

[BLOG | ARTICLE](#)
3 MINUTE READ

SEPTEMBER 23, 2020

Citation Laureates 2020: The giants of research



DAVID PENDLEBURY
Head of Research Analysis
Clarivate

Share this article



Clarivate analysts draw on Web of Science publication and citation data to reveal annual list of Citation Laureates – extremely influential researchers deemed to be ‘of Nobel class’

In early October each year, the [Nobel Assembly](#) confers science’s highest honors with the Nobel Prizes. As done since 2002, Clarivate analysts again draw on [Web of Science™](#) publication and citation data to reveal the [2020 list of Citation Laureates™](#). These giants of research have authored publications cited at high frequency and contributed to science in ways that have been transformative, even revolutionary.

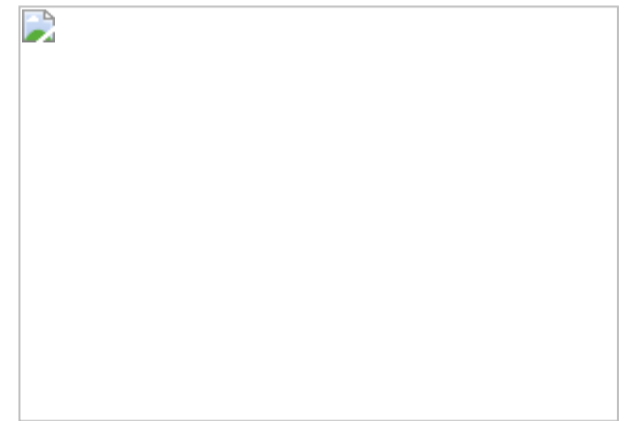
Citations as a herald of influence

Fifty years ago, Eugene Garfield, founder of [the Institute for Scientific Information \(ISI\)™](#) and father of citation indexing for scientific literature, published “Citation Indexing for Studying Science” (*Nature*, 227, 669-671, 1970). This paper presented a table of the 50 most-cited scientists during the year 1967.

The list contained the names of six Nobel Prize recipients as well as ten others who went on to earn Nobel recognition, eight within a decade. Garfield was demonstrating that citations in the journal literature, at least at high frequency, can serve as a strong indicator of community-wide influence and individual stature.

Table 1 illustrates the citation distribution for journal articles and proceedings papers published from 1970 to 2020 in the Web of Science. Out of some 51 million papers, only 5,700 papers have been cited 2,000 or more times, or just .01%.

Who are the 2020 Citation Laureates?



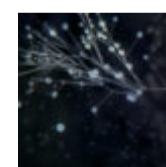
[See the list](#)

RECENT ARTICLES



[Author of green gardening guide wins Clarivate Award for Communicating Zoology \[2020\]](#)

NOVEMBER 19, 2020



[Clarivate identifies global scientific pioneers on annual Highly Cited Researchers list](#)

NOVEMBER 18, 2020



[The changing nature of international collaboration \[Podcast\]](#)

NOVEMBER 16, 2020



[Annual G20 Scorecard: Spotlight on COVID-19 research](#)

NOVEMBER 11, 2020

Web of Science™

Research class among millions of researchers can be made manageable by focusing on a smaller collection of very highly cited papers and their authors.

Citations	Number in range (papers)	Cumulative count (papers)
100,000 – 331,679*	2	2
50,000 – 99,999	13	15
10,000 – 49,999	261	276
5,000 – 9,999	716	992
3,000 – 4,999	1,613	2,605
2,000 – 2,999	3,078	5,683
1,000 – 1,999	16,029	21,712
500 – 999	62,596	84,308
0 – 499	50,637,099	50,721,407

Table 1. Citation distribution for journal articles and proceedings papers, 1970 to 2020.

Source. The Web of Science

Of course, Nobel Prizes are not handed to those with the highest number of citations. Only those deemed to have “made the most important discovery or invention in the field of physics.... made the most important chemical discovery or improvement.... [and] made the most important discovery within the domain of physiology or medicine” are considered worthy of the Nobel Prize, as specified by the will of Alfred Nobel. We follow a similar approach in our selection of the Citation Laureates.

Measuring Nobel-class influence

Since 2002, Clarivate has named Citation Laureates in the areas recognized by the Nobel Prize: Physiology or Medicine, Physics, Chemistry and Economics. These are the giants of research, those with transformative influence upon their fields

However, a high level of citation is only a prerequisite for selection. While we say that citations at high frequency reflect contributions that have been influential in some way, we also emphasize that citation data should be combined with qualitative information and human judgement. An expert examination of awards, memberships and pioneering impact provides a deeper understanding of researcher influence and whether it reflects important discoveries, inventions or improvements of the kind the Nobel Prize recognizes.



The Citation Laureates are researchers of Nobel class, who are, in the words of sociologist Harriet Zuckerman, “peers of the prize-winners in every sense except that of having the award.” While not all can possibly become Nobel Laureates, their research achievements, we believe, ought to be highlighted and celebrated.

At the intersection of these data sets, we often find potential, even probable Nobel Laureates who we define as Citation Laureates. To date, we have identified more than 300 Citation Laureates. As of September 2020, 54 of these later received the Nobel Prize, 29 within two years of being named a Citation Laureate.

A fresh class of research giants

This year we name 24 new Citation Laureates with significant contributions in each of the four Nobel Prize areas. These individuals contributed highly cited papers reporting, among other topics:

- discoveries in genetics heralding personalized approaches to cancer treatment,
- fundamental studies of galaxy formation and evolution,
- advances in supramolecular chemistry through self-assembly strategies that take inspiration from nature itself, and
- studies of labor economics, especially the analysis of women’s participation and the gender pay gap.

Web of Science™

sociologist Harriet Zuckerman, peers of the prize winners in every sense except that of having the award.” While not all can possibly become Nobel Laureates, their research achievements, we believe, ought to be highlighted and celebrated.

When the Nobel Prizes for 2020 are announced, we will learn the names of researchers graduating from Nobel-class to Nobel laureate. If the past is a guide, we expect one or more Citation Laureates in the group.

To learn more about this year’s list and view our Hall of Citation Laureates, please visit:

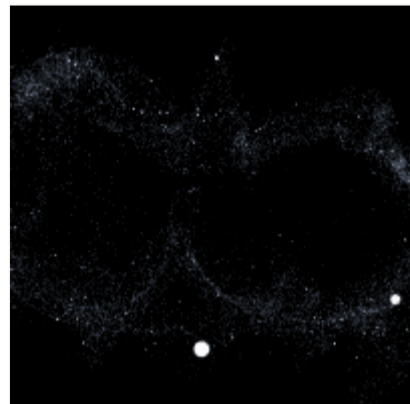
<https://clarivate.com/webofsciencegroup/citation-laureates>.

- [Citation Laureates](#)
- [Citations](#)
- [Institute for Scientific Information](#)
- [Nobel prize](#)
- [Web Of Science](#)

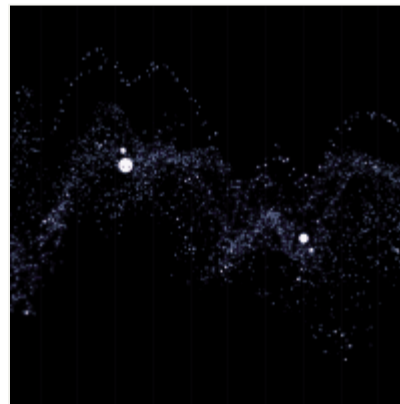
Share this article

RELATED ARTICLES →

ARTICLE
[Giants of research share how they found their calling](#)



ARTICLE
[Want to be a researcher of Nobel class? Find out what it takes](#)



ARTICLE
[“It makes the success so much more rewarding.” Award-winning scientist shares advice for budding researchers](#)

ARTICLE
[Advice to my younger self: world’s top researchers share the tips they wish they’d known](#)