Scientific Article Writing Workshop

Dr. Imam Jauhari Maknun, S.T., M.T., M.Sc

Depok, 23 Mei 2018

Outline Presentasi

- Pengantar
- Pengalaman menulis paper
- 6 Hal yang perlu diperhatikan sebelum menulis paper
- 11 Langkah menulis paper
- Penutup

Pengantar

Biodata

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Pendidikan

- 2012 – 2015 : Dr. – Université de La Rochelle – Perancis
- 2010 – 2011 : M.Sc – Modélisation Numérique en Mécanique – Université de La Rochelle – Perancis
- 2009 – 2010 : M.T. – Teknik Sipil – Universitas Indonesia – Indonesia
- 2005 – 2009 : S.T. – Teknik Sipil – Universitas Indonesia – Indonesia

Pengalaman Menulis Paper

Pengalaman menulis Paper 1

European Journal of Environmental and Civil Engineering
Vol. 17, No. 1, January 2013, 1–18

Taylor & Francis
Taylor & Francis

Analytical and experimental analysis of an asymptotic thin-walled beam model

A. Hamdouni[a], I. Katili[b], I.J. Maknun[b] and O. Millet[a]*

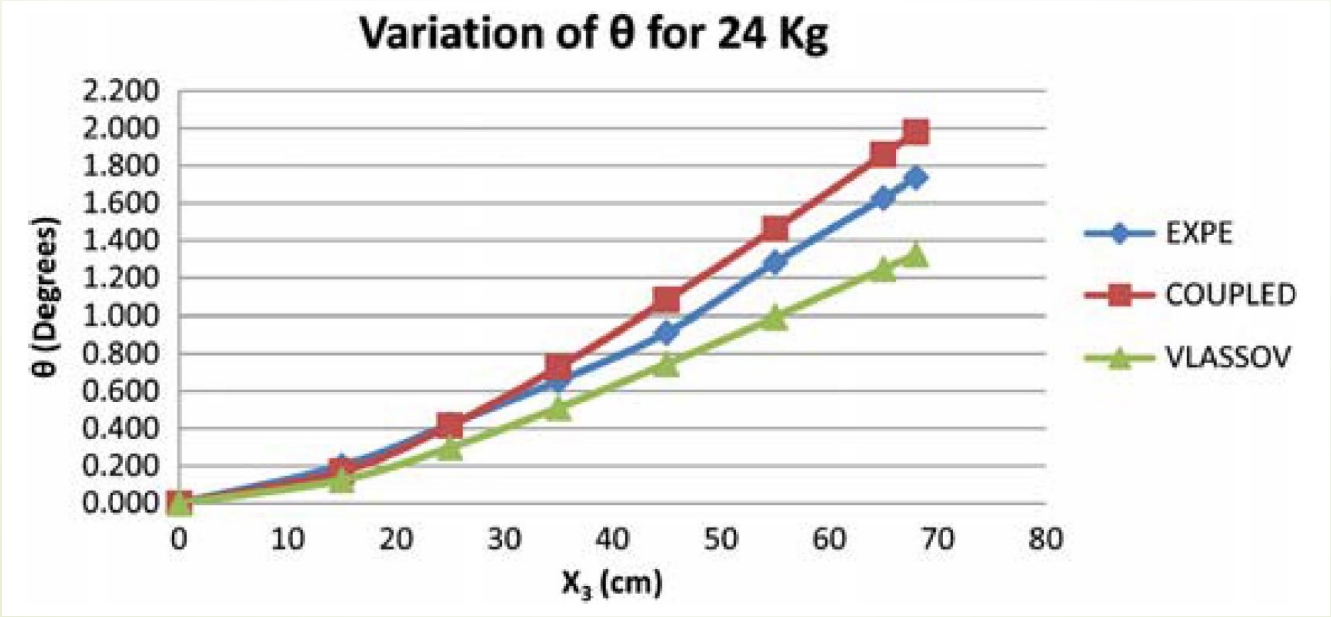
[a]*Laboratoire des Sciences de l'Ingénieur pour l'Environnement FRE-CNRS 3474, Université de La Rochelle, France;* [b]*Civil Engineering Department of the Universitas Indonesia*

(*Received 24 December 2011; final version received 6 May 2012*)

Pengalaman menulis Paper 1

Pengalaman menulis Paper 1

- Hasil Tugas Akhir S2 di Perancis
- Introduction, Metodologi dll. disiapkan oleh pembimbing
- Hanya membuat tabel dan analisa dari hasil penelitian di Laboratorium



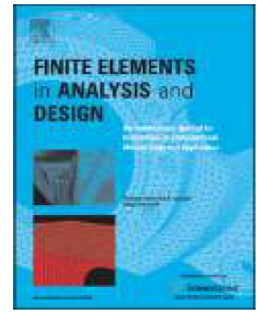
Pengalaman menulis Paper 2

Finite Elements in Analysis and Design 100 (2015) 12–27

Contents lists available at ScienceDirect

Finite Elements in Analysis and Design

journal homepage: www.elsevier.com/locate/finel

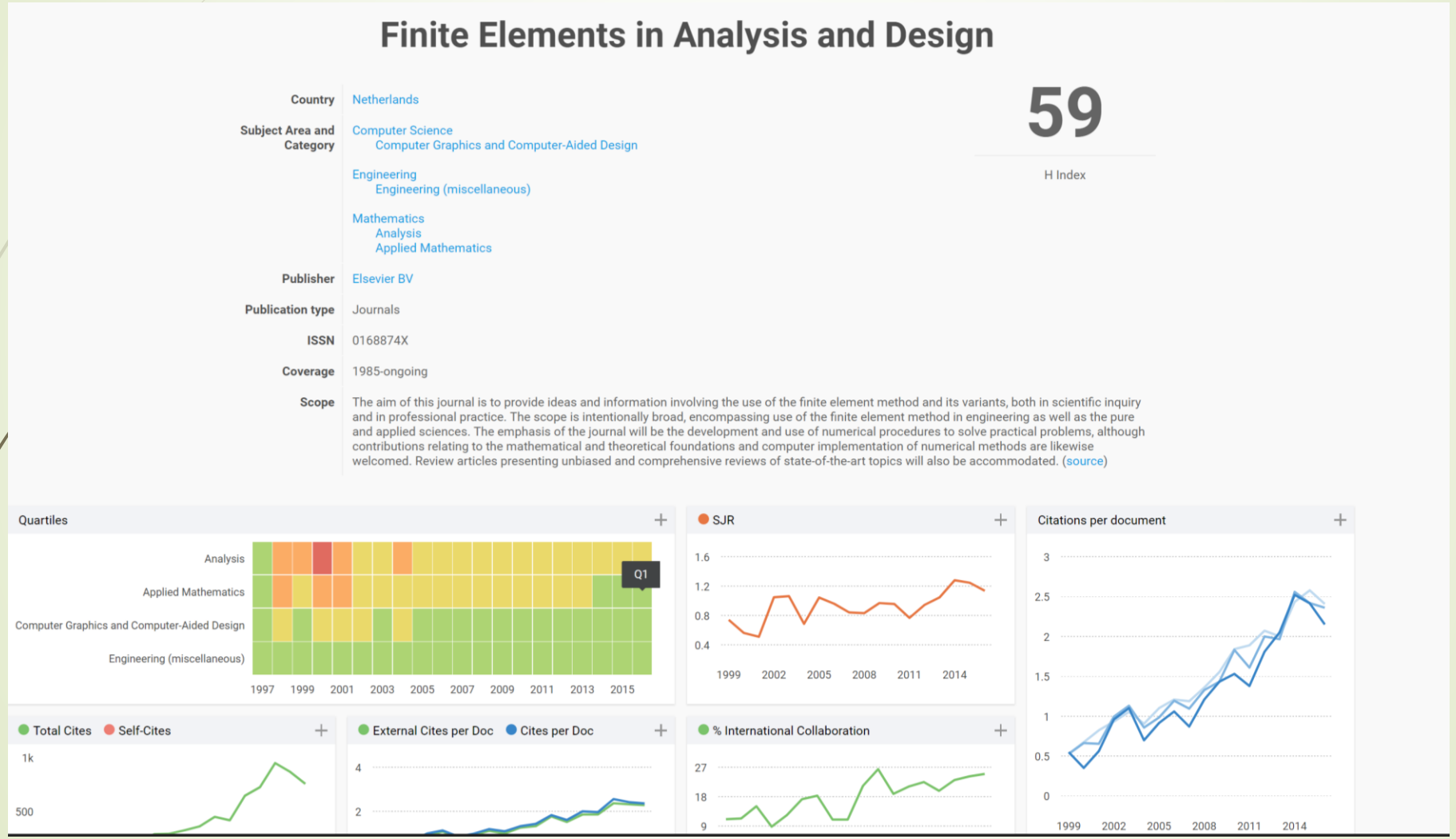


The development of DKMQ plate bending element for thick to thin shell analysis based on the Naghdi/Reissner/Mindlin shell theory

Irwan Katili [a,*], Jean-Louis Batoz [b], Imam Jauhari Maknun [a,c], Aziz Hamdouni [c], Olivier Millet [c]

[a] *Universitas Indonesia, Depok 16424, Indonesia*
[b] *Université de Technologie de Compiègne, Compiègne Cedex 60206, France*
[c] *Université de La Rochelle, La Rochelle 17000, France*

Pengalaman menulis Paper 2



Pengalaman menulis Paper 2

- Bagian dari penelitian S3
- Introduction, Metodologi dll. dari laporan Prof. Irwan Katili dalam Bahasa Indonesia yang diterjemahkan ke Bahasa Inggris
- Hasil numerik diperoleh dengan menggunakan program Fortran

Pengalaman menulis Paper 3

Composite Structures 132 (2015) 166–174

Contents lists available at ScienceDirect

Composite Structures

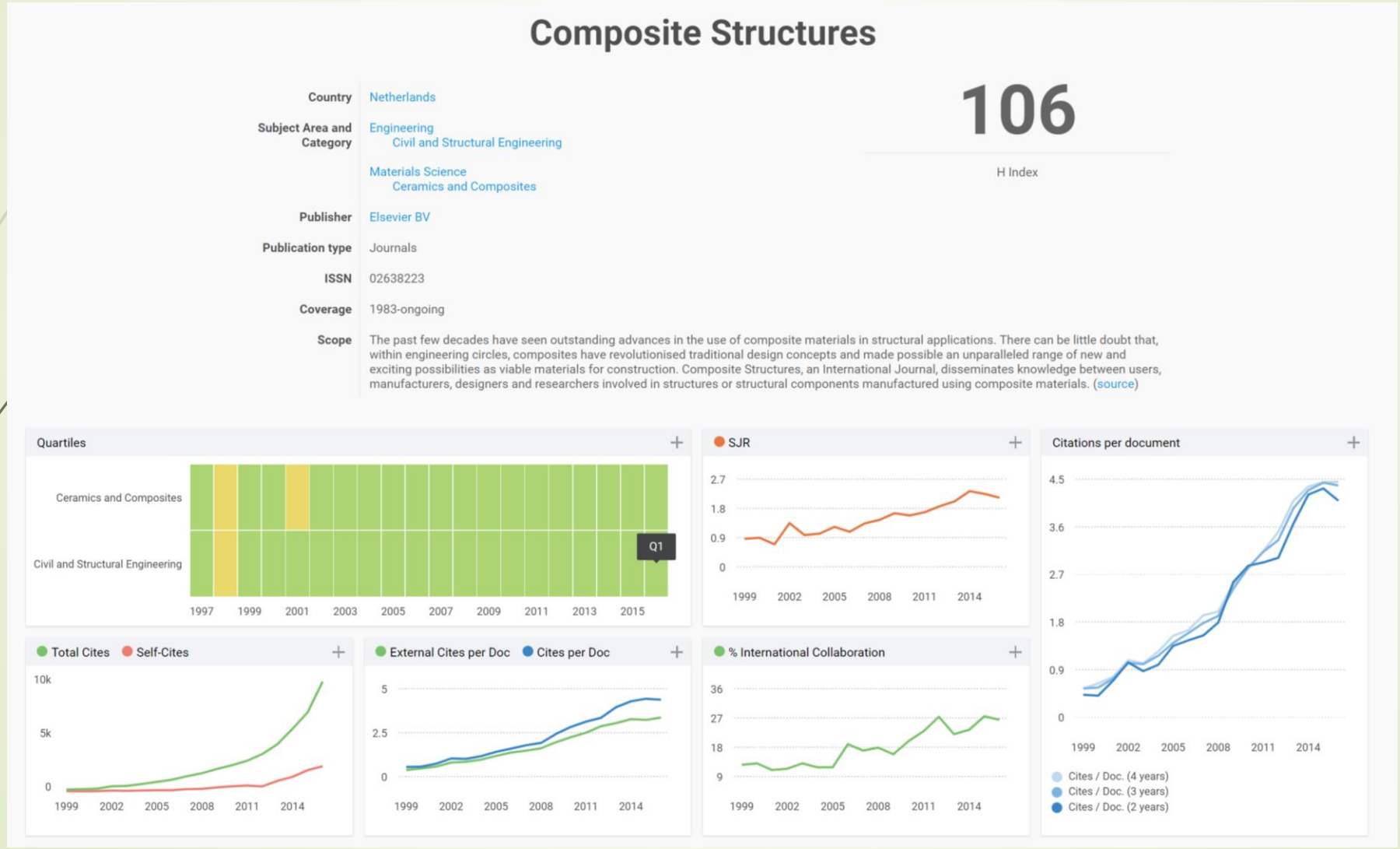
journal homepage: www.elsevier.com/locate/compstruct

Application of DKMQ element for composite plate bending structures

Irwan Katili [a,*], Imam Jauhari Maknun [a,b], Aziz Hamdouni [b], Olivier Millet [b]

[a] *Universitas Indonesia, Depok 16424, Indonesia*
[b] *Université de La Rochelle, La Rochelle 17000, France*

Pengalaman menulis Paper 3



Pengalaman menulis Paper 3

- Paper yang dijadikan Referensi

Available online at www.sciencedirect.com

ScienceDirect

Composites Science and Technology 69 (2009) 125–128

COMPOSITES SCIENCE AND TECHNOLOGY

www.elsevier.com/locate/compscitech

Modified discrete Mindlin hypothesises for laminated composite structures

Rezak Ayad [a,*], Nabil Talbi [a], Tewfik Ghomari [b]

[a] *Université de Reims Champagne-Ardenne, Groupe de Mécanique des Matériaux et des Structures (GMMS, EA 2617), ESIEC – Esplanade Roland Garros, BP1029, 51686 Reims, France*

[b] *Université des Sciences et de la Technologie d'Oran, Faculté de Mécanique, BP 1505, El-Mnaouar, 31000 Oran, Algeria*

Received 31 March 2007; accepted 11 October 2007
Available online 6 November 2007

Pengalaman menulis Paper 3

- Bagian dari penelitian S3
- Introduction, Metodologi dll. diambil dari beberapa referensi jurnal internasional ataupun buku
- Hasil numerik diperoleh dengan menggunakan program Fortran dan MATLAB

Pengalaman menulis Paper 3

Reviewer #1: A) Comments about the paper:

This paper presents "the use" of a finite element for bending of composite plates. This finite element named DKMQ is suitable for thick and thin plates, and was published by the author in 1993 [1]. Most of the information contained in this paper comes from his first two papers [1] and [2], both of the same years 1993.

The author believes, and he values as very interesting, that the quadrilateral plate element, such as "DKMQ", is appropriate for applications in composite structures. As such, he has devoted all of section 2 of the paper (8.5 of a total of 14 pages) to describe the element formulation of 22 years old without any innovation.

Entire formulation is centered in the field of linear behavior of the material, and therefore ignores interlaminar incompatible movements, such as the phenomenon of delamination.

In section 3 the author presents a validation of its formulation vs. work of Srinivas [12] and Pagano [10], [11]. Numerical analysis presented in this paper corresponds to three composites sandwiches plates simply supported. The results are very good and converging to the analytical solution obtained by Srinivas for the first plate, and Pagano test in the second and third plate.

B) Conclusion:

The work is very well written, but don't have any new contribution to knowledge. However shows a useful and important finite element for solving composite plates. For this reason, the paper should contain something else in the formulation that shows an innovation from the original work.

Pengalaman menulis Paper (2015)

International Journal of Technology (2015) 5: 780-789
ISSN 2086-9614

DEVELOPMENT OF THE DKMT ELEMENT FOR ERROR ESTIMATION IN COMPOSITE PLATE STRUCTURES

Imam Jauhari Maknun[1*], Irwan Katili[1], Heru Purnomo[1]

[1] *Department of Civil Engineering, Faculty of Engineering, Universitas Indonesia, Kampus Baru UI Depok, Depok 16424, Indonesia*

(Received: May 2015 / Revised: September 2015 / Accepted: September 2015)

Pengalaman menulis Paper (2016)

INTERNATIONAL JOURNAL FOR COMPUTATIONAL METHODS IN ENGINEERING SCIENCE AND MECHANICS
2016, VOL. 17, NOS. 5–6, 391–400
http://dx.doi.org/10.1080/15502287.2016.1231240

Taylor & Francis
Taylor & Francis Group

Application of DKMQ24 shell element for twist of thin-walled beams: Comparison with Vlassov theory

Imam Jauhari Maknun[a,b], Irwan Katili[a], Olivier Millet[b], and Aziz Hamdouni[b]

[a]Universitas Indonesia, Civil Engineering Department, Depok, Indonesia; [b]Université de La Rochelle, La Rochelle, France

ABSTRACT

This article presents the application of DKMQ24 shell element for twist of thin-walled beams. This element passed the patch tests for membrane, bending and shear problems and gave fine results for plate and shell problems analysis without shear locking. Thin-walled cantilever beams are analyzed using this element. DKMQ24 gives good results for cantilever beams with open cross-section for a very few number of element. Moreover, the comparison of the results obtained with Vlassov analytical solution enables to evaluate the accuracy of the twist rigidity, J_d, which depends on an empirical coefficient in Vlassov theory.

KEYWORDS

DKMQ24; shell; thin-walled beam; twist; twist rigidity; Vlassov

Pengalaman menulis Paper (2017)

International Journal of Technology (2017) 6: 1060-1069
ISSN 2086-9614

ERROR ESTIMATION FOR THE DKMQ24 SHELL ELEMENT USING VARIOUS RECOVERY METHODS

Irwan Katili[1*], Imam Jauhari Maknun[1], Elly Tjahjono[1], Irene Alisjahbana[1]

[1]*Department of Civil Engineering, Faculty of Engineering, Universitas Indonesia,*
Kampus UI Depok, Depok 16424, Indonesia

(Received: January 2017 / Revised: May 2017 / Accepted: November 2017)

International Journal of Mechanical Engineering and Robotics Research Vol. 6, No. 3, May 2017

Development DKMQ Shell Element with Five Degrees of Freedom per Nodal

Herry Irpanni, Irwan Katili, and Imam J. Maknun
Civil Engineering Department
Universitas Indonesia
Depok, Indonesia
Email: herry.irpanni@gmail.com

Pengalaman menulis Paper (2018)

ELSEVIER

Computers & Structures

Volume 204, 15 July 2018, Pages 48-64

A comparative formulation of DKMQ, DSQ and MITC4 quadrilateral plate elements with new numerical results based on *s-norm* tests

Irwan Katili [a], Jean-Louis Batoz [b], Imam Jauhari Maknun [a], Pascal Lardeur [b]

ELSEVIER

Composite Structures

Available online 17 January 2018

In Press, Corrected Proof

Shear deformable shell element DKMQ24 for composite structures

Irwan Katili [a], Imam Jauhari Maknun [a], Jean-Louis Batoz [b], Adnan Ibrahimbegovic [b]

6 hal yang perlu diperhatikan sebelum menulis paper

Rujukan :
Six things to do before writing your manuscript By Angel Borja, PhD (2014)

1. Think about why you want to publish your work – and whether it's publishable.

- Writing a paper starts well in advance of the actual writing. In fact, you must to think about why you want to publish your work at the beginning of your research, when you question your hypothesis.
- You need to check then if the hypothesis and the survey/experiment design are publishable.

1. Think about why you want to publish your work – and whether it's publishable.

Ask yourself:

- Have I done something new and interesting?
- Is there anything challenging in my work?
- Is my work related directly to a current hot topic?
- Have I provided solutions to some difficult problems?

2. Decide what type of the manuscript to write.

1. Full articles, or original articles.
2. Letters/rapid communications/short communications.
3. Review papers or perspectives.

3. Choose the target journal.

- A common question is how to select the right journal for your work.
- Do not gamble by scattering your manuscript to many journals at the same time.
- Only submit once and wait for the response of the editor and the reviewers.

3. Choose the target journal.

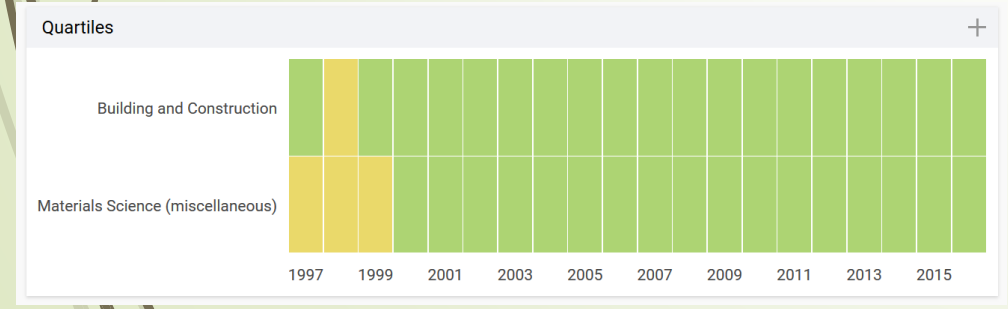
Cement and Concrete Composites

› Supports Open Access

Editor: N. Banthia

› View Editorial Board

This journal is designed to reflect current developments and advances being made in the general field of **cement-concrete composites** technology and in the production, use, and performance of **cement-based construction materials**. The word cement is interpreted in a wide sense, including not only Portland cement but also blended cements and other binding materials. In addition to novel aspects of conventional concrete materials, the journal covers a wide range of **composite materials** such as fiber-reinforced cement composites, polymer cement composites, polymer impregnated composites, ferrocement, and cement composites containing special aggregate inclusions or waste materials.



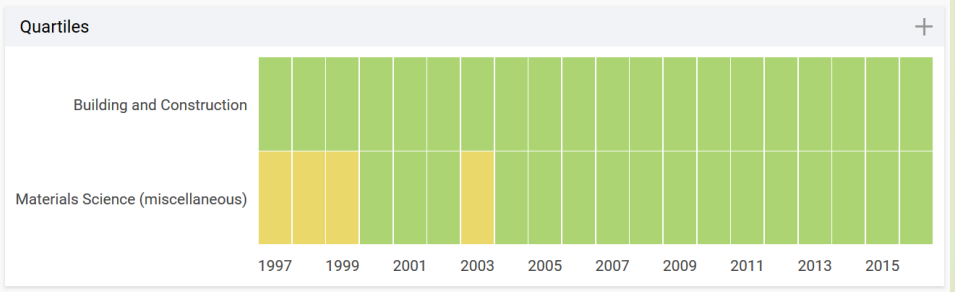
Cement and Concrete Research

› Supports Open Access

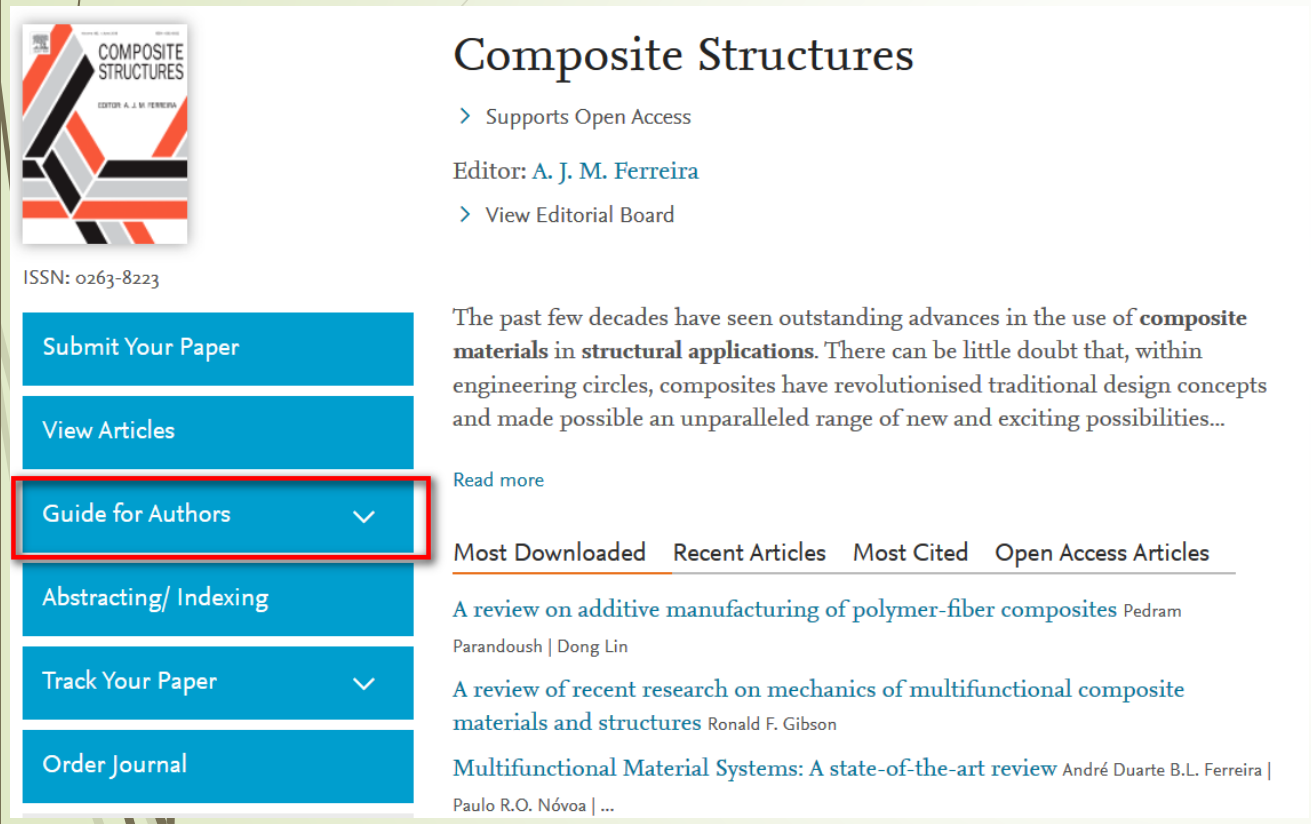
Editor-in-Chief: Karen Scrivener

› View Editorial Board

The aim of *Cement and Concrete Research* is to publish the best research on **cement, cement composites, concrete** and other allied materials that incorporate cement. In doing so, the journal will present: the results of research on the properties and performance of cement and concrete; novel experimental techniques; the latest analytical and modelling methods; the examination and the diagnosis of real cement and concrete structures; and the potential for improved materials. The fields which the journal aims to cover are:



4. Pay attention to journal requirements in the Guide for Authors.



After selecting the journal for submission, go to the web page and download the Guide for Authors, print out it and read the guidelines again and again!

5. Pay attention to the structure of the paper.

Article structure

Generally, the size of the manuscript should not exceed 6000 words or about 12 printed pages.

Follow this order when typing manuscripts: Title, Authors, Affiliations, Abstract, Keywords, Main text, Acknowledgements, Appendix, References, Vitae, Figure Captions and then Tables. Do not import the Figures or Tables into your text. The corresponding author should be identified with an asterisk and footnote. All other footnotes (except for table footnotes) should be identified with superscript Arabic numbers.

Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

Theory/calculation

A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

Results

Results should be clear and concise.

5. Pay attention to the structure of the paper.

Discussion

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

Conclusions

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

Appendices

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

6. Understand publication ethics to avoid violations.

- One of the worst things in science is plagiarism.
- Violations include data fabrication and falsification, improper use of human subjects and animals in research, and using another author's ideas or wording without proper attribution.

11 Langkah Menulis Paper

Rujukan :
11 steps to structuring a science paper editors will take Seriously By Angel Borja, PhD (2014)

Steps to organizing your manuscript

- An article begins with the Title, Abstract and Keywords.
- The article text follows the **IMRAD** format, which responds to the questions below:
  - **I**ntroduction: What did you/others do? Why did you do it?
  - **M**ethods: How did you do it?
  - **R**esults: What did you find?
  - **A**nd
  - **D**iscussion: What does it all mean?
- The main text is followed by the Conclusion, Acknowledgements, References and Supporting Materials.

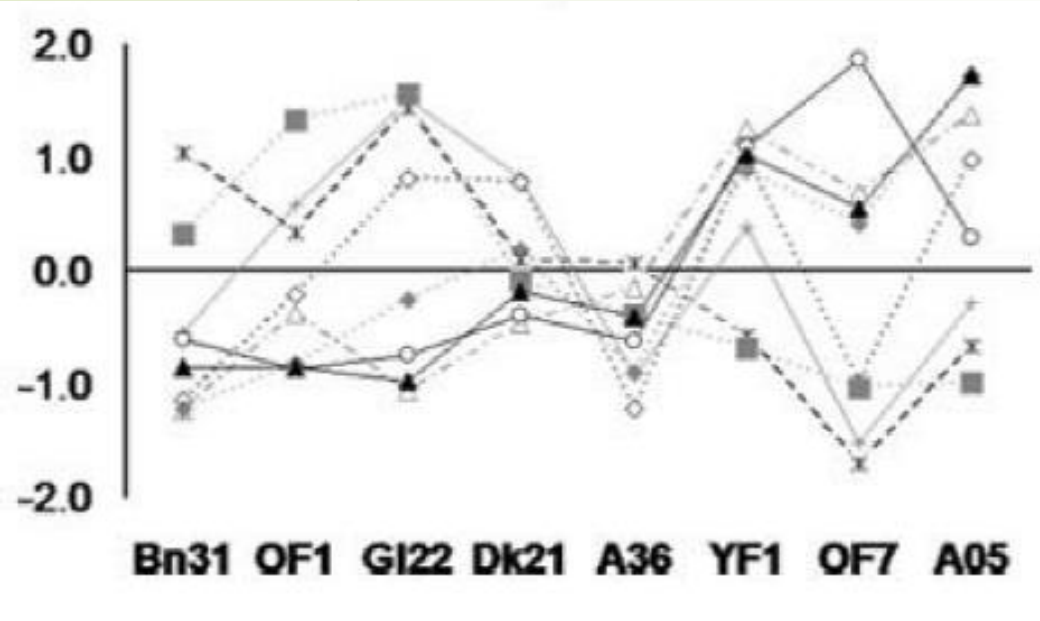
Steps to organizing your manuscript

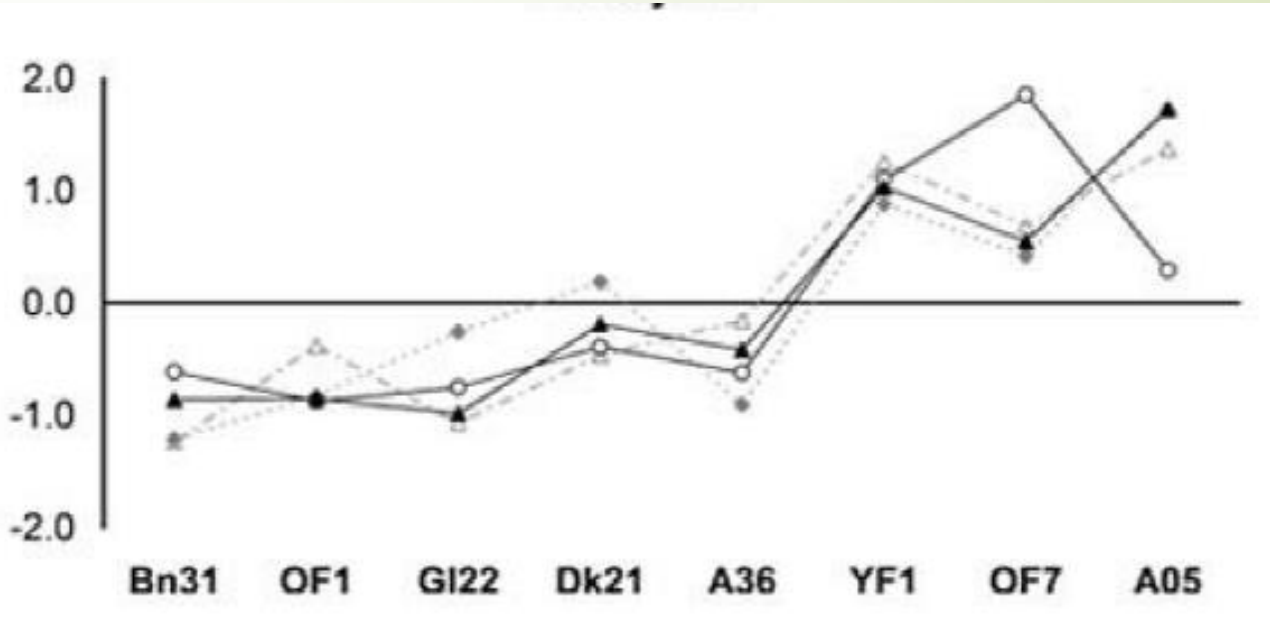
1. Prepare the **figures and tables**.
2. Write the **Methods**.
3. Write up the **Results.**
4. Write the **Discussion.**
5. Write a clear **Conclusion.**
6. Write a compelling **introduction.**
7. Write the **Abstract.**
8. Compose a concise and descriptive **Title.**
9. Select **Keywords** for indexing.
10. Write the **Acknowledgements.**
11. Write up the **References.**

Step 1: Prepare the figures and tables

- Remember that "a figure is worth a thousand words." Hence, illustrations, including figures and tables, are the most efficient way to present your results
- How do you decide between presenting your data as tables or figures?
  - Tables give the actual experimental results,
  - Figures are often used for comparisons of experimental results with those of previous works, or with calculated/theoretical values
- Figure and table legends must be self-explanatory

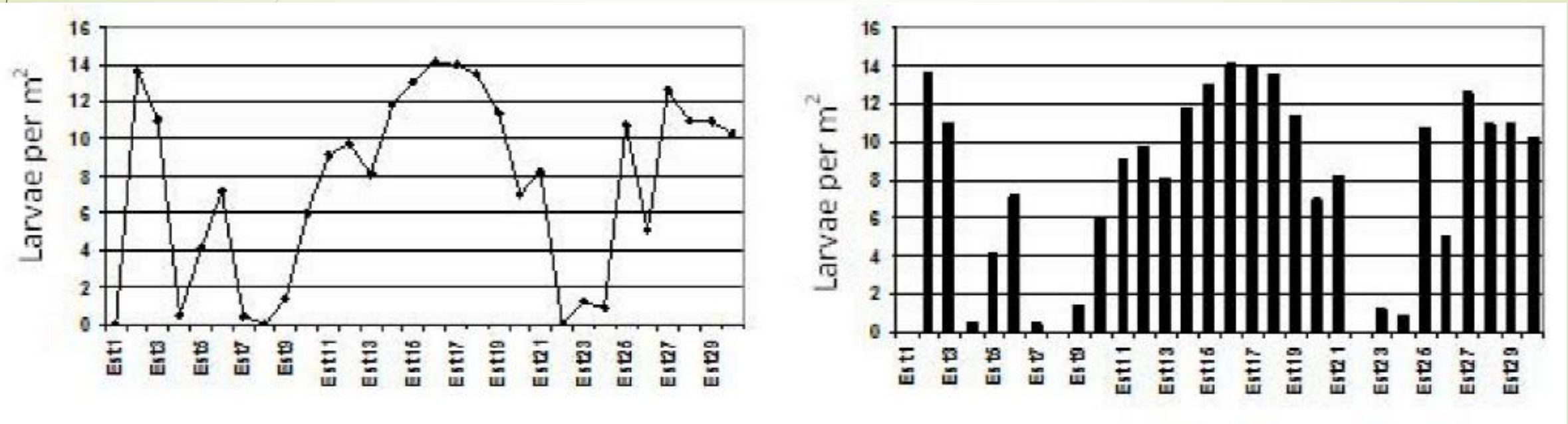
Step 1: Prepare the figures and tables





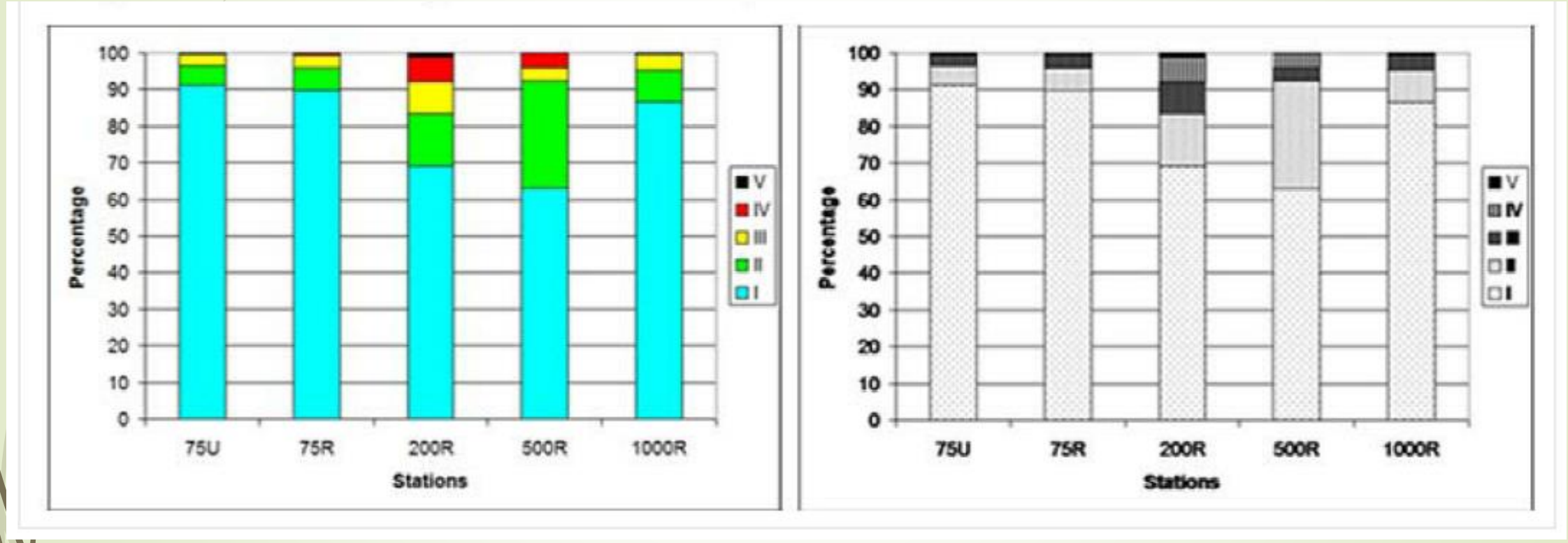
Hindari terlalu banyak data dalam 1 grafik

Step 1: Prepare the figures and tables



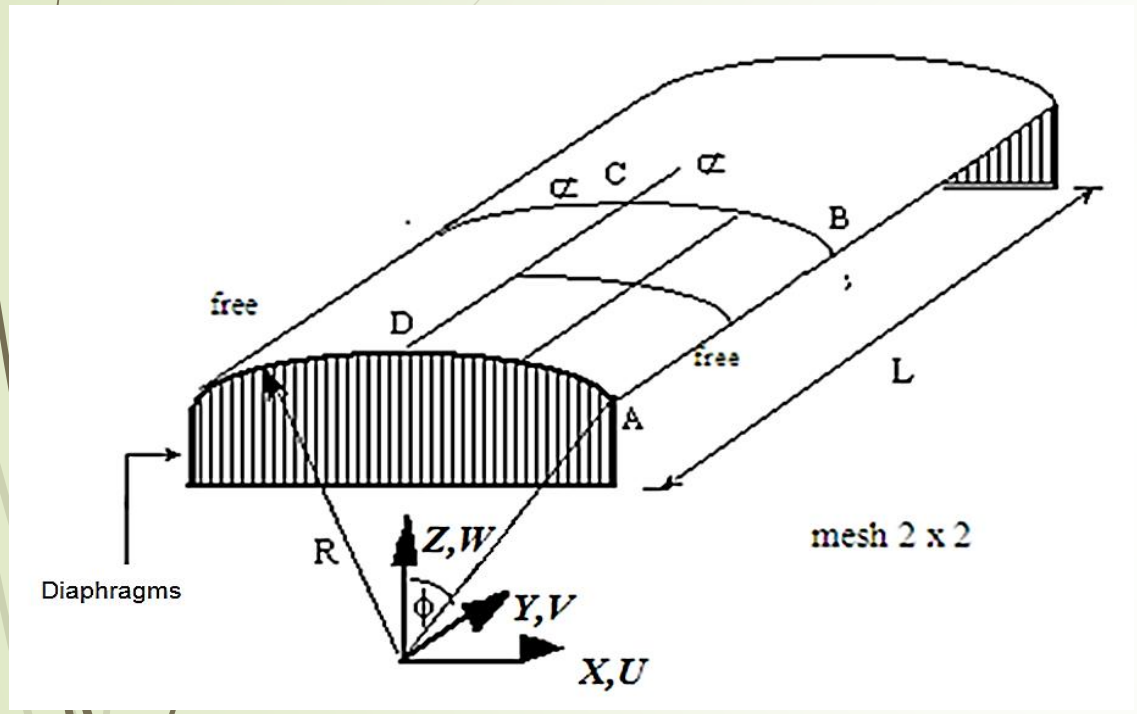
Pilihlah grafik yang tepat untuk hasil penelitian

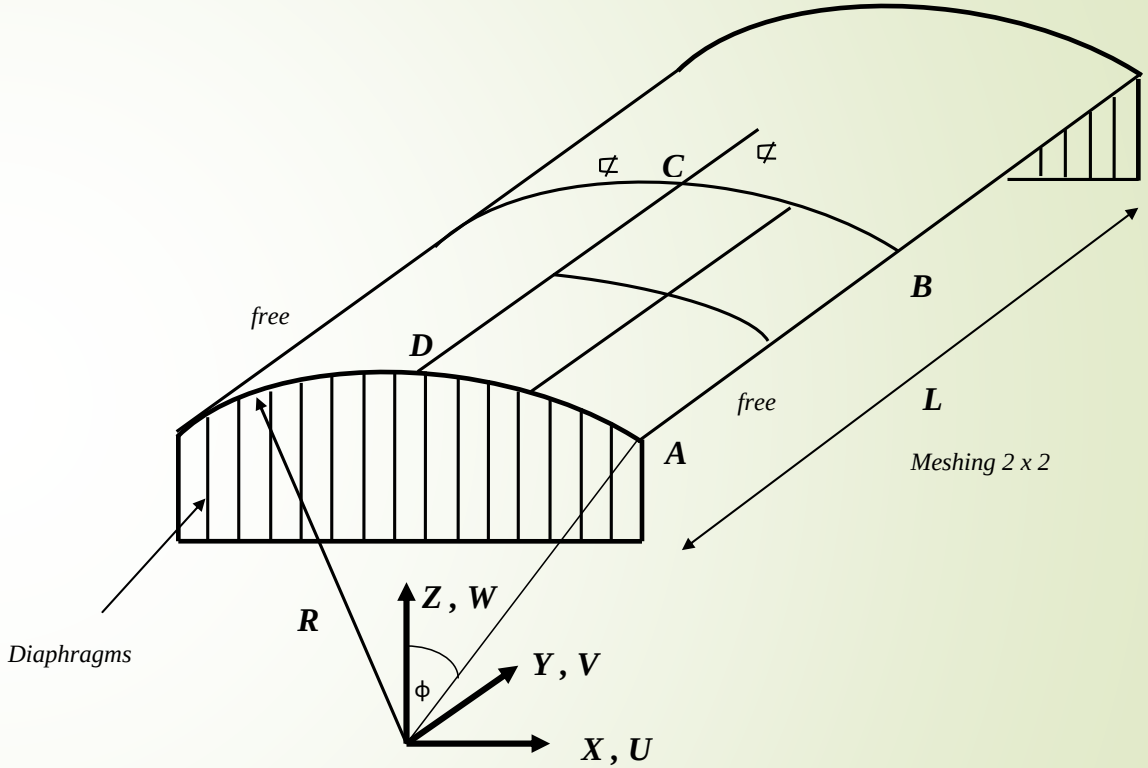
Step 1: Prepare the figures and tables



Usahakan menggunakan warna hitam putih jika tidak diperlukan

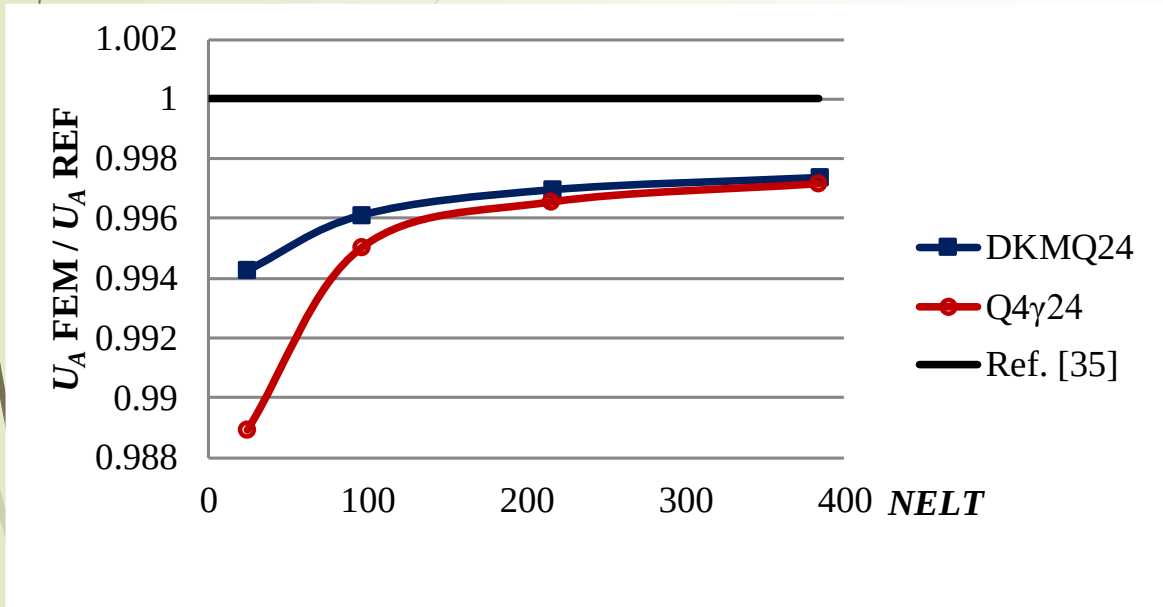
Step 1: Prepare the figures and tables



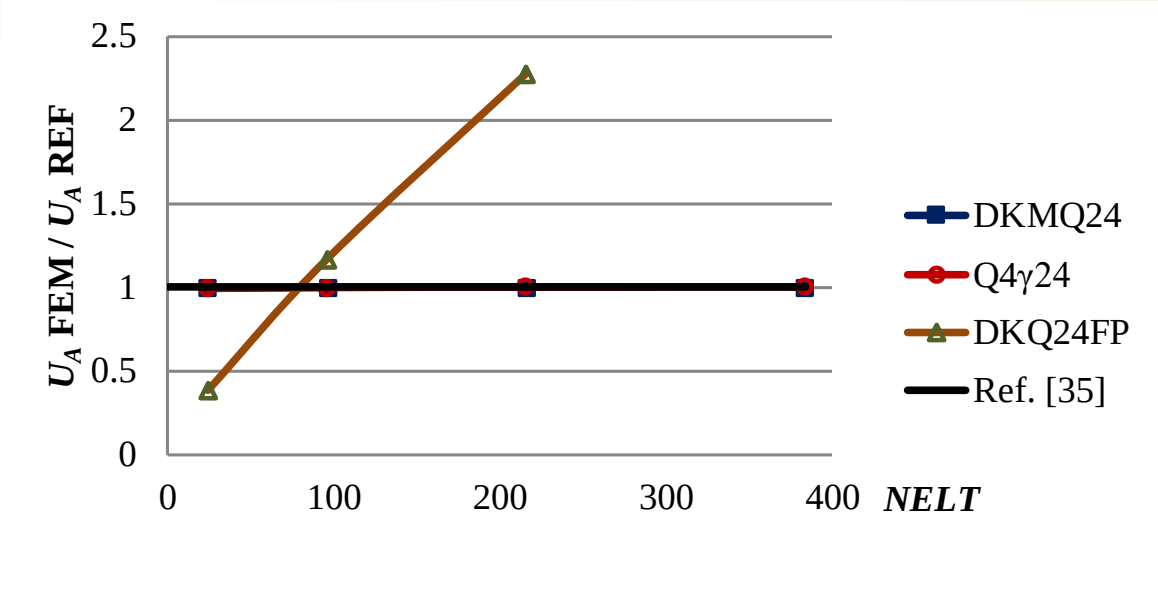


Ketajaman dan ukuran gambar harus diperhatikan

Step 1: Prepare the figures and tables

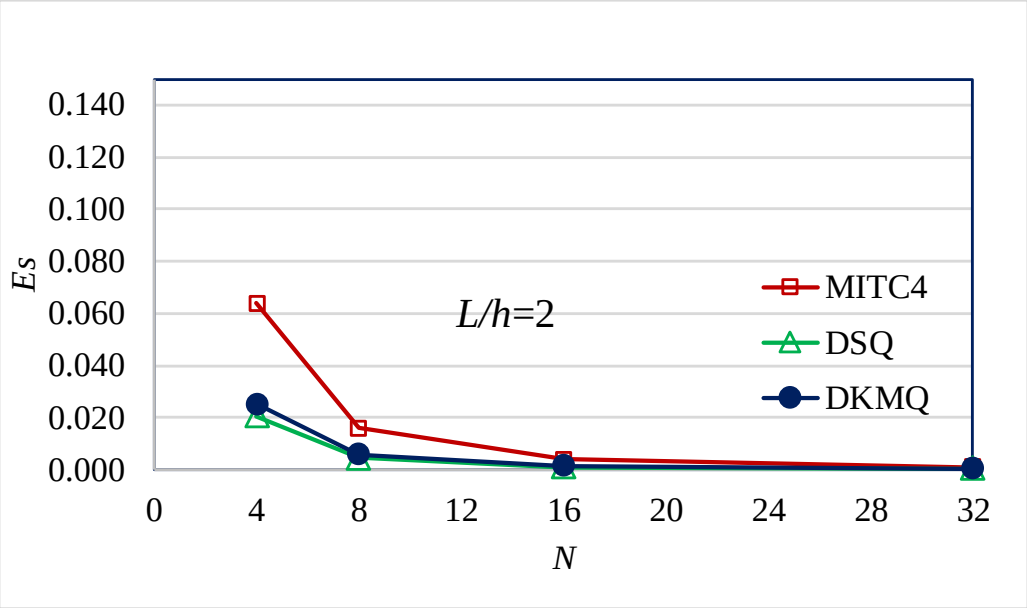


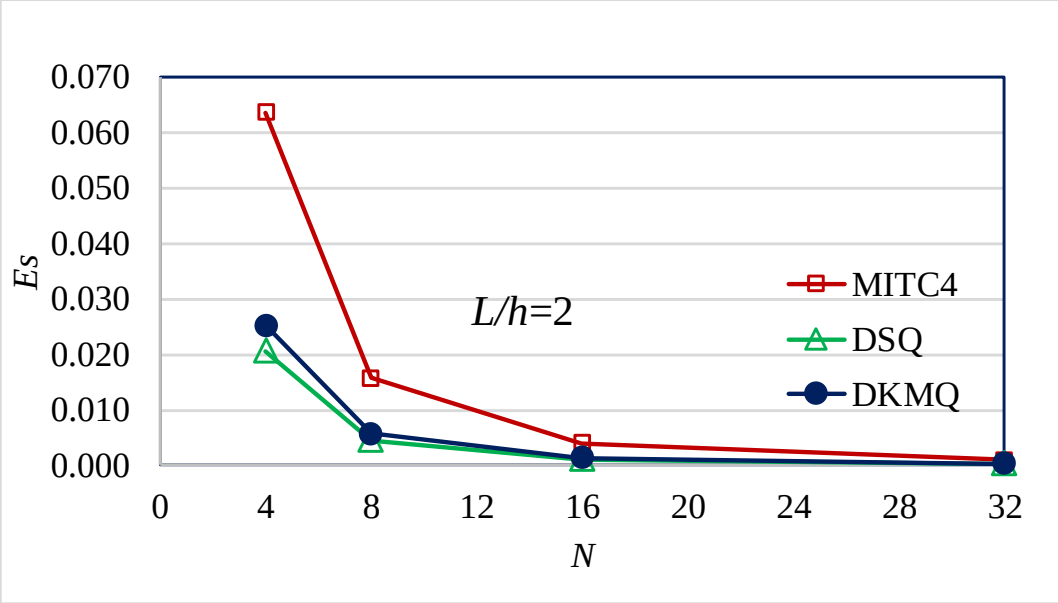
Hasil dengan 2 elemen



Hasil dengan 3 elemen

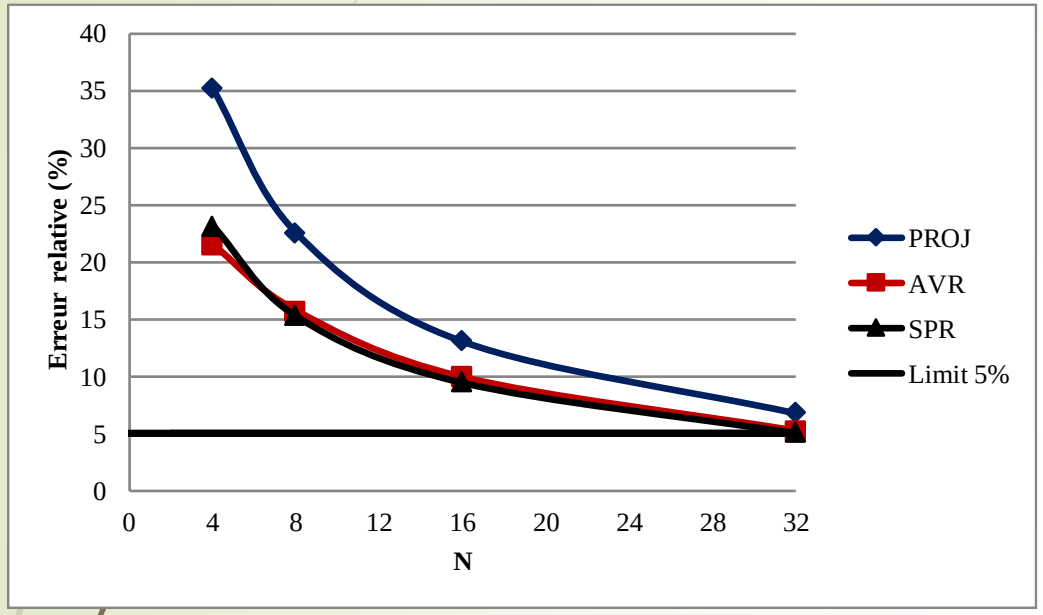
Step 1: Prepare the figures and tables

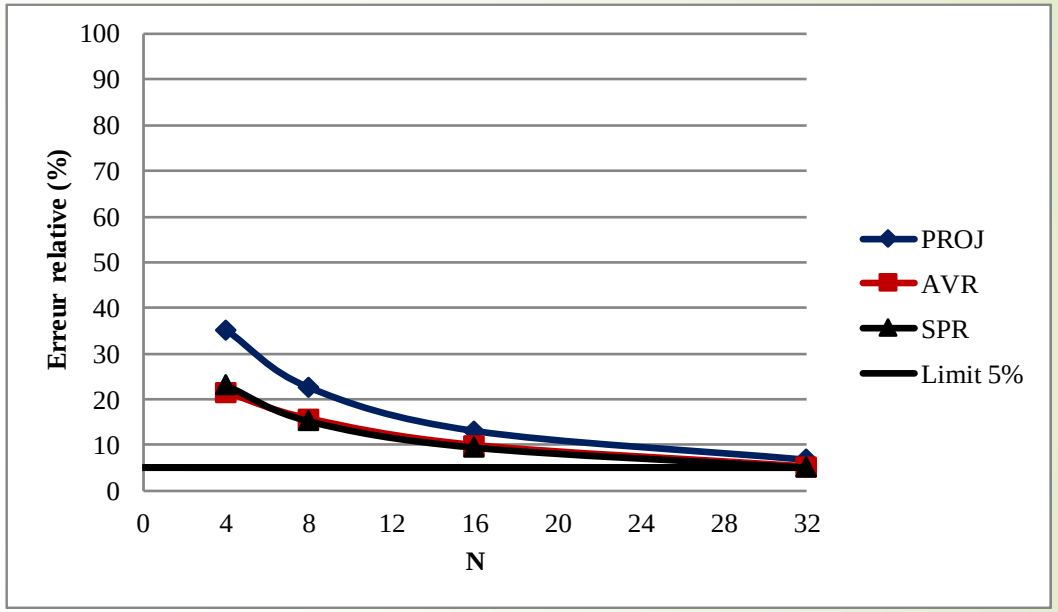




Hasil dengan skala sumbu Y yang berbeda

Step 1: Prepare the figures and tables





Hasil dengan skala sumbu Y yang berbeda

Step 2: Write the Methods

- This section responds to the question of how the problem was studied.
- If your paper is proposing a new method, you need to include detailed information so a knowledgeable reader can reproduce the experiment.

Step 3: Write up the Results

- This section responds to the question "What have you found?" Hence, only representative results from your research should be presented.

- The results should be essential for discussion.

Step 4: Write the Discussion

- Here you must respond to what the results mean.
- It is the most important section of your article.
- Probably it is the easiest section to write, but the hardest section to get right.
- Take into account that a huge numbers of manuscripts are rejected because the Discussion is weak.

Step 5: Write a clear Conclusion

- You can propose present global and specific conclusions, in relation to the objectives included in the introduction.
- Whatever the case, without a clear conclusion section, reviewers and readers will find it difficult to judge your work and whether it merits publication in the journal

Step 6: Write a compelling Introduction

- This is your opportunity to convince readers that you clearly know why your work is useful.
- A good introduction should answer the following questions:
  1. What is the problem to be solved?
  2. Are there any existing solutions?
  3. Which is the best?
  4. What is its main limitation?
  5. What do you hope to achieve?

Step 7: Write the Abstract

- The abstract tells prospective readers what you did and what the important findings in your research were.
- Together with the title, it's the advertisement of your article.
- Make it interesting and easily understood without reading the whole article

Step 8: Compose a concise and descriptive title

- The title must explain what the paper is broadly about.

- It is your first (and probably only) opportunity to attract the reader's attention

Step 9: Select keywords for indexing

- Keywords are used for indexing your paper.
- They are the label of your manuscript.
- It is true that now they are less used by journals because you can search the whole text

Step 10: Write the Acknowledgements

- Here, you can thank people who have contributed to the manuscript

Acknowledgments

The financial support from the Indonesian Ministry of Research, Technology and Higher Education (KEMENRISTEKDIKTI) and Institut Français d'Indonésie (IFI), French Embassy in Jakarta are gratefully acknowledged.

5. Acknowledgement

The financial support from Universitas Indonesia through the Hibah PITTA program (No.786/UN2.R3.1/HKP.05.00/2017) is gratefully acknowledged.

Step 11: Write up the References

- Typically, there are more mistakes in the references than in any other part of the manuscript.
- It is one of the most annoying problems, and causes great headaches among editors.
- Now, it is easier since to avoid these problem, because there are many available tools (EndNote or Mendeley)

Penutup

Here are some general guidelines

- **Title:** Short and informative
- **Abstract:** 1 paragraph (<250 words)
- **Introduction:** 1.5-2 pages
- **Methods:** 2-3 pages
- **Results:** 6-8 pages
- **Discussion:** 4-6 pages
- **Conclusion:** 1 paragraph
- **Figures:** 6-8 (one per page)
- **Tables:** 1-3 (one per page)
- **References:** 20-50 papers (2-4 pages)

As you prepare your manuscript, there are some basic principles you should always keep in mind:

- Cherish your own work – if you do not take care, why should the journal?
- There is no secret recipe for success – just some simple rules, dedication and hard work.
- Editors and reviewers are all busy scientists, just like you. Make things easy to save them time.

Terima Kasih