

What did we learn from the Sci-Hub story?

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Piracy. Why even talk about it?

- **Guerrilla Open Access is part of the reality of open access.** Most scientific articles are indeed available to the public, for free... through unauthorized means.
- **It is not a secret.** Google “*how to access pirated articles*” or anything similar. You will get an immediate answer on how to do it. Several answers, in fact.
- Using platforms that infringe on copyright or access restrictions may have legal and ethical implications, but **they are used by a large number of people anyway.**
- Maybe there is something useful to learn here.

FEATURES

WHO'S DOWNLOADING PIRATED PAPERS? EVERYONE

Data from the controversial website Sci-Hub reveal that the whole world turns to it for journal articles

By John Bohannon

Just as spring arrived last month in Iran, Meysam Rahimi sat down at his university computer and immediately ran into a problem: how to get the scientific papers he needed. He had to write up a research proposal for his engineering Ph.D. at Amirkabir University of Technology in Tehran. His project straddles both operations management and behavioral economics, so Rahimi had a lot of ground to cover.

But every time he found the abstract of a relevant paper, he hit a

Many academic publishers offer programs to help researchers in poor countries access papers, but only one, called Share Link, seemed relevant to the papers that Rahimi sought. It would require him to contact authors individually to get links to their work, and such links go dead 50 days after a paper's publication. The choice seemed clear: Either quit the Ph.D. or illegally obtain copies of the papers. So like millions of other researchers, he turned to Sci-Hub, the world's largest pirate website for scholarly literature. Rahimi felt no guilt. As he sees it,

ing. Over the 6 months leading up to the Sci-Hub survey, the website served up 28 million papers. More than 2.6 million downloads came from Iran, 3.4 million from China, 4.4 million from the United States. For every scientific topic, from physics experiments published decades ago to the latest breakthroughs in biology, Sci-Hub had the papers. The publisher with the most requests? It is Elsevier by a wide margin. Sci-Hub provided half-a-million Elsevier papers in one recent survey.

These statistics are based on data from the Sci-Hub website, which has been running since 2011. The data are not



Bohannon, J., Who's downloading pirated papers? Everyone. *Science* **2016**, 352 (6285), 508-512.

language **English** 简体中文 Русский Português

mirrors sci-hub.se sci-hub.st sci-hub.ru see all →

total	users	latest read
88,343,822 docs	126,626 in 1h	Tisagenlecleucel infusion in patients with relapsed/refractory ALL and concurrent serious infect ... / J Immunother Cancer. Hall 2021

latest reads

- 01:19:21 Tisagenlecleucel infusion in patients with relapsed/refractory ALL and concurrent serious infection / J Immunother Cancer Hall, 2021
- 01:19:21 Efficacy and safety of TAS-115, a novel oral multi-kinase inhibitor, in osteosarcoma: an expansion cohort of a phase I study / Invest New Drugs Kawai, 2021
- 01:19:21 Metabolic interplay between white, beige, brown adipocytes and the liver / Journal of Hepatology Scheja, 2016
- 01:19:21 First Principles Study on Properties of Monolayer MoS2 Under Different Strains / Braz J Phys Wang, 2021
- 01:19:21 Marzlin and Sanders Reply: / Phys. Rev. Lett. Marzlin, 2006
- 01:19:21 On the Scientific Status of Rational Models / American Journal of Political Science Moe, 1979
- 01:19:21 Update on the Role of Allergy in

science for the people

[database](#) [about](#) [Elbakyan](#) [stats](#) [donate](#)

E=mc²
Albert Einstein, 1905.

Screenshot from <https://sci-hub.se>
Accessed Feb 21, 2024

More than 50% of academics admit using piracy websites in order to bypass paywalls for research they want to access.

Segado-Boj, F.; Martín-Quevedo, J.; Prieto-Gutiérrez, J.-J.
Jumping over the paywall: Strategies and motivations for scholarly piracy and other alternatives.
Information Development **2022**, 02666669221144429.

Sci-Hub has legal issues, right?

- Yes. Sci-Hub hosts material without regard to copyright.
- Among many other cases, in 2015, a New York court issued a preliminary injunction against Sci-Hub, leading to the suspension of its domain. In 2017, Alexandra Elbakyan, creator of Sci-Hub, **was ordered to pay \$15 million** as fallout from a US copyright infringement lawsuit brought by Elsevier.
- Except that it is rather challenging to enforce legal judgments against entities that operate outside traditional legal jurisdictions.

Schiermeier, Q. US court grants Elsevier millions in damages from Sci-Hub.
Nature **2017**. <https://doi.org/10.1038/nature.2017.22196>

Sci-Hub also has many supporters

Alexandra Asanovna Elbakyan



Kazakhstani computer programmer

Alexandra Asanovna Elbakyan founded [Sci-Hub](#) in 2011 to provide free and unrestricted access to all scientific knowledge. Launched as a tool for providing quick access to articles from scientific journals, Sci-Hub has grown a database of more than 88.3 million research articles and books freely accessible for anyone to read and download; much of this knowledge otherwise would be hidden behind paywalls. Sci-Hub is used by millions of students, researchers, medical

professionals, journalists, inventors, and curious people all over the world, many of whom provide feedback saying they are grateful for this access to knowledge. Some medical professionals have said Sci-Hub helps save human lives; some students have said they wouldn't be able to complete their education without Sci-Hub's help. Through Sci-Hub, Elbakyan has strived to shatter academic publishing's monopoly-like mechanisms in which publishers charge high prices even though authors of articles in academic journals receive no payment. She has been targeted by many lawsuits and government actions, and Sci-Hub is blocked in some countries, yet she still stands tall for the idea that restricting access to information and knowledge violates human rights.

Electronic Frontier Foundation - Awards 2023

<https://www.eff.org/awards/effawards/2023> - Accessed Feb 21, 2024

Sci-Hub also has many supporters

Recognition and awards [\[edit \]](#)

In December 2016, *Nature* named Elbakyan as one of the [10 people who most mattered in science](#) that year.^[9] Researchers who use Sci-Hub often thank Elbakyan in the Acknowledgments section of their papers.^[41]

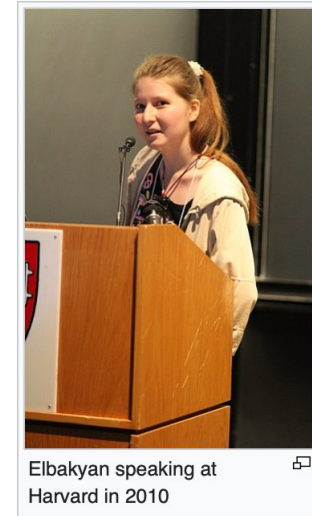
For her actions in creating Sci-Hub, Elbakyan has been called a hero,^{[42][43]} for example by Nobel laureate [Randy Schekman](#).^[44] *Ars Technica* has compared her to [Aaron Swartz](#),^[45] and *The New York Times* has compared her to [Edward Snowden](#).^[31] Edward Snowden acknowledged Sci-Hub to be one of the most important websites for academics in the world.^[46] She has also been called a modern-day "[Robin Hood](#)"^{[47][48]} and a "Robin Hood of science"^{[12][49]} and "Science's Pirate Queen".^{[6][8][11]}

Elbakyan has several biological species named in her honor:

- *Idiogramma elbakyanae*, a species of [parasitoid wasps](#) discovered by Russian and Mexican [entomologists](#) in 2017.^[50] Elbakyan was offended by this, saying that "the real parasites are scientific publishers, and Sci-Hub, on the contrary, fights for equal access to scientific information."^[51] The Russian entomologist responded that he supports Sci-Hub and naming was not an insult.^[52] The article says that "The species is named in honour of Alexandra Elbakyan (Kazakhstan/Russia), creator of the web-site Sci-Hub, in recognition of her contribution to making scientific knowledge available for all researchers."^[50]
- *Brachyplatystoma elbakyanii* ^[es], an [extinct](#) species of [catfish](#) discovered by Argentine [paleontologists](#) in 2020.^[53]^[54]
- *Spigelia elbakyaniae* ^[d], a species of [flowering plant](#) from Mexico discovered in 2020.^{[55][56]} (At first *Spigelia elbakyanii*, then changed by the authors because the "correct termination, however, for an epithet dedicated to a woman (Alexandra Elbakyan) is *-iae*, instead of *-ii*".^[57]
- *Amphisbaena elbakyanae*, a species of [worm lizard](#) discovered in 2021.^[58]
- *Sibogasyrinx elbakyanae* ^[c; d], a species of [deep-sea snail](#) discovered by researchers from Russia and France in 2021.^[59]

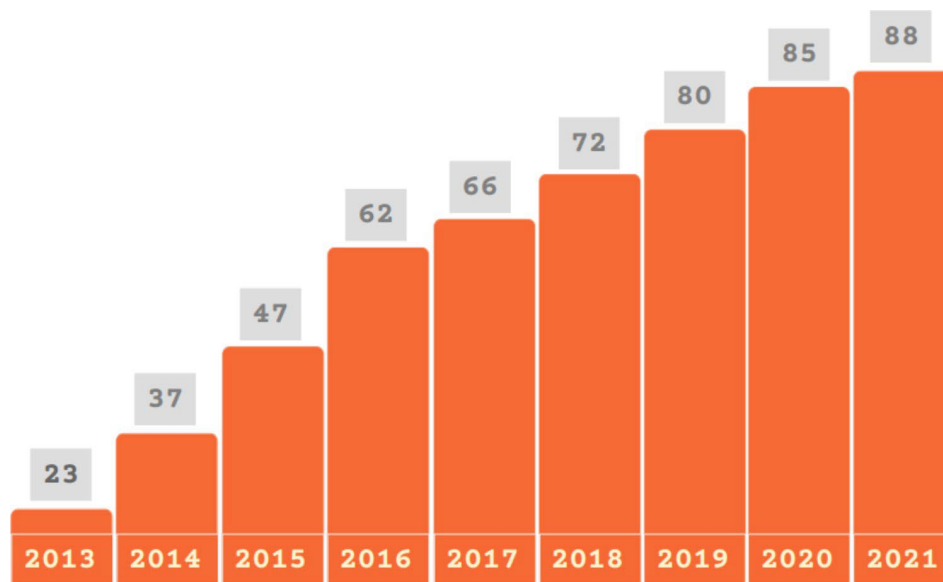
Elbakyan was nominated twice for [John Maddox Prize](#) and made it to the final shortlist.^[60] Some researchers say that Elbakyan deserves a [Nobel Prize](#) for her work.^{[13][61][62]} Wildlife scientist T R Shankar Raman has stated in an interview: "I am not a fan of the Nobel Prizes, given they have their own biases and have failed to adequately acknowledge scientific contributions of women, for example. But given that its stated purpose is to award those who have conferred the greatest benefit to humankind, Alexandra Elbakyan certainly qualifies."^[63]

In 2023 Elbakyan received the Award for Access to Scientific Knowledge from the [Electronic Frontier Foundation](#) for her "vital work in helping to ensure that technology supports freedom, justice, and innovation for all people."^[64]



Screenshot from https://en.wikipedia.org/wiki/Alexandra_Elbakyan
Accessed Feb 21, 2024

More than 88 million articles were stolen by Sci-Hub



Sci-Hub database growth by year

Sci-Hub was growing most quickly in the period from 2013 to 2016. That is because it was downloading old papers from journal archives. After that it only had to download new papers.

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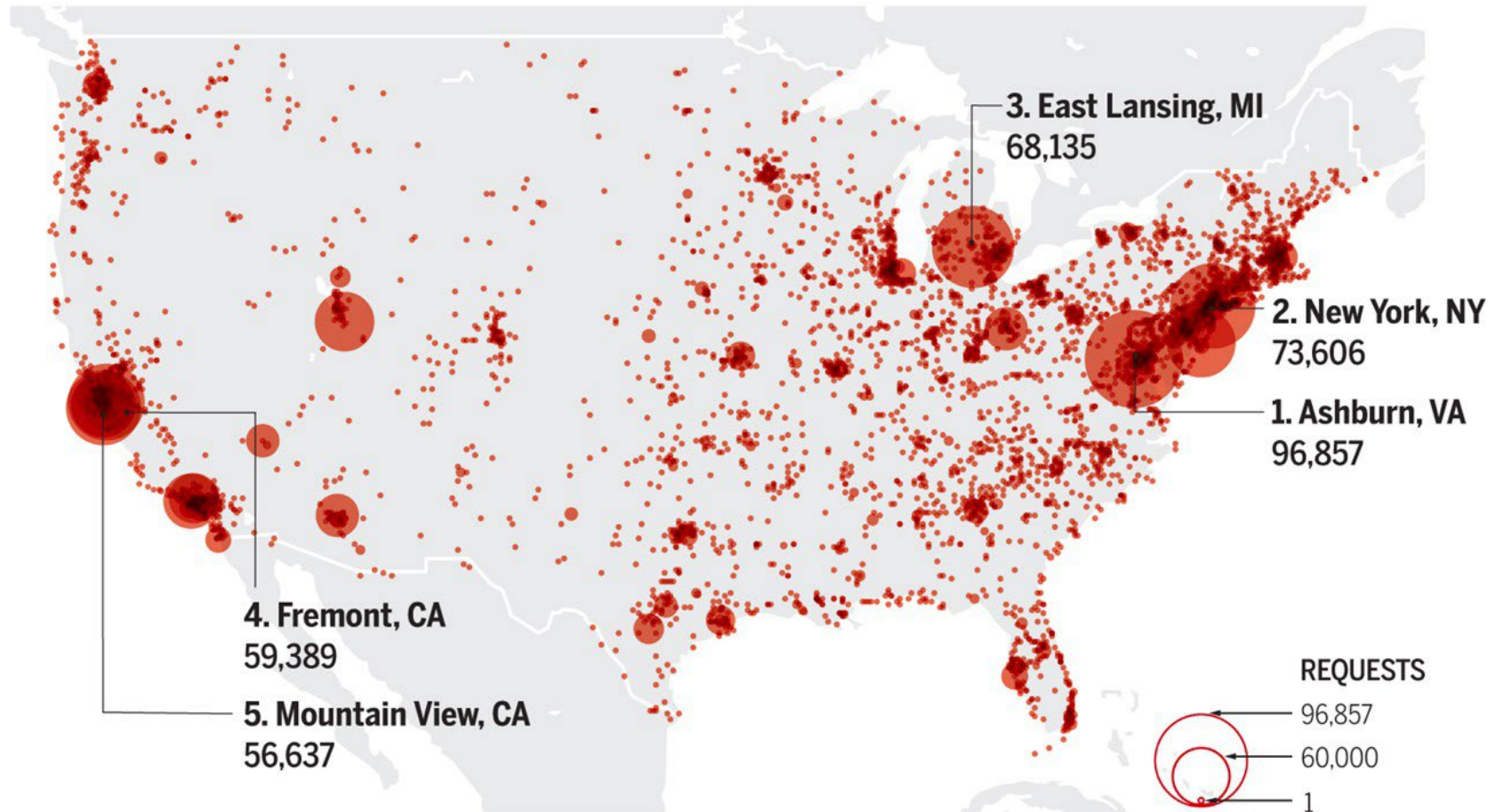
<https://www.amazon.com/Synology-Bay-2-5-DS620slim-Diskless/dp/B07V6CC4M2>

<https://www.amazon.com/Dell-Exos-7200RPM-3-5-inch-Enterprise/dp/B0CH1PMX7Q>

Why do people use Sci-Hub?

Need or convenience?

Sci-Hub users in the United States seem to congregate near universities and likely have institutional access to the articles they request. This map excludes 27,000 download requests from anonymous U.S. IP addresses.



Bohannon, J., Who's downloading pirated papers? Everyone.
Science **2016**, 352 (6285), 508-512.

HOME > SCIENCE > VOL. 352, NO. 6285 > WHO'S DOWNLOADING PIRATED PAPERS? EVERYONE

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JOHN BOHANNON [Authors Info & Affiliations](#)

SCIENCE • 29 Apr 2016 • Vol 352, Issue 6285 • pp. 508-512 • DOI: 10.1126/science.352.6285.508

↓ 20,697

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NEWS Corrected 13 May. Corrected 28 April 2016; see full text.

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CURRENT ISSUE



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BY PANKAJ SHARMA, XIAOLONG ZHANG, ET AL.

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BY JIE CHEN, YABO ZHOU, ET AL.

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Bohannon, J. (2016). *Who's downloading pirated papers? Everyone*. *Science*, 352(6285), 508–512.
doi:10.1126/science.352.6285.5

10.1126/science.352.6285.508

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#iCanHazPDF

#iCanHazPDF is a hashtag used on social media websites to request access to academic journal articles which are behind paywalls.

<https://en.wikipedia.org/wiki/ICanHazPDF>

Yes, You Can Haz PDF

Kundu, Suze November 23, 2018

<https://blogs.scientificamerican.com/observations/yes-you-can-haz-pdf/>



More information: <https://knowyourmeme.com/memes/sites/cheezburger>

#iCanHazPDF

Crowdsourced research sharing takes place across social media platforms, including Twitter hashtags such as #icanhazpdf, Reddit Scholar, and Facebook.

Findings indicate that the motivations of this community are utilitarian or ideological in nature, similar to other peer-to-peer file sharing online.

Caffrey, C.; Gardner, G. J., Fast and Furious (at Publishers):
The Motivations behind Crowdsourced Research Sharing. <https://doi.org/10.5860/crl.78.2.131>
College & Research Libraries, [S.l.], v. 78, n. 2, p. 131, apr. **2017**. ISSN 2150-6701.

“Those with access to these resources — students, librarians, scientists — you have been given a privilege. You get to feed at this banquet of knowledge while the rest of the world is locked out. But you need not — indeed, morally, you cannot — keep this privilege for yourselves. You have a duty to share it with the world. And you have: trading passwords with colleagues, filling download requests for friends.”

Swartz A. Guerilla Open Access Manifesto. 2008.
*[https://archive.org/stream/GuerillaOpenAccessManifesto/
Goamjuly2008_djvu.txt](https://archive.org/stream/GuerillaOpenAccessManifesto/Goamjuly2008_djvu.txt)*

23

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[Article] Epstein–Barr virus as a leading cause of multiple sclerosis: mechanisms and implications, by Kjetil Bjornevik et al.

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[Article] Transparency and the Black Box Problem: Why We Do Not Trust AI

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The screenshot displays the 'About Community' page for the subreddit r/Requesting. At the top, the title 'About Community' is followed by three dots. Below this, a description states: 'This subreddit is for requesting and sharing specific articles available in various databases.' The creation date is shown as 'Created Jun 16, 2009' with a calendar icon. The community statistics are presented in three columns: '100k Members', '26 Online' (indicated by a green dot), and 'Top 5% Ranked by Size'. A prominent 'Create Post' button is centered below these statistics. Underneath the button is a section titled 'COMMUNITY OPTIONS' with a downward arrow. At the bottom, there is a 'Filter by flair' section with five buttons: 'Mod Post', 'Requesting', a small black circle, 'Needs Digitizing', and 'Found'.

[https://www.reddit.com/r/Scholar/](https://www.reddit.com/r/Scholar/Screenshot: Feb 21, 2024)
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JoaoG 16 min. ago

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10
points

1
finished

gotiktik Yesterday 01:17

[Full book] The Psychology of Poverty, Wealth, and Economic Inequality Top cambridge

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points

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points

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Silverhand 4 min. ago

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Reply

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Help get

Complete 609987 requests for help

<https://www.wosonhj.com>

Screenshot: Feb 21, 2024

So what did we learn, again?

- Sci-hub became particularly popular because of its ease of use.
- Most scientific articles are available to the public through unauthorized means. And the damage is already done.
- Guerrilla Open Access is a thing and there are lots of enthusiasts and supporters out there.
- It is becoming increasingly easier to store and organize large amounts of data.