

Technical writing

Overview of this talk:

- Essentials: do's and don't's
- Style: matters of taste
- Advice: how to succeed and how to enjoy it

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- undergraduate project, MSc/MRes dissertation, PhD thesis

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but in general...

- writing is an intrinsic part of doing research, both internally (part of the process) and externally (dissemination)

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- Colleagues – to communicate research
- General Public – to raise awareness

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- Aiming explanation at target reader

Layout and structure

- Title, authors
- Abstract/summary (contents, list of Tables etc, if necessary)
- Introduction
- Theory
- Implementation
- Results
- Discussion/conclusion/future work, acknowledgements
- References
- Appendices, (Index?)

Presentation pointers

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- Citations and referencing

Citations - name-date

proposed by Knorr-Held and Rasser (2000).

... grouped continuous models (McCullagh, 1980), we define ...

Knorr-Held, L. and Rasser, G. (2000). Bayesian detection of clusters and discontinuities in disease maps. *Biometrics*, 56, 13–21.

House rules

In the end, you may have to conform to -

- The journal editors (journals often have own LaTeX style files)
- The university
- Conference organisers, ...

on matters of layout, style,
or spelling, abbreviation, referencing, etc.

Guides to good practice

- N. J. Higham, *Handbook of writing for the mathematical sciences*. SIAM.
- R. Barrass, *Scientists must write*. Science paperbacks.
- Let LaTeX do the work of formatting (most of the time) you concentrate on the content

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- A formal or "correct" style does not have to be unreadable

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- Clarity and informality are not equivalent

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- Paragraphing: headed sections / paragraphs

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- Signposting:
structure/order/difficulty/relationship

Style: Developing your own

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- Read books on the subject, e.g.
 - ▶ Kirkman, John (1992). Good Style
 - ▶ Luey, Beth (1987). Handbook for Academic Authors
 - ▶ O'Connor, Maeve (1991). Writing Successfully in Science

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- Perfectionism is your enemy not your friend

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- Start thinking about the writing when you plan the research

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- Accept writing blocks as normal and don't get into a vicious circle of anxiety

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- Keep careful bibliographic details of papers read and get them right

Advice: Polishing

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- Exploit the technology

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- Stand back and put yourself in the place of the reader

Advice: Proof-reading

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- You probably need to do it on paper

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- Whatever you do next, writing is useful