

How to Get Published in a Research Journal

Anne Kitson





Thought Question

What is it that distinguishes a very good manuscript from a bad one?





Objectives

- What steps do I need to take before I write my paper?
- How can I ensure I am using proper manuscript language?
- How do I build up my article properly?





What steps do I need to take before I write my paper?





Determine if you are ready to publish

You should consider publishing if you have information that advances understanding in a specific research field

This could be in the form of:

- Presenting new, original results or methods
- Rationalizing, refining, or reinterpreting published results
- Reviewing or summarizing a particular subject or field

If you are ready to publish, a strong manuscript is what is needed next





What is a strong manuscript?

- Has a <u>clear</u>, <u>useful</u>, and <u>exciting</u> message
- Presented and constructed in a <u>logical</u> manner
- Reviewers and editors can grasp the significance easily

Editors and reviewers are all busy people – make things easy to save their time





Decide the most appropriate type of manuscript

- Conference Papers
- Full articles/Original articles
- Short communications/letters
- Review papers/perspectives
 - 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.





Conference Papers

- Excellent for disseminating early or in-progress research findings
- Typically 5-10 pages, 3 figures, 15 references
- Draft and submit the paper to conference organisers
- Good way to start a scientific research career

Sample Conference Paper titles:

- "Global Warming Prevention Technologies in Japan" at 6th Greenhouse Gas Control Technologies International Conference
- "Power consumption in slurry systems" at 10th European Conference on Mixing





Full articles/Original article

- Standard for disseminating completed research findings
- Typically 8-10 pages, 5 figures, 25 references
- Draft and submit the paper to appropriate journal
- Good way to build a scientific research career

Sample full article titles:

- "Hydrodynamic study of a liquid/solid fluidized bed under transverse electromagnetic field"
- "Retinoic acid regulation of the Mesp-Ripply feedback loop during vertebrate segmental patterning"
- "Establishing a reference range for bone turnover markers in young, healthy women"





Short Communications Articles

- Quick and early communications of significant, original advances.
- Much shorter than full articles.

Sample Short Communications titles:

PLEASE ADD IN SUITABLE EXAMPLES FROM YOUR DISCIPLINE.





Review papers/perspectives

- Critical synthesis of a specific research topic
- Typically 10+ pages, 5+ figures, 80 references
- Typically solicited by journal editors
- Good way to consolidate a scientific research career

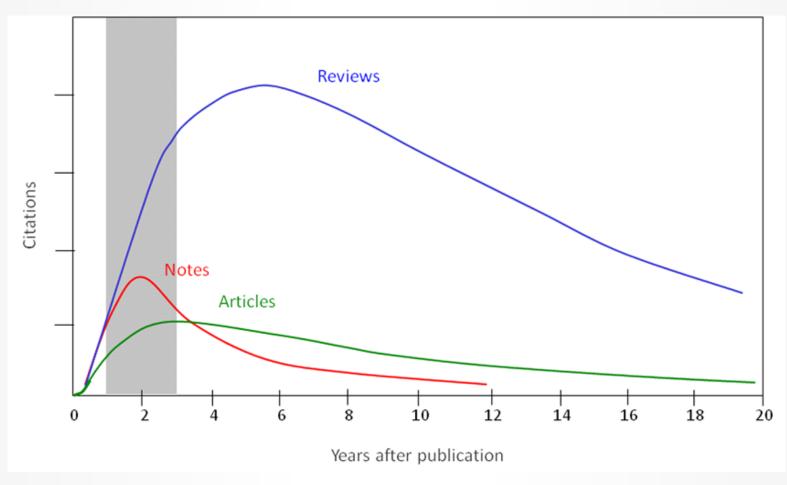
Sample full article titles:

- "Advances in the allogeneic transplantation for thalassemia"
- "Stress and how bacteria cope with death and survival"
- "Quantifying the transmission potential of pandemic influenza"



Citations impact varies by publication type









Choosing the right journal

Investigate all candidate journals on Elsevier.com to find out:

- Aims and scope
- Accepted types of articles
- Readership
- Current hot topics
 - go through the abstracts of recent publications





Choosing the right journal cont...

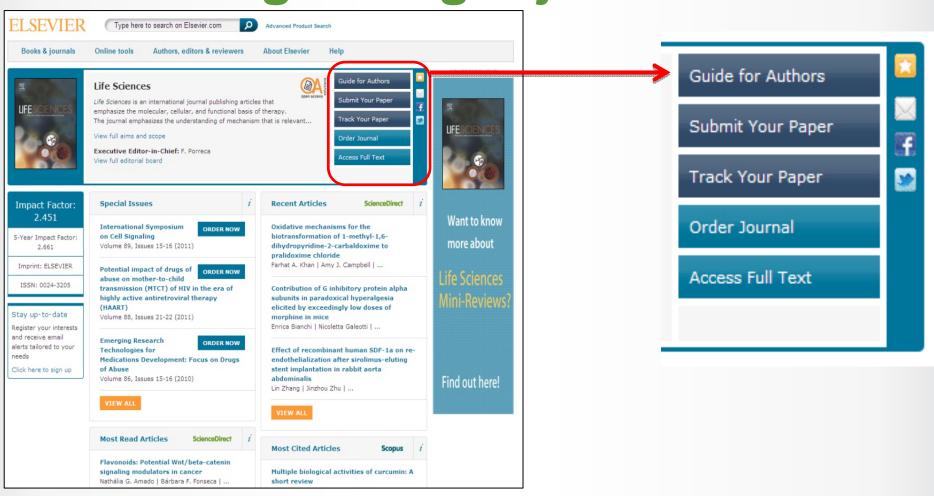
- Ask for help from your supervisor or colleagues
 - The supervisor (who is often a co-author) has co-responsibility for your work.
- DO NOT gamble by submitting your manuscript to more than one journal at a time.
 - International ethics standards prohibit multiple/simultaneous submissions, and editors WILL find out! (see also our webcast on publishing ethics www.elsevier.com/editorsupdate).

TIP: Articles in your references will likely lead you to the right journal.





Choosing the right journal cont...





Summary – What steps do I need to take before I write my paper?

- Determine if you are <u>ready</u> to publish
- Decide on the <u>type</u> of manuscript
- Choose the <u>target journal</u>
- Check the <u>Guide for Authors</u>





Potential Author Responsibilities

- Originality fabrication, falsification, plagiarism,
- Citations and context crediting and noting permissions
- Conflicts of Interest other activities by the author, EiC at same institute
- Authorship first authors and co-authors; avoid ghost authors, scientific writers, 'so-called gift authors
- Submission no dual submission
- Who else is responsible? All stakeholders have a part to play in upholding ethics Authors; institutions/companies/agencies/funding bodies Publishers/journal editors COPE, PERK tools to assist
- Consequences
 - Written letters of concern and reprimand; article retractions; some form of disciplinary action on the part of the researcher's institute or funding body



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How can I ensure I am using proper Manuscript language?





Thought Question

What are some characteristics of the best manuscript writing you have seen?





Why is language important?

Save your editor and reviewers the trouble of guessing what you mean

Complaint from an editor:

"[This] paper fell well below my threshold. I refuse to spend time trying to understand what the author is trying to say. Besides, I really want to send a message that they can't submit garbage to us and expect us to fix it. My rule of thumb is that if there are more than 6 grammatical errors in the abstract, then I don't waste my time carefully reading the rest."





Do publishers correct language?

 No. It is the <u>author's responsibility</u> to make sure his paper is in its best possible form when submitted for publication

However:

- Publishers often provide resources for authors who are less familiar with the conventions of international journals. Please check your publishers' author website for more information.
- Some publishers may perform technical screening prior to peer review.
- Visit http://webshop.elsevier.com for translation and language editing services.





Manuscript Language – Overview

Write with clarity, objectivity, accuracy, and brevity

- Key to successful manuscript writing is to be alert to common errors:
 - Sentence construction
 - Incorrect tenses
 - Inaccurate grammar
 - Mixing languages

Check the <u>Guide for Authors</u> of the target journal for any language specifications





Manuscript Language - Sentences

An example of what NOT to do:

"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."

A possible modification:

"It was expected that the intravenous administration via emulsion would have a higher retention concentration. However, the experimental results suggest otherwise. The SLN entered the tumor blood vessel more easily than the emulsion. This may be due to the smaller aperture of the SLN (46 nm) compared with the aperture of the emulsion (65 nm)."





Manuscript Language – Tenses

- Present tense for known facts and hypotheses:
 "The average life of a honey bee is 6 weeks"
- Past tense for experiments you have conducted:
 "All the honey bees were maintained in an environment with a consistent temperature of 23 degrees centigrade..."
- Past tense when you describe the results of an experiment:
 - "The average life span of bees in our contained environment was 8 weeks..."





Manuscript Language – Grammar

- Use active voice to shorten sentences
 - Passive voice: "It has been found that there had been..."
 - Active voice: "We found that..."
 - Passive voice: "carbon dioxide was consumed by the plant..."
 - Active voice: "...the plant consumed carbon dioxide.."
- Avoid abbreviations: "it's", "weren't", "hasn't"
 - Never use them in scientific writing
 - Only use abbreviations for units of measure or established scientific abbreviations, e.g. DNA





Manuscript Language – Grammar

- Minimize use of adverbs: "However", "In addition", "Moreover"
- Eliminate redundant phrases

"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." - Editor

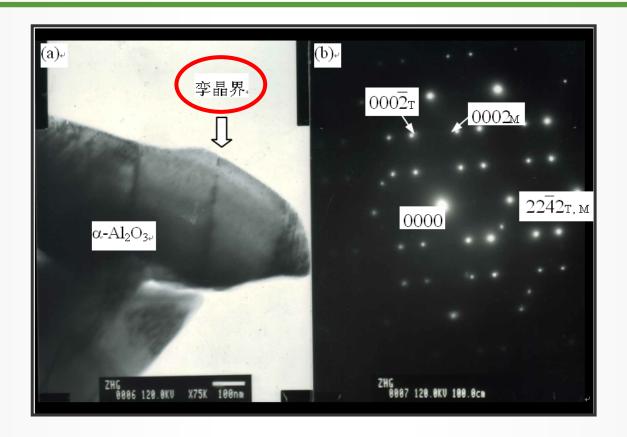
"Delete 'In present report'. It is impossible for it to be in a different report! You start the conclusions "In this report, we have prepared....." This is nonsense. The samples were prepared in the laboratory!" - Editor





Language

Finally, you should use English throughout the manuscript, including figures.







Summary – How can I ensure I am using proper manuscript language?

- Proper manuscript language is important so that editors and reviewers can easily understand your messages
- Refer to the journal's <u>Guide for Authors</u> for specifications
- Check that your paper has <u>short sentences</u>, <u>correct tenses</u>, <u>correct grammar</u>, and is all in <u>English</u>
- Have a native English speaker check your manuscript or use a language editing service



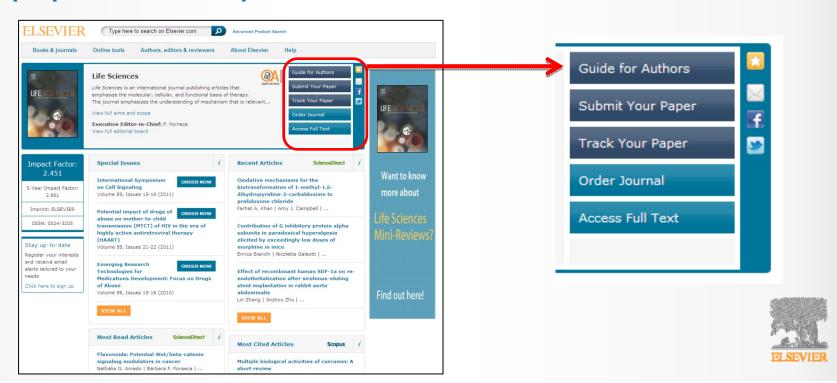


How do I build up my article properly?



Read the 'Guide for Author's! Publishing Connect Read the 'Guide for Author's!

- You can find the Guide for Authors on the journal homepage on Elsevier.com
- Stick to the Guide for Authors in your manuscript, even in the first draft (text layout, nomenclature, figures & tables, references etc.). In the end it will save you time, and also the editor's.
- Editors (and reviewers) do not like wasting time on poorly prepared manuscripts.





General structure of a research article

- Title
- Abstract
- Keywords
- Main text (II
 - Introduct
 - Methods
 - Results
 - And
 - <u>D</u>iscussi
- Conclusion
- Acknowled
- References

The progression of the thematic scope of a paper:

general → specific → general

However, we often write in the following order:

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





Title

- A good title should contain the fewest possible words that adequately describe the content of a paper.
- Effective titles
 - Identify the main issue of the paper
 - Begin with the subject of the paper
 - Are accurate, unambiguous, specific, and complete
 - Are as short as possible
- Articles with short, catchy titles are often better cited
- Do not contain rarely-used abbreviations







Original Title	Revised	Remarks
Preliminary observations on the effect of Zn element on anticorrosion of zinc plating layer	Effect of Zn on anticorrosion of zinc plating layer	Long title distracts readers. Remove all redundancies such as "observations on", "the nature of", etc.
Action of antibiotics on bacteria	Inhibition of growth of mycobacterium tuberculosis by streptomycin	Titles should be <u>specific</u> . Think to yourself: "How will I search for this piece of information?" when you design the title.
Fabrication of carbon/CdS coaxial nanofibers displaying optical and electrical properties via electrospinning carbon	Electrospinning of carbon/CdS coaxial nanofibers with optical and electrical properties	"English needs help. 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?" — the Editor-in-chief

ELSEVIER



Abstract

... is freely available in electronic abstracting & indexing services [PubMed, Medline, Embase, SciVerse Scopus,]

This is the advertisement of your article.

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 Bayes for 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.

e understood

What has been done ence whether

What are the main findings





Keywords

Used by indexing and abstracting services

- They are the labels of your manuscript.
- Use only established abbreviations (e.g. DNA)
- Check the 'Guide for Authors'

Article Title

"Silo music and silo quake: granular flow-induced vibration"

"An experimental study on evacuated tube solar collector using supercritical CO2"

Keywords

Silo music, Silo quake, stick-slip flow, resonance, creep, granular discharge

Solar collector; Supercritical CO2; Solar energy; Solar thermal utilization





Introduction

Provide context to convince readers that you clearly know why your work is useful

Sample 1st paragraph of an Introduction

DE DITEI

1. Introduction

The environmental pollution and the energy crisis have brought serious problems to the world environment and sustainable development. The applications of solar energy to electricity generation and heat collection/refrigeration become important, and have received considerable attention [1], [2], [3], [4], [5], [6], [7] and [8]. The solar collector is the heart of these solar energy utilization systems. During the last two decades a number of researchers have worked on developing new and more efficient solar collector or improving existing ones [9], [10] and [11]. For example, the performance of a water-in-glass evacuated tube solar heater is investigated and factors influencing the operation of water-in-glass collector tubes are discussed. The results show the existence of inactive region near the sealed end of the tube which might influence the performance of the collector [12].

Zhang, XR; Yamaguchi, H. "An experimental study on evacuated tube solar collector using supercritical CO₂" *Applied Thermal Engineering* © Elsevier



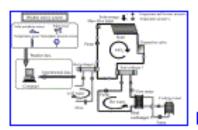


Methods

Sample 1st paragraph of an Experimental Set-Up section

2. Experimental set-up

In order to study the CO_2 -based collector characteristics well, a closed CO_2 loop including the collector is necessary. The CO_2 loop is designed and it consists of a solar collector array, flow regulating valve (throttling valve), heat exchanging system, and feed pump. The details of the experimental set-up are shown in Fig. 1. The solar collector is used to heat CO_2 fluid contained in heating channels and increase CO_2 temperature. The supercritical CO_2 flows through the valve, which can be used to adjust the CO_2 flow rate for the present study. The CO_2 flowing out of the valve is cooled in the heat exchanging system. After that, it is pumped by the feed pump, back into the higher pressure condition in the solar collector. As shown in Fig. 1 the experimental set-up is a closed cycle of CO_2 fluid, which is mainly comprised of evacuated solar collector arrays, a throttling valve, heat exchangers 1 and 2 (CO_2 /water heat exchanger), liquid CO_2 feed pump, and measurement and data acquisition system.



Zhang, XR; Yamaguchi, H. "An experimental study on evacuated tube solar collector using supercritical CO₂" Applied Thermal Engineering © Elsevier





Ethics Committee approval

- Experiments on humans or animals must follow applicable ethics standards
 - e.g. most recent version of the Helsinki Declaration and/or relevant (local, national, international) animal experimentation guidelines
- Approval of the local ethics committee is required, and should be specified in the manuscript
- Editors can make their own decisions as to whether the experiments were done in an ethically acceptable manner
 - Sometimes local ethics approvals are below internationally accepted standards





Results – what have you found?

- Tell a clear and easy-to-understand story. RED THREAD
 - Be structured (sub-headings)
- The following should be included:
 - The main findings
 - Thus not all findings (Add <u>Supplementary Materials</u> for data of secondary importance)
 - Findings from experiments described in the Methods section
 - Highlight findings that differ from findings in previous publications, and unexpected findings
 - Results of the statistical analysis

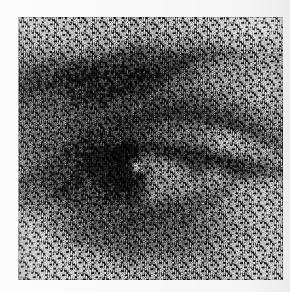






Results – Figures and tables

- Illustrations are critical, because
 - Figures and tables are the most efficient way to present results and;
 - Results are the driving force of the publication
- Captions and legends must be detailed enough to make figures and tables selfexplanatory
- No duplication of results described in text or other illustrations



"One Picture is Worth a Thousand Words" Sue Hanauer (1968)





Discussion

W

Sample 1st paragraph of an Discussion

5. Discussion

section

In this section, a mechanism for the production of pulsations is suggested. The results are then compared with those obtained in previous work on pulsating granular materials, and some suggestions for further work are made.

5.1. A mechanism for producing silo quake

Using the background on stick—slip friction in granular materials discussed earlier, one can compare the experimental observations in this study with those in previous studies to qualitatively explain the physical mechanism for stick—slip motion. The dynamic arch which forms in such flows is part of a force chain—that is, a particle contact network through which stresses are transmitted [28]. The arch is fragile, and consequently when the material below it has discharged enough so that the arch is unsupported from below, a slow creep typically observed in adhesive stick—slip flow begins. During this creep, the adhesive friction forces become progressively weaker and weaker, and eventually the arch will break. Once the arch collapses, complete slip occurs, a quake is observed, and a new arch is created. This quake can set up structural vibrations of decaying amplitude that then collapse the newly formed arch; in this manner, a series of self-sustained pulsations results. This is the pulsation process observed in this study, where the discharge rate is *fast* enough (between 1 and 8 cm/s) that it does not affect the f_n unlike in Wensrich's study [8] and [9].





Conclusion

Sample Conclusion from the

present state of knowledge

6. Conclusion

This study has shown that stick—slip motion generates silo music and silo quake. Silo music is driven by the stick—slip pulsating motion of the granular material during discharge and is associated with a resonance in the air column above the bed. When the pulsating motion disappears, so does the silo music. Over the range of discharge rates studied here (equivalent to average velocities of descent through the tube of 1–8 cm/s), the pulsation frequency was independent of discharge velocity. Both silo music and flow pulsations stopped abruptly when the bed height fell below a critical value. The critical height could be changed by placing an overload in the case of crushed glass, but not in the case of the smooth glass beads. This may be rationalized, although only speculatively at this point, by differences in stress chain behavior.

Suggest tuture experiments.

Muite, B.K., Quinn, S.F., Sundaresan, S., Rao, K.K.. "Silo music and silo quake: granular flow-induced vibration" *Powder Technology.* © Elsevier



References



Cite the main scientific publications on which

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Muite, B.K., Quinn, S.F., Sundaresan, S., Rao, K.K.. "Silo music and silo quake: granular flow-induced vibration" *Powder Technology.* © Elsevier

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Conform strictly



Acknowledgments

Ensures those who helped in the research are recognised

Include individuals who have assisted with your study, including:

- Advisors
- Financial supporters
- Proofreaders
- Typists
- Suppliers who may have given materials



Summary – How do I build up my article properly?

- Title
- Abstract
- Keywords
- Main text (IMRAD)
 - Introduction
 - <u>M</u>ethods
 - Results
 - And
 - <u>D</u>iscussions
- Conclusion
- Acknowledgement
- References
- Supporting Materials

Structure your article properly

 Make sure each section of the paper fulfills its <u>purpose</u> clearly and concisely





Professor H. D. Schmidt School of Science and Engineering Northeast State University College Park, MI 10000 USA

Your cha

Dear Professor Schmidt,

Final approval from all authors

Explanation of importance

of research

January 1, 2008

- Submit
- Mention special
- Note <u>sr</u>
 of inter

Enclosed with this letter you will find en electronic submission of a manusentitled "Mechano-sorptive creep under compressive loading – a micromomodel" by John Smith and myself. This is an original paper which reither previously nor simultaneously in whole or in part been submitted where else. Both authors have read and approved the final version submitted

Mechano-sorptive is sometimes denoted as accelerated creep. It has been experimentally observed that the creep of paper accelerates if it is subjected to a cyclic moisture content. This is of large practical importance for the paper industry. The present manuscript describes a micromechanical model on the fibre network level that is able to capture the experimentally observed behaviour. In particular, the difference between mechano-sorptive creep in tension and compression is analysed John Smith is a PhD-student who within a year will present his doctoral thesis. The present paper will be a part of that thesis.

Three potential independent reviewers who have excellent expertise in the this paper are:

Dr. Fernandez, Tennessee Tech, email1@university.com

Dr. Chen, University of Maine, email2@university.com

Dr. Singh, Colorado School of Mines, email3@university.com

I would very much appreciate if you would consider the manuscript for publication in the International Journal of Science.

Suggested reviewers

ely yours,



Authorship



General principles for who is listed first

- First Author
 - Conducts and/or supervises the data generation and analysis and the proper presentation and interpretation of the results
 - Puts paper together and submits the paper to journal
- Corresponding author
 - The first author or a senior author from the institution.

Avoid

- Ghost Authorship
 - leaving out authors who should be included
- Gift Authorship
 - including authors who did not contribute significantly
- Spelling names: Be consistent!





Revision

Revise before submission

- Vet the manuscript as thoroughly as possible before submission
- Ask colleagues and supervisors to review your manuscript

Finally, SUBMIT your manuscript with a cover letter and await a response...





After submission

- Refereeing speed varies tremendously between journals
- The Editor will decide to "Accept", "Accept with Revision (Minor or Major)", or "Reject" the manuscript





Thank you

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