# Research Methodology

Writing Article for Publication





# Why writing article?

- Motivation to publish [1]:
  - Dissemination
  - Career prospects
  - Improved funding
  - Ego
  - Patent protection

# What an editor looking for?

- Originality
  - What's new?
- Content
  - Is that enough?
- Simplicity
  - Can it be clearer, shorter, more concise?

### A Perfect Article

- Brings together the two key scientific elements of
  - 1) THEORY
  - 2) EXPERIMENT
- Shows how a variety of disparate data/results/observations can be understood
- There's no fixed formula for writing a paper
- But there are some useful guidelines

### The Reader's Perspective

- You are writing the paper for readers. What they look for [6]:
  - Authoritative high-quality articles
  - Ease of access
  - Rapid delivery
  - Convenient format
  - Linking of information
  - Low or no cost
  - Up-to-date information
  - Comprehensible, easy to read
  - Short and compact information

### Types of Article

- There are 2 types of article
  - 1) Original research article
    - > Detailed studies reporting original research & classified as primary literature
    - ➤ Including hypothesis, background study, methods, results, interpretation of findings, and a discussion of possible implications

#### 2) Review article / Survey article

- ➤ Gives an overview of existing literature in a field
  - Often identifying specific problems or issues
  - Analyzing information from available published work on the topic
- ➤ Are considered as secondary literature
- Can be an efficient way for early career researchers to begin publishing
- ➤ Can broadly discuss about literature reviews and systematic reviews

# Where our work can be published?

- Workshop, scientific day, magazine
- Conference
  - Local conference
  - International conference
- Journal Editor
- Book
  - Textbook
  - Book's chapter
  - Report/thesis

# Differentiation of Publishers

Workshop	Conference	Journal	Book
<ul> <li>Training/starting point</li> <li>Less impact/distribution</li> <li>High acceptant rate</li> <li>Acceptant notification in short time</li> <li>Less requirements</li> </ul>	<ul> <li>(depend on conference types)</li> <li>Better recognized</li> <li>More competitive</li> <li>Chance to meet with other researchers, and travel, get inspired</li> <li>Acceptant notification is faster than journal publication case</li> <li>Cost money</li> </ul>	(depend on journal types)  Most recognized High level publication Longer time of acceptant notification  Mostly not spend money	<ul> <li>Requires a lot of background, information, knowledge</li> <li>Takes longer time to finish a book</li> <li>High recognition</li> </ul>

### Types of Journals

- National vs. International
- Peer-reviewed vs. Non-reviewed
- Commercial vs. Society journal
- Commercial vs. Open access journals
- Research vs. Review journals
- Printed journals vs. Online journals

### Why publish in open access journals?

- Advantages to publish in open access journals:
  - Your article will obtain more citations
  - You own the copyright to your article
  - Your article will be peer-reviewed and published very fast
  - All interested readers
    - ➤ Can read, download, and/or print open access articles at no cost!
  - Your article can be read by potentially millions of readers
    - ➤ Is incomparable to publishing in a traditional subscription journal
  - Open Access journals are FREE to view!

### Which journal to submit to?

- Criteria to consider (the same to the conference paper)
  - Impact factors
  - Reputation
  - Reviewers
  - Readership
  - Turnaround time
- Journals with high impact factors have
  - High competition
  - Limited space
  - High rejection rates

### Identification of a Suitable Journal

- Investigate key literature in your field and the editorial board
- Consider the preferences of your audience
- Consider the production time and the reputation of the journal
- Ask colleagues and study the guidelines for authors
- Compare the aims, scopes, favorites with your contents
- Look at the papers in that journals within the last two years

# Article Publishing Process

Complete the research work

Select the Conference/Journal publisher

Submit the article

### **Article Submission**

Article submission (whole article / long abstract)



Review stage (by the reviewer committee)



Article resubmission (after responding to the feedbacks)



**Publication** 

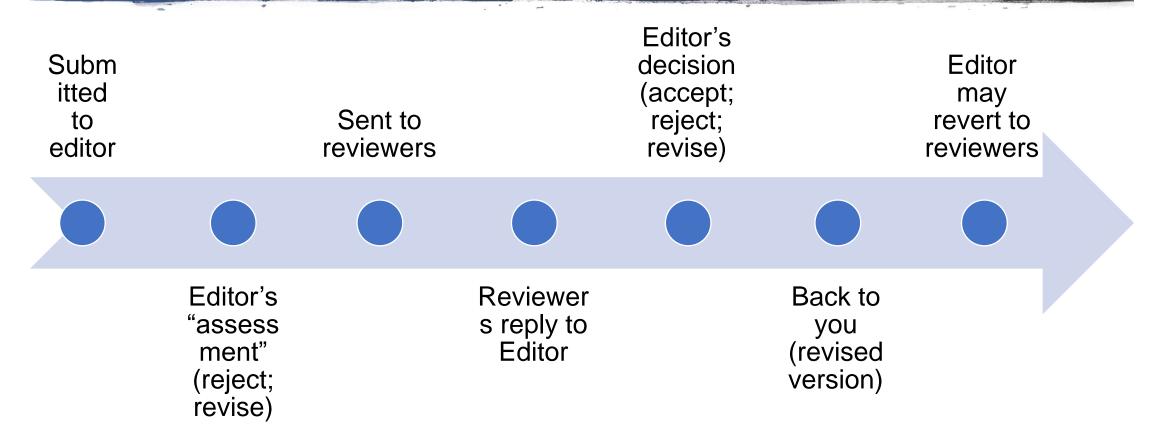


Submission the final version



Acceptant notification

# Journal Submission [2]



Reviewers and editors are very busy people who have to read a lot of papers in short time.



### What you should care about?

- Your contribution
- Title
- Keywords
- Publisher/Editor
- Plagiarism
- Language

### Your Contribution

#### Literature review

- Make sure you know well the current research state
- Do result comparison
- Do enough critical analysis part

#### Contribution

- Enough to be accepted
- Logical
- Proven

### Title and Keywords

- Why do we need title and keywords?
  - People search by title, keywords
  - Search engine is based on keywords to identify relevance articles
  - Advertisement
    - ➤ Attract readers' eyes
      - Understanding of readers for very short time
    - >Attract editors

### What title should be?

- Short
- Informative
- Explaining the subject of the study
- Containing paper type (e.g. review)
- Understandable in isolation
- Specific (not too general)
- Not including abbreviations

### Publisher

- Select the most suitable one
- Aims of the edition
  - Check carefully the aims
  - Make sure you mention the objectives in your articles
  - Response to what the publisher needs (your contributions)
- Format and style
  - Respect the format and style
    - ➤ Provided by the publisher or
    - ➤ Your article will be rejected

# Plagiarism

#### Definition

- Polite term for copying
- The unacknowledged use of someone else's words or ideas

#### Plagiarism checking tools

- To check how much you copies and pasted from others
  - ➤ And where did you copy from

# Why plagiarism important?

#### Intellectual property right

- "It is unethical to plagiarize because someone else has worked hard and should receive credit." [3]
- "You wouldn't want someone else to steal your work!" [3]

#### Self-respect & knowledge

- You don't learn from plagiarism
- It decreases your innovation, ideas and critical thinking
- You can get cough and the consequences can be bad

### How to avoid plagiarism?

- Use your own words & sentences
- Cite to the original authors

#### In [4], the authors wrote

"IoT itself is the integration of multiple heterogeneous network, it should deal with compatibility issues between different networks which is prone to security issues, for example, it is difficult to establish the junction of relationship as the relationship of trust between nodes that are constantly changing, but this can be solved by key management and routing protocols [18–20]."

### Citation – Tools

- Zotero
- EndNote

Nowadays, IoT is widely applied to social life applications such as smart grid, intelligent transportation, smart security, and smart home [5].

Data Privacy: RFID security and privacy technologies can be divided into two categories: physical-based schemes and password-based schemes, the former sends deactivation kill command [36], block tags [36, 37], clip tags, pseudonyms tags [38], Faraday nets, signal interference [39], antenna energy analysis [40] etc. The later includes schemes such as hash locks [41], random hash lock [42], hash chain [43], anonymous ID [44], re-encryption [45].

### Citation – Referencing

"The effect of rumor for mobile ad-hoc networks" [81, 82] is studied calculation of trust degree based on the interaction between hop neighbors. (source [4])

Rummler and Brache defined business process as "the series of steps that a business executes to produce a product or service" [2]. (source [5])

Azleny et al. [14], state that an ontology language is selected based on four criteria: intended use, expressiveness, automated reasoning ,and user perception. (source [5])

# Quoting, Paraphrasing, Summarizing

#### Quotations

Identical to the original

#### Paraphrasing

Putting a passage from source material into your own words

#### Summarizing

- Putting the main idea(s) into your own words
  - ➤ Including only the main point(s)

# Language

- 1) Content
- 2) Tense
- 3) Synonyms
- 4) Linking Words

# Content – Concise Enough (Abstract)

"In this paper, we will describe some experiments that we reconducted to measure the creeps train rate in a stainless steel, and we will discuss the significance of the results."

"We conducted a series of experiments to measure the creep strain rate in the stainless-steel alloy SUS678F. We showed that the creep strain rate is proportional to the applied stress."

Source: [4]

### Content

- Avoid long sentences (about 28 words)
- 1 paragraph for 1 main idea
- Avoid plagiarism
- All images and tables must be described

"Thus, networking security is a large multi-layered security system, in addition, considering security of each layers also consider cross-layer integration of heterogeneous network security issues (Table 1; Figs. 2, 3)."

Source: [4]

### Tense

- Don't just use the present simple
- Use a variety of language verb tenses, nouns, adjectives
- Use 3<sup>rd</sup> person form to write your article, avoid using I & We
- If English is not your first language
  - Find a native English speaker (if possible)
    - >To review the content and language of the paper before submitting it
- Regardless of primary language
  - Find a colleague/editor
    - ➤ To review the content and language of the paper

# Synonyms

- Can help to reduce the quotation ("...") to existing work
- Reduce burden some of your article
- Make your article rich
- But don't overplay with the words

# Linking Words

- What for?
  - To link ideas
  - Help organize our writing
  - Smooth the reading process
  - Order information: Firstly, Secondly, Finally, etc.
  - Add information: Furthermore, In addition, Moreover, etc.
  - Contrast ideas: However, In contrast, Nevertheless, On the contrary, On the one hand, ..., On the other hand, etc.
  - Summarize or reach a conclusion: In conclusion, In sum, etc.

# Start Writing

Draft ideas

Define key messages

What is your original/contribution? What you want readers to know?

Choose content

Limit the scope

How much work we should specify in this paper?

Structure the content

Define paper structure

Is it provide enough info/detail?

Put ideas/info into text

Write paper

Is it concise, easy to understand and short?

Evaluate, peer review

Check/recheck the paper

Is it correct? Content, style, language, etc.

In the 1<sup>st</sup> draft, write whatever come to mind, then keep improve version by version <sup>36</sup>

### Writing Order – Best Practice

- 1) Heading information: title, authors, contact, keywords
- 2) Introduction
- 3) Literature review
- 4) Proposed solutions
- 5) Implementation & Discussion
- 6) Conclusion & Future work
- 7) Abstract
- 8) Acknowledgement

### References

- [1] Bryan Coles (ed.) The STM Information System in the UK, BL Report 6123, Royal Society, BL, ALPSP, 1993
- [2] David Taylor, "Writing an Article for Publication", WISER Lunchtime Seminar, February 2009
- [3] <a href="http://library.csus.edu/content2.asp%3FpageID=354.html">http://library.csus.edu/content2.asp%3FpageID=354.html</a>, accessed date, 15 December 2016
- [4] Jing, Qi, et al. "Security of the internet of things: Perspectives and challenges." Wireless Networks 20.8 (2014): 2481-2501.
- [5] S. Chhun, N. Moalla, and Y. Ouzrout, "Ontology-Based Approach for Semantic Service Selection in Business Process Re-Engineering," in Enterprise Interoperability VI, Springer, 2014, pp. 63–73.
- [6] Felix Müller, "How to write a scientific paper?", University of Kiel Institute for Natural Resource Conservation