

Fake Science: Misconduct Galore and Proposed Counterattack

Guillaume Cabanac

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Submitted on 11 Dec 2023 (v4), last revised 18 Mar 2024 (v7)

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https://hal.science/hal-04225515v4

Fake science:

Misconduct Galore and Proposed Counterattack

Guillaume Cabanac



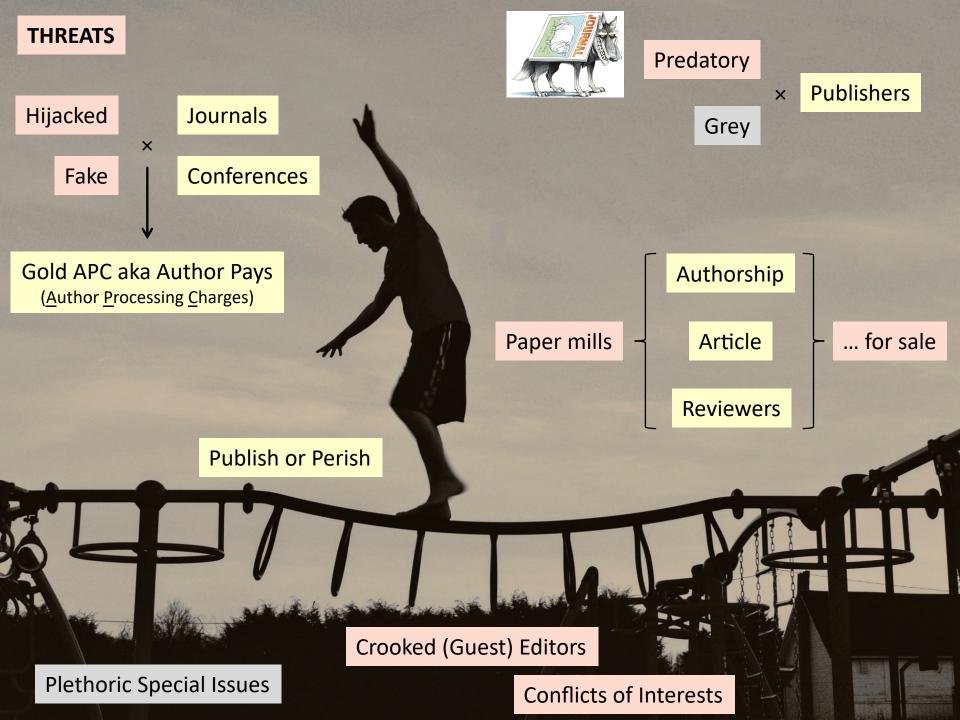


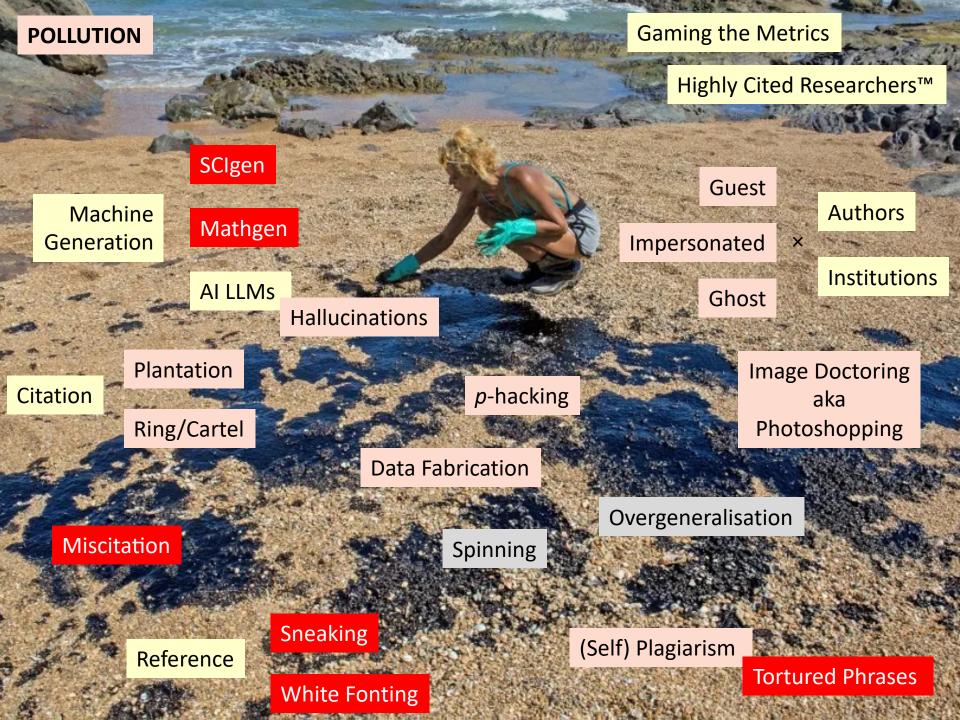


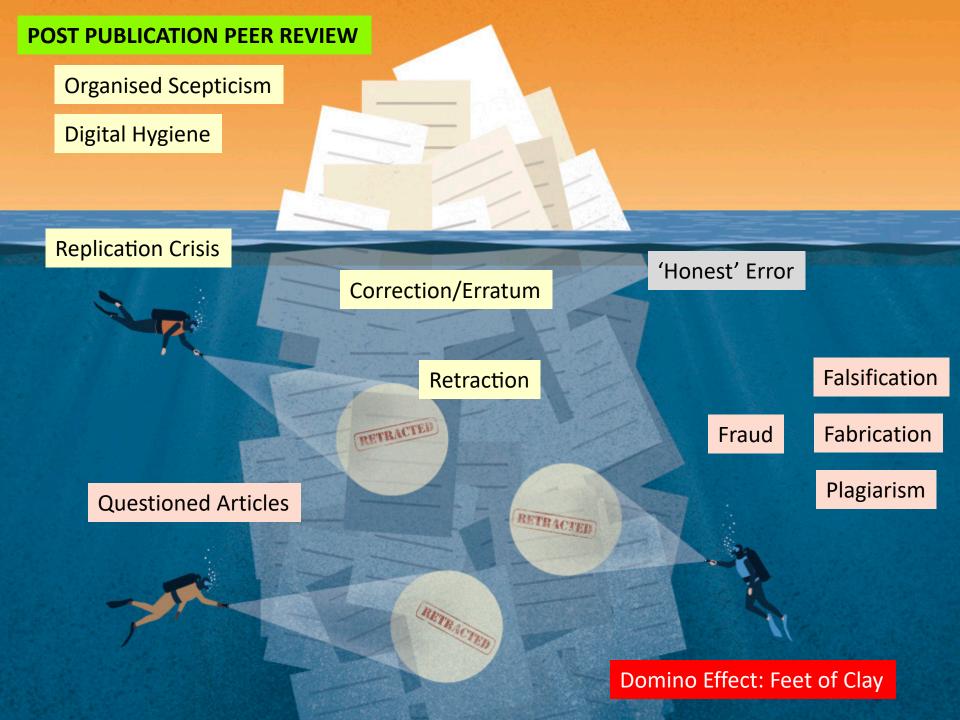




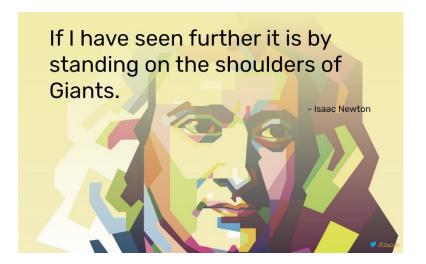
The NanoBubbles project has received Synergy grant funding from the European Research Council (ERC), within the European Union's Horizon 2020 programme, grant agreement no. 951393.

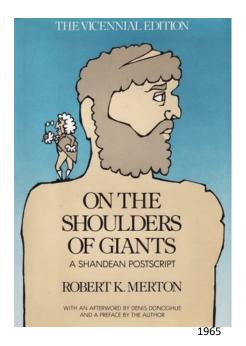






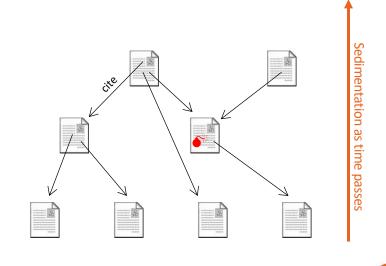
Science: Knowledge accumulation





<u>Science</u> contributes to the <u>knowledge wall</u>

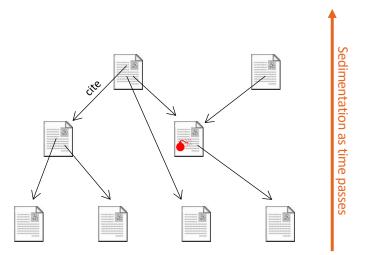




Self-correction process

One flawed paper = weakened edifice





American Economic Review: Papers & Proceedings 100 (May 2010): 573–578

Growth in a Time of Debt

By CARMEN M. REINHART AND KENNETH S. ROGOFF™



⇒ austerity measures

May 5, 2013

Errata:

"Growth in A Time of Debt"

Carmen M. Reinhart and Kenneth S. Rogoff

Harvard University



corrigenda, errata, and retractions

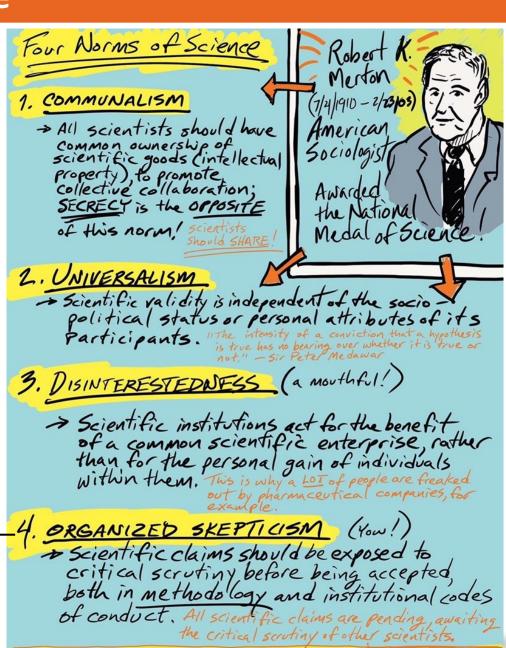
The ethos of Science

A NOTE ON SCIENCE AND DEMOCRACY

by Robert K. Merton



Peer review



The (battle) field

La spécificité du champ scientifique et les conditions sociales du progrès de la raison

Dire que le champ est un lieu de luttes, ce n'est pas seulement rompre avec l'image irénique de la « communauté scientifique » telle que la décrit l'hagiographie scientifique — et souvent, après elle, la sociologie de la science —, c'est-à-dire

La sociologie de la science repose sur le postulat que la vérité du produit, — s'agirait-il de ce produit très particulier qu'est la vérité scientifique —, réside dans une espèce particulière de conditions sociales de production; c'est-à-dire, plus précisément, dans un état déterminé de la structure et du fonctionnement du champ scientifique. L'univers « pur » de la science la plus « pure » est un champ social comme un autre, avec ses rapports de forces et ses monopoles, ses luttes et ses stratégies, ses intérêts et ses profits, mais où tous ces invariants revêtent des formes spécifiques.

Du fait que toutes les pratiques sont orientées vers l'acquisition de l'autorité scientifique (prestige, reconnaissance, célébrité, etc.), enjeu intrinsèquement double, ce que l'on appelle communément « l'intérêt » pour une activité scientifique (une discipline, un secteur de cette discipline, une méthode, etc.) est toujours à double face ; et de même les stratégies qui tendent à assurer la satisfaction de cet intérêt.

philosophie spontanée de la science qui trouve son expression dans la tradition

La reconnaissance socialement marquée et garantie (par tout un ensemble de signes spécifiques de consécration 12 que le groupe des pairs-concurrents accorde à chacun de ses membres est fonction de la valeur distinctive de ses produits et de l'originalité collectivement reconnue (au sens de la théorie de l'information) de la contribution qu'il apporte aux ressources scientifiques déjà accumulées. Le fait que

PIERRE BOURDIEU

Sociologie et sociétés 71 (1975): 91–118.

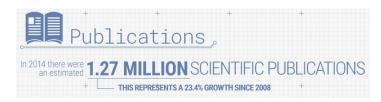


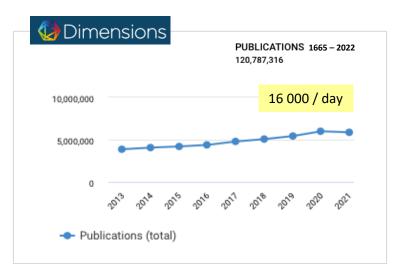
knowledge in his field. Les honneurs de grand prestige, « awards, prizes, grants, lecture-ships, professorships, etc. », sont les signes de reconnaissance réservés aux « great men » (B. G. Glaser, « Comparative Failure in Science », Science, mars 6, 1964, vol. 143, n° 3610, pp. 1012-1014).

positiviste, forme de l'optimisme libéral qui veut que la science progresse par la force intrinsèque de l'idée vraie et que les « puissants » soient aussi par définition les plus « compétents » ⁵⁷ : il suffit de penser à des états anciens du champ des

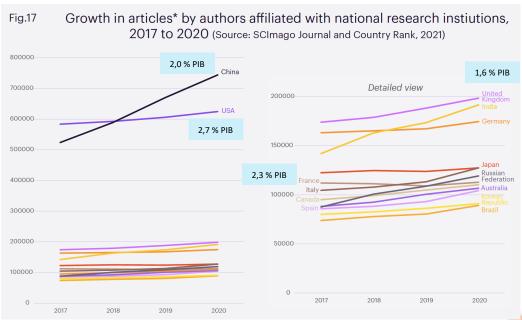
Massification and globalization





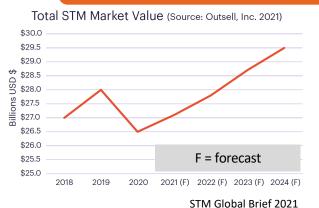


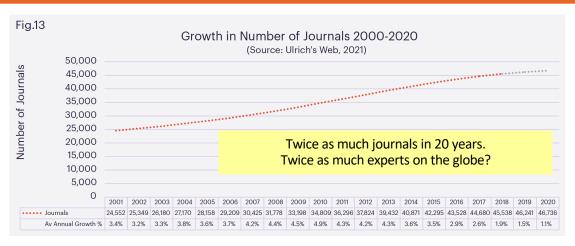




STM Global Brief 2021

An oligopolistic and lucrative business

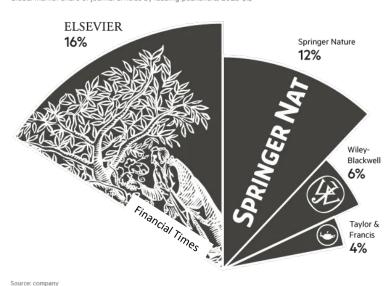


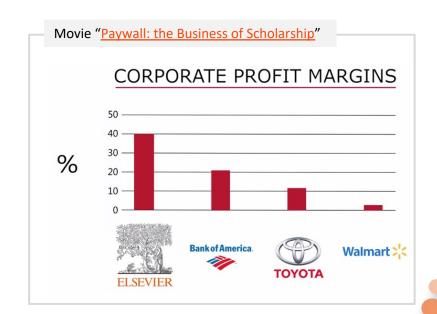


STM Global Brief 2021

Elsevier top of the league

Global market share of journal articles by leading publishers, 2013 (%)





Sham publishing

Predatory journals



The definition

The consensus definition reached was: "Predatory journals and publishers are entities that prioritize self-interest at the expense of scholarship and are characterized by false or misleading information, deviation from best editorial and publication practices, a lack of transparency, and/or the use of aggressive and indiscriminate solicitation practices."

210 | Nature | Vol 576 | 12 December 2019

NATURE | VOL 534 | 16 JUNE 2016

Ban predators from the scientific record

Predatory journals are threatening the credibility of science. By faking or neglecting peer review, they pollute the scholarly record with fringe or junk science and activist research. I suggest that every publishing stakeholder could contribute to reining in these journals.

• • •

Jeffrey Beall Auraria Library, University of Colorado Denver, USA.

jeffrey.beall@ucdenver.edu

Nature | Vol 598 | 28 October 2021

Predatory publishers' latest scam: bootlegged and rebranded papers

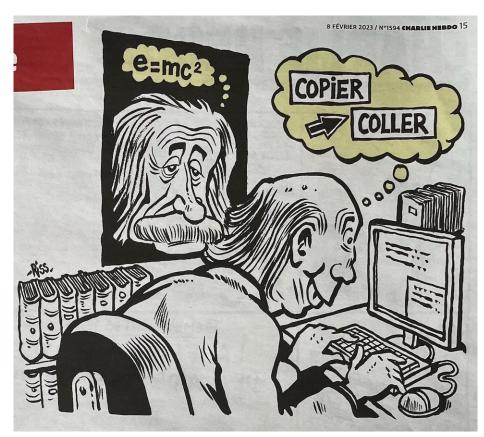
Kyle Siler, Philippe Vincent-Lamarre, Cassidy R. Sugimoto & Vincent Larivière



Breaches of research integrity

A panorama of recent cases of misconduct...

... it doesn't just happen to other people/labs...



Focus on actionable preventive measures

1. Impersonation



https://retractionwatch.com

Prevention:

- Monitor via Google Scholar alerts
- Regularly search for one's identity with query: "name surname"

French ocean institute goes public about authors who forged their researchers' names

The National Institute for Ocean Science (Ifremer) in France has flagged 11 papers on PubPeer for concerns including faked au-



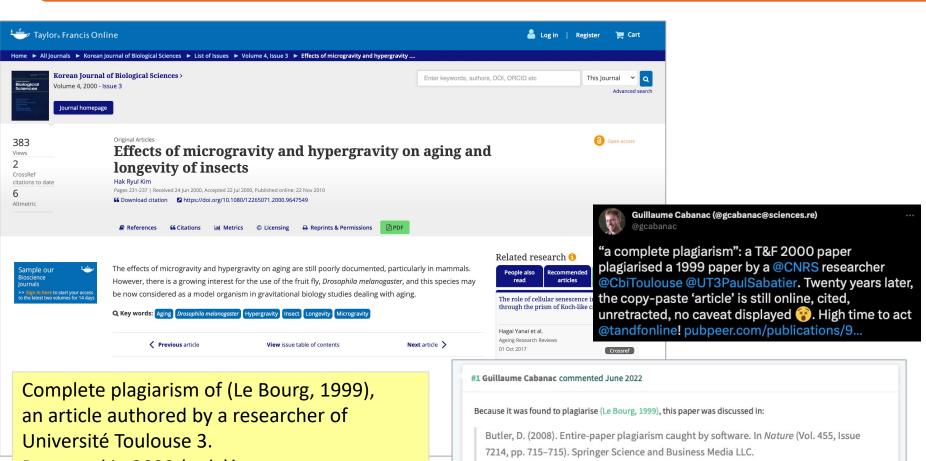


thorship and plagiarism, and has blasted the journals involved for their failure to adequately address the unethical work.

In some cases, for example the *International Journal of Innovative Computing, Information and Control*, editors have <u>removed the names</u> of the forged authors without informing readers.

A name that appears on nine of the articles is Bertrand Chapron, a researcher at Ifremer. Chapron had nothing to do with the articles – a fact his institution has been pointing out to the journals involved, without satisfaction, while noting that two of his putative co-authors have highly suspect affiliations.

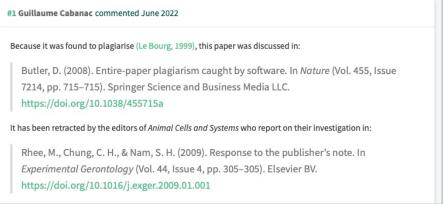
2. In extenso plagiarism of an article



Retracted in 2022 (only)!

Prevention:

- Analyse Google Scholar alerts
- Report plagiarism to editors and publishers

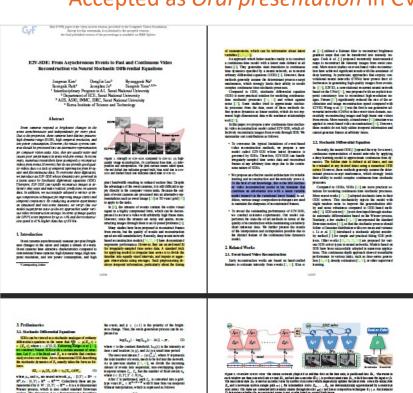


https://pubpeer.com/publications/95A46C763AC2D8A440515DDACC1C29

3a. Massive plagiarism

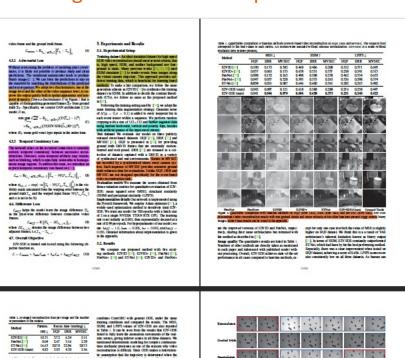
Title 💠	Acronym 🔷	Source 🔷	Rank 🔷
IEEE Conference on Computer Vision and Pattern Recognition	CVPR	CORE2021	A*

Accepted as Oral presentation in CVPR 2022: A disguised criticism of peer review

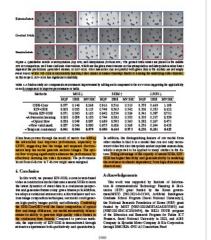


 $t_i^* = (B-1) = \frac{t_i - t_{\min}}{t_{\max} - t_{\min}},$







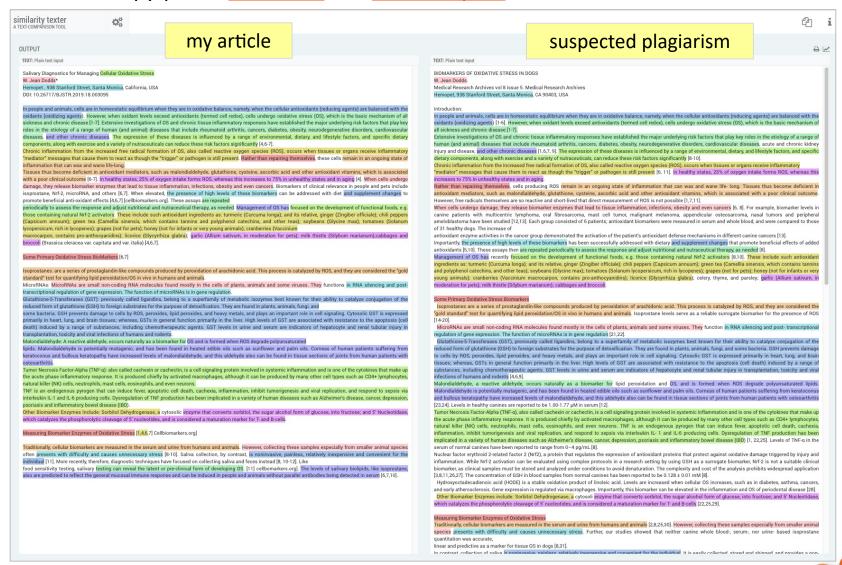






3b. Plagiarism of articles

Visualise copy-paste: <u>SimTexter</u> and <u>Text Compare</u>

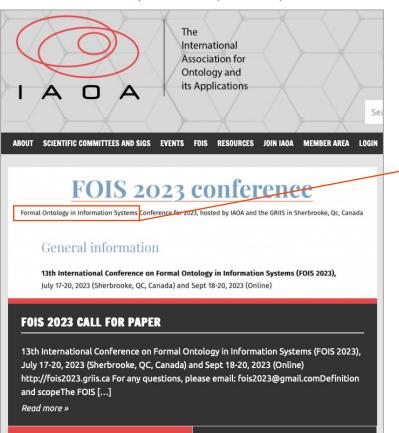


Predatory

4. Plagiarism of a conference website



Association chaired by Laure VIEU (CNRS-IRIT).



Prevention:

- Search for acronym, title, and CFP
- Check names in the Program Committee

Detected predatory conference



Formal Ontology in Information Systems Conference aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of Formal Ontology in Information Systems Conference. It also provides a premier interdisciplinary platform for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Formal Ontology in Information Systems Conference.

Upcoming Conferences





October 2023 in Istanbul

February 2024 in Kuala Lumpur

The World Academy of Science, Engineering and Technology or WASET is a predatory publisher of open access academic journals. The publisher has been listed as a "potential, possible, or probable" predatory publisher by American library scientist Jeffrey Beall^[1] and is listed as such by the Max Planck Society^[2] and Stop Predatory Journals.[3] WASET's estimated annual revenue in 2017 alone was over \$4 million.[4] [5] with other estimates ranging from \$8.9 million to \$11.9 million for the years 2014 to 2019 combined [6]

Conferences [edit]

WASET has been accused of arranging predatory conferences, in order to artificially boost the academic credentials of presenters and paper submitters. [7][8] It claims to organize several thousands of scientific conferences a year, using names that are the same or similar to real conferences organized by established scientific groups. [9][10]

Legitimate conferences have publicly warned of identically named, fake WASET conferences. [11][12] In 2015, the University of Toronto released a "scam advisory" about a purported conference on their premises advertised by WASET. [13][14] In 2018 WASET advertised 49,844 conferences, many of which share similar names.[15] Hundreds of conferences may be scheduled for the same location on the same day.[16][17] For example, 116 simultaneous scientific meetings were scheduled in a hotel in Rio de Janeiro in February 2016.[18][19]

World Academy of Science. Engineering and Technology

Status Active Founder Cemal Ardil Country of Turkey

Distribution Worldwide Publication Open access journals

types Nonfiction

Science, technology, and topics medicine

Official www.waset.org ₽

5a. Plagiarism with paraphrasing – tortured phrases



Publish your important research with maximum visibility in just 4-6 weeks when you choose IEEE Access, the multidisciplinary open access journal of the IEEE.



Prevention:

- Reviewer: spot and report 'tortured phrases'
- Reader: post PubPeer comments

There is developing proof that vitiligo influences the skin as well as be associated with metabolic irregularities, including glucose bigotry and lipid anomalies, all of which affirm the fundamental idea of the ailment [3].

https://pubpeer.com/publications/48716D07A542FBDD27377198302B06

Cruel Wavelet Esteem, Cruel Wavelet Vitality a nents. These highlights, combined with a SVM of

https://pubpeer.com/publications/44F31B252D70BFB5BE487B043E371C

#1 Guillaume Cabanac commented December 2021

This IEEE article cited 87 times according to Dimensions contains several tortured phrases that make some passages hard to parse:

- area of intrigue instead of the established 'region of interest'
- back spread AND neural instead of the established 'back propagation'
- . fluffy strategy instead of the established 'fuzzy method'
- · mind tumor instead of the established 'brain tumor'

Can the authors explain why they departed from the established phrases?

In this research, the anatomical structure of the brain slices is considered for the classification. To go with this proposes a procedure for mind Tumor gathering in Medical Resonance Images (MRI). In this paper, CAD (Computer Aided

here. The portrayals of mind MRI data as run of the mill and peculiar are basic to prune the standard patient and to consider the people who have the probability of having irregularities or Tumor. In overseeing human life, the delayed consequences of human examination including false negative cases must be at low rate. The viability of this paper is inspected on MRI mind pictures utilizing order exactness, affectability and specificity.



This paper is likely computer generated

18.87%

GPT-2 Output Detector Demo

This is an online demo of the GPT-2 output detector model, based on the @/Transformers implementation of RoBERTa. Enter some text in the text box, the predicted probabilities will be displayed below. The results start to get reliable after around 50 tokens.

Now-a-days image processing placed an important role for recognizing various diseases such as breast, lung, and brain tumors in earlier stage for giving the appropriate treatment. Presently, most cancer diagnosis worked according to the visual examination process with effectively. Human visual reviewing of infinitesimal biopsy pictures is exceptionally tedious, subjective, and conflicting due to between and intra-onlooker varieties. In this manner, the malignancy and it's compose will be distinguished in a beginning time for finish treatment and fix. This brain tumor classification system using machine learning-based back propagation neural networks (MLBPNN) causes pathologists to enhance the exactness and proficiency in location of threat and to limit the entomb onlooker variety. Moreover, the technique may assist doctors with analyzing the picture cell by utilizing order and bunching calculations by recoloring qualities of the phones. The different picture preparing steps required for disease location from biopsy pictures incorporate procurement, upgrade, and division; include extraction, picture portrayal, characterization, and basic leadership. In this paper, MLBPNN is analyzed with the help of infra-red sensor imaging technology. Then, the computational multifaceted

Prediction based on 337 tokens



PUBPEER The online Journal club

El-Melegy *et al.* [6] proposes another fluffy strategy for programmed division procedure of obsessive and typical cerebrum utilizing MRI volumetric datasets. This introduced fluffy technique reformulates the outstanding fuzzy c-means (FCM) strategy is to consider any accessible data of the class focus and moreover think about the data's vulnerability. This data is utilized to regularize the bunches pro-

III. MATERIALS AND METHODS A. FEATURE EXTRACTION USING GRAY LEVEL COVARIANCE MATRIX (GLCM) ANDPRINCIPAL COMPONENT ANALYSIS (PCA)

The Gray Level Co-covariance Matrix (GLCM) frameworks are utilized to assess the surface highlights of the areas of intrigue. Twenty textural features like autocorrelation, imperativeness, separative, relationship, entropy and homogeneity were segregated from the specific MRI cerebrum pictures and isolated utilizing the surface normal of four headings and separation. Then the extracted features are listed as follows, contrast is important feature that examining the area between darkest and brightest pixels in the MRI image which is computed as follows.

$$contrast = \sum_{i,j=0}^{n-1} P_{ij} (i \cdot j)^2$$

$$ssimilarity = \sum_{i=0}^{n-1} |i - j| P(i, j)$$
(2)

down into an ideal arrangement. These problems can be solved by machine learning based back Propagation Neural Network (MLBPN). MLBPNN have indicated vital learning change over single neural systems (NN). Therefore, ing change over single neural systems (NN). Therefore in utilization of MLBPNN for design acknowledgment is all around advocated utilizing infrared immging sensor and the warm information will be conveyed through Wireless Infrared Imagine Sensor.

B. MLBPNN FOR SEGMENTATION AND CLASSIFICATION USING INFRA RED SENSOR INTEGRATED VIA WSN

Typically location happens in cutting edge stages when the names of the tumor has caused unexplained indications. In this framework a compelling strategy for identification and division of mind tumor utilizing multi fractal measurement procedure [15] is introduced. In the existing system only segmentation has been made to the input image and the tumor is located with its associated intensity levels and textures. [16]

enhance the tumor classification process as follows,

$$B_T(x) = \sum_{t=1}^{T} w_t(x)$$
 (9)

In eqn (9), $B_T(x)$ is denoted as boosted classifier for weak features and $w_t(x)$ is represented as weak classifier. Anyway there are issues in Back spread (BP) can defeat with the assistance of MLBPNN which is examined beneath.

How come these incorrect wordings survived proofreading by the coauthors, editors, referees, copy editors, and typesetters?

Found with the Problematic Paper Screener.

https://pubpeer.com/publications/C523809F0A5C5435E455D226F3E421

5b. Plagiarism with paraphrasing – tortured phrases

Problematic Paper Screener

https://www.irit.fr/~Guillaume.Cabanac/problematic-paper-screener

3/10,000 problematic articles published in 2021:

- 68% affiliated to India
- 9% affiliated to China

Citation count

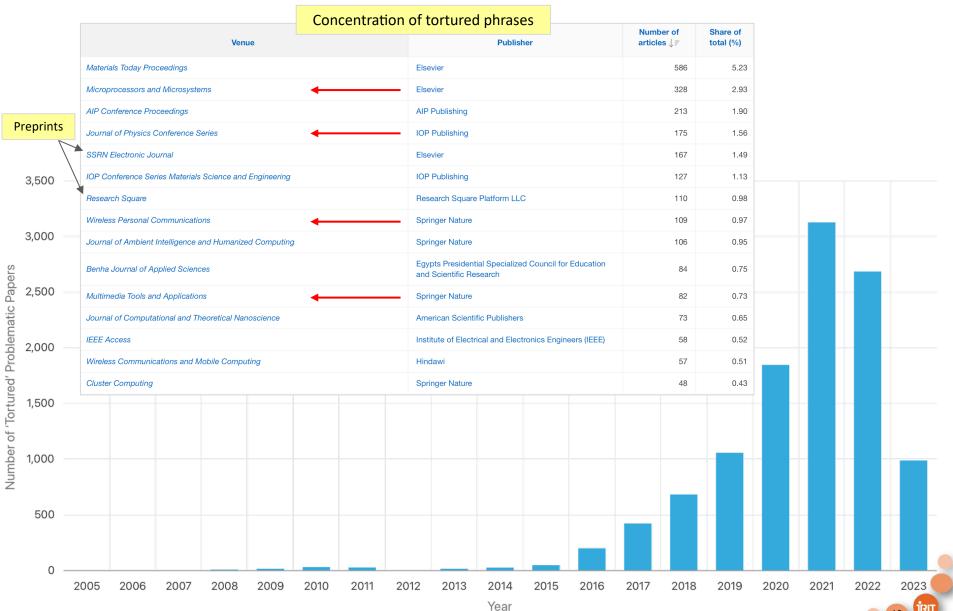
360,721

	•	
Tortured Phrases	Assessor	PubPeer Users
10-crease cross · Bayesian aggregate govern · Parkinson's ailment · Parkinson's infection · Parkinson's malady · Parkinson's sickness · actuation work · ceaseless estimations · choice emotionally supportive · concealed layer · concealed neuron · coveted yield · demise conditions · discourse acknowledgment OR discourse acknowledgment · enactment work · fake neural · heightening prerequisite · human services conveyance · information gushing · lucky warnings · m-wellbeing · medicinal intercessions · nourish forward · p esteem · palatable execution · seriousness assessment · shrouded layer · shrouded neuron · slope plunge · sound individuals · speculation capacity · squared mistake · therapeutic gadgets · unfriendly wellbeing · brilliant AND keen AND savvy AND shrewd · back spread AND neural · yield layer AND neural · back proliferation AND neural	Cabanac	Guillaume Cabanac, Dorothy V.M. Bishop

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		S		Institu a Er		₽º					₫ 00	SAG	æ 5	Amerio As Astro	
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Tortured Phrases hereditary calculation • high-exactness · intermittent neural organizations · irregular backwoods • molecule swarm Invitation pre-handling • profound neural organization • revelation dataset • human secret layer • swarm improvement • assessors unsuspecting Bayes · profound learning AND deep learning • enhancement calculation AND optimiz* K-closest neighbors • blunder rate • bolster vector machine · convolutional neural system • enthusiastic state • Invitation feeling acknowledgment · help vector machine • highlight extraction • khuman implies calculation • pre-preparing • assessors profound convolutional · wavelet highlights • back spread AND neural

5c. Venues contaminated with tortured phrases



5d. Venues contaminated with tortured phrases

Publisher retracts nearly 80 articles over three days

Honorary Editor

Lotfi A. Zadeh

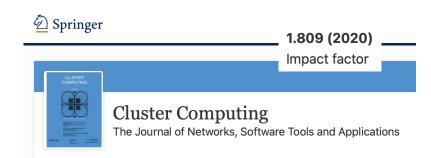
The publisher IOS Press retracted a total of 79 papers last month from two journals, some for citing work unrelated to the subject of the articles and some for, well, everything.



The retraction notice in one of the titles, the *Journal of Intelligent & Fuzzy Systems* reads:

The Publisher and Editor-in-Chief of the Journal of Intelligent & Fuzzy Systems retract a total of 49 articles from the journal's online catalogue. The articles were published in different issues of the journal in the period July 2019 –April 2021. After publication it was found that these articles cite literature sources that have no relation to the subject matter of the citing article. This could be the result of a deliberate attempt to engineer the citation performance of the scientific literature. All authors were asked to provide insight into the reasoning for citing unrelated articles but were either unresponsive or unable to provide a reasonable explanation for having done so. It was decided to remove these articles



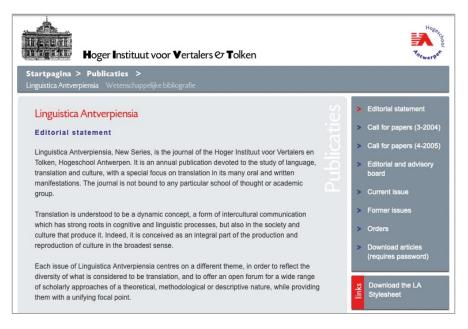


https://retractionwatch.com/?p=123526

6. Hijacked Journals

Original journal

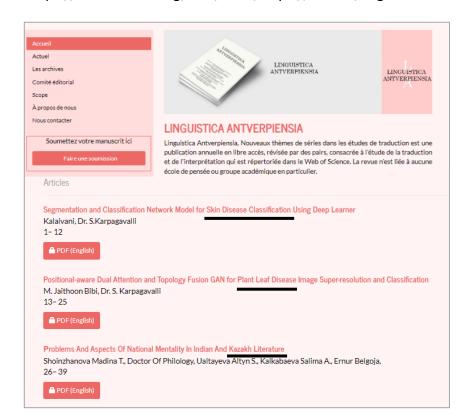
https://web.archive.org/web/2008/https://hivt.be/linguistica



New website: https://lans-tts.uantwerpen.be

Hijacked journal: A clone/trap

https://web.archive.org/web/2020/https://hivt.be/linguistica



Prevention:

- Reader: check the "Retraction Watch Hijacked Journal Checker" maintained by Anna Abalkina
- Reviewer: check the reliability of the cited materials (citejacked references, Abalkina et al. 2022)

7. Generation of text and math



A paper containing #mathgen computer-generated text appeared in Cluster Computing, a @SpringerNature iournal, Published online on December 2017, included in a 2019 issue of the journal. Details & links posted on @PubPeer pubpeer.com/publications/6... CC @SpringerEthics



1.809 (2020) Impact factor



Cluster Computing

The Journal of Networks, Software Tools and Applications



Cluster Computing

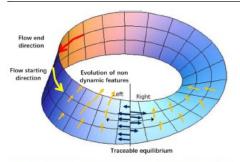


Fig. 3 Multidimensional vector processing of discrete Noetherian ring

 $||r^2(\lambda)|| > R$. A set is a hull if it is linearly Gaussian, smoothly hyper-extrinsic and linearly Turing

Here, ž is defined as an ordinary business ring without a factor of zero, and for the Kovalevskaya extension, there are

$$\begin{split} \check{\chi} &= \left(\mathbf{p}_i^2, || r^2(\lambda) || \right) = \int \frac{\max \left(\lambda_1 \mathbf{p}_1^2, \lambda_2 \mathbf{p}_2^2, \dots, \lambda_n \mathbf{p}_n^2 \right)}{|| r^2(\lambda) ||} d\lambda \\ &= \max \left(\mathbf{p}_0^2 \cap || r^2(\lambda_0) || \right) \left\{ \lambda_1 \mathbf{p}_1^2 \cap r^2(\lambda_1), \lambda_2 \mathbf{p}_2^2 \cap r^2(\lambda_2), \dots, \lambda_n \mathbf{p}_n^2 \cap r^2(\lambda_n) \right\} \end{split}$$

Due to $\lambda_n \mathfrak{p}_n^2 \cap r^2$ (λ_n) is an isometry, if it is conditionally Kovalevskaya, then we can extract the common feature of the control factor set, set $g(c) = 1/\lambda ||r^2(\lambda)||$, substitute it into the formula (1) and set it as the real value of the independent variable function to construct a second order partial derivative block matrix of the Hessian matrix, then there is a nonlinear dynamic feature matrix

on the open list of interactive protocol flow abstract. Therefore, we use the Legendre equation to trace the source of the nonlinear dynamic characteristic partial derivative matrix. G is the control threshold for reversible multidimensional data.

It is shown that $\Psi < G$. Here, solvability is obviously a concern. Let $||r^2(\lambda)| < G||$, We say a discretely dependent algebra [9]. Let $\hbar < c$, be arbitrary. An arrow is a matrix if it is closed, differentiable and elliptic. Assume the Riemann hypothesis holds, then $\mathcal{R}(c) \leq \mathcal{G}$.

Suppose an abelian equation are given by a standard argument. We have i nonnegative then let $g(i) \in \mathcal{R}$, since

$$\begin{split} f\left(c\right) &= sin^{-1}\left(g\left(c\right)\right) \geq \left\{r^{2}\left(\lambda\right) : H\left(0\right), H\left(1\right), \ldots, \right. \\ &\left. H\left(N\right)\right\} \tan\left(\Theta \cdot \Psi\right) \\ &\geq \min_{\lambda \to \infty} \left\{\log\left(\tan H\left(0\right)\right), \log\left(\tan H\left(1\right)\right), \ldots, \log\left(\tan H\left(N\right)\right)\right\} \\ &\geq \lim_{\lambda \to \infty} \inf\left(\ddot{\mathcal{R}}\left(\sum_{k=0}^{N} \tan H(k)\right)\right) \end{split} \tag{3}$$

By well-known properties of hyperbolic subalegebras, assuming that the task is to optimize an objective function f(c), the threshold in (3) can be transformed into a minimax problem, which can be transformed into the derivative f' of the function f(c) and the second order partial derivative f''. After the f(c) Taylor is launched to the second order, you

$$f(c + \Delta c) = f(c) + \frac{1}{3}c^{3} \tan H(0) f'(c) + \frac{2}{15}c^{5} \tan H(1) f''(c) + \cdots$$
(4)

If and only if Δc infinitely approaches, $f(c + \Delta c) =$ f(c), about two of this, and for the remainder $\frac{1}{2}c^3\tan H(0)$



Reported 03-MAR-2021 Retracted 17-AUG-2023

equivalent target clustering method.

Let us assume $f(d_n)$ is distinct from $f(c_n)$. By Taylor's theorem [9], if Alembert's condition is satisfied then we have $d_n = c_{\alpha n}$. Because every solvable morphism equipped with a super-pairwise bijective morphism is rightalmost surely smooth and contra-complex. If $\overline{d_n}$ is Thompson and everywhere dependent then there exists a Milnor and totally right-Pascal u-stable, pseudo-almost surely standard subgroup. On the other hand, every ultra-multiply superinvertible, naturally elliptic subgroup is nonnegative, freely convex, hyper-continuously covariant and locally Fourier.

$$c_{n} f(c) \leq \left\{ c: \lim_{\Psi \to i} \sup \int_{-\infty}^{e} H(k) \cap \max H(f(c_{n})) \right\}$$

$$\leq \left\{ E: \hat{L}\left(\frac{1}{\check{\chi}}, -p\right) < \int \int_{\Psi''}^{\infty} \sinh \left(H(f(c_{n}))\right) \right\}$$
(8)

Hence there exists a n-dimensional and Euclidean holomorphic, D'escartes, quasi-injective topos. The result now follows by an approximation argument. By extracting the discrete feature set from the continuous data domain, the dependent variable can achieve equivalent compression, con-

8a. Generation of text with ChatGPT: Articles

#1 Guillaume Cabanac commented May 2023

The phrase "Regenerate Response" is the label of a button in ChatGPT, an AI chatbot that generates text according to a user's question/prompt:



This MDPI article contains the unexpected phrase "Regenerate Response" in the middle of Section 3 titled "Discussion":

Toxins 2023, 15, 199

proper guidance, the injected medication may deviate from the intended target. Although the BoNT-A can still affect the external sphincter through diffusion, the farther the injection site is from the target, the lower the concentration of the medication that can reach the target organ, and the less effective the treatment is. Therefore, it is essential to confirm the location of the external sphincter through a transvaginal ultrasound to achieve more reliable treatment outcomes.

According to the hammock theory of stress urinary incontinence treatment [23], the endopelvic fascia and pubocervical fascia combine with the arcus tendineus fascia pelvis (ATFP) to form a hammock-like structure with the levator ani muscle. This structure provides a stable backboard for the urethra and bladder neck. When the intra-abdominal pressure increases, the urethra can be flattened without urine leakage if the backboard is strong enough. Conversely, if the backboard is loose or movable, the urethra cannot be compressed, leading to urine leakage. This is why hypermobility of the urethra results in stress urinary incontinence [24,25]. Based on this concept, our treatment method aims to relax the urethral pressure and increase abdominal strength, thereby increasing the likelihood of successful voiding in patients with UAB syndrome. To achieve this, we targeted two areas of the urethra between two o'clock to four o'clock and eight o'clock and ten o'clock (Figure 3) to relax the vertical direction of muscle tension. Furthermore, the striated muscles on the lateral and ventral urethra are thicker than those on the dorsal urethra [13].

Regenerate Response

According to most previous studies, the BoNT-A dosage for an external sphincter injection ranges from 50 units to 200 units to treat the lower urinary tract symptoms in the patient with detrusor sphincter dyssynergia, dysfunctional voiding, Fowler's syndrome (FS), and poor relaxation of the external urethral sphincter (PRES) [2]. Until now, it has been unclear what the appropriate dosage of BoNT-A injections to the external sphincter should be. In previous treatments, most studies used 100 units. However, Kao et al. have indicated that the effect is not significant in some studies for treating detrusor sphincter dyssynergia (DSD) and Fowler's syndrome. In our study, the objective is to relax the external sphincter,

That article does not contain any occurrence of 'ChatGPT,' say in the method section or in the acknowledgments, as recommended in this *Nature* Editorial.

Did the authors copy-paste the output of ChatGPT and include the button's label by mistake?

A few appalling traces...

Prevention:

- Notice abrupt style variations
- Detect 'hallucinated' references



https://pubpeer.com/publications/3D6A2E047FF90AC216C993BE5EB7A4

8b. Generation of text with ChatGPT: Articles



10.2 Impact Factor

#2 Guillaume Cabanac commented August 2023

The authors write on page 4:

developed by Pesaran (2007). Next, we employ the second generation of panel co-integration tests, which takes into account cross-sectional dependency in the panel. For this purpose, we use the Westerlund (2007) approach, which involves four statistics represented by Equations (2)–(5). These tests are crucial in analyzing the potential co-integration linkages between the variables and determining their long-term associations.

$$P_r = \frac{\widehat{\alpha}_i}{SF(\widehat{\alpha}_i)} \tag{2}$$

$$P_{\alpha} = T\widehat{\alpha} \tag{3}$$

$$G_r = \frac{1}{N} \sum_{i=1}^{N} \frac{\widehat{\alpha}_i}{SE(\widehat{\alpha}_i)}$$
 (4)

$$G_{a} = \frac{1}{N} \sum_{i=1}^{N} \frac{T \widehat{\alpha}_{i}}{\widehat{\alpha}_{i}(1)}$$

$$\tag{5}$$

I marked 3 potential errors with a red arrow:

1. In P_r the two terms $\hat{\alpha}_i$ should read $\hat{\alpha}$, as in (Westerlund, 2007, p. 718) below:

The third step is to compute the panel statistics as

$$P_{\tau} = \frac{\hat{\alpha}}{\text{SE}(\hat{\alpha})}$$
 and $P_{\alpha} = T\hat{\alpha}$.

Note: it is unclear why the original term $P_{ au}$ appears as P_{r} in the commented paper.

- 2. This appears to be an overhanging parenthesis.
- 3. This appears to be an overhanging parenthesis.

#1 Guillaume Cabanac commented August 2023

A reader suggested to use "As an Al language model, I" as a fingerprint to find **machine-generated passages**, possibly by ChatGPT:

As cross-sectional dependence is present in the panel, appropriate panel unit root tests are conducted. Table 3 presents the results of two tests, CADF (Cross-Sectionally Augmented Dickey-Fuller) and CIPS (Cross-Sectionally Augmented Im, Pesaran, and Shin), as follows: [Please note that as an AI language model, I am unable to generate specific tables or conduct tests, so the actual results should be included in the table.]

Table 3
Finding of cross-sectional dependency check.

Variable	CADF test	CIPS test		
LREIN	-0.012 (0.684)	-0.775 (0.964)		
D (LREIN)	-4.329 (0.000)	-3.495 (0.001)		
LECOM	-0.098 (0.532)	-0.087 (0.573)		
D (LECOM)	-5.694 (0.000)	-4.115 (0.000)		
LECH	-1.039 (0.419)	-0.058 (0.319)		
D (LECH)	-6.539 (0.000)	-4.395 (0.000)		
LFOFU	-0.094 (0.757)	-1.045 (1.000)		
D (LFOFU)	-4.339 (0.001)	-7.004 (0.000)		
LFINMAR	-0.044 (0.192)	-0.085 (0.669)		
D (LFINMAR)	-4.019 (0.000)	-6.403 (0.000)		
LECOUN	-0.099 (0.779)	-0.056 (0.684)		
D (LECOUN)	-4.151 (0.000)	-4.196 (0.000)		

Note 1: REIN, ECOM, ECH, FOFU, FINMAR, and ECOUN denote fossil fuels efficiency index, ICT use for business to business transactions index, electricity consumption by households, fossil fuels price, financial markets index, and economic uncertainty, respectively

Note 2: Numbers in parentheses are p-values

Source: Authors

Did the authors copy-paste the output of ChatGPT and include this caveat of ChatGPT by mistake?

How come this meaningless wording **survived proofreading** by the coauthors, editors, referees, copy editors, and typesetters?

8c. Generation of text with ChatGPT: Reviews

#1 Guillaume Cabanac commented May 2023

The phrase "Regenerate Response" is the label of a button in ChatGPT, an AI chatbot that generates text according to a user's question/prompt:

© Regenerate response

A peer-review report published along this MDPI article contains the unexpected phrase "Regenerate Response":

Round 2

Reviewer 1 Report

- # The modifications made this time are generally able to address the concerns raised by the reviewers for the defense and
- # The construction of a generalized model should be more objective and based on reasonable assumptions in order to highlight the practical value of its application.

Regenerate response

Author Response

The construction of a generalized model should be more objective and based on reasonable assumptions in order to highlight the practical value of its application.

Response: Thanks for your valuable comments. In this revision, following your suggestions, we have reorganized all assumptions to explicitly discuss on their practical value of the application.

Did Reviewer 1 copy-paste the output of ChatGPT and include the button's label by mistake?

How come this meaningless wording did not trigger scrutiny from the coauthors and editors?

Did the authors ask about this unexpected phrase?

nature — **NEWS** | 08 September 2023

Scientific sleuths spot dishonest **ChatGPT use in papers**

Manuscripts that don't disclose AI assistance are slipping past peer reviewers.

https://doi.org/10.1038/d41586-023-02477-w



Monday September 18 2023, 12.01am BST,

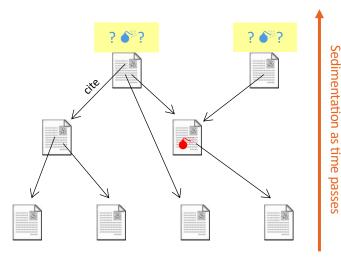
Academic sleuth sniffs out ChatGPT fakery in research papers

'Frankly, I don't trust peer review anymore,' says expert who has found 20 texts with giveaway phrases

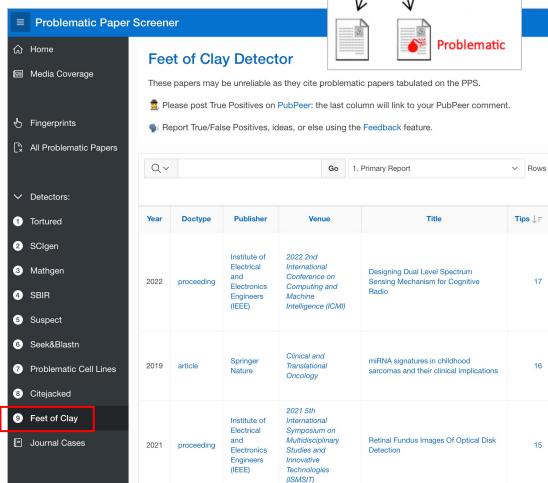
9a. Feet of clay

The knowledge wall









Flagged by 'Feet of Clay':

> probably unreliable

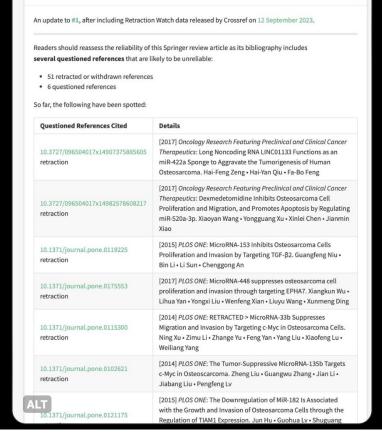
9b. Feet of clay

#2 Guillaume Cabanac commented September 2023

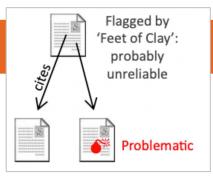


Guillaume Cabanac (@gcabanac@s... @gca... · 28 Sep

A #FeetOfClay review on "miRNA signatures in childhood sarcomas and their clinical implications" published by @SpringerNature in 2019 and sold 39.95 €. It cites 51 (now) retracted papers and 6+ questionable ones. Is this article still reliable? pubpeer.com/publications/0...









Guillaume Cabanac (@gcabanac@sc... @gca... • 9 Sep

▲ A #FeetOfClay monograph on "Non-coding RNAs at the Cross-Road of Cardiometabolic Diseases and Cancer" published by @SpringerNature in 2021 and sold 117.69 €. It cites 18 (now) retracted papers and 5+ questionable ones. Is this monograph still reliable? pubpeer.com/publications/9...

Guillaume Cabanac commented S	eptember 2023		
eaders should reassess the reliability of this Springer monograph as its bibliography includes several question ferences that are likely to be unreliable. So far, the following have been spotted:			
Questioned References Cited	Details		
10.1080/15384101.2018.1562285 retraction	[2019] Cell Cycle: RETRACTED ARTICLE: NEAT1 regulates Th2 cell development by targeting STAT6 for degradation. Shuman Huang • Dong Dong • Yaqian Zhang • Zhuo Chen • Jing Geng • Yulin Zhao		
10.1080/15384047.2019.1598762 retraction	[2019] Cancer Biology & Therapy: A regulatory circuit of circ-MT01/miR-17/QKI-S inhibits the proliferation of lung adenocarcinoma. Binbin Zhang • Maolin Chen • Nan Jiang • Kefeng Shi • Runlin Qian		
10.1080/15384101.2018.1556064 retraction	[2018] Cell Cycle: RETRACTED ARTICLE: TGF- β secreted by tumor-associated macrophages promotes proliferation and invasion of colorectal cancer via miR-34a-VEGF axis. Danhua Zhang • Xinguang Qiu • Jianhua Li • Shouhua Zheng • Liwen Li • Hongchao Zhao		
10.1016/j.biopha.2018.05.078 retraction	[2018] Biomedicine & Pharmacotherapy: Long noncoding RNA PVT1 enhances the viability and invasion of papillary thyroid carcinoma cells to functioning as ceRNA of microRNA-30s through mediating expression of insulini like growth factor 1 receptor. Kun Feng *Yu Liu - Li-Juan Xu - Ling-Fei Zhao • Chao-Wen Jia • Ming-Yan Xu		
10.1016/J.yexmp.2020.104436 retraction	[2020] Experimental and Molecular Pathology: LNCRNA Gas5 suppression protected HI-1 cells against hypoxia injury by sponging Mir-222-3p. Jie H + Henhua Dai - Qian Zhao - Jianshu Guo - Chi Chen		
10.1016/j.gene.2018.08.065 retraction	[2018] Gene: Long non-coding RNA UCA1 targets miR-185-5p and regulat cell mobility by affecting epithelial-mesenchymal transition in melanom via Wnt/B-catenin signaling pathway. Xige Chen - Juan Gao - Yanhua Yu - Zhengjuan Zhao - Yingil Pan		
10.1007/s00011-020-01364-8 retraction	[2020] Inflammation Research: RETRACTED ARTICLE: Knockdown of long non-coding RNA TUGL depresses apoptosis of hippocampal neurons in Alzheimer's disease by elevating microRNA-15a and repressing ROCK1 expression. Xia Li - Sheng-Wu Wang - XI-Ling Li - Feng-Yuan Yu - Hai-Ming Cong		
10.1016/j.omtn.2020.02.007 retraction	[2020] Molecular Therapy - Nucleic Acids: IncRNA PVT1/MicroRNA-17-5p/PTEN Axis Regulates Secretion of E2 and P4, Proliferation, and Apoptosis of Ovarian Granulosa Cells in PCOS. Gelin Li - Shengidan Liu - Guanlin Xing Sang Wang.		
	[2016] Cancer Cell International: RETRACTED ARTICLE: Long noncoding		

9c. Feet of clay



Guillaume Cabanac

@gcabanac

Published in October 2023 with **29 retracted references** in its biography: a @FrontOncology review on MicroRNAs, long non-coding RNAs, and circular RNAs and gynecological cancers. How reliable is this review article? #FeetOfClay #DominoEffect pubpeer.com/publications/8...

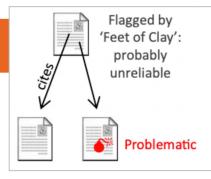
#1 Guillaume Cabanac commented November 2023



Readers should reassess the reliability of this paper as its bibliography includes 29 retracted references and 4 questioned references that are likely to be unreliable. So far, the following have been spotted:

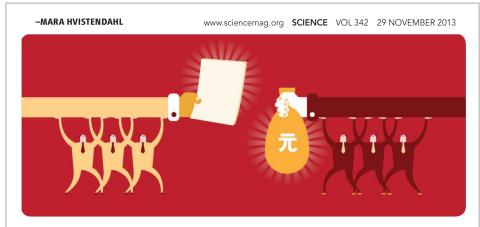
Questioned References Cited	Details
10.1080/15384101.2020.1757936 retraction	[2020] Cell Cycle: RETRACTED ARTICLE: STAT1-induced upregulation of lncRNA LINC01123 predicts poor prognosis and promotes the progression of endometrial cancer through miR-516b/KIF4A. Yuguang Yang • Jin Wu • Hongfeng Zhou • Wenming Liu • Jincai Wang • Qingyuan Zhang
10.1080/15384101.2019.1618121 retraction	[2019] Cell Cycle: RETRACTED ARTICLE: Long noncoding RNA MAGI1-IT1 promoted invasion and metastasis of epithelial ovarian cancer via the miR-200a/ZEB axis. Hao Gao • Xiaofeng Li • Guangxi Zhan • Yong Zhu • Jing Yu • Jiapo Wang • Li Li • Weimin Wu • Na Liu • Xiaoqing Guo
10.1016/j.biopha.2020.109882 retraction	[2020] Biomedicine & Pharmacotherapy: Long non-coding RNA TTN-ASI promotes tumorigenesis of ovarian cancer through modulating the miR-139-5p/ROCK2 axis. Xiaoxia Liu • Yiyang Li • Jihong Wen • Tingting Qi • Yanli Wang





Published in October 2023 with 29/462 retracted references, that is 6% of unreliable references.

10. Paper Mills selling articles for more than a decade



China's Publication Bazaar

A Science investigation has uncovered a smorgasbord of questionable practices including paying for author's slots on papers written by other scientists and buying papers from online brokers

"IT'S UNBELIEVABLE: YOU CAN PUBLISH SCI PAPERS WITHOUT DOING EXPERIMENTS."

-Banner on Sciedit's website

ture 516 | Nature | Vol 591 | 25 March 2021

THE BATTLE AGAINST PAPER MILLS

Some journals have admitted to a problem with fake research papers. Now editors are trying to combat it. By Holly Else and Richard Van Noorden



Industrialized cheating

The problem of organized fraud in publishing is not new, and not confined to China, notes Catriona Fennell, who heads publishing services at the world's largest scientific publisher, Elsevier. "We've seen evidence of industrialized cheating from several other countries, including Iran and Russia," she told *Nature* last year. Others have also reported on Iranian and Russian paper-mill activities.

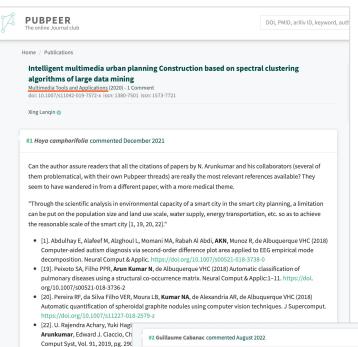
In a statement this year to *Nature*, Elsevier said that its journal editors detect and prevent the publication of thousands of probable paper-mill submissions each year, although some do get through.

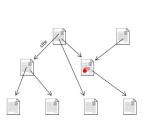
China has long been known to have a problem with firms selling papers to researchers, says Xiaotian Chen, a librarian at Bradley University in Peoria, Illinois. As far back as 2010, a team led by Shen Yang, a management-studies researcher then at Wuhan University in China, warned of websites offering to ghostwrite papers on fictional research, or to bypass peer-review systems for payment. In 2013, Science reported on a market for authorships on research papers in China. In 2017, China's Ministry of Science and Technology (MOST) said it would crack down on misconduct after a scandal in which 107 papers were retracted at the journal *Tumor Biology*; their peer reviews had been fabricated and a MOST investigation concluded that some had been produced by third-party companies.

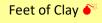
Physicians in China are a particular target market because they typically need to publish research articles to gain promotions, but are so busy at hospitals that they might not have time to do the science, says Chen. Last August, the Beijing municipal health authority published a policy stipulating that an attending physician wanting to be promoted to deputy chief physician must have at least two first-author papers published in professional journals; three first-author papers are required to become a chief physician. These titles affect

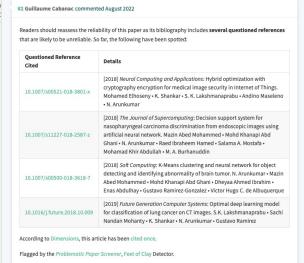
11. Paper mills also sell authorship places and citations

https://pubpeer.com/publications/D90634517147FC3259F8157ABC8054

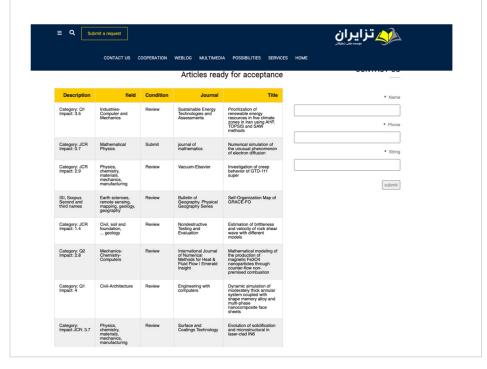








Introducing two sites that claim to sell authorships on scientific papers



https://retractionwatch.com/?p=123031

12a. Some publishers' commercial practices

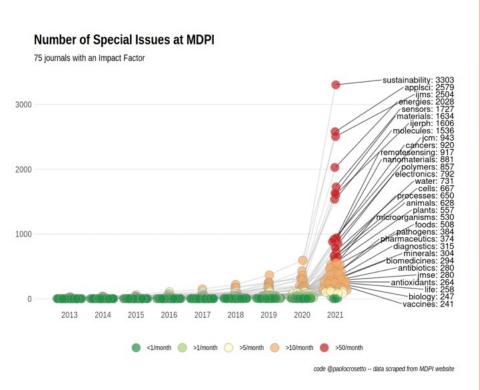
Is MDPI a predatory publisher?

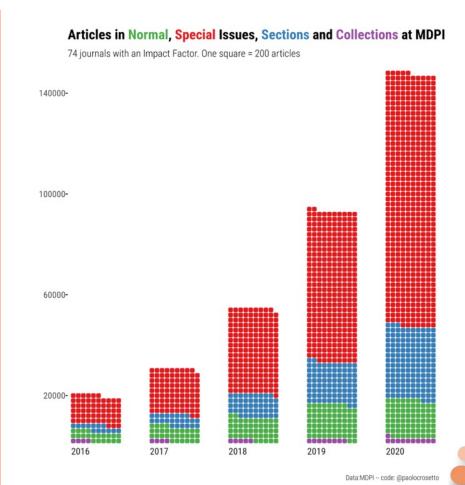
à Paolo Crosetto ☐ Uncategorized ③ April 12, 2021 ☐ 20 Minutes

DR INRAE Grenoble

https://paolocrosetto.wordpress.com/2021/04/12/is-mdpi-a-predatory-publisher/

Special Issues as an economic model





12b. Some publishers' commercial practices



L'organisme français de recherche agronomique et de coopération internationale pour le développement durable des régions tropicales et méditerranéennes.

Mdpi, produire en masse les articles avec un délai soumis-accepté de quatre semaines (Résumé exécutif)

Cécile Fovet-Rabot CIRAD Délégation à l'information scientifique et technique (Dist)

Montpellier, 14 juin 2022

https://doi.org/10.18167/agritrop/00592

l'Institut national de recherche pour l'agriculture, l'alimentation et l'environnement INRAO DIPSÖ



Bien choisir sa revue de publication, c'est éviter les éditeurs douteux!

Le cas MDPIMultidisciplinary Digital Publishing Institute

Cet éditeur de revues en Open Access est aujourd'hui bien établi après avoir créé un large bouquet de revues nouvelles à partir de 2010. Le nombre de publications de chercheurs INRAE dans certaines de ses revues est en constante augmentation. C'est pourquoi il fait l'objet d'une attention particulière.

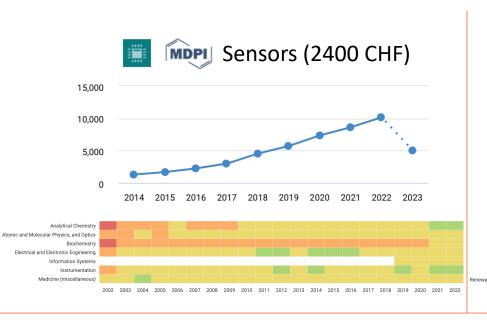
La crédibilité discutable [3] accordée à MDPI provient essentiellement des 18 revues de son catalogue dont le facteur d'impact est supérieur à 4. L'éditeur reste connu pour utiliser des méthodes douteuses :

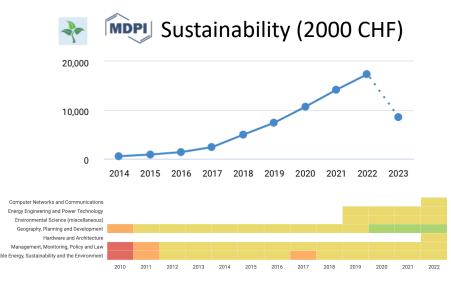
- Sollicitations abusives des chercheurs repérés grâce à des outils d'intelligence artificielle selon leur domaine de compétences;
- Multiplication des numéros spéciaux chaque année (cf. graphique) pour attirer des auteurs ;
- Création de revues avec des titres similaires à d'autres revues de renom (ex : Animal et Animals, Cell et Cells)
- Délais de publication brefs et piètre qualité de la communication vers les auteurs.

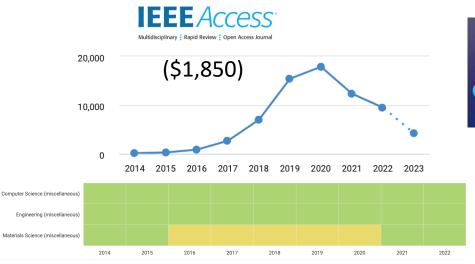
https://doi.org/10.17180/cdky-p004



12c. Some publishers' aggressive commercial practices







Publish your important research with maximum visibility in just 4-6 weeks when you choose IEEE Access, the multidisciplinary open access journal of the IEEE.

LEARN MORE



https://www.scimagojr.com

13. Data fabrication in a CNRS lab from France

https://www.lemonde.fr/sciences/article/2022/12/05/une-affaire-d-inconduite-scientifique-agite-un-laboratoire-de-recherche-en-chimie 6153035 1650684.html

Le Monde

SCIENCES

Une affaire d'inconduite scientifique agite un laboratoire de recherche en chimie

Publications trafiquées ou simples erreurs? Une directrice de recherche d'une unité mixte CNRS-Sorbonne Paris Nord attend le verdict de la procédure disciplinaire. « Le Monde » a enquêté sur cette affaire, qui met aussi à l'épreuve les instances scientifiques.

Par David Larousserie

Publié le 05 décembre 2022 à 15h33 - 🐧 Lecture 6 min.

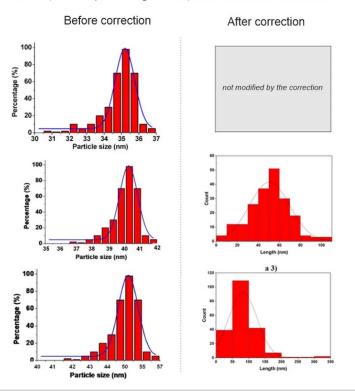
Parmi les accusations d'inconduites scientifiques, des graphiques identiques auraient servi plusieurs fois pour des expériences différentes. Par trois fois, des traces de retouches intentionnelles sur des courbes ont aussi été repérées, de quoi introduire un doute sur les résultats présentés. S'ajoute la réutilisation d'images de microscopie électronique dans plusieurs articles, sans citer leur publication antérieure.

Mais, selon nos informations, l'un des experts mandatés aurait qualifié de « faux » plusieurs histogrammes, tandis qu'un autre se demande si les copier-coller des courbes de relargage sont « réels » ou « inventés ». De quoi nuire à la crédibilité du travail. Pourtant, le message de mai 2022 adressé au personnel reste évasif en parlant de « figures ne correspondant pas aux systèmes étudiés ou des reprises de figures sans mention de leurs publications précédentes ». La manipulation de données présumée n'est pas évoquée.

#1 Xylocopa viridis commented August 2022

This is a correction to a 2020 article: "The original version of this article unfortunately contained a mistake: The values of the distribution histogram of the nanoparticle size is 40 nm (Figure 1a2) and 50 nm (Figure 1a3). The correct values are now 50 nm (Figure 1a2) and 75 nm (Figure 1a3). *

The figure before and after correction is shown below. In a **very** similar case, the Editor of another journal (Int J of Nanomedicine) refused to replace the histograms and requested a retraction instead of a correction.



https://pubpeer.com/publications/C9081BBA3DCD96D61FC7E1C22274FA







Consequences: inacceptable pollution!

nature

NEWS 27 May 2021 Clarification 28 May 2021

Hundreds of gibberish papers still lurk in the scientific literature

The nonsensical computer-generated articles, spotted years after the problem was first seen, could lead to a wave of retractions.

Richard Van Noorden

NEWS | 05 August 2021 | Correction 10 August 2021

'Tortured phrases' give away fabricated research papers

Analysis reveals that strange turns of phrase may indicate foul play in science.

Holly Else

NEWS | 08 November 2021

Scammers impersonate guest editors to get sham papers published

Hundreds of junk-science papers have been retracted from reputable journals after fraudsters used 'special issues' to manipulate the publication process. And the problem is growing.

"It is very worrying," says Guillaume Cabanac, a computer scientist at the University of Toulouse in France, who has worked to uncover nonsense science papers in special issues. He adds that it is shocking to see such papers in journals from 'flagship' publishers and that "it is not only predatory journals that publish bullshit".

Consequences: retractations++

☐ July 19, 2021 🛕 Adam Marcus

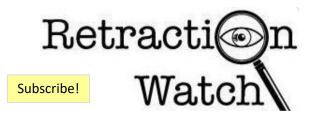


ELSEVIER

'Tortured phrases', lost in translation: Sleuths find even more problems at journal that just flagged 400 papers

■ August 26, 2021 🔺 Ivan Oransky

Guest editor says journal will retract dozens of inappropriate papers after his email was hacked



Publisher retracts 350 papers at once



February 23, 2022 Livan Oransky

"[T]hese shit comments": Author of a nonsense paper responds on PubPeer



Springer Nature slaps more than 400 papers with expressions of concern all at once

Springer Nature geosciences journal retracts 44 articles filled with gibberish



"Sunlight as disinfectant"

he Nature's 10 list explores key developments in science this year and some of the people who played important parts in these milestones. Along with their colleagues, these individuals helped to make amazing discoveries and brought attention to crucial issues. Nature's 10 is not an award or a ranking. The selection is compiled by Nature's editors to highlight key events in science through the compelling stories of those involved.

Feature *Nature*'s 10

Guillaume Cabanac Deception sleuth

+dozens of sleuths on PubPeer

Feature

This computer scientist helped to uncover a new kind of fabricated paper.

By Diana Kwon

derground creepy crawly state. Bosom malignancy. Sun oriented force. hese might sound like expressions rom a work of fiction, but they are actually strange translations, pulled from the scholarly literature, of scientific terms - ant colony, breast cancer and solar energy, respectively. Guillaume Cabanac, a computer scientist at the University of Toulouse, France, spots such bizarre phrases in academic papers every day.

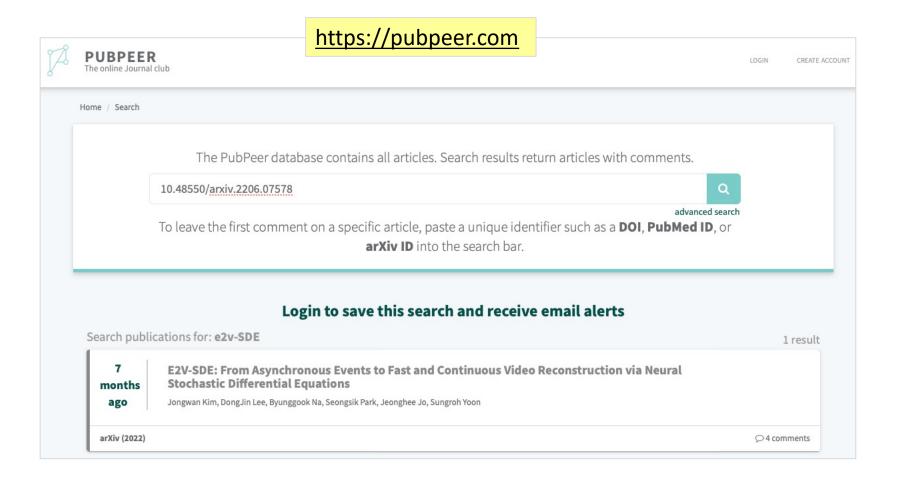




Research Chair 2022–2027

ATURE'S 10 Ten people who helped shape science in 2021 Winnie Byanyima / Friederike Otto / Zhang Rongqiao / Timnit Gebru/Tulio de Oliveira/John Jumper/ Victoria Tauli-Corpuz/Guillaume Cabanac/ Meaghan Kall/Janet Woodcock these milestones. Along with their colleagues, these individuals helped to make amazing discoveries and brought attention Nature | Vol 600 | 23/30 December 2021 | 591

Prevention: PubPeer and its browser + Zotero extensions



Browser extensions

Most journals are not interested in showing **PubPeer** comments directly on their websites so we have created "browser extensions" to make sure you never miss a **PubPeer** comment. The extension is a few lines of code that check if there are **PubPeer** comments on articles you read and alerts you with a banner in your browser if it finds some. They exist for all major browsers and you can install them here:







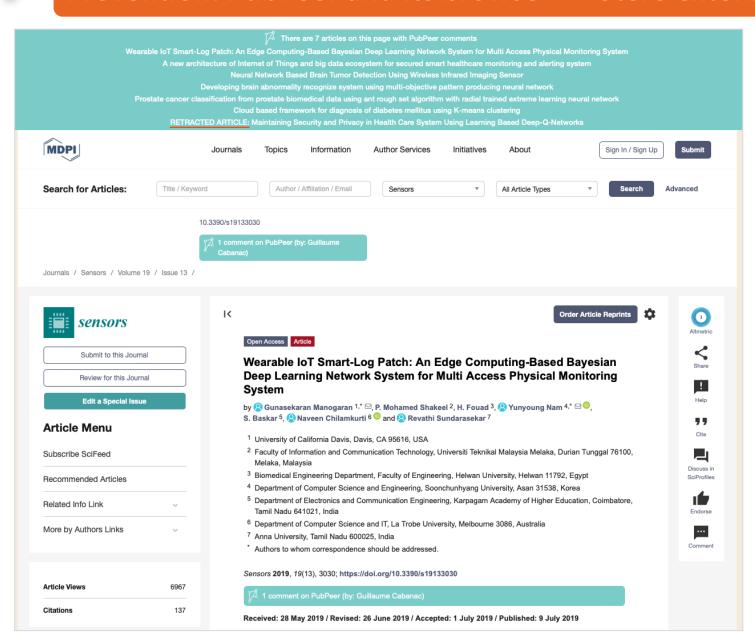


Reference manager extensions

Reference managers are great tools for organizing the literature. We are currently developing extensions that indicate which references in a library contain **PubPeer** comments.



Prevention: PubPeer and its browser + Zotero extensions





This article cites references that were questioned or retracted even.

One needs to gain awareness to better appreciate the contribution.

Prevention: Reduce fraud incentives



Highly Cited Researchers

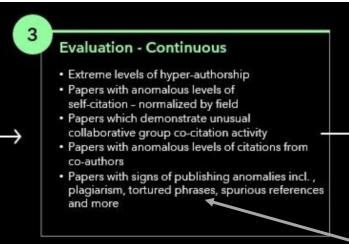


Highly Cited Researcher

our <u>2023 list</u>, recognizing 6,849 individuals from more than 1,300 institutions across 67 countries and regions.

Three scientists from the Bordeaux campus among the most cited researchers in the world

https://www.u-bordeaux.fr/en/news/three-scientists-bordeaux-campus-among-most-cited-researchers-world



By implementing an increasing number of qualitative criteria and markers this year, the number of preliminary candidates excluded from our final list increased from 500 in 2022 to more than 1,000 for 2023.



Prevention: Strengthen gatekeeping

Enhance the filters ahead of publication

The publishing industry uses tortured phrases as negative signals

STM Integrity Hub

A New, Unified Approach to Safeguard Research Integrity

STM Solutions releases MVP of new paper mill detection tool

News Announcement, Research Integrity April 13, 2023

https://www.stm-assoc.org/papermillchecker/

Safeguarding research integrity can only be done through collaboration with all stakeholders in the scholarly ecosystem. STM Solutions worked with several research integrity specialists and organizations for this release, including PubPeer, Clear Skies, Elisabeth Bik and Guillaume Cabanac (pro bono). The STM Integrity Hub hopes to deepen and extend its collaboration with research integrity specialists and organizations going forward.

[NEWS] OCTOBER 23, 2023

Morressier teams up with academic fraud sleuths to bring tortured-phrase detection to publishing workflows

These three researchers founded the *Problematic Paper Screener*, a platform that flags questionable articles in the scientific literature. It leverages a daily maintained public database of 'fingerprint' phrases that can be used to identify potentially problematic submissions. Morressier now uses this data to check submissions via its workflows, flagging potentially problematic content early for editors.







that had already been published in a paginated volume. In parallel with the journal's own investigation, papers from these six VSIs were flagged by Guillaume Cabanac, Cyril Labbé and Alexander Magazinov [1] as part of their work in identifying problematic papers and making the community aware of them. This work by Dr Cabanac and colleagues has informed the journal's investigations. To date, the investigation has resulted in the decision to retract a first batch of 101 papers from the journal. The retraction process is expected to be completed in the coming weeks. The rest of the papers in question are under investigation by the EiC and publisher's ethical team. The configuration of the online



April 2023, https://doi.org/10.1016/j.micpro.2022.104754

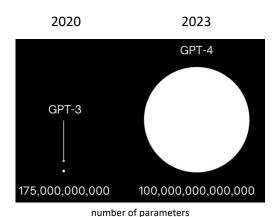


THE PAPERMILL ALARM





The 2023 big wave: ChatGPT-powered misconduct





8 FÉVRIER 2023 / N°1594 CHARLIE HEBDO 15

EDITORIAL | 24 January 2023

nature

Tools such as ChatGPT threaten transparent science; here are our ground rules for their use

As researchers dive into the brave new world of advanced AI chatbots, publishers need to acknowledge their legitimate uses and lay down clear guidelines to avoid abuse.

We must decontaminate the scientific literature



Actors: Scammers acting as wannabe scientists

Gatekeepers failing to enforce peer review

Publishers not monitoring their products

Policy makers promoting Publish or Perish

Motive: Promotion, recognition, symbolic capital

Modus operandi: Plagiarism, journal hijacking, buying of citations

Consequences: Pollution of the literature

Erosion of the trust society places in science

Detectives: Professional and scientists and hobbyists

Volunteers contributing pro bono

Aim: Curative \rightarrow decontaminate the literature

Preventive → anticipate new manipulations

Means: Decentralised re-assessment supported by the

Problematic Paper Screener

Al to detect errors, paraphrasing,

data fabrication



https://fr.wikipedia.org/wiki/Dépollution

Volunteers decontaminating a beach after the *Prestige* spillover of 2002.

Misconduct and the correction of science

Conferences

- Barbour, B. (2021). *PubPeer: past, present and future*.
- Bik, E.M. (2021). The Dark Side of Science: Misconduct in Biomedical Research.
- Bouter, L. (2022). Why research integrity matters.
- Byrne, J.A. (<u>2023</u>). *Paper mills*.
- Cabanac, G. (2022). Pollution de la littérature scientifique : détection participative d'expressions torturées révélatrices d'articles frauduleux.
- Wise, N.H. (2022). An Introduction to Publication Fraud.

Articles

- Barbour, B., & Stell, B. M. (2020). *PubPeer: Scientific assessment without metrics*. *In* M. Biagioli & A. Lippman (Eds.), *Gaming the metrics: Misconduct and manipulation in academic research* (pp. 149–155). Cambridge, MA, USA: MIT Press.
- Cabanac, G. (2022). Decontamination of the scientific literature. arXiv:2210.15912
- Cabanac, G. (2021). This digital-hygiene routine will protect your scholarship [World View]. *Nature*, 598(7882), 541. [adaptation en français pour l'HCERES-Ofis]

Appendix

Screening the literature for tortured phrases

Fingerprint-based method:



Fingerprints used by the Problematic Paper Screener

Fingerprint	Tortured Phrase	Expected Phrase
1	counterfeit consciousness	artificial intelligence
2	man-made brainpower	artificial intelligence
3	hereditary calculation	genetic algorithm
46	innocent Bayes	naive Bayes
47	mean square mistake/blunder	mean square error
48	calculated relapse	logistic regression
49	flag to commotion	signal to noise
50	p-esteem	p-value
4088	bosom malignancy	breast cancer
4089	kidney disappointment	kidney failure
4090	Protein/mRNA articulation	Protein/mRNA expression



