



Elsevier Author Workshop ■ Tianjin  
2007-11-16

## How to Write a World Class Paper *From title to references* *From submission to revision*

Presented By: Robert Allen, PhD  
Editor-in-Chief: Biomedical Signal Processing & Control



## Prof. Robert Allen



- Graduated in Control Engineering (1972) with PhD in Mechanoreceptor Modelling (1978) University of Leeds
- Founding Editor-in-Chief of Biomedical Signal Processing and Control
- Founding Editor-in-Chief of Bioinspiration & Biomimetics *Learning from Nature* (IOPP)
- Honorary Editor of Medical Engineering & Physics
- Affiliation: Professor of Biodynamics & Control Chair of Signal Processing & Control Group Institute of Sound & Vibration Research University of Southampton

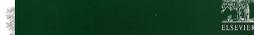


## Medical Engineering & Physics

•**Scope:** clinical engineering, tissue engineering, biomedical computing, instrumentation, medical imaging, biomaterials and rehabilitation

•**Audience:** medical engineers and clinicians

• **Official publication of:** Institute of Physics and Engineering in Medicine



## Biomedical Signal Processing & Control



**Biomedical Signal Processing and Control** aims to provide a cross-disciplinary international forum for the interchange of information on research in the measurement and analysis of signals and images in clinical medicine and the biological sciences.

The scope of the journal is defined to include relevant review papers, technical notes, short communications and letters. Tutorial papers and special issues will also be published.

ISSN: 1746-8094

Commenced publication 2006





## Outline

- Current status of Chinese articles
- Why do scientists publish?
- What is a good manuscript?
- How to write a good manuscript for an international journal
  - Preparations before starting
  - Construction of an article
  - Technical details
- Revision, and response to reviewers
- Ethical issues
- Conclusion: what gets you accepted?
- Appendix: Language

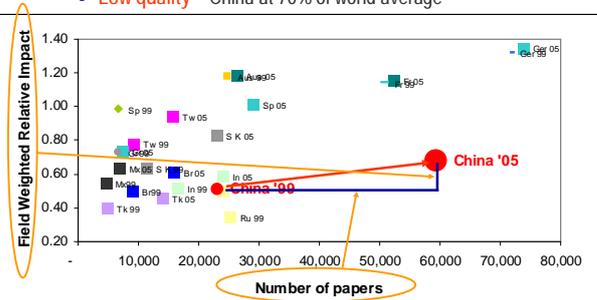
## Current status of Chinese articles

- Why do scientists publish?
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## Current status of Chinese articles

- High quantity – exponential growth since 1999
- Low quality – China at 70% of world average



### Comparison: China and US acceptance rates for Elsevier journals

	2005		2006		2007(Jan. – Jun.)	
	Number of submissions	Rate of acceptance	Number of submissions	Rate of acceptance	Number of submissions	Rate of acceptance
China	25,696 (14%)*	24%	59,161 (15%)*	26%	40,333 (15%)*	24%
US	35,973 (20%)*	58%	62,775 (16%)*	55%	43,784 (17%)*	51%
Total	189,343	42%	386,557	40%	261,867	38%

Selection of Elsevier Editorial Outflow Statistics

\* Number of submissions from the country / Total number of submissions Elsevier received.

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### One reason of the explosion in quantity: Publication is the most important measure for researchers in China...

- Number of publications
- Number of publications in international journals
- Number of publications included by EI, SCI
- Impact factor of the journal in which an article is published
- ...



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### High submissions + Low quality → STRESS for editors and reviewers...



Editors and reviewers are the **most precious resource** of a journal!

- Editors and reviewers are practicing scientists, even leaders in their fields. They are **not professional** journal staff – they do journal work **on the side** of their own research, writing and teaching.
- They are busy people who work for journals **to contribute to science**.
- Editors may receive a small payment, but reviewers are **UNPAID**.



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### An international editor says...

- "A great deal of **excellent research** is submitted from China."
- "I have encountered the following serious issues **on an occasional basis** (but more often than I would like)..."
  - Multiple submission of the same manuscript to two or more journals
  - Submission of a paper already published in Chinese
  - Plagiarism (especially of small parts of a paper)"
- "The following problems appear **much too frequently**"
  - Submission of papers which are clearly out of scope
  - Failure to format the paper according to the Guide for Authors
  - Inappropriate (or no) suggested reviewers
  - Inadequate response to reviewers
  - Inadequate standard of English
  - Resubmission of rejected manuscripts without revision

– Paul Haddad, Editor, *Journal of Chromatography A*



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### ...and our publishing advice is as follows:



- Submit to the right journal (scope and prestige)
- Submit to one journal only
- Do not submit “salami” article
- Pay attention to journal requirements
- Pay attention to structure
- Check the English
- Pay attention to ethical standards



- Current status of Chinese articles
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### What is *your personal reason* for publishing?



- However, editors, reviewers, and the research community don't care about these reasons.



### Why should scientists publish?

- Scientists publish to **share** with the science **COMMUNITY** something that **advances, not repeats, knowledge and understanding** in a certain field.

“In determining the suitability of submitted articles for publication, particular scrutiny will be placed on the degree of novelty and significance of the research and the extent to which it adds to existing knowledge in separation science.”

– Aims and Scope, *Journal of Chromatography A*



## Publish or Perish?

"There are three necessary steps in useful research: the first to begin it, the second to end it and the third to publish it."

– M. Faraday  
Being published  $\neq$  Immortality!



"Surely you were aware when you accepted the position, Professor, that it was publish or perish."

– Thomas H. Adair, Professor, University of Mississippi



## Your paper is worthless if no one reads, uses, or cites it

"A research study is meaningful **only if someone else uses it in his/her studies**. For this to happen a paper has to be written in a way that **arouses other scientists' interest and allows others to reproduce the results**. Only an understandable study can be reproduced. Only a reproducible work enables others to follow the lead. The number of scientists following the lead is a measure of the impact of a research study. Thus, in a way, a research study has to **make a 'sale'** to other scientists."

– ZHOU Yaoqi, Professor.  
Indiana University School of Informatics, IUPUI  
<http://sparks.informatics.iupui.edu>



## Even high impact factor journals have articles that get no citation or very low downloads

Articles with low downloads

Selection from the Full-text usage report:

Cell, articles published in 2005 (2007.6)

Cell	b-07	Mar-07	Apr-07	May-07	Total
	0	0	0	2	7
	0	0	1	3	24
	6	1	2	5	83
	17	13	12	17	386
	1	0	0	2	10



## Non-cited papers in high IF journals

SCOPUS

Citations of the Articles published in Cell at the year of 2005. (2007.6)

Date	Source Title	Cited By
2005	Cell 122 (3), pp. 327-332	0
2005	Cell 122 (4), pp. 499-504	3
2005	Cell 123 (4), pp. 555-568	6
2005	Cell 122 (6), pp. 941-945	6



## Journal publishers do not want zero-cited articles

- Editors now regularly analyze citations per article.

“The statistic that 27% of our papers were not cited in 5 years was disconcerting. It certainly indicates that **it is important to maintain high standards when accepting papers...** nothing would have been lost except the CV's of those authors would have been shorter...”

– Marv Bauer, Editor, *Remote Sensing of Environment*

- Articles will increasingly be checked on originality and relevance. Acceptance will get even harder.



## A journal is the gateway to a COMMUNITY of -- researchers with a common interest. ---

- Journals are the prime carrier of scholarly communication.
- New research relies on relevant information
- Journal Editors + Reviewers + Authors + Readers → A community of scientists

Your paper is your passport to your community



## When you submit a paper, many people invest in you.

- Editors and reviewers invest time in considering, revising, and editing your paper;
- Researchers invest time in exploring your ideas and findings;
- Publishers invest time and resources organizing the review process, and building reviewing systems



## Is your paper worth people's time?

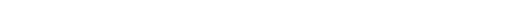
- **QUALITY and VALUE** is at the heart of the scholarly communication system. Journals do not want:
  - Reports of no scientific interest
  - Work out of date
  - Duplications of previously published work
  - Incorrect/unacceptable conclusions
  - “Salami” papers: datasets too small to be meaningful



“Just because it has not been done before is no justification for doing it now.”

– Peter Attiwill, Editor-in-Chief, *Forest Ecology and Management*





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## A good manuscript leads readers to scientific significance immediately.

- Content is essential
  - Contains a scientific message that is clear, useful, and exciting
- Presentation is critical
  - Conveys the authors' thoughts in a logical manner such that the reader arrives at the same conclusions as the author
  - Constructed in the format that best showcases the authors' material, and written in a style that transmits the message clearly

**"Good science deserves good presentation, not the sloppy accounts I read too often."**



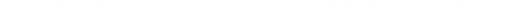
– Peter Thrower, Editor-in-chief, *Carbon*  
 Writing a Scientific Paper: I. Titles and Abstracts,  
*Carbon* (2007), doi:10.1016/j.carbon.2007.07.009

## Work hard to satisfy readers' expectations.

- What readers want –
  - "The potential readers of your paper have a diverse level of expertise in your field...the paper should be written **simply enough** to make it understandable and reproducible by graduate students and **deep enough** to attract the interests of experts."
  - "All scientists (students or their advisors) are usually very busy... They usually hope to find the most important information in a paper very quickly...it is important to write a well-structured (linked) paper that **allows readers to search for information quickly.**"
  - "In addition, a paper will be widely cited/used only if its significance can be understood without much effort. **Letting readers to find things where they expect to find** is the key to the clarity of a paper."



– ZHOU Yaoqi, professor, Indiana University School of Informatics, IUPUI  
[http://sparks.informatics.iupui.edu/Publications\\_files/write-english.pdf](http://sparks.informatics.iupui.edu/Publications_files/write-english.pdf)



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- 
- **How to write a good manuscript for an international journal**
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    - Construction of an article
    - Technical details



## 1. Check the originality of your idea at the very beginning of your research.

- Have you done something new and interesting?
- Is there anything challenging in your work?
- Is the work directly related to a current hot topic?
- Have you provided solutions to any difficult problems?

If all answers are "yes", then start preparing your manuscript.



## TRACK the latest results regularly in your field. New and relevant articles get published all the time.

Scopus: 356 Web (15,108) Patents (81) SelectedSources (17) Search your library

Your query: (TITLE-ABS-KEY(mcmc) AND TITLE-ABS-KEY(parameter estimation)) Save as Alert RSS

Source Title	Author Name	Year	Document Type
<input type="checkbox"/> SCASP IEEE International Conference on Acoustics Speech and Signal Processing Proceedings (24)	<input type="checkbox"/> Doucet, A. (19)	<input type="checkbox"/> 2007 (39)	<input type="checkbox"/> Article (342)
<input type="checkbox"/> Computational Statistics and Data Analysis (16)	<input type="checkbox"/> Andrieu, C. (10)	<input type="checkbox"/> 2006 (71)	<input type="checkbox"/> Review (14)
<input type="checkbox"/> Statistics in Medicine (9)	<input type="checkbox"/> Godsil, S.J. (9)	<input type="checkbox"/> 2005 (59)	

Results: 356 Search within results

**"Save as Alert": Remind yourself about the new findings.**

Document (sort by relevancy)	Author(s)	Year	Source Title
<input type="checkbox"/> A two-state regime switching autoregressive model with an application to river flow analysis	Vassas, K., Elek, P., Markou, L.	2007	Journal of Stochastic Planning and 137 (10), PP

Subject Areas: Life Sciences (> 3,400 titles) Physical Sciences

## 2. Decide the type of your manuscript

- Full articles/Original articles: the most important papers; often substantial, **completed** pieces of research that are of significance.
- Letters/Rapid Communications/Short communications: usually published for **quick and early** communication of significant and original advances; **much shorter** than full articles (usually strictly limited).
- Review papers/perspectives: **summarize** recent developments on a **specific topic**; highlight important points that have been **previously reported** and introduce no new information; often submitted **on invitation**.



## 2. Decide the type of your manuscript

- Self-evaluate your work: Is it sufficient for a full article? Or are your results so thrilling that they need to be shown as soon as possible?
- Ask your supervisor and colleagues for advice on manuscript type. Sometimes outsiders see things more clearly than you.



## 3. Who is your audience?

"One seldom writes for oneself... it is of great importance to identify the sector of readership for which a paper is meant. A paper written in abstruse mathematical language cannot be appreciated by the practical engineer who is interested in acquiring something for immediate use. On the other hand, for a scientific conference, a paper written in the style of a practicum would probably put the author to disgrace."

– Mooson Kwauk, Academician, Chinese Academy of Sciences



Topics of *local or national* relevance are sometimes not interesting for an *international audience*.

	Document (sort by relevance)	Author(s)	Date	Source Title	Cited
1	Estimated surface-wave contributions to radar Doppler velocity measurements of the ocean surface	Gedzel, C.G., Norm, K.E.	2003	Remote Sensing of Environment 87 (1), pp. 99-110	0
2	Structural and functional roles in the performance of an herbivore: A case study of the Great Barrier Reef: A <i>subtropical reef</i>	Burrage, D.M., Hixon, M.L., Hacker, J.M., Miller, J.L., Stogatz, T.C.	2003	Remote Sensing of Environment 85 (2), pp. 204-220	0
3	LineScan camera evaluation of SSM/I 85.5 GHz sea ice retrieval				0
4	Albion remote sensing of breaking waves				0
5	Sea level rise and coastal erosion near Taiwan	Chen, K.S., Wang, J.L., Shiao, L.M.	2001	Remote Sensing of Environment 75 (3), pp. 997-1011	0
6	A simple physical model of vegetation reflectance for standardizing optical satellite imagery	Dymond, J.E., Shepherd, J.D., Gu, L.	2001	Remote Sensing of Environment 75 (3), pp. 350-359	0
7	Educational outreach activities for Landsat-7	Merry, C.J., Stockman, R.	2001	Remote Sensing of Environment 78 (1-2), pp. 217-220	0
8	OCTS-derived chlorophyll-a concentration and oceanic structure over the coast of Japan	Yokouchi, K., Takeda, H., Matsumoto, J., Fujiwara, G., Kawamura, H., Shiga, K.	2000	Remote Sensing of Environment 73 (2), pp. 188-197	0
9	GOES-8 imagery as a new source of data to conduct ocean feature tracking	Traylor, L.C., V.M.	2000	Remote Sensing of Environment 73 (2), pp.	0

Can you distinguish a trend in these articles that do NOT get cited?

## 4. Choose the right journal

- Investigate all candidate journals to find out:
  - Aims and scope
  - Types of articles
  - Readership
  - Current hot topics (go through recent abstracts)

Volume 54, Issue 2, Pages 193-318 (August 2007)

Article List | Full Abstracts

1. Editorial Board Page/FC PDF (682 K)

2. Cloning, expression, purification and functional characterization of a novel protein from *Escherichia coli* strain N1624

3. SummaryPlus

4. Faser, Najib Nematpour, Reza B. Gouda, HKS | PDF (387 K)

http://www.sciencedirect.com/science/journal/10465928

sevier.com/locate/journaldescription.cvs\_home/622935/description#description

### PROTEIN EXPRESSION AND PURIFICATION

Editor-in-Chief: R.R. Burgess  
See [editorial board](#) for all editors information

Description

The power of modern molecular genetics to provide large quantities of proteins that were previously difficult to obtain has sparked an explosion of interest in both practical and theoretical aspects of protein purification.

*Protein Expression and Purification* is dedicated to providing a forum for information about protein isolation based on conventional fractionation as well as techniques employing various molecular biological procedures to increase protein expression.

The following types of articles are published:

- Original articles reporting novel or significantly improved isolations of highly purified proteins
- Procedures for expressing and isolating proteins from genetically engineered sources
- Novel or improved molecular biological methods for overexpression of specific proteins
- Review articles that describe and discuss the expression and purification of proteins

Audience: Biochemists, biophysicists

#### 4. Choose the right journal

- You must get help from your supervisor or colleagues. Chase them if necessary.
- Articles in your references will likely lead you to the right journal.
- DO NOT gamble by scattering your manuscript to many journals. Only submit once! International ethics standards prohibit multiple/simultaneous submissions, and editors DO find out!



#### 5. Read the 'Guide for Authors'! Again and again!

- Apply the Guide for Authors to your manuscript, even to the first draft (text layout, paper citation, nomenclature, figures and table, etc.). It will save your time, and the editor's.
- All editors hate wasting time on poorly prepared manuscripts. It is a sign of disrespect.

PROTEIN EXPRESSION AND PURIFICATION

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For Authors  
[Guide for Authors](#)  
[Submit your article](#)  
[Track your accepted article](#)

For Editors  
[Track line for Editor](#)

Related websites  
[Go A-Z to Index](#)

#### "Guide for Authors" often contains useful instructions on scientific writing.

" ...

##### 6 Introduction

The Introduction summarizes the rationale for the study and gives a concise background. Use references to provide the most salient background rather than an exhaustive review. The last sentence should concisely state your purpose for carrying out the study (not methods, results, or conclusion).

...

##### 9 Results

Emphasize or summarize only important observations. Simple data may be set forth in the text with no need for tables or figures. Give absolute values, not merely percentages, particularly for the control values.

Present your results followed by (Table 1 or Figure 2). Do not write "Table 1 shows that" or "Figure 2 demonstrated that."



– Author guidelines, *Acta Pharmacologica Sinica*

- How to write a good manuscript for an international journal
  - Preparations before starting
  - Construction of an article
  - Technical details



## The general structure of a full article

- Title
- Authors
- Abstract
- Keywords
- Main text (IMRAD)
  - Introduction
  - Methods
  - Results
  - And
  - Discussion (Conclusions)
- Acknowledgements
- References
- Supplementary material

Make them easy for indexing and searching!  
(informative, attractive, effective)

Each has a distinct function.



- The progression of the thematic scope of a paper:  
general → particular → general

- However, we often write in the following order:

- Figures and tables
- Methods, Results and Discussion
- Conclusions and Introduction
- Abstract and title

- For example, if the discussion is insufficient, how can you objectively demonstrate the scientific significance of your work in the introduction?



## 1. Title

... what the paper is broadly about

- A good title contains the **fewest** possible words that **adequately** describe the contents of the paper.
- Effective titles
  - Identify the main issue of the paper
  - Begin with the subject of the paper
  - Are accurate, unambiguous, specific, and complete
  - Do not contain infrequently-used abbreviations
  - Attract readers



### Journal of Catalysis

Volume 221, Issue 1, 1 January 2004, Pages 11-19

DOI: 10.1016/S0021-9517(03)00264-2  
Document Type: Article

the main issue

[View at Publisher](#) [Full Text](#) [2 colLab](#) [Library Catalogue](#)

#### Mutual influence of the HDS of dibenzothiophene and HDN of 2-methylpyridine

Egorova, M. A., Prins, R. A. M.

Specific

Inst. for Chem. and Bioengineering, Swiss Fed. Institute of Technology, 8093 Zurich, Switzerland

#### Abstract

The influence of 2-methylpyridine and 2-methylthiophene (DBT) and the effect of DBT of methylpyridine were studied over a sulfided NiM and 2- and 340 °C. Both N-containing molecules strongly suppressed the hydrogenation pathway of the hydrodesulfurization of DBT and inhibited the direct desulfurization route at both reaction temperatures. The inhibitory effect on the direct desulfurization was stronger for 2-methylpyridine than for 2-methylthiophene. H<sub>2</sub>S promoted the hydrogenation of 2-methylpyridine up to 10 kPa and inhibited it at higher partial pressures. H<sub>2</sub>S had a positive influence on the hydrodenitrogenation conversions of 2-methylthiophene and 2-methylpyridine. DBT had a negative effect on the hydrogenation of 2-methylpyridine, but did not influence the C-N bond cleavage of 2-methylpyridine. Therefore, C-N and C-S bond breaking takes place at different active sites, whereas the hydrogenation sites for N- and S-containing molecules may be the same. © 2003 Elsevier Inc. All rights reserved.

The title honestly reflects the subject matter of the paper.

### Does the title give a full and honest indication of what is in the paper?

"I recently received a paper whose title indicated that it concerned the preparation of carbon nanoparticles as a filler for polymers. But this was not true! The authors had only examined one polymer...

Another recent submission had a title that told me that a material was synthesised 'in a gas pressure atmosphere'. I had to read well into the experimental part of the paper before I learned that the atmosphere was argon! There was no indication of this in either the title or the abstract. What the author should have said was 'in high pressure argon'."

– Peter Thrower, Editor-in-chief, *Carbon*  
 Writing a Scientific Paper: I. Titles and Abstracts,  
*Carbon* (2007), doi:10.1016/j.carbon.2007.07.009



### Keep a title short. Remove all uninformative phrases such as, "studies on", "the nature of", etc.

- Preliminary observations on the effect of salinity on benthic community distribution within an estuarine system, in the North Sea



- Effect of salinity on benthic distribution within the Scheldt estuary (North Sea)



### Be specific

- Fabrication of carbon/CdS coaxial nanofibers displaying optical and electrical properties via electrospinning carbon

"The title is nonsense. All materials have properties of all varieties. You could examine my hair for its electrical and optical properties! You **MUST be specific**. I haven't read the paper but I suspect there is something special about these properties, otherwise why would you be reporting them?"

– Peter Thrower, Editor-in-Chief, *Carbon*



- Electrospinning of carbon/CdS coaxial nanofibers with optical and electrical properties



## 2. Authors and Affiliations

Put the title of your abstract here using both upper and lower case letters, Times

New Roman, 12 pts, bold, centered, double spaced-

A. Author<sup>a</sup>, B. Author<sup>b</sup>, C. Author<sup>a,\*</sup>

<sup>a</sup> Department, University, Street, Postal-Code City, Country<sup>o</sup>

<sup>b</sup> Laboratory, Institute, Street, Postal-Code City, Country<sup>o</sup>

\*Corresponding author. Tel.: +xxx xxxxx xxx xxx; fax: +xxx xxxxx xxx xxx; E-mail address: xxxxxx@xxxx xxx

## Keep your name and affiliation consistent

### Ex1. 欧阳钟灿

Standard:

- > Ouyang Zhongcan (Ouyang Z. ),  
GB/T 16159-1996. 汉语拼音正词法基本规则
- > OUYANG Zhong-can (Ouyang Z.C.),  
中国学术期刊(光盘版)检索与评价数据规范

Following are also found in literature: Ou-yang Zhong-can, Ouyang Zhong-can, Ou-Yang Zhongcan, Ouyang, Z.C., Zhongcan Ouyang, Zhong-can Ou-Yang, .....

Indicate your family name and given name clearly.



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## Alternative spellings lead to online confusion

### Ex2. Beijing University of Aeronautics and Astronautics 北京航空航天大学

Scopus: 3,570 Web (0) Patents (4) SelectedSources (0) Search

Your query: AFFIL("Beijing University of Aeronautics and Astronautics")

Scopus: 20 Web (0) Patents (0) Search

Your query: AFFIL("Beihang University")

Scopus: 12 Web (0) Patents (0) SelectedSources (0) Search

Your query: AFFIL("Beijing University of Aeronautics and Astronautics")

Scopus: 7 Web (0) Patents (2) SelectedSources (0) Search

Your query: AFFIL("University of Aeronautics and Astronautics, Beijing")

Scopus: 1,450 Web (0) Patents (1) Search

Your query: AFFIL("Beihang University")

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## 3. Abstract

– what has been done and what are the main findings

- There are 3 main types of abstract.
  - > **Indicative (descriptive) abstract** outlines the topics covered in a piece of writing so the reader can decide whether to read the entire document. Often used in review articles or conference reports.
  - > **Informative abstract** summarize the article based on the IMRAD structure, but without these words explicitly presented.
  - > **Structured abstract** follows headings required by the journal. Often used in Medical journals.

- Check carefully which type fits the journal of your choice.



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## Indicative abstract

Signal Processing  
Volume 19, Issue 4, April 1990, Pages 259-299  
Invited paper  
doi:10.1016/0165-1684(90)90158-U

### Fast fourier transforms: A tutorial review and a state of the art

P. Duhamel

Background

**Abstract.** The publication of the Cooley-Tukey fast Fourier transform (FFT) algorithm in 1965 has opened a new area in digital signal processing by reducing the order of complexity of some crucial computational tasks like Fourier transform and convolution from  $N^2$  to  $N \log_2 N$ , where  $N$  is the problem size. The development of the major algorithms (Cooley-Tukey and split-radix FFT, prime factor algorithm and Winograd fast Fourier transform) is reviewed. Then, an attempt is made to indicate the state of the art on the subject, showing the current standing of research, open problems and implementations.

Main topic

Issues discussed

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**Informative abstract**

Digital Signal Processing  
Volume 17, Issue 5, September 2007, Pages 891-913  
Special Issue on Bayesian Source Separation

**Variational and stochastic inference for Bayesian source separation**  
A. Taylan Cemgil<sup>a,1,2</sup>, Cedric Févotte<sup>a</sup> and Simon J. Godsill<sup>a</sup> doi:10.1016/j.dsp.2007.03.008

**Abstract.** We tackle the general linear instantaneous model (possibly underdetermined and noisy) where we model the source prior with a Student *t* distribution. The conjugate-exponential characterisation of the *t* distribution as an infinite mixture of scaled Gaussians enables us to do efficient inference. We study two well-known inference methods: Gibbs sampler and variational Bayesian source separation. We derive both techniques as local message passing algorithms to highlight their algorithmic similarities and to contrast their different convergence characteristics and computational requirements. Our simulation results suggest that typical posterior distributions in source separation have multiple local maxima. Therefore we propose a hybrid approach where we explore the state space with a Gibbs sampler and then switch to a deterministic algorithm. This approach seems to be able to combine the speed of the variational approach with the robustness of the Gibbs sampler.

**What has been done**

**What are the main findings**

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**Informative abstract**

Signal Processing  
Volume 87, Issue 10, October 2007, Pages 2455-2460  
Special Section: Total Least Squares and Errors-in-Variables Modeling

**Calculation of radix-2 discrete multiresolution Fourier transform**  
X. Wen<sup>a,1,2</sup> and M. Sandler<sup>a</sup>  
doi:10.1016/j.sigpro.2007.04.002

**Abstract.** This article discusses the efficient calculation of radix-2 multiresolution Fourier transforms (MRFT), which can also be regarded as a collection of short-time Fourier transforms (STFTs) with multiple 2-based window sizes, calculated on the same discrete-time signal. We show that by reconfiguring the (decimation-in-time) frequency-fast Fourier transform (DIF-FFT) framework to adopt different internal calculations, we are able to save nearly 50% of the calculation compared with a direct DIF-FFT method. Practical issues on real signals, sliding windows and cosine-family windowing are also discussed.

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**Structured Abstract**

Clinical Biochemistry  
Volume 40, Issue 12, August 2007, Pages 876-880  
doi:10.1016/j.clinbiochem.2007.04.009

**Pleural fluid neopterin levels in tuberculous pleurisy**  
Gursel Cok<sup>a,1,2</sup>, Zuhail Parbidar<sup>a</sup>, Gunes Basol<sup>a</sup>, Ceylan Kabaroğlu<sup>a</sup>, Ulku Bayindir<sup>a</sup>, Sara Habib<sup>a</sup> and Oya Bayindir<sup>a</sup>

**Abstract**

**Objectives:** Neopterin is produced by stimulated macrophages under the influence of gamma interferon of lymphocyte origin. It is regarded as a biochemical marker of cell-mediated immune response. This study was designed to assess the diagnostic value of pleural fluid neopterin levels in tuberculous pleurisy in comparison with adenosine deaminase activity.

**Design and methods:** Pleural fluid adenosine deaminase (ADA) activity and neopterin levels were measured in 16 patients with tuberculous pleurisy (TP) and 19 patients with malignant pleurisy (MP). ADA activity was determined by a colorimetric method, whereas neopterin levels were determined by a reversed-phase liquid chromatography technique. All values were given as median (min - max).

**Results:** The mean age was 45.43 ± 20.39 years in the TP group and 60.42 ± 11.02 years in the MP group ( $p = 0.026$ ). The median pleural fluid ADA activity was 51.75 U/L (3.50 - 62.40 U/L) in the TP group and was 2.30 U/L (1 - 8.20 U/L) in the MP group. The difference was statistically significant ( $p < 0.001$ ). The median pleural fluid neopterin levels were 13.15 nmol/L (1.86 - 59.50 nmol/L) and 2.44 nmol/L (0.92 - 27.60 nmol/L) in the TP group and the MP group, respectively ( $p = 0.021$ ). In order to evaluate the diagnostic value of pleural fluid neopterin concentrations, receiver-operating-characteristic curve analysis was performed.

**Conclusion:** Pleural fluid neopterin concentration is significantly higher in TP when compared to MP, however when compared, its clinical use as a diagnostic marker is not valuable as ADA.

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The abstract is the advertisement of your article. A clear abstract will strongly influence the editor's decision on whether your work will be further considered.

- Precise and honest
- Stand-alone
- No uncommon technical jargons, or citations.
- Brief and specific

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## An abstract should precisely reflect the content of a paper.

- Abstracts: A soluble, poly (ethylene glycol) supported piperazine catalyst has been prepared. Its utility in Knoevenagel condensation has been demonstrated.

For what?  
And how?

What was found?

.....

.....



## An abstract cannot include anything not mentioned in the main text.

Very occasionally one finds a statement such as '...the activation energy was determined to be 270 kcal/mole' in the abstract, but there is no mention of the value in the text! The abstract should be a concise summary of the text, and **should not contain any information that is not in the text.**

– Peter Thrower, Editor-in-chief, *Carbon*  
Writing a Scientific Paper: I. Titles and Abstracts,  
*Carbon* (2007), doi:10.1016/j.carbon.2007.07.009



## The abstract should be understood without reading the whole article.

"I recently asked an author the question, 'What does this mean' about a statement in his paper. He had used a word that does not exist in any dictionary that I have...How would non-native English speakers understand it? ... The author replied... that if I only read the full paper I would discover what it meant, to which I replied that the point of my comment was that **it should not be necessary to read the whole paper to discover what was meant in the abstract.** This vital point is not understood by many authors."

– Peter Thrower, Editor-in-chief, *Carbon*  
Writing a Scientific Paper: I. Titles and Abstracts,  
*Carbon* (2007), doi:10.1016/j.carbon.2007.07.009



## Normally no reference should be cited in abstract.

Readers of the abstract may not be able to access the full article for the reference list. If a reference has to be cited in the abstract, it must be given in full, e.g., "A.D.Becke, J. Chem. Phys. 96, 2155 (1992)"

Sediment transport bathymetry and hydrodynamic conditions (3-D) cohesive sediments Coriolis force; tides; salinity, river wave parameters; including the significant wave height, period, and direction. The Grant-Madsen model is introduced for the bed shear stress. The combined effect of waves and currents. The formulation of bed shear stress used to calculate the sink/source terms is modified based on previous research that sufficiently the research of DING et al. (2003) which is validated the formulation by many with measurement data. The model has been applied to simulate sediment transport in the Hangzhou Bay. The results of the simulation agree well with field observations concerning the distribution of suspended sediment, and indicating that the sediments are remarkably suspended in the Hangzhou Bay under the action of waves and currents.



### Do not cram the abstract with too many details, or uninformative descriptions.

Abstract: Indiplon polymorph I was prepared according to previous reports and polymorph II was obtained in new ways. The polymorphs were characterized by single crystal X-ray diffraction (SCXRD), power X-ray diffraction (PXRD), variable temperature X-ray diffraction (VT-PXRD), differential scanning calorimetry (DSC), thermogravimetry (TG), Fourier transform infrared (FT-Raman) spectroscopy and solubility determination. Slight differences between the two forms were detected by FT-Raman spectroscopy. No differences were observed by DSC. This was explained by VT-PXRD which showed a solid-solid phase change from Form II to Form I occurring during the heating process and the failure of DSC to detect the phase change was due to its very small transition enthalpy. Besides, the DSC curve of Form II we gained indicated a melting endotherm at 194 °C other than 175 °C as revealed in the previous report. VT-PXRD further confirmed the melting endotherm at 194 °C. It was possible that the sample characterized by a main endothermic peak at 175 °C in previous reports was a novel polymorph that has not been identified. Solubility measurements at various temperatures showed that the two polymorphs were monotropic and Form I was the relatively thermodynamically stable crystal form.

Useless phrases

Too detailed

Unspecific, uninformative

Too detailed

### Some journals require a graphical abstract provided for each manuscript on first submission.

- The graphical abstract is a **concise, pictorial** form, which
  - is carefully designed to capture the attention of a wide readership;
  - is prepared for compilation of databases;
  - serves to illustrate the theme of the paper are desired;
  - may also be accompanied by appropriate text with strict word limitation, e.g., 30-50 words.
- Consult a recent issue of the journal for the examples of acceptable graphical abstract.



### The graphical abstract is more effective and direct than a text abstract. Make it eye-catching.

Tetrahedron

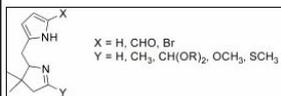
Volume 63, Issue 1, 1 January 2007, Pages 37-55

#### Synthesis of hydrodipyrins tailored for reactivity at the 1- and 9-positions

Han-Je Kim<sup>a</sup>, Dilek Kiper Dogutan<sup>a</sup>, Marcin Ptaszek<sup>a</sup> and Jonathan S. Lindsey<sup>a, b, \*</sup>

doi:10.1016/j.tet.2006.10.027

#### Graphical abstract



Thirty-three hydrodipyrins containing diverse functional groups at the  $\alpha$ -positions have been synthesized for use in routes to hydrophorphyrins.



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#### Electrohydrodynamic atomization for biodegradable polymeric particle production

Jingwei Xie, Liang Kuang Lim, Yiyong Phua, Jinsong Hua and Chi-Hwa Wang,

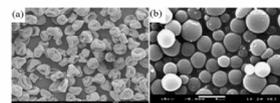
Journal of Colloid and Interface Science

Volume 302, Issue 1, 1 October 2006, Pages 103-112

doi:10.1016/j.jcis.2006.06.037

#### Graphical abstract

Controllable size and morphology of biodegradable polymeric particles were achieved by the electrohydrodynamic atomization technique. Cenosphere and spherical particles were obtained by controlling the solvent evaporation rate under different experimental setups.



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Journal of Colloid and Interface Science  
Volume 305, Issue 1, 1 January 2007, Pages 88-93

**Dynamic light scattering in turbid colloidal dispersions: A comparison between the modified flat-cell light-scattering instrument and 3D dynamic light-scattering instrument**

M. Medebach<sup>a</sup>, C. Moltzi<sup>a</sup>, N. Freilinger<sup>a</sup> and O. Glatter<sup>a,b,\*</sup>  
doi:10.1016/j.jcis.2006.09.013

**Graphical abstract**

To measure the dynamics of turbid systems is of great interest for fundamental research as well as industrial applications. We show the performance of a modified flat-cell light-scattering instrument.

The graphical abstract consists of two parts. On the left is a schematic diagram of the experimental setup. It shows a HeNe laser beam passing through a flat sample cell containing a turbid dispersion. An adjustable optical fiber is positioned to collect light from the sample. On the right is a plot showing the intensity of scattered light versus weight fraction (wt %) for two different particle sizes: 100 nm (represented by squares) and 200 nm (represented by circles). The plot shows that the intensity increases with weight fraction and is higher for the larger 200 nm particles.

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#### 4. Keywords

– how your manuscript should be labeled or categorized

- Check the Guide for Authors! (Number, label, definition, thesaurus, range, and other special requests)
- Avoid words with a broad meaning.  
“...Words selected should reflect the essential topics of the article... Do not select “soil”. ”  
– Guide for Authors, *Soil Biology & Biochemistry*
- Only abbreviations firmly established in the field are eligible.  
e.g., DNA (life sciences), FFT (signal processing), SEM (material engineering), etc.

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#### 5. Introduction

– what problem was studied and why your work is necessary

- Answer a series of questions:
  - Provide sufficient and background information that helps readers evaluate your work without referring to previous publications.
    - General background (review articles cited) → problems investigated particularly in this piece of research (briefly review the main publications on which your work is based.)
  - Convince readers that you clearly know why your work is necessary.
    - Use words or phrases like “however”, “remain unclear”, etc., to address your opinions and work
- What is the problem?
- Are there any existing solutions?
- Which is the best?
- What is its main limitation?
- What do you hope to achieve?

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A molecular beacon-based real time NASBA assay for detection of *Listeria monocytogenes* in food products: Role of target mRNA secondary structure on NASBA design

Anna Nadal <sup>a,1</sup>, Anna Coll <sup>a,1</sup>, Nigel Cook <sup>b</sup>, Maria Pla <sup>a,\*</sup>

**Journal of Microbiological Methods**  
www.elsevier.com/locate/jmicmeth

**Introduction.** *Listeria monocytogenes* is a facultative anaerobic gram-positive bacterial species widely distributed in the environment. Listeriosis is associated with food products contaminated with *L. monocytogenes*... (Peccio et al., 2003 and Ryser, 1999).

The classical approach for detection of *L. monocytogenes* in food involves... (Farber and Peterkin, 1991)... DNA-based techniques such as... have been developed for... (Hough et al., 2003; Koo and Taylor, 2002; Liming et al., 2004; Nogva et al., 2000 and Rodriguez-Lázaro et al., 2000). However, amplification of DNA from dead cells can overestimate the number of... (Josephson et al., 1993). Efforts have been made to reduce... by... (Nogva et al., 2000) ...

Although conventional NASBA (Nogva et al., 2000) 1997 and Uytendaele et al., 1995), no real-time NASBA (QNASBA) assay has been published to... We describe a QNASBA assay for... and its application to... In addition, we present our assay as an illustrative example of...

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"If you published something related to the new work or even something to be published, you should mention this in the introduction, which will help editors and reviewers to see your track record. "

- George F. Gao, Director, Institute of Microbiology, Chinese Academy of Sciences

"...Our recent studies of HR1 and HR2 regions in MuV fusion protein have shown that its HR1 and HR2 also form a stable six-helix bundle, suggesting a common core architecture similar to those of other viral fusion protein [20]. These methods have been successfully used in the biochemical and structural analysis of several other viral fusion protein core, including SARS-CoV [21] and [22], MHV [17], Newcastle disease virus [23] and [24], Nipah virus, and Hendra virus [25]. Here, we report the determination of crystal structure of MuV fusion core to 2.2 Å resolution by X-ray crystallography. The structure confirms..."

Biochemical and Biophysical Research Communications

Volume 348, Issue 3, 29 September 2006, Pages 916-922

Structural characterization of Mumps virus fusion protein core

Yueyong Liu<sup>a,\*</sup>, Yanhui Xu<sup>a,\*</sup>, Zhiyong Lou<sup>a,\*</sup>, Jieqing Zhu<sup>a</sup>, Xuebo Hu<sup>a</sup>, George F. Gao<sup>a</sup>

Bingsheng Ouyang<sup>a</sup>, Zilue Rao<sup>a</sup>, and Po Tian<sup>a</sup> doi:10.1016/j.bbrc.2006.07.168

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Example

## Introduction is not a review article or a history lesson!

"Rice (*Oryza sativa* L.) is one of the major crops in the world (Wang et al. 2004), contribution 43.7% of the total national grain production in China... [Followed are more than 200 words, describing the problem of water shortage in rice cropping area.]

Nitrogen (N) is one the three essential macronutrients for plant growth... [Another nearly 300 words describe the generation of nitrites in the soil.]

Using model calculations and experiments... [The next 5 more paragraphs describe the detailed mechanism of how plants absorb N in the soil and its relationship with irrigation.]

Based on previous studies, we focus our investigation on... [Readers may well be exhausted if they ever read this far.]"

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... But give the whole picture before you present your new data.

"Wide band gap materials are attractive for optical devices. For example, GaN and SiC have been used for blue or shorter wavelength light emitting diodes. ZnO is a wide band gap material (3.37 eV). Compared with others, it has larger exciton binding energy (60 meV), which assure more efficient excitonic emission at higher temperature. The study on the emission properties of ZnO films is attractively increasing attention because of its promising optoelectric applications [4-9]. In this paper, Cu-doped ZnO films were prepared by RF sputtering technique. The structures and light emission properties of Cu-doped ZnO films have been investigated and discussed. "

The problem investigated is not addressed enough, especially the necessity or the work. Readers will skim your paper if they cannot find any attractive points in the introduction.

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## Citing relevant references is very important

Some recent papers have demonstrated abnormal expression of microRNAs in diverse cancers, suggesting that microRNAs might play a role in oncogenesis, and some of these seem to have the characteristics of stem cell microRNAs. Some researchers now consider that cancer stem cells might contribute to the development and transformation of human cancers. To determine whether or not the initiation and maintenance of cancer stem cells are regulated by microRNAs will require further studies. In this review, we summarize some indirect evidence to support the concept that microRNAs

Corresponding references should be CITED here!!!

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## 6. Methods

### – how was the problem studied

- The structure, organization, and content of this section depends heavily on the type of paper. The basic principle is to provide **sufficient information** so that a knowledgeable reader can **reproduce** the experiment, or the derivation.
  - Empirical papers
    - material studied, area descriptions
    - methods, techniques, theories applied
  - Case study papers
    - application of existing methods, theory or tools
    - special settings in this piece of work
  - Methodology papers
    - materials and detailed procedure of a novel experimentation
    - scheme, flow, and performance analysis of a new algorithm
  - Theory papers
    - principles, concepts, and models
    - major framework and derivation



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## Empirical papers

- Provide operational definitions
- Describe the methods of data collection, unit of analysis and measurement
- Identify the subject of study
- Give the dates or time periods of data collection if important
- Identify the statistical methods if they are used : sample size, type of analyses, alpha level, statistical software used



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doi:10.1016/j.ecss.2006.11.017 Estuarine, Coastal and Shelf Science 72 (2007) 511–521

### Relationship between the lability of sediment-bound metals (Cd, Cu, Zn) and their bioaccumulation in benthic invertebrates

J.-C. Amiard<sup>a,\*</sup>, A. Geffard<sup>a,1</sup>, C. Amiard-Triquet<sup>a</sup>, C. Crouzet<sup>b</sup>

#### 2. Materials and methods

##### 2.1. Sediment sampling

The sampling sites are shown in Fig. 1.

##### 2.3. Metal partitioning among geochemical fractions

All the monthly samples from the Seine estuary (GR) preserved by freeze-drying concomitantly at the estuary.

##### 2.5. Metals in organisms

Organisms were collected at the same dates as sediments. The mussels (*Crassostrea gigas*) were collected

##### 2.2. Desorption tests

All desorption tests were carried out in triplicate. For sediment samples from the Seine estuary, Boulogne harbour sample (500 mg) was dispersed

##### 2.4. Metals in sediments

Contrary to the more conventional method based on the digestion of the sediment

##### 2.6. Statistical treatment

In the case of replicate analyses in sediments and pooled worms, standard errors were always  $\leq 5\%$  of the mean and will not be shown in the figures because they have no interpretative value. At those sites which were sampled on one occasion, metal determinations were carried out on eight bivalves:



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## Case study papers

- Cite corresponding references if necessary.
- Specify the value of the key parameters and the experimental settings for your case.



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**Cell**  
Volume 115, Issue 4, 14 November 2003, Pages 389-399  
doi:10.1016/S0092-8674(03)00885-7

Evolution of a Combinatorial Transcriptional Circuit: A Case Study in Yeasts  
(Annie E. Tsong, Mathew G. Miller, Ryan M. Raisner and Alexander D. Johnson)

**Experimental Procedures**

**Strain Construction.** All strains were derived from CAI4 ( $\Delta$ ura3::imm434/  $\Delta$ ura3::imm434) (Fonzi and Irwin, 1993). The a1 and a2 genes were knocked out using strategies outlined Wilson et al. (2000).

**Quantitative Mating Analysis.** Quantitative mating analysis was previously described (Miller and Johnson, 2002).

**Preparation of Cultures and cDNA for Microarray Experiments.** For white and opaque cultures, 1 ml cultures were grown overnight at 23°C in SC+100  $\mu$ g/ml uridine + 55  $\mu$ g/ml adenine... cDNA was prepared as previously described (Bennett et al., 2003). Construction and analysis of C. albicans microarrays was also as previously described (Bennett et al., 2003)

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## Methodology papers

- Address the model and the theoretical frame work of the methodology. Cite corresponding references.
- List every experimental detail which is unpublished.
- Describe the tests designed to examine both the effectiveness and the performance of the new method. The main results should be presented and studied thoroughly in the section of results and discussion. (Sometimes this part could be combined into the section of results.)

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**Ecological Modelling** doi:10.1016/S0304-3800(03)00139-X  
Volume 168, Issue 3, 15 October 2003, Pages 233-249  
Landscape Theory and Landscape Modelling

**A multi-scale segmentation/object relationship modelling methodology for landscape analysis**

C. Burnett and Thomas Blaschke

**Article Outline**

- Introduction
- Theoretical framework
  - Theoretical components explaining landscape structure
    - Landscape heterogeneity and patches
    - Scale
    - Scale and aggregation
    - Hierarchy and quasi-equilibria
  - Hierarchical path dynamics
- Methodological framework
  - Critique of the pixel approach
  - Partitioning an HPD-conceptualised reality
  - GIS building
  - Segmentation
  - Object relationship model building
  - Visualization
  - Quality assessment
- Example studies
  - Ruissalo Island: from individual trees to habitat units
  - Biosphere Reserve Rnön: bush encroachment monitoring
- Discussion
- Acknowledgements
- References

The method section is usually the heaviest part in methodology papers.

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## A clear and brief algorithm scheme

On-line non-stationary ICA using mixture models  
Ahmed, A.; Andrieu, C.; Doucet, A.; Rayner, P.J.W.  
Proc. IEEE ICASSP, v5. 3148-3151, 2000

**Monte Carlo filter**

**Sequential Importance Sampling Step**

- For  $i = 1, \dots, N$ , sample  $\theta_i^{(t)} \sim \pi(\theta_i | \theta_{i-1}^{(t)}, y_{1:t})$  and set  $\tilde{\theta}_i^{(t)} = (\theta_{i-1}^{(t)}, \theta_i^{(t)})$ .
- For  $i = 1, \dots, N$ , evaluate the importance weights up to a normalizing constant
 
$$w_i^{(t)} \propto \frac{r(y_t | \theta_{i-1}^{(t)}, y_{1:t-1}) p(\theta_i^{(t)} | \theta_{i-1}^{(t)})}{r(\tilde{\theta}_i^{(t)} | \theta_{i-1}^{(t)}, y_{1:t-1})}$$
 (10)
- For  $i = 1, \dots, N$ , normalize the importance weights
 
$$\tilde{w}_i^{(t)} = \frac{w_i^{(t)}}{\sum_{j=1}^N w_j^{(t)}}$$
 (11)

**Selection Step**

- Multiply / discard particles  $\{\tilde{\theta}_i^{(t)} : i = 1, \dots, N\}$  w.r.t. high / low normalized importance weights to obtain  $N$  particles  $\{\theta_i^{(t)} : i = 1, \dots, N\}$ .

Do not present your coding segment as the flow or scheme of your algorithm.

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## Theory papers

- Define or construct the model.
- Provide the complete inference of the main theme of the article. Put the supportive details which are of secondary importance into appendix or supplementary materials. (e.g., the proof of whether some condition is fulfilled to implement a well established theorem)
- Indicate the corresponding simulations if appropriate. The main results should be presented and studied thoroughly in the section of results and discussion. (Sometimes this part could be combined into the section of results.)



Digital Signal Processing 17 (2007) 891–913 doi:10.1016/j.dsp.2007.03.008  
 Variational and stochastic inference for Bayesian source separation

A. Taylan Cemgil<sup>a,\*</sup>, Cédric Févotte<sup>b</sup>, Simon J. Godsill<sup>b</sup>

**2. Model**  
 The source separation model defines  $\mathcal{S} = \{s_1, \dots, s_K\}$ . The model described in the previous section is an MCMC model for the mixing model parameters  $\Theta_s = \{\alpha_s, \lambda_{1,N}\} \equiv \{\nu, \lambda\}$ . We will refer to all parameters of  $\Theta_s$  as  $\Theta$ .

**3. Inference**  
**Major inference**

3.1. **Markov chain Monte Carlo**  
 Suppose we could generate  $I$  independent samples  $\Theta^{(i)} \equiv \{\nu^{(i)}, \lambda^{(i)}\}$  from the joint posterior distribution  $p(\Theta | \mathbf{y})$ . Then the maximum a posteriori (MAP) estimate of  $\Theta$  is given by  $\hat{\Theta} = \arg \max_{\Theta} \frac{1}{I} \sum_{i=1}^I \log p(\Theta^{(i)} | \mathbf{y})$ .

3.2. **Gibbs sampling**  
 A simpler approach is to sample the variables one by one or in sets. We group all variables in mutually exclusive sets  $C_\alpha$ , that we name a unique cluster index and  $C = \{C_1, \dots, C_q, \dots, C_A\}$  is the set of all clusters for grouping the variables. A natural choice for the source separation problem is to use  $C_\alpha = \{v_\alpha, \lambda_{1,N}\}$ .

**Appendix A. Standard distributions in exponential form, their sufficient statistics and entropies**

**Appendix D. Definition of performance criteria for source separation**  
 The below criteria are defined when all the true source signals and all noise are defined in detail by [40]. The reconstructed signal by a separation algorithm is  $\hat{s} = s_{\text{target}} + \epsilon_{\text{noise}} + \epsilon_{\text{in}}$ . We will refer to all other sources as known one can compute a decomposition as  $s = s_{\text{target}} + \epsilon_{\text{noise}} + \epsilon_{\text{in}}$ .

**Secondary inference**

$$G(\lambda; a, b) = \exp\left(-\frac{a}{\lambda}\right) \exp(-\lambda b)$$

$$\langle \lambda \rangle_G = ab, \quad \langle \log \lambda \rangle_G = -\log a - \frac{1}{b}$$

$$H[G] = -\langle \log G \rangle_G = \log a + \frac{1}{b}$$

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## 7. Results

– what have you found?

- The following should be included in this part.
  - the **main findings** listed in association with the methods
  - the **highlighted difference** between your results and the previous publications (especially in case study papers)
  - Results of **statistical analysis**
  - Results of **performance analysis** (especially in the methodology, or algorithm papers)
  - A set of **principle equations or theorems** supporting the assumptions after a long chain of inferences (especially in the theory papers)



## Use numbered sub-headings to keep together results of the same type

Journal of Colloid and Interface Science  
 Volume 305, Issue 1, 1 January 2007, Pages 101–110  
 doi:10.1016/j.jcis.2006.09.069

Douglas B. Haussner<sup>a</sup>, Richard J. Reeder<sup>b</sup> and Daniel R. Stroughair<sup>a</sup>

### Article Outline

- Introduction
- Experimental
- Results
  - Atomic force microscopy
    - AFM of freshly cleaved calcite as a function of humidity
    - AFM force versus distance curves as a function of humidity
    - AFM of calcite pre-etched in de-ionized water and pre-equilibrated solution under varying humid environments
    - AFM of calcite individually pretreated with Cd(II) and Pb(II) prior to exposure to humidity
  - Ion scattering spectroscopy of Cd(II) and Pb(II) pretreated calcite surfaces
- Discussion
  - The effect of humidity on the restructuring process
  - The effect of divalent metals on the restructuring process
- Summary

The results should be essential for discussion. Use supplementary material for data of secondary importance.

Journal of Colloid and Interface Science  
Volume 314, Issue 1, 1 October 2007, Pages 230-235  
doi:10.1016/j.jcis.2007.04.079 Lijuan Wang<sup>a</sup>, Xuefeng Li<sup>a</sup>, Gaoyong Zhang<sup>a</sup>, Jinfeng Dong<sup>a, b, c</sup> and Julian Eastoe<sup>d</sup>

**Oil-in-water nanoemulsions for pesticide formulations**

3. Results and discussion  
3.1. Equilibrium of decanoate  
3.2. Effect of commercial  $\beta$ -CP microemulsion; (C)  
3.3. Effect of commercial  $\beta$ -CP microemulsion; (C)  
3.4. Nanoemulsion formation at constant oil  
3.5. Stability of nanoemulsions



Display Full Size version of this image (26K)

Fig. 8. Polarizing light microscopy images of commercial  $\beta$ -CP microemulsion; (C) from (a) the after 24 h.

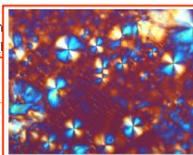


Fig. 2 a the microscopy patterns taken in polarized optical microscopy

(426 K)

mmc1.doc Help

Microsoft Word file 1.

Supplementary material.



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## A figure is worth a thousand words...

- Illustrations, including figures and tables, are the **most efficient way to present the results**. Your data are the "driving force of the paper". Therefore, your illustrations are critical!

"I do remember when you have an argument about the authorship, people usually would ask: why do not you count the figures to see who contributed what and how many figures?"

Gustave Doré

– George F. Gao, Director, Institute of microbiology, Chinese Academy of Sciences

John Milton



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## Make captions self-sufficient

- The caption of figures and tables should contain sufficient explanatory details to make the figure understood easily without referring to the text.

"Readers... often look at the graphics first and many times go no further. Therefore, the reviewer should be particularly sensitive to inclusion of clear and informative graphics."

– Henry Rapoport, Associate Editor, *the Journal of Organic Chemistry*



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## Cell

Volume 122, Issue 3, 12 August 2005, Pages 473-483

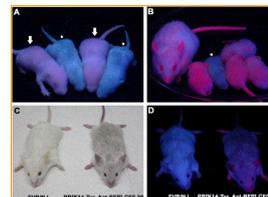
**Efficient Transposition of the piggyBac (PB) Transposon in Mammalian Cells and Mice**

Sheng Ding<sup>1,5</sup>, Xiaohui Wu<sup>1,5</sup>, Gang Li<sup>1</sup>, Min Han<sup>1,2</sup>, Yuan Zhuang<sup>1,3</sup> and Tian Xu<sup>1,4</sup>

doi:10.1016/j.cell.2005.07.013

- Figure 5. Expression of Transgenes in piggyBac Vectors**

(A) PB[Act-RFP] expression in the progenies resulted in red fluorescence under the illumination of a portable long-wave UV light. Two positive mice (arrows) carrying the same single copy transposon (AF0-47T6) and two negative littermates (asterisks) are shown.



(B) PB[Act-RFP] expression in a founder mouse and her progeny. Red fluorescence was mosaic in the founder. Segregation of transposons in the progeny resulted in different intensities of RFP signal. The star marks the transgene-negative littermate.

(C and D) Coexpression of two transgenes in the same piggyBac vector. As a result of tyrosinase expression, a PB[K14-Tyr, Act-RFP] founder shows gray coat color under white light, while the transgene-negative littermate remains albino (C, right and left, respectively). When illuminated by UV, red fluorescence was observed from this founder (D).

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**Life Sciences**

Volume 80, Issue 4, 2 January 2007, Pages 337-344

**WIN-55,212-2 and SR-141716A alter nicotine-induced changes in locomotor activity, but do not alter nicotine-evoked [<sup>3</sup>H]dopamine release** doi:10.1016/j.lfs.2006.09.020

Kelli R. Rodvelt<sup>a</sup>, Dana M. Bumgarner<sup>a</sup>, William C. Putman<sup>b</sup> and Dennis K. Miller<sup>a, c, \*†</sup>

Table 1.

WIN-55,212-2 and SR-141716A did not alter nicotine-evoked [<sup>3</sup>H]overflow from rat striatal slices preloaded with [<sup>3</sup>H]dopamine

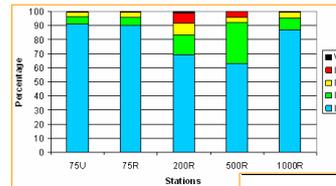
	Drug concentration						
	Control	100 pM	1 nM	10 nM	100 nM	1 μM	10 μM
WIN-55,212-2	1.91 (± 0.26)	2.34 (± 0.51)	2.34 (± 0.51)	2.42 (± 0.53)	2.18 (± 0.39)	2.80 (± 0.66)	4.63 (± 1.87)
SR-141716A	2.46 (± 0.44)	ND	4.13 (± 1.67)	3.18 (± 0.96)	1.55 (± 0.57)	2.09 (± 0.80)	3.50 (± 1.54)

Data represent mean (± S.E.M.) total [<sup>3</sup>H]overflow after the addition of nicotine (10 μM) to superfusion buffer. Control values represent superfusion in the presence of nicotine and the absence of WIN-55,212-2 or SR-141716A (i.e., nicotine alone). The effect of the 100 pM concentration of SR-141716A on nicotine-evoked [<sup>3</sup>H]overflow was not determined (ND). (n = 6 - 10 rats).

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**No illustrations should duplicate the information described elsewhere in the manuscript.**



Generally, tables give the actual experimental results. In this case, the table is more direct and clear.

The graph repeats what the table describes.

Station	ECOLOGICAL GROUP				
	I	II	III	IV	V
75U	91.3	5.3	3.2	0.2	0.0
75R	89.8	6.1	3.6	0.5	0.0
200R	69.3	14.2	8.6	6.8	1.1
500R	63.0	29.5	3.4	4.2	0.0
1000R	86.7	8.5	4.5	0.2	0.0



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**Illustrations should be used only for essential data.**

Table 2. Colour codes and notations of the soil layers

Habitat	Depth (cm)	Colour codes	Colour notation
Woodland	0-5	25YR4/2	Dark grayish brown
	5-10	25Y3/3	Light olive brown
	10-15	25Y6/3	Light yellowish brown
	15-20	25Y6/4	Light yellowish brown
	20-30	25Y6.5/3	Light yellowish brown -Light olive brown
	30-40	25Y3/3	Light olive brown
	40-50	25Y3/3	Light olive brown
	50-60	25Y6/3	Light yellowish brown
	60-70	25Y3/4	Light olive brown
	70-80	25Y6.5/3	Light yellowish brown -Light olive brown
Wetland	0-5	25Y6.5/3	Light yellowish brown -Light olive brown
	5-10	25Y3/3	Light olive brown
	10-15	25Y3/2	Dark grayish brown
	15-20	25Y4/1.5	Dark gray -Dark grayish brown
	20-30	25Y4/2.5	Dark grayish brown -Olive brown
	30-40	25Y4/2.5	Dark grayish brown -Olive brown
	40-50	25Y4/2	Dark grayish brown
	50-60	25Y4/2	Dark grayish brown
	60-70	25Y4/2	Dark grayish brown
	70-80	25Y4/2	Dark grayish brown
Grassland	0-5	25Y4/2	Dark grayish brown
	5-10	25Y4/2	Dark grayish brown
	10-15	5Y5.2	Olive gray
	15-20	5Y6.2	Light olive gray
	20-30	5Y6.2	Light olive gray
	30-40	5Y6.2	Light olive gray -Olive gray
	40-50	5Y6.2	Pale olive
	50-60	5Y6.2	Pale olive
	60-70	5Y6.2	Light olive gray -Pale olive
	70-80	5Y6.2	Light olive gray -Pale olive

This table is not necessary. It can all be said in the text: 'The surface soils were dark grayish brown, grading to light olive brown (woodland), light olive brown (wetland), and pale olive (grassland) at 100 cm.' There is little to no value in describing colour of soil at 10 cm intervals.

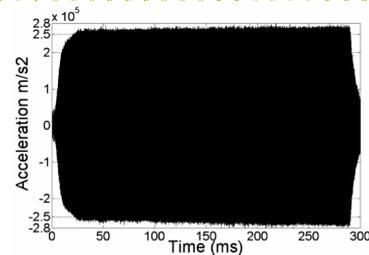


Fig. 4 Result of vibration acceleration at end of bonding tool

- The vibration characters could be easily described in the text. The figure is unnecessary, and meaningless with an inappropriate display range of x-axis.



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### Contents in illustrations should be meaningful

Table 3. Soil texture along the depth profile in KNP

Habitat	Depth	Clay (%)	Silt (%)	Sand (%)
Woodland	0-5	43.0	53.0	4.0
	5-10	61.0	29.0	10.0
	10-15	71.0	22.0	7.0
	15-20	71.0	22.0	7.0
	30-40	65.0	26.0	9.0
	50-60	66.0	25.0	9.0
Wetland	0-5	58.0	34.0	8.0
	5-10	58.0	31.0	11.0
	10-15	54.0	32.0	14.0
	15-20	45.0	35.0	20.0
Grassland	0-5	80.0	20.0	0.0
	5-10	67.0	31.0	2.0
	10-15	47.0	30.0	23.0
	15-20	57.0	28.0	15.0
	30-40	61.0	28.0	11.0
	50-60	76.0	23.0	1.0
	70-80	48.0	33.0	19.0
	90-100	58.0	31.0	11.0

- Why include '.0'? It adds nothing.



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### Appearances count!

- Plot 3 or 4 data sets per figure;
- Use subplot panels to assemble figures which illustrate the same type of problem.
- well-selected scales; appropriate axis label size; symbols clear to see and data sets easy to discriminate.

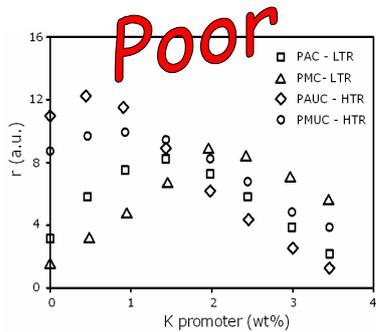


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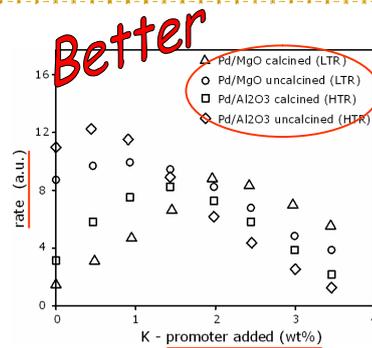
### Revision of a figure



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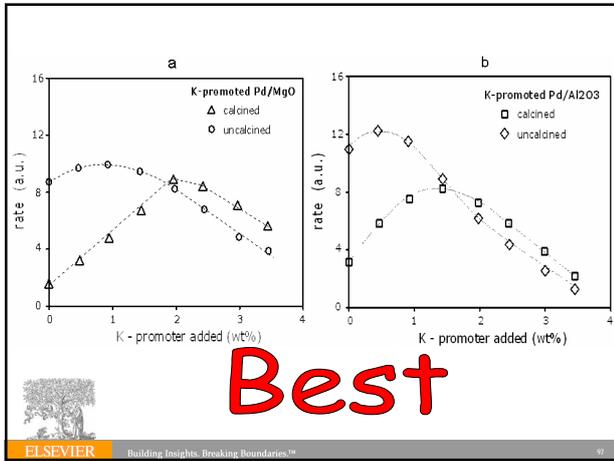
95



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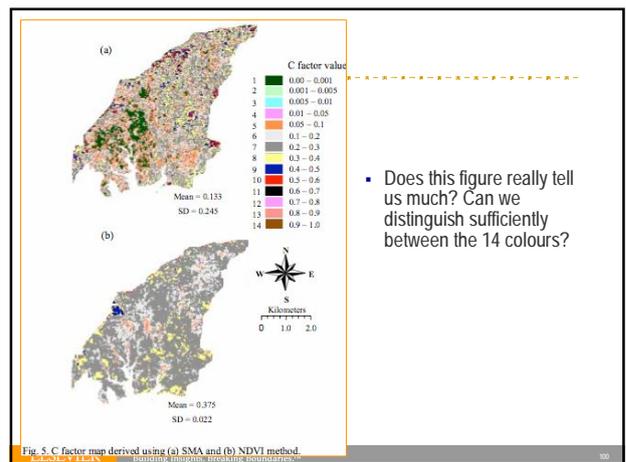
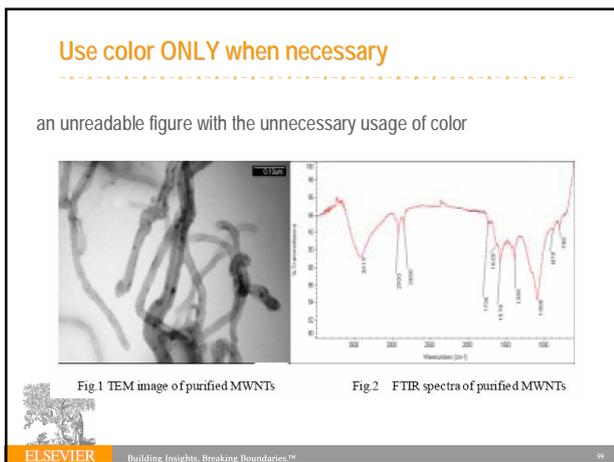


Revision of a table

Depth	Gravel	Sand	Mud
5 m	3,42%	81,41%	15,17%
50 m	2,5%	58,42%	39,08%
100 m	0,0%	32,5%	67,5%

↓

Water depth (m)	Gravel (%)	Sand (%)	Mud (%)
5	3.4	81.4	15.2
50	2.5	58.4	39.1
100	0	32.5	67.5



## Avoid long and boring tables

Table 4. Habitat and year wise variation in C: N, C: P, C: S and N: P ratio

Habitat	Layer	C: N			C: P			C: S			N: P		
		2003	2004	2005	2003	2004	2005	2003	2004	2005	2003	2004	2005
Woodland	Litter	28.38	16.46	25.39	809.99	1731.06	2315.63	403.62	765.99	1462.36	28.54	105.18	91.20
	0	10.16	6.69	13.48	1139.26	1302.12	4090.33	307.09	389.68	1491.93	112.18	194.57	303.44
	25	1.40	0.87	1.53	255.09	420.14	1225.21	38.77	43.76	704.22	182.63	481.32	799.08
	50	1.08	0.48	0.87	286.52	232.94	733.49	36.55	23.24	713.48	266.16	482.10	841.75
	75	1.00	0.68	0.43	267.29	308.34	375.61	28.06	28.96	289.27	268.11	454.71	874.70
	100	1.21	0.50	0.72	479.20	358.25	604.82	30.96	23.81	224.68	395.95	719.89	841.99
	Litter	32.19	19.65	22.35	2214.09	1874.23	2404.12	4012.44	1045.70	506.56	68.79	95.39	107.56
	0	14.69	8.47	6.59	3978.20	2211.44	2809.48	1198.66	633.07	911.40	270.87	261.22	426.49
Grassland	25	2.89	2.06	2.52	1220.43	615.67	1063.27	515.85	636.71	1417.22	471.49	299.57	398.49
	50	2.01	1.71	1.30	1148.13	784.55	1190.52	303.14	520.66	876.57	571.29	458.41	913.96
	75	1.96	1.67	1.15	1018.65	982.64	1848.85	234.20	360.32	420.19	518.87	586.89	1602.35
	100	1.73	1.76	0.89	794.97	966.28	1852.74	151.76	354.12	318.74	459.28	550.34	2073.58
Litter	Litter	38.46	13.09	22.58	2911.64	1796.34	2679.57	18719.59	468.25	7396.69	75.70	137.26	118.69
	0	7.68	6.08	7.16	2024.65	1267.28	3652.67	1759.49	1328.00	1715.80	263.54	208.48	509.81
	25	3.01	1.05	1.44	1232.19	783.45	1506.97	516.96	472.00	668.80	409.07	745.17	1048.35
	50	1.14	0.78	1.31	726.96	694.30	1256.30	735.46	78.22	60.65	638.52	889.94	859.31
	75	1.07	0.72	0.88	628.09	797.55	1567.24	151.64	39.77	25.92	588.98	1106.52	1783.02
	100	0.90	0.77	0.72	508.90	381.24	717.78	46.61	20.13	14.31	564.63	498.31	996.65

- What a crowded table!
- Giving all of these ratios to two significant figures after the decimal point is simply not justified by the accuracy of measurement.

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## A few statistical rules for the Results section

- Which tests were used, with all the relevant parameters, should be noted.

E.g., Mean and standard deviation (SD) 44% (3)

Median and interpercentile range 7 years (4.5 to 9.5 years)

- Mean and standard deviation should be used for reporting normally distributed data. Median and interpercentile range should be used for skewed data.

- Numbers should be reported with the appropriate degree of precision. Reported (not analyzed) numbers should be rounded to two significant digits unless there is a valid reason for more precision.

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## A few statistical rules for the Results section

- When reporting percentages, the numerators and denominators should always be given.

E.g., 50% (500/1000)

- Percentages should not be used for very small samples.

E.g., "One of two" should not be replaced by 50%

- The actual *P* value should be reported (not simply  $P > 0.05$ )

- The word "significant" should be used to describe "statistically significant differences" only.

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## A few statistical rules for the Results section

Please consult

Thomas A. Lang, Michelle Secic.

**How to Report Statistics in Medicine: Annotated Guidelines for Authors, Editors, and Reviewers.**

Philadelphia: ACP; 1997.

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## 8. Discussion

... what do the results mean?

- Check for the following:
  - How do your results relate to the original question or objectives outlined in the Introduction section?
  - Can you reach your conclusion smoothly after your discussion?
  - Do you provide interpretation for each of your results presented?
  - Are your results consistent with what other investigators have reported? Or are there any differences? Why?
  - Are there any limitations?
- Do not
  - Make statements that go beyond what the results can support
  - Suddenly introduce new terms or ideas



## Clearly state the relationship with previous publications.

Journal of Molecular Biology doi:10.1016/j.jmb.2005.08.078  
Volume 354, Issue 3, 2 December 2005, Pages 601-613

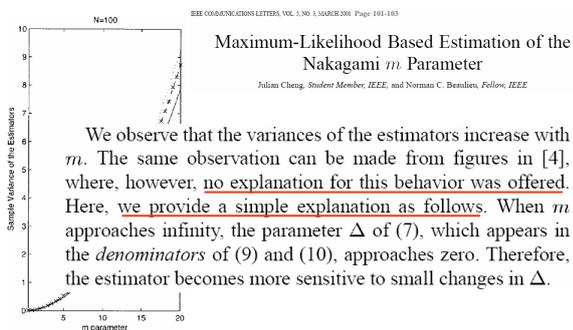
Design and Characterization of Viral Polypeptide Inhibitors  
Targeting Newcastle Disease Virus Fusion

Jieqing Zhu<sup>a, b, \*</sup>, Xinhui Jiang<sup>a, \*†</sup>, Yueyong Liu<sup>a, b, \*</sup>, Po Tien<sup>a, c, d, e</sup> and George F. Gao<sup>a, b, c, d, e</sup>

... we showed that HR212 could inhibit NDV-mediated cell fusion... This was in contrast to the results of others[16], which... As a further characterization, we detected the inhibition of HR212 added... This result implied that the conformational changes of the F protein occurred very quickly after receptor binding to the HN protein... This may explain why the inhibition activity was much lower if added after cleavage activation. However, all these results are still consistent with the idea that HR2 peptides could interact ...



## Speculations on possible interpretations are allowed. But these should be rooted in fact, rather than imagination.



## Watch out for the non-quantitative words!

E.g., Low/high; Extremely; Enormous; Rapidly; Dramatic; Massive; Considerably; Exceedingly; Major, minor; ...

They are often qualified by very, quite, slightly, etc. **Quantitative description is always preferred.**

- But note subtleties
  - ‘the effect of adding N was minor’ – not quantitative;
  - ‘the effect of adding P was to increase dry weight by 60% whereas the effect of adding N was minor’ – ‘minor’ is given a sense of quantitative definition.



- Ask your colleagues to read Results and Discussion before you go further! Check the organization, number and quality of illustrations, the logic and the justifications.
- Revision of Results and Discussion is **not just paper work**. You may do further experiments, derivations, or simulations. Sometimes you cannot clarify your idea in words because some critical items have not been studied substantially.



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## 9. Conclusion

– How the work advances the field from the present state of knowledge

- A clear conclusion section helps reviewers to judge your work easily.
- Do
  - Present global and specific conclusions, in relation to the objectives.
  - Indicate uses, extensions, and limitations if appropriate.
  - Suggest future experiments and point out those that are underway.
- Do not
  - Summarize paper (abstract is for that purpose).
  - Make a list of trivial statements of your results.
  - Make judgments about impact.



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### Toxicology

Volume 234, Issues 1-2, 5 May 2007, Pages 90-102

#### Cholinesterase inhibition and alterations of hepatic metabolism by oral acute and repeated chlorpyrifos administration to mice

Maria Francesca Cometa<sup>a,\*,</sup> Franca Maria Buratti<sup>a</sup>, Stefano Fortuna<sup>a</sup>, Paola Lorenzini<sup>a</sup>, Maria Teresa Volpe<sup>a</sup>, Laura Parisi<sup>a</sup>, Emanuela Testa<sup>a</sup> and Annarita Meneguzzi<sup>a</sup>

doi:10.1016/j.tox.2007.02.008

In conclusion, our results obtained with mice increase the knowledge on CPF-induced adverse effects, up to now limited to rats. They seem to suggest that not all the CPF effects measured in rats and the related doses can be directly extrapolated to mice, which seem to be more susceptible at least to acute treatment. Even though many questions still remain open, our findings show that the mouse could be considered a suitable experimental model for future studies on the toxic action of organophosphorus pesticides focused on mechanisms, long term and age-related effects.

- Contribution to the particular area
- Practical significance, extensions
- Possible future work



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### Signal Processing

Volume 87, Issue 10, October 2007, Pages 2455-2460

Special Section: Total Least Squares and Errors-in-Variables Modeling

#### Calculation of radix-2 discrete multiresolution Fourier transform

X. Wen<sup>a,\*,</sup> and M. Sandler<sup>a</sup>

doi:10.1016/j.sigpro.2007.04.002

"...we addressed the calculation issues of radix-2 MFT. We have shown that by making reuse of the internal results of DIF-FFT, we are able to save nearly half the computation. The main drawback of this method is the loss of flexibility in framing and windowing, i.e., we are restrained to use 1/integer frame offsets, and low-complexity window functions of the cosine window family, although this is rarely a problem in practise."

- Scientific significance of the work
  - Limitation
  - Practical relevance



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## Avoid gratuitous statements in conclusion

"...There was a tendency for the soil seed bank to decrease in density with increasing elevation in both shady slope and sunny slope, and by the occurrence of species and different altitudes between soil seed bank and vegetation very low, and *Picea crassifolia* was in the soil seed bank despite being prominent component of the surface vegetation at woodlands, thus *Picea crassifolia* has no persistent seed bank. It will be important to maintain the existing vegetation in the future management."

Why is it important to maintain the existing vegetation, and how are we going to apply the results of this study of seed banks to maintain it?



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## Another Example

"The limited distribution of this *L. chinensis* forest, and the 'rare' status of the species make these kinds of studies very important to the successful management and preservation of this endemic species of the Taibai Natural Reserve."

- How are these type of studies going to be used in land management and preservation? How are they going to be applied, and what will be the outcomes?



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## Write positively!

"These results suggest that the trees might be under water stress to the extent that mortality might be possible"

- This statement is vague enough to mean **nothing!**



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## 10. Acknowledgments

- It is your chance to thank
  - People who have helped you, e.g., technical help, English revision
  - Funding organizations
  - Affiliation to projects and programs
  - Reviewers and editors (especially in the revised manuscript)
- Do
  - Ask permission from those who will be acknowledged with their names mentioned.
  - State clearly why they are acknowledged.
  - Include the grant number or reference.



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**Direct asymmetric aldol reaction catalyzed by simple prolinamide phenols**

Yu-Qin Fu<sup>a</sup>, Zai-Chun Li<sup>b</sup>, Li-Na Ding<sup>a</sup>, Jing-Chao Tao<sup>a,\*,</sup>, Sheng-Hong Zhang<sup>a</sup> and Ming-Sheng Tang<sup>a,\*,</sup>

doi:10.1016/j.tetasy.2006.12.008

**Acknowledgments**

We are grateful for the financial support from the National Natural Science Foundation of China (grants 20372059). We also thank Jian-Xun Kang and Wei-Guo Zhu for the determination of NMR, Shao-Min Wang for HRMS and Jian-Ge Wang for the analysis of the single crystal structure.



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**11. References**

- There are two basic references systems.
  - Vancouver system: references are numbered in the list according to the sequences they appeared in the main text.

- [1] V. Ponce, Appl. Catal. A 149 (1997) 27.
- [2] P. Gallezot, D. Richard, Catal. Rev. 40 (1998) 81.
- [3] P. Claus, Appl. Catal. A 291 (2005) 222.
- [4] D. Loffreda, F. Delbecq, F. Vigné, P. Sautet, J. Am. Chem. Soc. 128 (2006) 1316.
- [5] G.C. Bond, D.T. Thompson, Catal. Rev. 41 (1999) 19.
- [6] A. Corma, P. Serna, Science 313 (2006) 32.

Look for the journal title abbreviations at  
[http://apps.isiknowledge.com/WoS/help/A\\_abrvjt.html](http://apps.isiknowledge.com/WoS/help/A_abrvjt.html),  
or <http://www.library.ubc.ca/scieng/coden.html#U>.



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First  
alphabetically

Then  
chronologically

z. Harvard system: references are listed alphabetically according to the author name.

- Kurdziel, A.S., Wilkinson, N., Gordon, S.H., Cook, N., 2004. Development of methods to detect foodborne viruses. In: Clark, S.A., Thompson, K.C., Keevil, C.W., Smith, M.S. (Eds.), Rapid Detection Assays for Food and Water. Royal Society of Chemistry, Cambridge, pp. 175-177.
- Kurdziel, A.S., Wilkinson, N., Langton, S., Cook, N., 2001. Survival of poliovirus on soft fruit and salad vegetables. J. Food Prot. 64, 706-769.
- Le Guyader, F., Dubois, E., Menard, D., Pommepuy, M., 1992. Detection of hepatitis A virus, rotavirus, and enterovirus in naturally contaminated shellfish and sediment by reverse transcription-semi-nested PCR. Appl. Environ. Microbiol. 60, 3665-3671.
- Le Guyader, F., Mittelholzer, S., Haugarreau, C.L., Hedlund, K.-O., Asterlund, R., Pommepuy, M., Svensson, L., 2004. Detection of noroviruses in raspberries associated with a gastroenteritis outbreak. Int. J. Food Microbiol. 97, 179-186.

Example

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**Get your references right!**

- It is irritating for reviewers to find mistakes, particularly in one of their own references.
- Checking the format takes much time for the editors. Make their work easier and they will appreciate the effort.
- Please **make everything conforms to the Guide for Authors of the journal**, including the format of in-text citation, author names, article titles, journal names, page span, volume, and year. Read several sample articles to learn the right style.

[er.com/wpsjfind/journaldescription.cws\\_home/332/authorinstructions](http://www.wpsjfind/journaldescription.cws_home/332/authorinstructions)

**Guide for Authors**

**References**

Note: Authors are strongly encouraged to check the accuracy of each reference against its original source.

- All publications cited in the text should be presented in a list of references following the text of the manuscript. The manuscript should be carefully checked to ensure that the spelling of author's names and dates are exactly the same in the text as in the reference list.
- In the text refer to the author's name (without initial) and year of publication, followed if necessary by a short reference to appropriate pages. Examples: "Since Peterson (1988) has shown that...", "This is in agreement with results obtained later (Kramer, 1989, pp. 12-16)".

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### In-text citation: do not put all citations at the end of sentences

\*Worldwide research on pegmatites has involved the study of their petrogenesis, classification, texture and structure, rare element geochemistry, mineralogy, and experimental petrology; (Solodov, 1962; Zou and Xu, 1975; Zou et al., 1986; Kuzminko, 1976; Makagon, 1977; Makagon and Shmakin, 1988; Luan, 1979; Wang, 1982; Shmakin, 1983; London, 1981, 1986, 1998; Cerny, 1982a, 1982b, 1991; Cerny et al., 1986; Cerny and Lenton, 1995; Roedder, 1984; Walker et al., 1986; Wang et al., 1987; Chu and Wang, 1987; Wang et al., 1987; Zhang et al., 1987; Zhao et al., 1993; Li et al., 1983; Li, 1987; Li et al., 1994, 1998, 1999a, 1999b, 2000; Bai, 1995; Zeng and Jin, 1995; Wu et al., 1995; Lu and Wang, 1997; Feng, 1998).

36 references in one sentence!



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### Give just 2-3 pertinent references in a proper context.

The new materials achieved by using conventional chemical methods include carbon, noble metals, transition metal oxides and sulphides. [4-8]



The new materials achieved by using conventional chemical methods include carbon [4], noble metals [5, 6], transition metal oxides [7] and sulphides [8].



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### In-text citation: "et al" can be used only when a reference bears more than two authors

"...For three or more authors you must use the surname name of the first author and add 'et al.' and for two authors you cannot use et al., but must mention both family names. For one author, you must mention the family name..."

...This means that referring to ref. 13, with two authors, cannot be done with et al., but must be done by Hu and Ruckenstein. Similarly, referring to ref. 17 should be done as Zhdanov and Kasemov. Ref. 20 should be referred to as Latkin et al., always mention the FIRST author and then add et al."

– Roel Prins, Editor, *Journal of Catalysis*



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### Each reference needs to sufficient information so that the reader can find it easily.

- Avoid citing the following if possible:
  - personal communications, unpublished observations, manuscripts submitted but not yet accepted for publication
  - articles published only in the local language, which are difficult for international readers to find



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### Avoid excessive self-citation and journal self-citation

Citation Overview Citations received since

Author: [redacted]

Exclude from citation overview:  self citations

Sort documents Date Range  
 year descending 2005 to 2007 Update Overview

*h* index = 2 (9 out of 44 documents have each been cited at least 2 times)

“ISI ... stopped listing that journal this year because 85 percent of the citations to the publication were coming from its own pages.”

It is easy to exclude the self-citation from your citation record.

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### “Secondary referencing”: not the best practice

- Wherever possible, you should always try and **read the original**.
- If you have to give a secondary reference in your work, you **must make it clear that you have not read the original**. For example, Jones (2004, p.22) endorses this controversial view, quoting Johnson's conclusion that the earlier records have been forged.
- In your list of references at the end of your work, you **cannot include a reference to the original work** (in this example, by Johnson) as you have not read it. Your reference would therefore be: Jones, P.R. (2004) Golden legends: Christian hagiographies in early medieval Europe. London: Farrar.

– Academic conventions and bibliographic referencing. Newman higher education in Birmingham. <http://www.newman.ac.uk/Library/referencing.htm#intextcitation>

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## 12. Supplementary Material

“In particular, figures, tables, passages describing theory, or experimental details, which are **only of secondary importance to the main scientific thrust** of an article, can now be moved to supporting material. This has begun to open up new possibilities: papers that have in the past been considered as “long” and “heavy going” can **be transformed into succinct information-rich** articles, which are more interesting to read.”

– Guide for Authors, *Journal of Colloid and interface Science*

- Supporting material will **be available online** to readers if the paper is eventually published. The supporting materials section should **be referred** to in the main manuscript to direct reader, as appropriate.
- All the information should be **related and supportive** to your article.

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### Medical Image Analysis

Volume 9, Issue 3, June 2005, Pages 209-221

#### Flux driven automatic centerline extraction

Sylvain Bouix<sup>a, \*</sup>, Kaleem Siddiqi<sup>a, \*</sup> and Allen Tannenbaum<sup>a, \*</sup>

doi:10.1016/j.media.2004.06.026

Appendix A. Supplementary material

**Video** 1. Artery image. (6287 K) [Video\\_1.mpg](#) [Help](#)  
MPEG movie 1.

**Video** 2. Colon image. (7472 K) [Video\\_2.mpg](#) [Help](#)  
MPEG movie 2.

The main text [Display Full Size version of this image.](#)

Fig. 6. (a) A segmented colon. (b) Its medial surface centerline path. (c) The smoothed path shown in movie. The entire movie can be viewed at <http://www.cim.mcgill.ca/~sbouix/research/> article, at doi:10.1016/j.media.2004.06.026.

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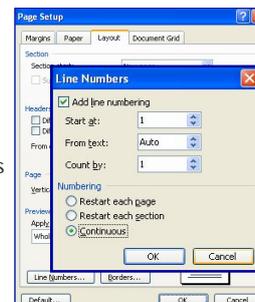
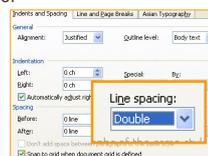
## How to write a good manuscript for an international journal

- Preparations before starting
- Construction of an article
- **Technical details**



## 1. Suggested text layout

- Keep it consistent throughout the manuscript.
- Double line spacing and 12 font is preferred: make it convenient for reviewers to make annotations.
- Number the pages.
- Number the lines if the journal requires to do so.



## 2. Suggested length of a full article

- "...25- 30 pages is the ideal length for a submitted manuscript, including **ESSENTIAL** data only."
  - Julian Eastoe, Co-editor, *Journal of Colloid and Interface Science*
- Title page
- Abstract 1 paragraph
- Introduction 1.5-2 manuscript pages (double-spaced, 12pt)
- Methods 2-4 manuscript pages
- Results and Discussion 10-12 manuscript pages
- Conclusions 1-2 manuscript pages
- Figures 6-8
- Tables 1-3
- References 20-50 items

- Letters or short communications have a stricter limitation of the length. For example, 3000 words with no more than 5 illustrations.



## 3. Abbreviations

- Abbreviations should be defined **on the first use** in **both** abstract and the main text. Some journals even forbid the usage of abbreviations in the abstract.

- Abbreviations that are **firmly established** in the field do not need to be defined.

"There is no need to define the commonly used abbreviations such as SEM, TEM, etc."

– Peter Thrower, Editor-in-chief, *Carbon*

- Never define an abbreviation which is never **used later** in the text.



### Acronyms – abbreviations that consists of the initial letters of a series of words, pronounced in sequence.

- Do not overuse acronyms.

"You might have set up an experiment with a eucalypt forest (EF) and a pine forest (PF), on two aspects North (N) and south (S), in two localities, say Victoria (V) and Tasmania (T). You then have the following: VEFS, VEFN, TEFS, TEFN, VPFS, VPFN, TPFS and TPFN. This leads to sentences like

'The concentration of phosphorus in top-soil was greatest in VEFS, intermediate in VEFN, VPFN and TPFS, and least in the other forests.'

This might make sense to the author, but it is a **nightmare** for reviewers and readers. You should not expect your readers to remember acronyms."

– Peter Attiwill, Editor-in-Chief, *Forest Ecology and Management*



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### 4. Cover Letter

- Basic information should be included as follows:

- Editor name(s)
- Originality of submission
- No competing financial interests
- Desired reviewers
- Corresponding author

April XX, 2007

JOURNAL EDITOR NAME

Editor-in-Chief

NAME OF JOURNAL

Dear Dr. JOURNAL EDITOR NAME:

I am submitting the manuscript "Manuscript Title" by RESEARCHER NAME for consideration for publication in NAME OF JOURNAL. I confirm that the manuscript has not been published or under consideration for publication elsewhere. Further, this submission has been approved by the institution where the study was conducted. Correspondence concerning the manuscript should be to the author, RESEARCHER NAME. I look forward to learning your response to our submission.

Sincerely,

RESEARCHER NAME, Ph.D.

Email: xxxxx@xxx.edu.cn

UNIVERSITY NAME, DEPARTMENT, AND ADDRESS



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### Cover letter is your chance to speak to the editor directly.

- Do not summarize your paper, or repeat the abstract, but mention what makes it special to the journal.
- Indicate the editor about the track record of your research... Make it short and striking.
  - Tell the editor your **research area** or your specialty (1 sentence)  
"We have been working in [a certain field]..."
  - Mention your **current research interest** (1 sentence)  
"We are now interested in / working on [some hot topic]..."
  - Present the **significance** of this piece of work (1-2 sentences)  
"In this manuscript, we answered a critical issue of..."
  - Stress 1-3 **main points** (1-3 sentences)
  - Confine the length to **2/3 page**

– George F. Gao, Director, Institute of microbiology,  
Chinese Academy of Sciences



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### 5. Suggest potential reviewers (referees)

- Your suggestions will help the Editor to pass your manuscript to the review stage more efficiently. Generally you are requested to provide 3-6 potential reviewers.

"You can easily find potential reviewers and their contact details by **mentioning authors from articles** in your specific subject area (e.g., your references). The reviewers should represent **at least two regions of the world**. And they should not be your supervisor or close friends."

– Roel Prins, Editor, *Journal of Catalysis*



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- Current status of Chinese articles
- Why do scientists publish?
- What is a good manuscript?
- How to write a good manuscript for an international journal
  - Preparations before starting
  - Construction of an article
  - Technical details
- **Revision, and response to reviewers**
- Ethical issues
- Conclusion: what gets you accepted?



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## Why revision is important and necessary?

- Which procedure do you prefer?
  - Send out a sloppily prepared manuscript → get rejected after 4-6 months → send out again only a few days later → get rejected again... → sink into despair
  - Take 3-4 months to prepare the manuscript → get the first decision after 4 months → revise carefully within time limitation...accepted

**磨刀不误砍柴工**

Please cherish your own achievements!

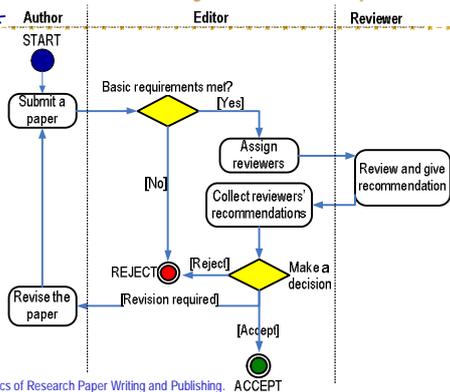


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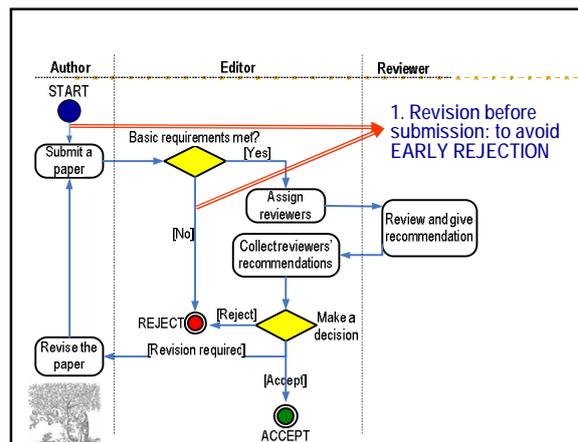
138

## Who moved your manuscript?



Michael Demtl, Basics of Research Paper Writing and Publishing.  
<http://www.pri.univie.ac.at/~demitl/papers/meth-se.pdf>

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**“Initial editorial review”:**  
many journals reject manuscripts that are not well prepared without sending them for review.

- Why?
  - The peer-review system is **grossly overloaded** and editors wish to use reviewers only for those papers with a good probability of acceptance.
  - It is a **disservice** to ask reviewers to spend time on work that has clearly evident deficiencies.



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**Please make every attempt to make the manuscript as good as possible.**

- No one get it right at the first time! Write, and re-write.
- Suggestions:
  - After writing a first version, take several days of rest. Refresh your brain with different things. Come back with critical eyes.
  - Ask your colleagues and supervisor to review your manuscript first. Ask them to be highly critical, and be open to their suggestions.



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**Revision before submission – checklist**

**Reasons for early rejection:**  
**content (aims and scope)**

- Paper is of limited interest or covers local issues only (sample type, geography, specific product, etc.).
- Paper is a routine application of well-known methods
- Paper presents an incremental advance or is limited in scope
- Novelty and significance are not immediately evident or sufficiently well-justified

**What should you check?**

- Does your work have any interest for an international audience? Is it necessary to let the international readers know the results?
- Have you added any significant values to an exist method or explored remarkable extensions of its application?
- Did you provide a perspective consistent with the nature of journal? Are the right conclusions drawn from the results?
- Does your work add to the existing body of knowledge? – Just because it has not been done before is no justification for doing it now. And just because you have done the study does not mean that is very important!



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**Revision before submission – checklist**

**Reasons for early rejection:**  
**Preparation**

- Failure to meet submission requirements
- Incomplete coverage of literature
- Unacceptably poor English

**What should you check?**

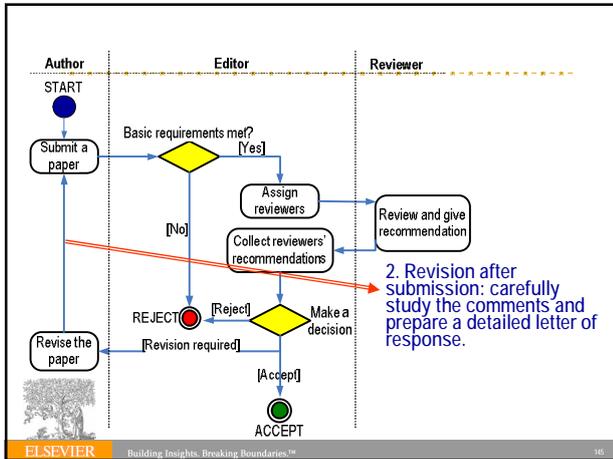
- Read the Guide for Authors again! Check your manuscript point by point. Make sure every aspect of the manuscript is in accordance with the guidelines. (Word count, layout of the text and illustrations, format of the references and in-text citations, etc.)
- Are there too many self-citations, or references that are difficult for the international reader to access?
- Did the first readers of your manuscript easily grasp the essence? Correct all the grammatical and spelling mistakes.



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## Take revision very seriously.

- Nearly every article requires revision.
- Bear in mind that editors and reviewers **mean to help** you improve your article. Do not take offence.
- Minor revision **does NOT guarantee** acceptance after revision. Do not count on the acceptance before you carefully study the comments.
- Revise the **whole** manuscript – not just the parts the reviewers point out.



## Revision: a great learning opportunity!

- A further review of the revised manuscript is common. Cherish the chance of discussing your work directly with other scientists in your community. Please prepare a detailed letter of response.
- Cut and paste **each** comment by the reviewer. Answer it directly below. Do not miss any point. State **specifically** what changes (if any) you have made to the manuscript. Identify the page and line number. **A typical problem** – Discussion is provided but it is not clear what changes have been made.
- Provide a **scientific response** to the comment you accept; or a **convincing, solid and polite rebuttal** to the point you think the reviewer is wrong.

- Write in a way that your responses can be given to the reviewer.



## A sample response

Reviewer's Comments: It would also be good to acknowledge that geographic routing as you describe it is not a complete routing solution for wireless networks, except for applications that address a region rather than a particular node. Routing between nodes requires further machinery, which detracts from the benefits of geographic routing, and which I don't believe you have made practical.

*Author's reply:* We agree and will add an appropriate caveat. Note that for data-centric storage (name-based exact-match and range queries for sensed events), the storage and query processing mechanisms "natively" address packets geographically--without a "node-to-location" database.

...

Reviewer's Comments: The footnotes are driving me crazy!

*Author's reply:* We'll strive to remove some of them.

...

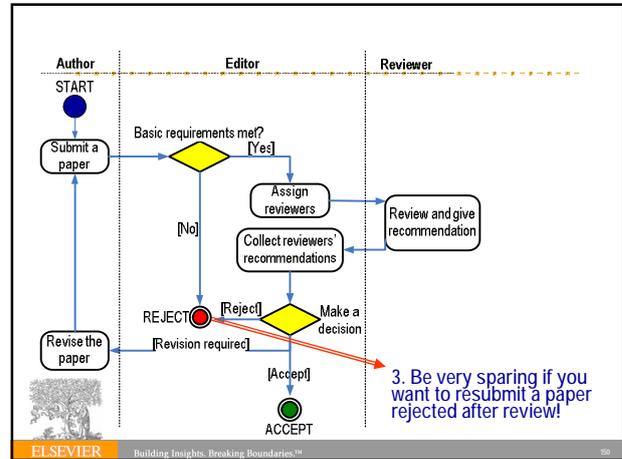
– Dr. Ramesh Govindan, professor,  
Computer Science Department, University of Southern California  
[http://enl.usc.edu/~ramesh/writings/files/NSDI\\_response.txt](http://enl.usc.edu/~ramesh/writings/files/NSDI_response.txt)



## A sample rebuttal

"...In section (4) you complain that there is no discussion of the limitations in the scope of HR. For example merely to reflect outside reality does not contribute to the problem of conscious awareness of these objects. However this issue is not unique to HR, it is a general philosophical issue that applies just as well to the alternative Neuron Doctrine model. But the Neuron doctrine itself cannot even plausibly account for the reflection of outside reality in an internal representation, due to the problems of emergence, reification, and invariance, which is why the Neuron Doctrine suggests a more abstracted concept of visual representation, in which the visual experience is encoded in a far more abstracted and abbreviated form. Therefore although HR does not solve the "problem of consciousness" completely, it is one step closer to a solution than the alternative. The philosophical issue of consciousness however is beyond the scope of this paper, which is a theory of neural representation, rather than a philosophical paper. I enclose a copy of my book, 'The World In Your Head', which addresses these philosophical issues more extensively..."

– Dr. Steven Lehar, <http://sharp.bu.edu/~slehar/>  
<http://sharp.bu.edu/~slehar/webstuff/hr/rebut.html>  
<http://sharp.bu.edu/~slehar/webstuff/hr/rebut-a.html>  
<http://sharp.bu.edu/~slehar/webstuff/hr/rebut-b.html>



## Rejection: not the end of the world



- Everyone has papers rejected – do not take it personally.
- Try to understand why the paper was rejected.
- Note that you have received the benefit of the editors and reviewers' time; take their advice serious!
- Re-evaluate your work and decide whether it is appropriate to submit the paper elsewhere.
- **If so, begin as if you are going to write a new article. Read the Guide for Authors of the new journal, again and again.**



## Never treat publication as a lottery by resubmitting a rejected manuscript directly to another journal without any significant revision!!! It won't save any of your time and energy...

- The original reviewers (even editors) may eventually find it, which can lead to animosity towards the author.
- A suggested strategy
  - In your **cover letter**, declare that the paper was rejected and name the journal.
  - **Include** the referees' reports and a **detailed letter of response**, showing how each comment has been addressed.
  - **Explain why** you are resubmitting the paper to this journal, e.g., this journal is a more appropriate journal; the manuscript has been improved as a result of its previous review; etc.



- Current status of Chinese articles
- Why do scientists publish?
- What is a good manuscript?
- How to write a good manuscript for an international journal
  - Preparations before starting
  - Construction of an article
  - Technical details
- Revision, and response to reviewers
- **Ethical issues**
- Conclusion: what gets you accepted?



## Publish **AND** Perish! – if you break ethical rules

- International scientific ethics have evolved over centuries and are commonly held throughout the world.
- Scientific ethics are not considered to have national variants or characteristics – there is a **single ethical standard** for science.
- Ethics problems with scientific articles are on the rise **globally**.



## Deadly Sins – Unethical behavior “can earn rejection and even a ban from publishing in the journal”

– Terry M. Phillips, Editor, *Journal of Chromatography B*

- Multiple submissions
- Redundant publications
- Plagiarism
- Data fabrication and falsification
- Improper use of human subjects and animals in research
- Improper author contribution



## 1. Multiple submissions (一稿多投): sending one of your papers to more than one journal at the same time

- Multiple submissions save your time but **waste editors’**.
- The editorial process of your manuscripts will be **completely stopped** if the duplicated submissions are discovered.

“It is considered to be unethical... We have thrown out a paper when an author was caught doing this. I believe that the other journal did the same thing.”

– James C. Hower, Editor, *the International Journal of Coal Geology*

- Competing journals constantly exchange information on suspicious papers (even between competitors).
- You should not send your manuscripts to a second journal **UNTIL** you receive the **final decision of the first journal**.



## 2. Redundant Publication (重复发表): two or more papers, without full cross reference, share the same hypotheses, data, discussion points, or conclusions

- An author should not submit for consideration in another journal a previously published paper.
  - Published studies **do not need to be repeated** unless further confirmation is required.
  - Previous publication of an abstract during the proceedings of conferences does not preclude subsequent submission for publication, but **full disclosure** should be made at the time of submission.
  - Re-publication of a paper in another language is acceptable, provided that there is **full and prominent disclosure of its original source** at the time of submission.
  - At the time of submission, authors should disclose details of related papers, even if in a different language, and similar papers **in press**.



## Acceptable secondary publication

- “Certain types of articles, such as guidelines produced by governmental agencies and professional organizations, **may need to reach the widest possible audience**. In such instances, editors sometimes choose deliberately to publish material that is also being published in other journals, **with the agreement of the authors and the editors of those other journals.**”

– Writing and Editing for Biomedical Publication, International Committee of Medical Journal Editors, *Uniform Requirements for Manuscripts submitted to Biomedical Journals*.

<http://www.icmje.org/index.html#ethic>



## Secondary publication: conditions

1. The authors have **received approval from the editors of both journals**; the editor concerned with secondary publication must have a photocopy, reprint, or manuscript of the primary version.
2. The priority of the primary publication is respected by a publication **interval of at least one week** (unless specifically negotiated otherwise by both editors).
3. The paper for secondary publication is intended for **a different group of readers**; an abbreviated version could be sufficient. (*to be continued*)



## Secondary publication: conditions (continued)

4. The secondary version **faithfully** reflects the data and interpretations of the primary version.
5. The footnote on the title page of the secondary version informs readers, peers, and documenting agencies that the paper has been published in whole or in part and states the primary reference. **A suitable footnote might read: “This article is based on a study first reported in the [title of journal, with full reference].”**
6. The **title** of the secondary publication **should indicate** that it is a secondary publication (complete republication, abridged republication, complete translation, or abridged translation) of a primary publication.





One of the most common forms of plagiarism is inappropriate, or inadequate paraphrasing.

- Paraphrasing is **restating** someone else's ideas while **not copying verbatim**.
- Unacceptable paraphrasing includes any of the following:
  - using phrases from the original source without enclosing them in quotation marks;
  - emulating sentence structure even when using different wording;
  - emulating paragraph organization even when using different wording or sentence structure.
- Unacceptable paraphrasing--even with correct citation--is considered plagiarism.



– Statement on Plagiarism. Department of Biology, Davidson College.  
<http://www.bio.davidson.edu/dept/plagiarism.html>

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- Original (Gratz, 1982):

Bilateral vagotomy resulted in an increase in tidal volume but a depression in respiratory frequency such that total ventilation did not change.

- Restatement 1:



Gratz (1982) showed that bilateral vagotomy resulted in an increase in tidal volume but a depression in respiratory frequency such that total ventilation did not change.

This sentence is identical to the original except that the author is attributed. It is a word-for word copying, without any changes and without quotation marks.



– Ronald K. Gratz. *Using Other's Words and Ideas*.  
Department of Biological Sciences, Michigan Technological University

[https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%20\\_20Using%20Other's%20Words%20&%20Ideas.pdf](https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%20_20Using%20Other's%20Words%20&%20Ideas.pdf)

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- Original (Gratz, 1982):

Bilateral vagotomy resulted in an increase in tidal volume but a depression in respiratory frequency such that total ventilation did not change.

- Restatement 2:



Gratz (1982) showed that bilateral vagotomy produced an increase in tidal volume and a depression in respiratory frequency so that total ventilation did not change.

Changing a few words does not alter the fact that this sentence, especially the sentence structure, is still substantially the same as the original.



– Ronald K. Gratz. *Using Other's Words and Ideas*.  
Department of Biological Sciences, Michigan Technological University

[https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%20\\_20Using%20Other's%20Words%20&%20Ideas.pdf](https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%20_20Using%20Other's%20Words%20&%20Ideas.pdf)

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- Original (Gratz, 1982):

Bilateral vagotomy resulted in an increase in tidal volume but a depression in respiratory frequency such that total ventilation did not change.

- Restatement 3:



Gratz (1982) showed that following bilateral vagotomy the snakes' tidal volume increased but their respiratory frequency was lowered. As a result, their total ventilation was unchanged.

Although the same information is presented, the sentence structure and word order have been substantially altered.



– Ronald K. Gratz. *Using Other's Words and Ideas*.  
Department of Biological Sciences, Michigan Technological University

[https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%20\\_20Using%20Other's%20Words%20&%20Ideas.pdf](https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%20_20Using%20Other's%20Words%20&%20Ideas.pdf)

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Original (Gratz, 1982):  
Bilateral vagotomy resulted in an increase in tidal volume but a depression in respiratory frequency such that total ventilation did not change.

Restatement 4:  
Gratz (1982) showed that following vagotomy the snakes' lung volume increased but their respiratory rate was lowered. As a result, their breathing was unchanged.

**Dropping the adjective "bilateral" alters the sense of the experimental technique. "Lung volume" is not the same as "tidal volume" and "breathing" is not the same as "total ventilation". Paraphrase should not change the meaning of the source.**

— Ronald K. Gratz. *Using Other's Words and Ideas*.  
Department of Biological Sciences, Michigan Technological University  
[https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%202\\_%20Using%20Other's%20Words%20&%20Ideas.pdf](https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%202_%20Using%20Other's%20Words%20&%20Ideas.pdf)

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Original (Buchanan, 1996):  
What makes intentionally killing a human being a moral wrong for which the killer is to be condemned is that the killer did this morally bad thing not inadvertently or even negligently, but with a conscious purpose -- with eyes open and a will directed toward that very object.

Restatement 1:  
Buchanan (1996) states that what makes intentionally killing a human being a moral wrong for which the killer is to be condemned is that the killer did this morally bad thing not inadvertently or even negligently, but with a conscious purpose -- with eyes open and a will directed toward that very object.

**Although technically avoiding plagiarism, the fact that the quoted sentences makes up almost the entire paragraph and contains all of the important information means that this is not the writer's own work.**

— Ronald K. Gratz. *Using Other's Words and Ideas*.  
Department of Biological Sciences, Michigan Technological University  
[https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%202\\_%20Using%20Other's%20Words%20&%20Ideas.pdf](https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%202_%20Using%20Other's%20Words%20&%20Ideas.pdf)

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Original (Buchanan, 1996):  
What makes intentionally killing a human being a moral wrong for which the killer is to be condemned is that the killer did this morally bad thing not inadvertently or even negligently, but with a conscious purpose -- with eyes open and a will directed toward that very object.

Restatement 2:  
Buchanan (1996) states that we condemn a person who intentionally kills a human being because he did a "morally bad thing" not through negligence or accident but with open eyes and a direct will to take that life.

**It is an acceptable paraphrasing.**

— Ronald K. Gratz. *Using Other's Words and Ideas*.  
Department of Biological Sciences, Michigan Technological University  
[https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%202\\_%20Using%20Other's%20Words%20&%20Ideas.pdf](https://www.geo.mtu.edu/~asmayer/un1001/un1001%20Fac%20Handbk%202_%20Using%20Other's%20Words%20&%20Ideas.pdf)

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**What guarantee an acceptable paraphrasing?**

- Make sure that you really understand what the original author means. Never copy and paste any words that you do not fully understand.
- Think about how the essential ideas of the source relate to your own work, until you can deliver the information to others without referring to the source.
- Compare you paraphrasing with the source, to see 1) whether you change the wording and the structure sufficiently; 2) whether the true meaning of the source is retained.

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#### 4. Data fabrication and falsification (数据造假)

- Fabrication is making up data or results, and recording or reporting them.

"... the fabrication of research data ... **hits at the heart of our responsibility to society**, the reputation of our institution, the trust between the public and the biomedical research community, and our personal credibility and that of our mentors, colleagues..."

"It can **waste the time of others**, trying to replicate false data or designing experiments based on false premises, and can lead to therapeutic errors. It can never be tolerated."

– Richard Hawkes, Professor,  
Department of Cell Biology and Anatomy, University of Calgary



#### 4. Data fabrication and falsification (数据造假)

- Falsification is manipulating research materials, equipment, processes; or changing / omitting data or results such that the research is not accurately represented in the research record.

➤ Select data to fit a preconceived hypothesis: "...an experiment (or data from an experiment) is not included because it 'did not work', or we show 'representative' images that do not reflect the total data set or, more egregiously, data that do not fit are simply shelved."

– Richard Hawkes

"The most dangerous of all falsehoods is a slightly distorted truth."  
– G.C.Lichtenberg (1742 - 1799)



#### 5. Improper use of human subjects and animals in research

- When reporting experiments on human subjects, authors should indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000 (5). If doubt exists whether the research was conducted in accordance with the Helsinki Declaration, **the authors must explain the rationale for their approach, and demonstrate that the institutional review body explicitly approved the doubtful aspects of the study.**
- When reporting experiments on animals, authors should be asked to indicate whether the institutional and national guide for the care and use of laboratory animals was followed. **No manuscript will be considered unless this information is supplied.**



#### 6. Improper author contribution

- Authorship credit should be based on
  1. substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;
  2. drafting the article or revising it critically for important intellectual content;
  3. final approval of the version to be published.

Authors should meet conditions 1, 2, and 3. Those who have participated in certain substantive aspects of the research project should be acknowledged or listed as contributors.



### Acquisition of funding, collection of data, or general supervision of the research group, alone, does not justify authorship.

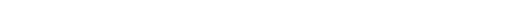
- Each author should have **sufficiently participated** in the work to take public responsibilities for appropriate portions of the content.
- The corresponding author should ensure that all appropriate co-authors and no inappropriate co-authors are included on the paper. **If there is plagiarism or other ethical problems, the corresponding author cannot hide behind or remain innocent.**



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- Current status of Chinese publications
- Why do scientists publish?
- What is a good manuscript?
- How to write a good manuscript for an international journal
  - Preparations before starting
  - Construction of an article
  - Technical details
- Revision, and response to reviewers
- Ethical issues
- **Conclusion: what gets you accepted?**



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### What gets you accepted?

- **A**ttention to details
- **C**heck and double check your work
- **C**onsider the reviews
- **E**nglish must be as good as possible
- **P**resentation is important
- **T**ake your time with revision
- **A**cknowledge those who have helped you
- **N**ew, original and previously unpublished
- **C**ritically evaluate your own manuscript
- **E**thical rules must be obeyed



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– Nigel John Cook, Editor-in-Chief, *Ore Geology Reviews*

## References & Acknowledgements – a growing list

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Thank you for Listening

Any Questions?



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## Appendix: language

## Five rules from George Orwell

1. Never use a metaphor, simile or other figure of speech which you are used to seeing in print.
2. Never use a long word where a short one will do.
3. If it is possible to cut a word out, cut it out.  
(This is a little similar to another rule in writing a scientific paper. If you are in doubt about including a theme, topic, result etc, omit it. 'If in doubt, leave it out.')
4. Never use the passive where you can use the active: active voice is generally clearer and more direct
5. Never use a foreign phrase, a scientific word or a jargon word if you can think of an everyday English equivalent.



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## KISS (Keep It Simple and Succinct)

- > Clarity
- > Objectivity
- > Accuracy
- > Brevity



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## Clarity

- > To communicate effectively to the reader; to make writing persuasive; to show credibility and authority as a writer
- > The first step towards being clear is to be brief.

"Everything should be made as simple as possible, but not simpler".

– Albert Einstein



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## Clarity: avoid...

1. Long phrases that may be better said with one or two words:

- > in view of the foregoing circumstances - therefore
- > are found to be in agreement - agree
- > has the capability of - can
- > in an adequate manner - adequately

2. Tautology:

- > consensus of opinion - consensus
- > fewer in number - fewer
- > exact duplicate - duplicate



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## Common clarity problems

### • Misplaced modifiers

The other day I shot an elephant in my pajamas. How he got in my pajamas I'll never know.

--Groucho Marx

Portia rushed to the store loaded with cash to buy a birthday gift.

Portia, loaded with cash, rushed to the store to buy a birthday gift.

### • Dangling modifiers

Having been thrown in the air, the dog caught the stick.

When the stick was thrown in the air, the dog caught it.

After mixing CO<sub>2</sub> and N<sub>2</sub>, the initial test was carried out.

The authors carried out the initial test after mixing CO<sub>2</sub> and N<sub>2</sub>.



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## Objectivity

- Reflects the philosophy of the scientific method; to present an unbiased and honest tone; as a general rule, minimize your use of personal pronouns

"From our analysis, we found that activation led to cell death."

"This analysis showed that activation led to cell death."



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## Accuracy

- Avoid to mislead the reader with inaccurate or incomplete results or misleading interpretations of the data.
- Avoid the use of casual or imprecise language, as this can make a paper less objective, and less accurate:

nowadays - presently, currently  
despite the fact that - although  
goes under the name of - is called  
on the contrary - in contrast  
(up) until now - to date  
be that as it may - however



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## Brevity

- Write briefly and to the point. Say what you mean clearly and avoid embellishment with unnecessary words or phrases.
- Use of the active voice alone shortens sentence length considerably.

"... brevity is the soul of wit, and tediousness the limbs and outward flourishes..."

--William Shakespeare



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## Brevity: Use shorter phrases or words

- Prior to → Before
- Upon → On
- Utilise → Use
- Utilisation → Use
- In spite of → Despite
- Irregardless → Regardless



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## Brevity: Avoid nominalization

"The comparison between X and Y was performed."  
"We compared X and Y."

"X is the dominant factor of Y no matter what kind of treatment was performed."  
"X is the main factor of Y despite the treatments."

"Hydrogen adsorption measurement at the atmospheric pressure was carried out...in the laboratory."  
"We measured hydrogen adsorption at the atmospheric pressure...in the laboratory."



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## Brevity: Keep sentences clear and concise

- Keep sentences clear and concise
- "...linearly with **the increment of the** concentrations..."  
→ "...linearly with **increasing** concentrations..."
- "To **cope with the** situations with time- and space-dependent..."  
→ "To **manage** situations with time- and space-dependent..."



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## long sentences

### Direct and short sentences are preferred!

- Long sentences will not make the writing more professional. They only confuse readers.
  - Nowadays, the average length of sentences in scientific writing is about 12-17 words.
  - It is said that we read one sentence in one breath. Long sentences choke readers.
  - The Chinese language can express more complicated meaning with fewer words than English. You have to change your style when writing in English. One idea or piece of information per sentence is sufficient. **Avoid multiple statements in one sentence.**



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## long sentences

- See the 80-word long sentence below. Even the editor found it incomprehensible.



The luminous efficiency of MOLED device drawn  faster than PLED, which may be caused by different fabrication process, i.e., the distribution of (tpbi)2Ir(acac) dye in host is more uniform in liquid polymer from spin coating method than thermal deposition of solid organic small molecules, so that the quenching phenomena in small molecular device are more critical than in polymer device, even the doping concentration of phosphor dye in MOLED (2 wt%) is lower than that in PLED (4 wt%).



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## long sentences

- Another awful example (with 91 words):

If it is the case, intravenous administration should result in that emulsion has higher intravenous administration retention concentration, but which is not in accordance with the result, and therefore the more rational interpretation should be that SLN with mean diameter of 46nm is greatly different from emulsion with mean diameter of 65 nm in entering tumor, namely, it is probably difficult for emulsion to enter and exit from tumor blood vessel as freely as SLN, which may be caused by the fact that the tumor blood vessel aperture is smaller.



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## long sentences

### Problems with long sentences:

- Inappropriate use of passive voice or dummy clauses (e.g., "It has been found that there had been many ...") makes sentences complex.
- Bad structure of sentences with wrongly used conjunctive words or dangling modifiers. (e.g., "because...", "so...", "Although...", "but...", "considering...", "it is...")
- Excessive use of subordinate clauses in one sentence. (e.g., "It has already been found that when...there would be ... which...while...")
- Mixing different levels of parallelisms connected by "and" in one sentence. (e.g., "...investigates the *constructions* of triangular norms *and* discusses the *rotation construction and the rotation-annihilation construction* based on weak negations")



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## long sentences

**Example 1:** 'Another problem related to the effects of environmental factors on the survival and growth of ECM strains in the Mongolian pine plantations is the distribution of tree root systems, because the distribution of ECM is corresponded with the roots directly, especially the fine roots. Therefore, we observed the root distribution of Mongolian pine in the present study. Results indicated that about 80% of the roots distributed within 20-40 cm soil depth, and more than 85% distributed within 0-40. Combined the observations of soil water content (soil water potential) in the plantation site, we observed that the water conditions within 20-40 cm layer were substantially better than in other layer. Additionally the temperature in month of July (the highest mean temperature in a year) within 20-40 cm layer just fell the optimum range for the growth of the major ECM strains. As for the soil pH it was not the limiting factor within 20-40 cm layer as well. This result suggested that the soil water condition and temperature in the roots distributing layer were suitable for the growth of the tested ECM strains in the plantation.'



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## long sentences

### Editor's Comments:



- Unfortunately, this is very near to being incomprehensible. Perhaps the following:

'The distribution of ECM is directly related to the distribution of fine roots in Mongolian pine. About 80% of the roots are within the 20-40 cm layer of soil, where water content is greatest. Thus neither water nor temperature limited the growth of ECM in July, the hottest month of the year.'

- However, no reviewer is going to do what I have done above, and so the paper will be summarily rejected without going out for review.



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## long sentences

**Example 2:** 'The clay serves beneficially in the instances where the sands and silts contain hydrolysable nutritive cations and behaves as a detrimental factor if the sand and silt contain non-transferable plant nutrients or only those transferred very slowly.'

- This single sentence contains too much information (and many grammatical errors as well)...
  - The clay serves beneficially in some sands and silts...
  - Sands and silts contain hydrolysable nutritive cations
  - Sands and silts behave as detrimental factor
  - Some nutrients make the sands and silts a detrimental factor
  - Plant nutrients in sands and silts may be non-transferable
  - Or transfer very slowly



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## Repetition & Redundancy

- Overusing conjunctive words or phrases such as "However", "in addition", "Moreover". Keep the usage of these words to a minimum!
- Phrases without meaning. Learn from the following comments from an Editor:
  - Never say "and references therein" - as in [1] and [25]. Any intelligent reader knows to look at the references in a paper in order to get even more information.
  - Delete "In the present report". It is impossible for it to be in a different report! You start the conclusions "In this report, we have prepared....." This is nonsense. The samples were prepared in the laboratory!



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## Repetition and Redundancy

- As far as ... is concerned → As for
- At the present time → At present, or now
- By means of → By
- In order to → To
- In view of the fact that → Since; because
- Red in colour → Red
- Small in size → Small
- Until such time as → Until
- Adequate enough → Adequate
- Research work → Research, or work
- Schematic diagram → Scheme, or diagram



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## Wrong use of words and phrases

- Passive voice used for intransitive verbs  
e.g., It has been arrived → It has arrived at...
- The 3<sup>rd</sup> singular form of verbs used for plural subjects  
e.g., The data was calculated → the data were calculated
- Subject of the main clause is not the doer of the dangling modifier  
e.g., "To improve the results, the experiment was done again." → the experiment cannot improve the results itself. It should be "We did the experiment again to improve the results".
- Multiple Nouns  
e.g., 'Mountain Ash regrowth forest 10 cm soil water calcium' ...  
Mean summer tree leaf water potential  
→ the mean water potential of tree leaves measured in summer
- Spoken abbreviations: "it's", "weren't", "hasn't" – Never use them in scientific writing



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## Avoid colloquialism

- Do not use colloquial speech, slang, or "childish" words or phrases, for example, "get", "done", and "since" or "as" when because should be used.
- Do not use contractions: for example, "don't" must be "do not" and "isn't" must be "is not" etc.



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## Grammar, spelling, etc.

- You are encouraged to have an English expert proof reading your manuscript. At least you should make use of the spelling and grammar checking tool of your word processor.
- Be sparing when using unfamiliar words or phrase. Do not just rely on electronic dictionaries or translating software, which may bring out ridiculous results (often Chinglish...). You should understand the meaning of every single word you type in the manuscript.
- US or UK spellings should be used consistently in a paper
- Never let Editors find such a word in your manuscript! (Distinguish zero from the letter "O")



“Obviously”

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## Punctuation

- Write complete sentences with effective punctuation.
- The trend in scientific writing is toward shorter sentences with less punctuation.
- Commas are the most difficult type of punctuation to use. Using commas incorrectly can change the meaning.
- Avoid Asian fonts!

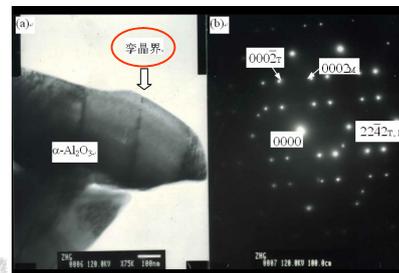


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## Finally, you should use English throughout the manuscript...



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## Language Editing Service

Recommend language editing companies

- International Science Editing
- Asia Science editing
- Edanz Editing
- SPI Publisher Services
- Diacritech Language Editing Service

Price rates starts from \$8/page

Use of an English-language editing service listed here is not mandatory, and will not guarantee acceptance for publication in Elsevier journals



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<http://www.elsevier.com/wps/find/authorsview.authors/languagepolishing>



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**Good luck!**

...and read the guide for authors



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