

An update on CrossRef's Plagiarism Detection Initiative



Chuck Koscher
Director of Technology
CrossRef

Is there a need?

nature International weekly journal of science

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Commentary

Nature **451**, 397-399 (24 January 2008) | [doi:10.1038/451397a](https://doi.org/10.1038/451397a); Published online 23 January 2008

A tale of two citations

Mounir Errami¹ & Harold Garner²

1. Mounir Errami is in the Division of Translational Research Department, The University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, Texas 75390-9185, USA.

2. Harold Garner is in the McDermott Center for Human Growth and Development, The University of Texas Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, Texas 75390-9185, USA.

Are scientists publishing more duplicate papers? An automated search of seven million biomedical abstracts suggests that they are, report Mounir Errami and Harold Garner. [▲ Top](#)

crossref.org

<http://dx.doi.org/10.1038/451397a>

DOI: FOR RESEARCH CONTENT

Is there a need?

A screenshot of a web page from Chemical & Engineering News (C&EN). The page features a navigation bar with links for Home, Current Issue, Features, Alerts, Careers, Multimedia, and Archive. The main content area displays the article title "A Massive Case Of Fraud" under the "SCIENCE / TECHNOLOGY" category. The author is identified as William G. Schulz. The article text discusses a case of scientific fraud involving a chemist in India who plagiarized and falsified research papers.

C&EN
CHEMICAL & ENGINEERING NEWS

Home | Current Issue | Features | Alerts | Careers | Multimedia | Archive

Home » Science & Technology » **A Massive Case Of Fraud**

SCIENCE / TECHNOLOGY

FEBRUARY 18, 2008 | VOLUME 86, NUMBER 07 | PP. 37-38

A Massive Case Of Fraud

Journal editors are left reeling as publishers move to rid their archives of scientist's falsified research

William G. Schulz

A CHEMIST IN INDIA has been found guilty of plagiarizing and/or falsifying more than 70 research papers published in a wide variety of Western scientific journals between 2004 and 2007, according to documents from his university, copies of which were obtained by C&EN. Some journal editors left reeling by the incident say it is one of the most spectacular and outrageous cases of scientific fraud they have ever seen.

<http://pubs.acs.org/cen/science/86/8607sci1.html>

crossref.org

DOI: FOR RESEARCH CONTENT

Is there a need?

TheScientist.com
MAGAZINE OF THE LIFE SCIENCES EVERY DAY, ONLINE

By Alison McCook

New details in Korean plagiarism case

Scientists continue to scuffle over blame and responsibility, and are taking their grievances to court

[Published 10th April 2007 05:15 PM GMT]

A Korean scientist who co-authored a paper allegedly stolen from another scientist has turned the tables on the journal editor who spoke out on the paper in question, accusing him of defamation and threatening him with legal action.

<http://www.the-scientist.com/news/home/53061/>

crossref.org

DOI: FOR RESEARCH CONTENT

Is there a need?



A baffling failure of peer review

Category: **Academics - Science**

Posted on: February 6, 2008 10:08 AM, by **PZ Myers**

A dismaying update: the paper in question contains a [significant amount of outright plagiarism](#), and large chunks of text are taken literally from Butterfield et al. 2006, "Oxidative stress in Alzheimer's disease brain: New insights from redox proteomics," European Journal of Pharmacology 545: 39-50. I hope we hear from Han and Warda sometime; they've got a lot of 'splaining to do.

http://scienceblogs.com/pharyngula/2008/02/a_baffling_failure_of_peer_rev.php

Is there a need?

HOME PAGE	MY TIMES	TODAY'S PAPER	VIDEO	MOST POPULAR	TIMES TOPICS
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The New York Times **U.S.**

WORLD	U.S.	N.Y. / REGION	BUSINESS	TECHNOLOGY	SCIENCE	HEALTH	SP
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POLITICS WASHINGTON EDUCATION

Bush Aide Resigns After Admitting Plagiarism

By [SHERYL GAY STOLBERG](#)
Published: March 1, 2008

Correction Appended

[WASHINGTON](#) — A longtime aide to President Bush who wrote occasional guest columns for his hometown newspaper resigned on Friday evening after admitting that he had repeatedly plagiarized from other writers.

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Academia thinks so.

JISC IPAS – Preventing and Detecting Plagiarism

The JISC Internet Plagiarism Advisory Service <http://www.jiscpas.ac.uk/> offers generic advice and guidance to institutions, academics and students on all aspects of plagiarism and collusion prevention and detection. The service provides access to and promotes the TurnitinUK® detection software <http://www.turnitin.com/static/home.html>, a system which has been developed to identify incidences of plagiarism in work submitted by students within the academic sector. Currently over 80% of UK universities, as well as a number of schools, FE colleges, professional and awarding bodies, employ TurnitinUK® to help combat the problem of plagiarism. The software compares student work against a database containing 8 billion pages, seeking out material which replicates original text.

It is a possibility that a clause relating to the use of TurnitinUK® could be added to future JISC Collections and NESLi2 agreements. Consequently JISC Collections would like to undertake a survey of the publishers it currently deals with in order to discover their views on plagiarism and whether they **already have systems in place**

Others think so.

- Maurer H., Kappe F. and Zaka B. 2006. Plagiarism - A Survey : *Journal of Universal Computer Science*. 12:1050-1084
http://www.jucs.org/jucs_12_8/plagiarism_a_survey
- The Plagiarism Today blog.
<http://www.plagiarismtoday.com/>
- Council of Science Editor's White Paper on Promoting Integrity in Scientific Journal Publications
http://www.councilscienceeditors.org/editorial_policies/white_paper.cfm
- Committee on Publication Ethics (COPE)
<http://www.publicationethics.org.uk/flow-charts/cope-flowcharts-optimal.pdf/download>
- The Center for Academic Integrity has some research and statistics concerning the prevalence of plagiarism in academia.
http://www.academicintegrity.org/cai_research.asp

CrossRef's membership thinks so.

– Fall 2006

Identified as a top need in Annual Member survey

– Q2 2007

Formation of a board level sub committee

– Summer 2007

Re-confirmed in interviews of publisher editorial staff

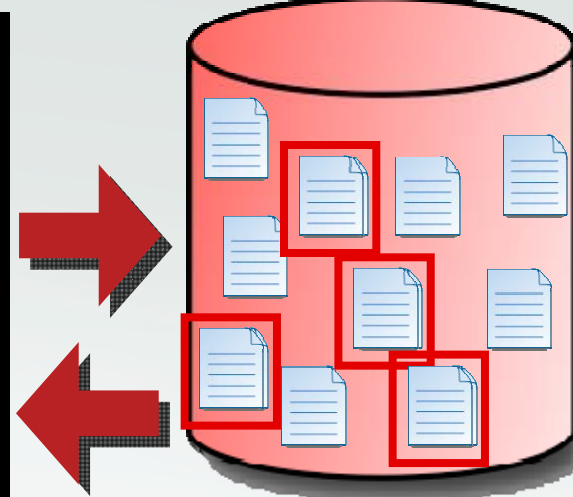
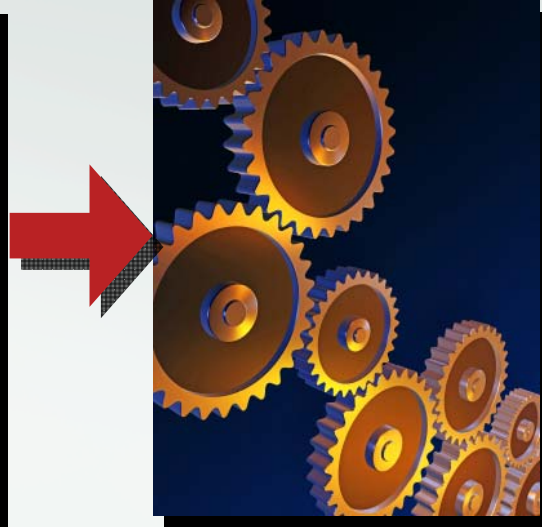
– Q3 2007

Pilot initiative: 8 publishers, 3.5 million indexed articles
4600 documents checked

– Q1 2008

Production service authorized by the CrossRef board
(Official launch in May)

Plagiarism detection aids.

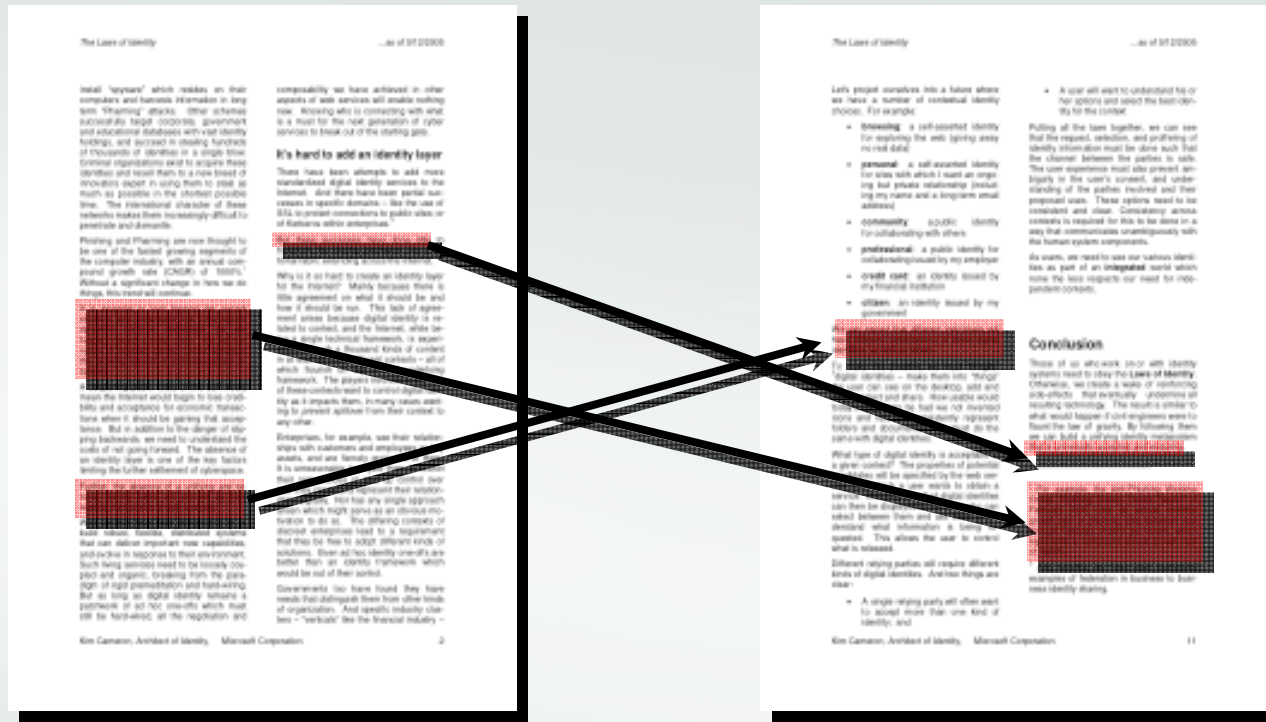


	title	similarity	author	submitted	resubmt
[-]	Front Page Article 3 parts - 12061 words total	5%	John Doe	03-09-06	[icon]
[-]	Book Preview 3 parts - 12060 words total	35%	Janet Doe	03-09-06	[icon]
[-]	Session 19450 3 parts - 12059 words total	5%	Jeff Doe	03-09-06	[icon]
[-]	Admission Essays 1 part - 24 words total	100%	Jenny Doe	03-09-06	[icon]
[-]	Legal Brief 1 part - 24 words total	100%	John Doe	03-09-06	[icon]

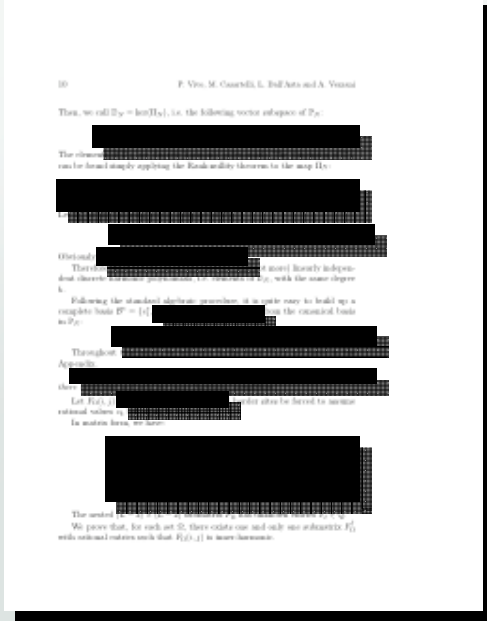
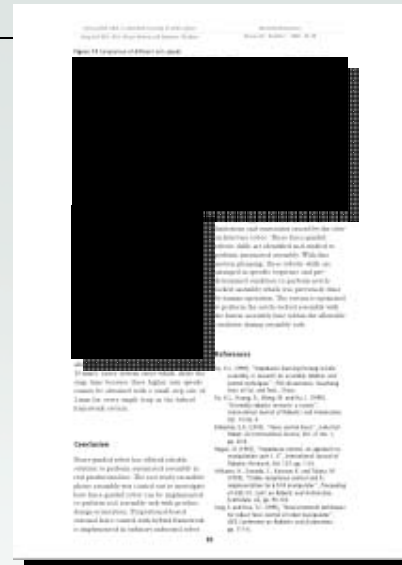
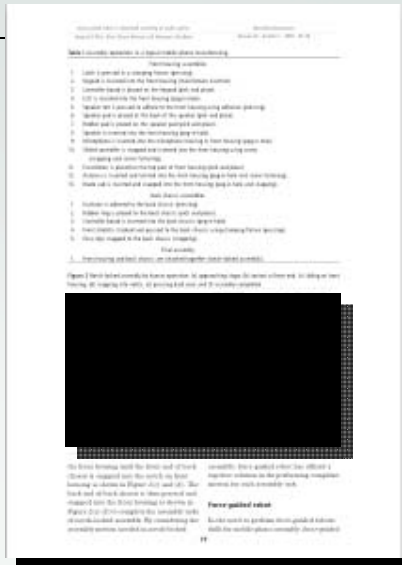
Text fingerprinting: a target document de-composed into short, normalized substrings which are then compared against a database of pre-indexed documents;

originality report issued -- this must be interpreted by a human being

Text regions examined for similarity.



submitted manuscript on left, database "hit" on right; similarities highlighted. Textual overlap might be due to: plagiarism attempt, incorrect citation, "self-plagiarism", reverse plagiarism (when somebody copies an earlier manuscript but gets published first), coincidence, acceptable re-use



Some limitations for current PD technology (clockwise from top left): photographs, graphs & tables, formulae

CrossCheck.

CrossRef established agreements with PD vendors offering services to members.

- Achieve economies of scale
- Eliminate one-on-one negotiations between publishers and vendors
- Make available other vendors as opportunities arise

CrossRef run program to provide support to members and monitor compliance.

- Enforce reciprocity principle
- Centralize issue management
- Create community benefits

IParadigms / iThenticate is currently the only vendor (terms stipulate exclusivity for one year).

CrossCheck Status

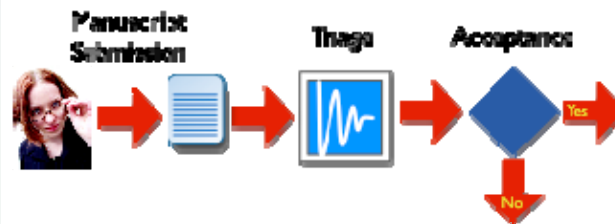
Phase 1



Database of
Published Articles

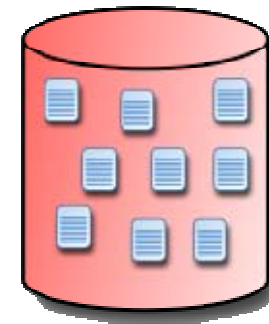
**cross
check**
Deposited

Phase 2



Workflow Integration

Phase 3





Duplicate
Submission
Checking

Using CrossCheck.

Participant obligations (CrossCheck is an opt-in service).

- Must have content indexed within 7 days of publication
- Maintain appropriate internal access to the PD service
- Exercise professional judgment in determining the existence of plagiarism

Participant benefits

- Identifying circumstances in which works being considered for publication may have been previously published in whole or in part.
- Ability to view raw text (no formatting) of any duplicative items
- Use of the  and  logos

Community benefits

- All iParadigms users will be checking their documents against a much more complete database of scholarly works (No access to full text!)
- Defuse a complaint from aggressive open-access supporters.

CrossCheck fees.

A publisher will have two costs to participate in CrossCheck

- An annual fee paid to CrossRef to support the program
- A transaction fee paid to iParadigms to check a document

CrossRef fee assessed in arrears, will not exceed 20% of annual member fee

- For 2008 amount to be raised is \$50,000

iParadigms transaction fee is volume based

Volume	0-5,000	5,001~ 25,000	25,001~ 50,000	50,001~ 100,000	100,001~ 200,000	200,000 +
Price	\$0.75	\$0.65	\$0.55	\$0.45	\$0.35	\$0.25

Thank you

me → ckoscher@crossref.org

But call
this guy! → gboucher@crossref.org