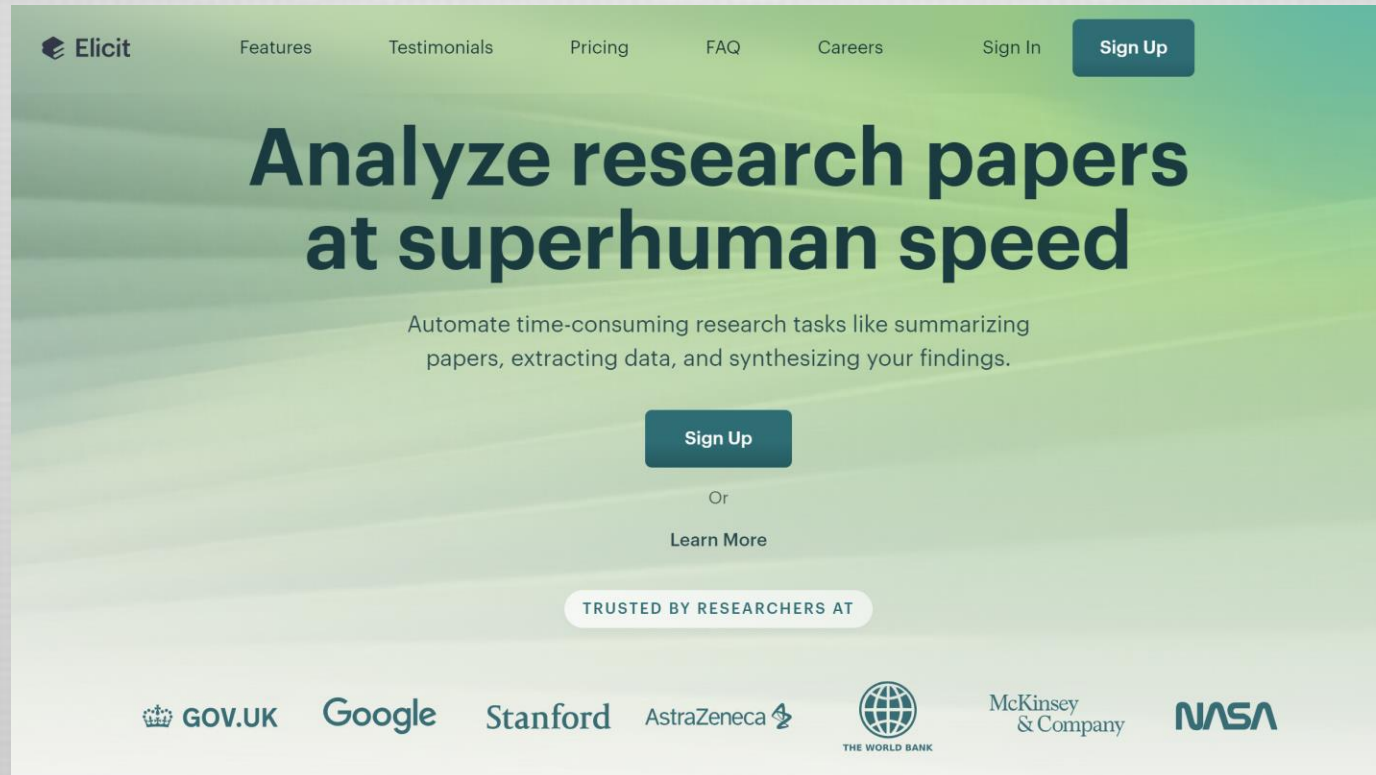
Inteligencia Artificial

¿Provee tu institución entrenamiento para usar apropiadamente las herramientas de IA en el proceso científico?

Investigadores biomédicos



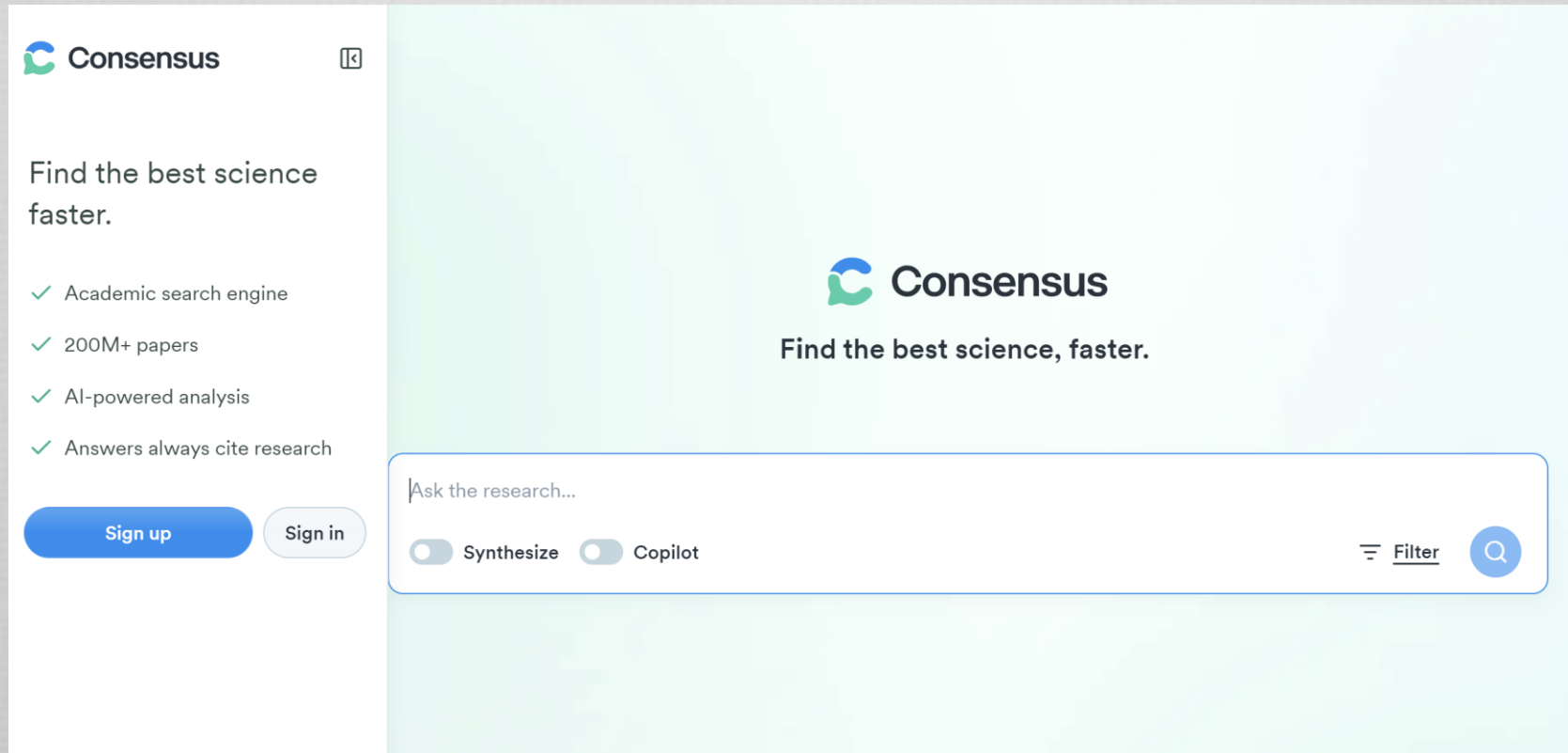
Algunas herramientas



The screenshot shows the Elicit website homepage. At the top, there is a navigation bar with the Elicit logo and links for Features, Testimonials, Pricing, FAQ, Careers, Sign In, and a prominent Sign Up button. The main heading reads "Analyze research papers at superhuman speed". Below this, a sub-headline states: "Automate time-consuming research tasks like summarizing papers, extracting data, and synthesizing your findings." There is another Sign Up button, followed by "Or" and a "Learn More" link. A section titled "TRUSTED BY RESEARCHERS AT" features logos for several organizations: GOV.UK, Google, Stanford, AstraZeneca, THE WORLD BANK, McKinsey & Company, and NASA.

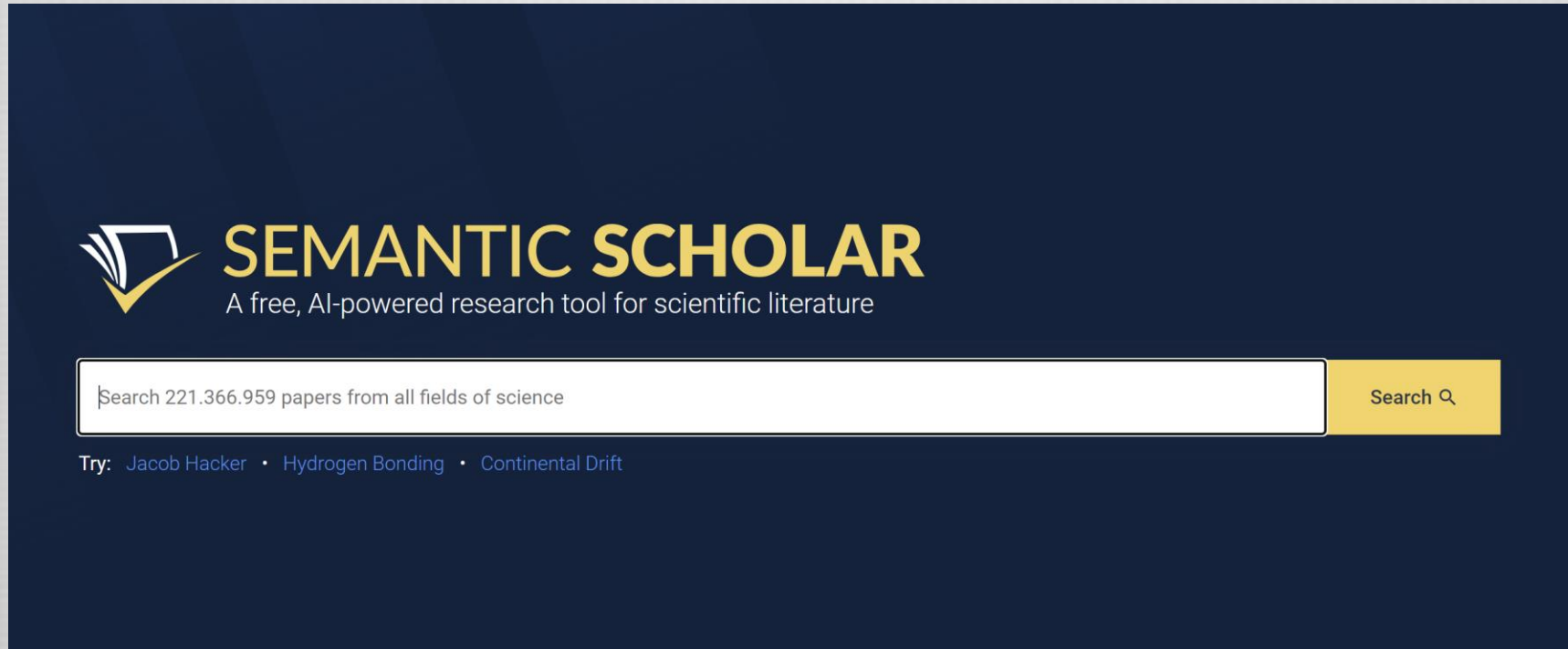
Usando LLM, [Elicit](#) encuentra papers relevantes al t3pico de inter3s, analizando papers y citas y extrayendo informaci3n sintetizada

Algunas herramientas



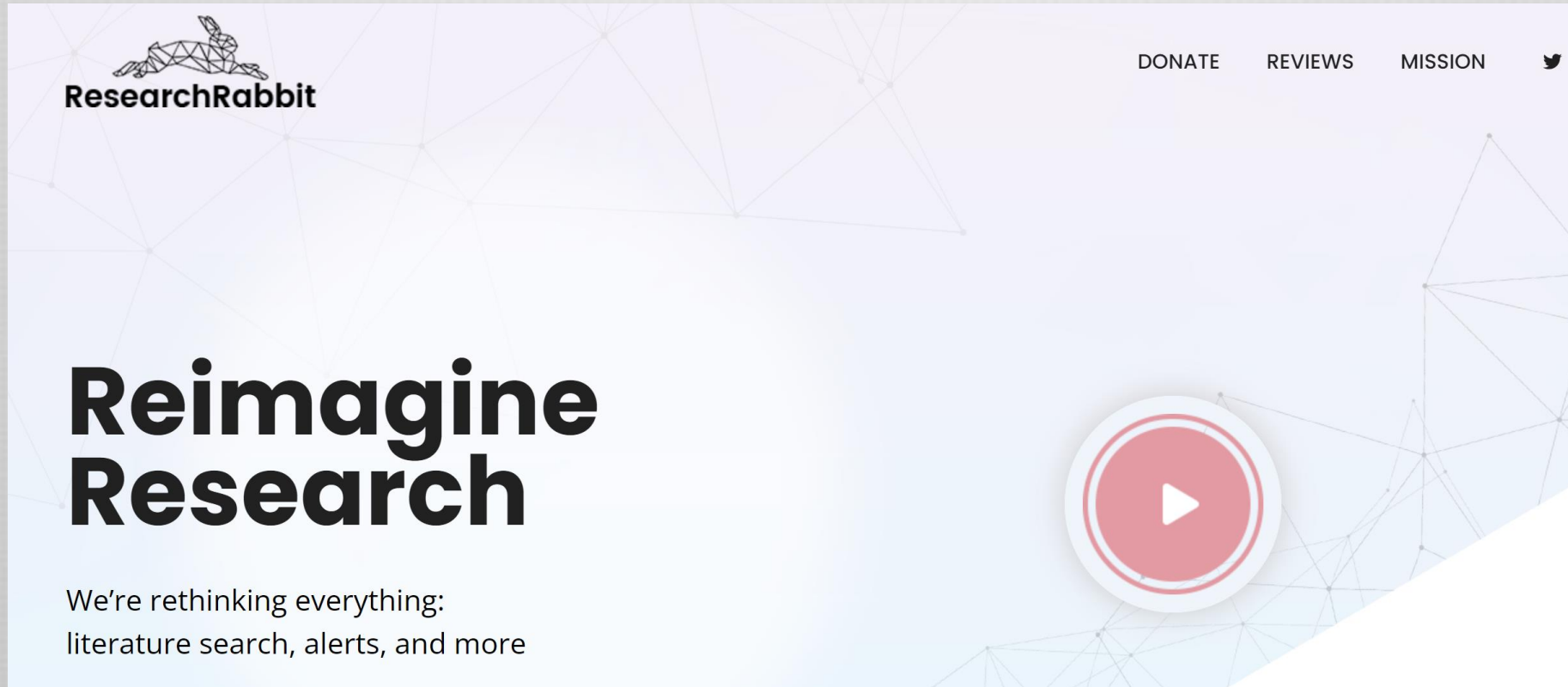
Similar al anterior, **Consensus** usa LLM para ayudar a los investigadores a sintetizar consultas basadas en las conclusiones de los papers

Algunas herramientas



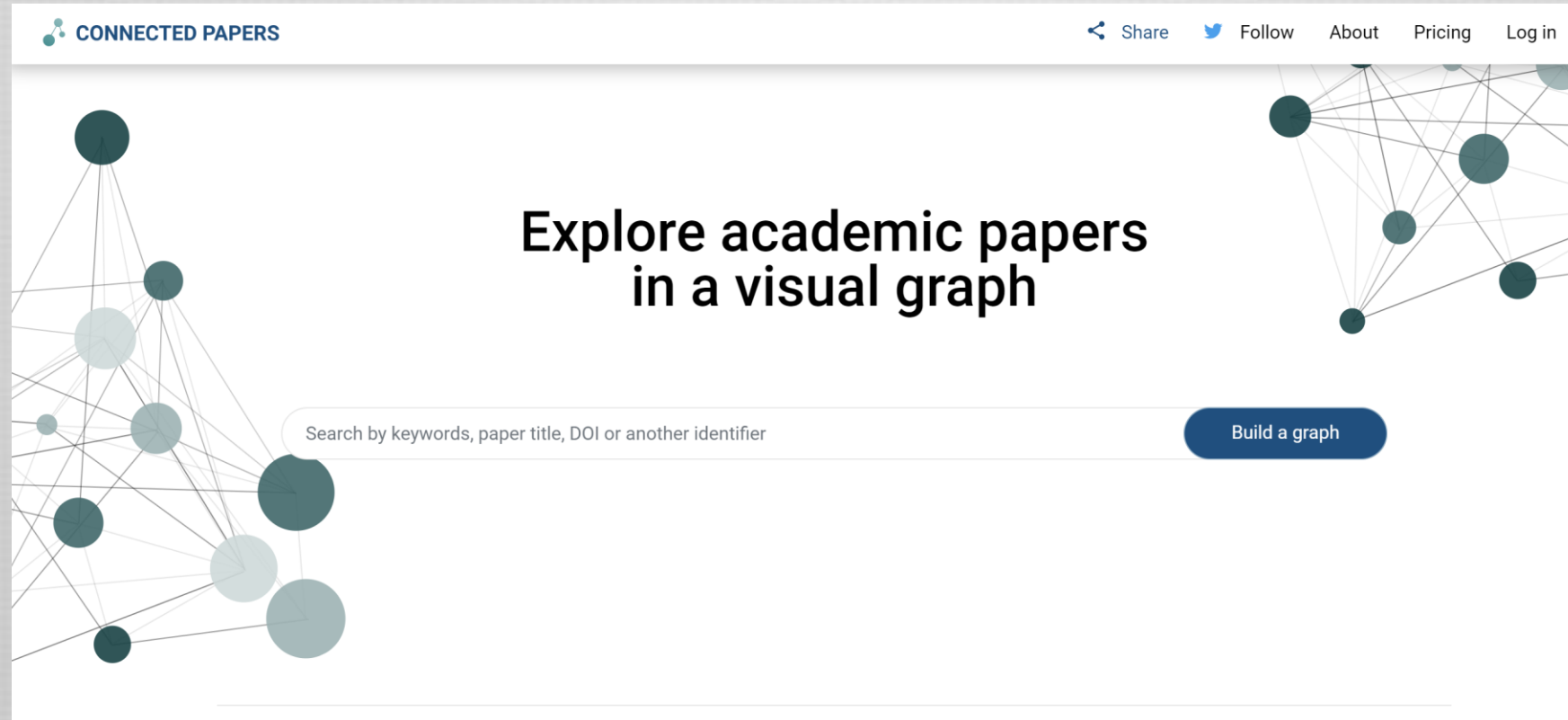
Semantic Scholar provee breves resúmenes (TLDR) de los principales objetivos y resultados de los papers

Algunas herramientas



[Research Rabbit](#) mapea citas y referencias para enfocarse en las relaciones entre trabajos de investigación y ayuda a visualizarlos fácilmente

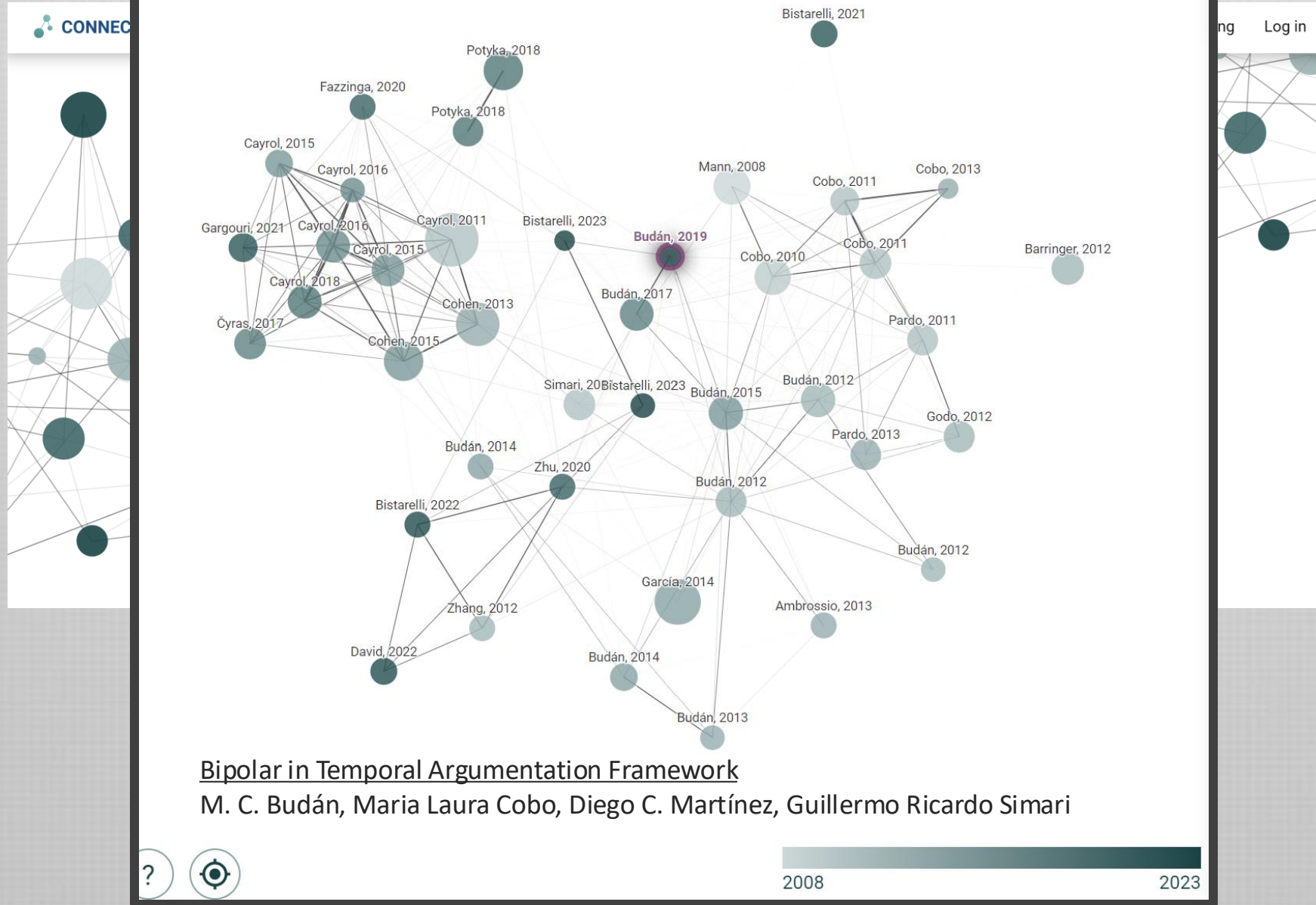
Algunas herramientas



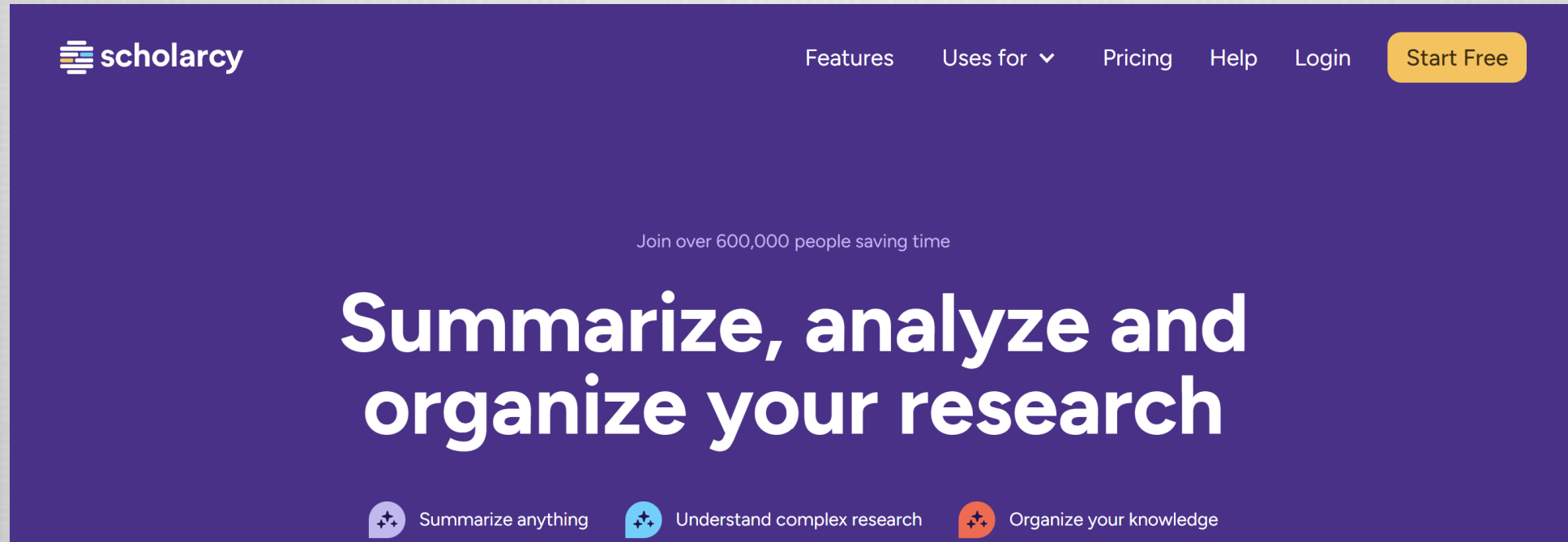
The screenshot shows the homepage of the Connected Papers website. At the top left is the logo "CONNECTED PAPERS" with a network icon. At the top right are navigation links: "Share", "Follow", "About", "Pricing", and "Log in". The main heading in the center reads "Explore academic papers in a visual graph". Below this is a search bar with the placeholder text "Search by keywords, paper title, DOI or another identifier" and a blue button labeled "Build a graph". The background features a network graph with nodes of varying sizes and colors (dark teal, light teal, grey) connected by thin lines.

Connected Papers es similar a Research Rabbit

Algunas herramientas



Algunas herramientas



The image shows the homepage of Scholarcy, a research summarization tool. The page has a dark purple background. At the top left is the Scholarcy logo, which consists of a stylized 'S' icon followed by the word 'scholarcy'. To the right of the logo are navigation links: 'Features', 'Uses for' (with a dropdown arrow), 'Pricing', 'Help', and 'Login'. A yellow 'Start Free' button is positioned on the far right. Below the navigation is a white text line: 'Join over 600,000 people saving time'. The main headline is 'Summarize, analyze and organize your research' in large white font. At the bottom, there are three feature highlights, each with a circular icon containing a star and a document symbol: 'Summarize anything' (purple icon), 'Understand complex research' (blue icon), and 'Organize your knowledge' (orange icon).

Scholarcy resumen los puntos clave de cada paper y los dispone en tarjetas (summary cards) que los investigadores pueden guardar y compartir

Algunas preguntas

¡Gracias!