A bibliometric analysis has found that certain fields are more likely to garner a Nobel prize than others.

While the authors are unable to determine whether this clustering is driven by the nomination of candidates or by the selection of the awardees, or both, they are concerned that it might create a culture where some scientists are considered less worthy simply because of the field in which they work. It might even influence the fields in which researchers choose to undertake research. “Scientists do care about rewards and incentives. Therefore, they may be attracted to work in fields or sub-disciplines that are attracting more recognition, funding, and have better odds of being seen as important science,” Ioannidis told Physics World. “Diversity and richness of disciplines and approaches is a strength of science, and too much clustering of recognition may be detrimental in this regard.”

Lutz Bornmann, a science sociologist at the headquarters of the Max Planck Society in Munich, is “surprised” by the team’s findings. “I had expected that the Nobel prizes are more evenly distributed across fields,” he says. He wonders whether, in addition to the potential for bias in the nomination and selection processes, the clustering might indicate that certain fields of science are more amenable to the type of ground-breaking research likely to achieve Nobel recognition.

Bornmann is keen, however, for scientists to continue their research efforts in whichever field captures their interest. “Although the study revealed these clustering processes, researchers should not adjust their careers to the results of the study,” he says. After all, he explains, even researchers active in fields seemingly favoured by the prize stand only a very small chance of being awarded a Nobel, however worthy their achievements. “Many candidates deserve a prize,” he says, “but only a few receive it.”

Simon Perks

Awards

Particle and atomic physics more likely to win Nobels

Research into particle and atomic physics is more likely to be awarded a Nobel prize than work in other fields. That is according to a new analysis from scientists at Stanford University, who find, however, that research that does achieve such recognition may actually have far less impact than other discoveries made at the same time (PLOS One 15 e0234612).

John Ioannidis and colleagues from Stanford mapped the key Nobel-prize-related publication of each laureate who was awarded a prize in either physics, chemistry or physiology and medicine between 1995 and 2017. They also analysed 63 million other articles from the Scopus database that were published in the same timeframe. The work revealed that, out of 114 scientific fields, particle and atomic physics alone accounted for a quarter of Nobel prizes awarded during the period covered by the study. When including cell biology, neuroscience and molecular chemistry, these five fields accounted for more than half of awards. Furthermore, almost all Nobel-prize-related papers have been cited less extensively than top papers published around the same time.

Broken cable damages iconic Arecibo observatory

The iconic Arecibo radio telescope in Puerto Rico has suffered a 30 m-long gash in its main reflector dish after a steel cable snapped last month. As Physics World went to press, it was not clear what caused the accident, with observations stopped for at least two weeks while investigations were carried out. The incident happened on 10 August when one of the auxiliary cables that supports a metal platform above the 307 m-wide observatory broke. When the cable snapped, it flailed, gashing the main 307 m-wide reflector as well as damaging several panels in the Gregorian Dome that is held above the dish. Built some 50 years ago, the observatory has endured many hurricanes, tropical storms and earthquakes, with damage caused by Hurricane Maria in 2017 still being repaired. In 2018 the University of Central Florida took over managing Arecibo after the National Science Foundation sought to reduce its funding for the facility.

Michael Banks