Innovations that deliver value across the research ecosystem

How the Web of Science has developed and implemented new technologies that drive research progress.

Through novel approaches to organizing, structuring, and linking data, the Web of Science has been solving for emerging challenges in scholarly research for 60 years.

1964Science Citation Index™ first

published

Recording and linking the cited references that authors attach to their papers creates an "association of ideas index."

Atlas of Science first published

ISI Chief Scientist, Henry Small, develops co-citation clustering to map the scientific literature and reveal connections between research specialties.

Google PageRank patent cites Garfield's work

Garfield's concept of citation indexing anticipated web hyperlinking and the Google Search algorithm by three decades.

Highly Cited Researchers™ identified

Expert, bibliometric analysis reveals global research scientists and social scientists who have demonstrated significant and broad influence in their field(s) of research.

2012

ResearcherID code provides foundation for new ORCID service

ResearcherID code base is donated to ORCID, allowing them to further develop it and launch a persistent identifier service backed by a not-for-profit organization.

ZU16Improvements to author identification

in Web of Science data

A new disambiguation algorithm is applied to the entire Web of Science Core Collection™ dataset, factoring in a wide range of data points weighted using machine learning.

202

Citation Topics introduced

New citation-based classification algorithm, developed with researchers at the Centre for Science and Technology Studies (CWTS) in Leiden, helps users better understand the ever-evolving landscape of ideas.

Cited references enriched with more data

Web of Science captures, classifies, and displays in-text citation data to provide machine learning based context around how and why an author cited a reference.

Web of Science Research Assistant beta

A new generative-Al-powered tool tested by institutional partners enables researchers to ask questions and get to the right answers in Web of Science data faster.

· 1955

Citation indexing first proposed

Dr. Eugene Garfield introduces a new concept that will revolutionize information retrieval.

· 1973/1978

Citation indexing applied to new fields

Launch of the Social Sciences Citation IndexTM and the Arts & Humanities Citation IndexTM.

199/

Web of Science launches online

Bringing together science, social sciences, and arts and humanities research into a citation index navigable via a new web application.

2001Essential Science Indicators™ launches

A new web-based analytics tool provides data on the output and impact of researchers, institutions, nations, and journals, as well as Highly Cited Papers™ and Research Fronts™.

2008

ResearcherID helps the research community disambiguate authors

Researchers can establish a persistent, unique identifier and accurately associate their work to this universal ID, rather than an ambiguous name, for the first time.

· 2015

Manuscript Matcher launches

A new feature suggests the top journal candidates for a paper by analyzing millions of Web of Science citation connections and prioritizing matches using sophisticated clustering algorithms.

· 2017

Funding support for oaDOI service

Clarivate[™] provides grant to Impactstory (now OurResearch) to support further oaDOI development and leverages the service in the Web of Science, making OA content more accessible for researchers.

2021-2022

Recommendation algorithms

Content metadata and user interactions drive article and author recommendations that facilitate connections and broader discovery in the Web of Science.

• • • • 2023

Al-enabled search improvements

Algorithmically generated author keyword and topic suggestions help improve user queries.

• • • 2024

Semantic search/search optimization

Leveraging the Web of Science Knowledge Graph, we go beyond direct keyword matching to enable users to discover semantically relevant content from across the Web of Science Core Collection, and use AI to make search recommendations and optimize your results.

