Steps prior to writing a paper

Have a story to tell…
Where to start?

1. Results
   • Do not publish just to publish
   • Negative results can be published, wrong results not!

2. Figures

3. Structure of the paper: titles & subtitles

4. Discuss with supervisors & co-authors – make a plan

5. Read journal’s guide for authors
   (e.g., https://www.elsevier.com/journals/learning-and-instruction/0959-4752/guide-for-authors)
Article’s structure and content

• Title
  • Short & attractive

Which title is concise but also includes sufficient information to make the paper stand out?

1. Characterization of a landfill using geophysical data
2. Characterization of a heterogeneous landfill using geophysical data
3. Characterization of a heterogeneous landfill using seismic and electrical resistivity data
4. Characterization of a heterogeneous landfill using seismic and electrical geophysical data.
Article’s structure and content

• Authors – Affiliation
  • Who should be your co-author? Who should be the first author? (e.g., https://www.psi.ch/integrity/dokumente)
  • Use correct affiliation (incl. present address)

• Keywords
  • General words (e.g., landfills)
  • Specific to your research (e.g., MASW)

• Highlights
  • Short sentences which describe the main findings and motivation of your research
Article’s structure and content

• Abstract
  • Attract the interest of the reader, do not simply summarize your study
  • Three main components:
    a) What is the problem and what is the focus of your paper?
    b) What are the main methods you used?
    c) What are the results? - Simply mention them with no explanation
• Graphical abstract
  • An innovative figure to get the interest of the reader
Article’s structure and content

• Introduction
  • What is the problem? Explain in detail and use specific phrases to make your point clear.
    – «There is an increasing need to...»
    – «It is critical to understand the...»
  • What has been done till now and why is this not enough (gap)?
  • Provide clear objectives of your article. Explain why your paper is innovative.
    – «The objectives were to investigate the following:...»
    – «The first goal of our paper is...»
  • In the end, shortly summarize the content of your paper.
Article’s structure and content

• Main body
  • Laboratory/field measurements, theory, models, results
  • Explain your measurement (theory/model), procedure (parameters) chronologically
  • Add information such as time & place
  • Describe the figures – be specific in both the main text and the figure caption
  • Provide a detailed description – do not assume things are self-explanatory
Article’s structure and content

• Discussion
  • Yes or no?
  • Criticism of your own work can help in the reviewing process
  • Opportunity to point out other applications of your work
  • Do not refer to future work you will do
  • Do talk about the difficulties you had, but only if you are already planning a way to solve them.
    – «There were difficulties in...»
    – «The results will be much better if...»
  • Helps to connect with your next article:
    – «In Konstantaki, et al., 2014 we found that...The goal of this paper is to further investigate....»
Article’s structure and content

• Conclusions
  • Short & precise
    – «We studied the...»
    – «We investigated the potential...»
• Acknowledgements
• References
  • Use a reference management software (Module 1 & Module 5)
  • Do not cite just to cite
  • Avoid too many self-citations
  • Read the papers you cite
Article’s structure and content

• Figures
  • Follow the instructions in the authors’ guide
  • When using figures from other authors, check the copyright (Module 3)
  • Compare same things
  • Be careful with the color scale

Picture from: Kontantaki, 2016. Doctoral Thesis
Exercise 1

• Describe your research in one or two sentences (elevator pitch)
• Make a short outline of your research or of the next paper you are planning to write