Functional Genomics and Systems Biology Group
Computational Biology Center

"Where to start"
Overcoming writers block and other methods to improve your writing skills

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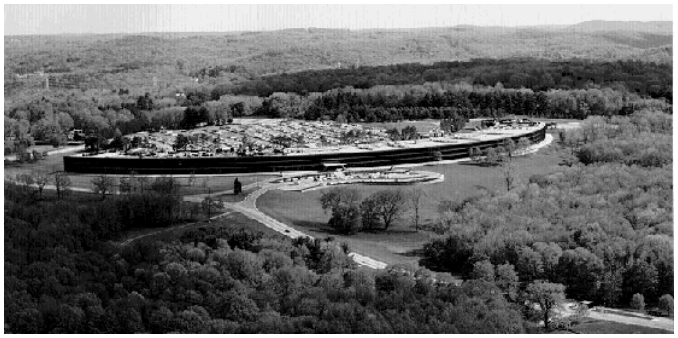
IBM T. J. Watson Research Center, Yorktown Heights, USA

Disclaimer

IBM pays my salary. This presentation is entirely my personal opinion.



IBM Thomas J. Watson Research Center, Yorktown Heights, NY

Where to start?

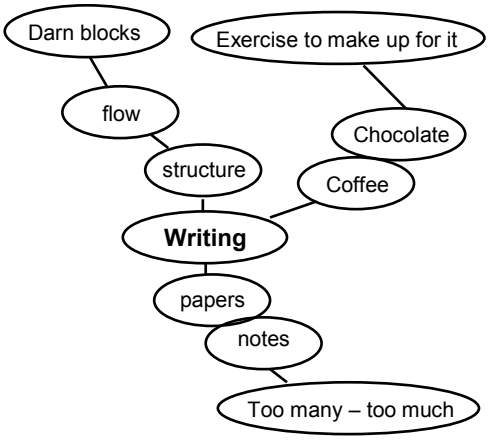
- From idea to first outline
  - Custern
  - Mindmapping
- From outline to first draft
  - That darn first sentence
  - Know yourself – keeping the flow
- What is next?

A step back – Planning the writing process

- Exploration **30 %**
  - Collecting ideas
  - Formulate questions and explore the field
- Organize
  - Narrow down the subject
  - Developing specific aims
  - Writing a synopsis
  - Specific reading and analysis of literature
- The first draft **30 %**
  - Structure
  - Do not think about style too much
- Revisions **40 - 50 %**
  - Structure, flow and argumentation
  - Style

Cluster Method

- Used to give shape to vague ideas
- Similar to brainstorming
- Method
  - Write the main idea in the middle of a sheet of paper
  - Circle it
  - Write down fast all ideas that you have without trying to put them into any order
  - Circle each idea
  - Connect the circles beginning from the central idea – these will give association chains
  - Do not try to force anything
  - Just look at the cluster and see what comes to your mind
  - All in – everything is allowed.



Note: When you cluster you will find that you have an impulse to write at times –
take it and use it to begin writing!

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Creative Writing

- Free writing
  - Motivate yourself to write 5 minutes without stopping at all!
  - If you cannot think of anything that you want to write – simply write that down!
  - The aim is to write and not to stop writing. It does not matter what you write!
- Automatic writing
  - Write down whatever thought goes through your mind
  - The aim is to visualize the invisible word generator in your head
- Discovery writing
  - Chose a politic, scientific or art subject
  - Write down fast whatever you can think of regarding the subject
  - Do not worry about grammar or complete sentences

Well, I am supposed to write something but I cannot be bothered but I should whatever does it make sense I better seek the source inside of me and tell the world about atrial fibrillation. It is after all the worlds most common arrhythmia. Not deadly though but it increases risk of stroke – boom! And people can die! Lets tackle the problem and simulate it to find new therapies!

Focusing on the problem

- Write down in one sentence the problem you want to solve

  We investigate ablation lesions in treatment of atrial fibrillation.

- Write down in one sentence why you want to solve it

  We want to learn how they manifest and change after initial application.

- Make your case in one sentence

  This understanding is crucial to improve ablation therapy to reduce recurrence of atrial fibrillation in patients.

- What – who – when – where – why – what for – how

You have to define your red thread, your leitmotif!

Mindmap Method

- Gives the first structure of scientific work by graphical means
- Method
  - Get a large piece of paper and multi-colored pens
  - Write the problem down in the center
  - Write down clockwise the different aspects of the problem as branches
  - Formulate them short and as nouns
  - Branch out from the branches using different colors

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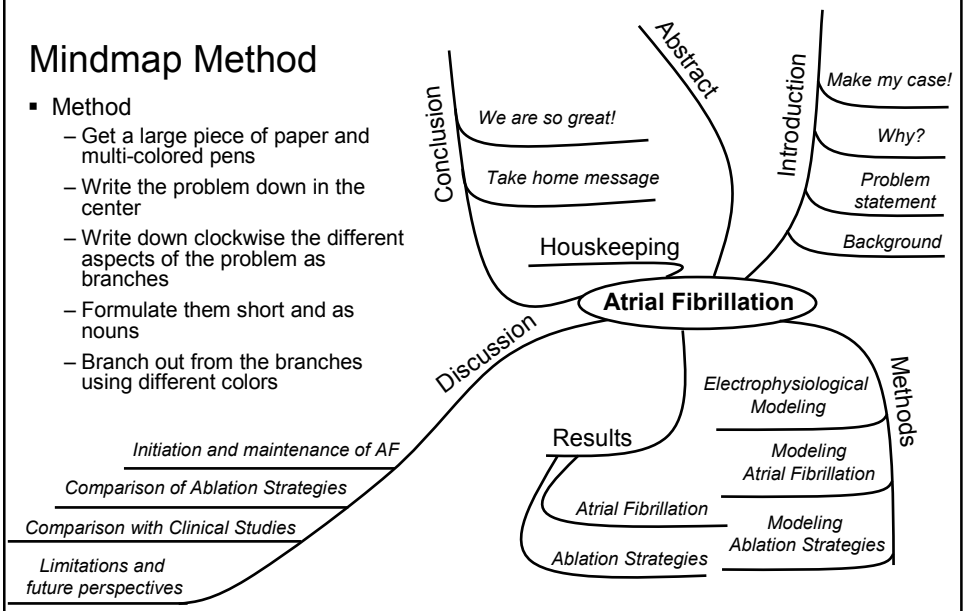
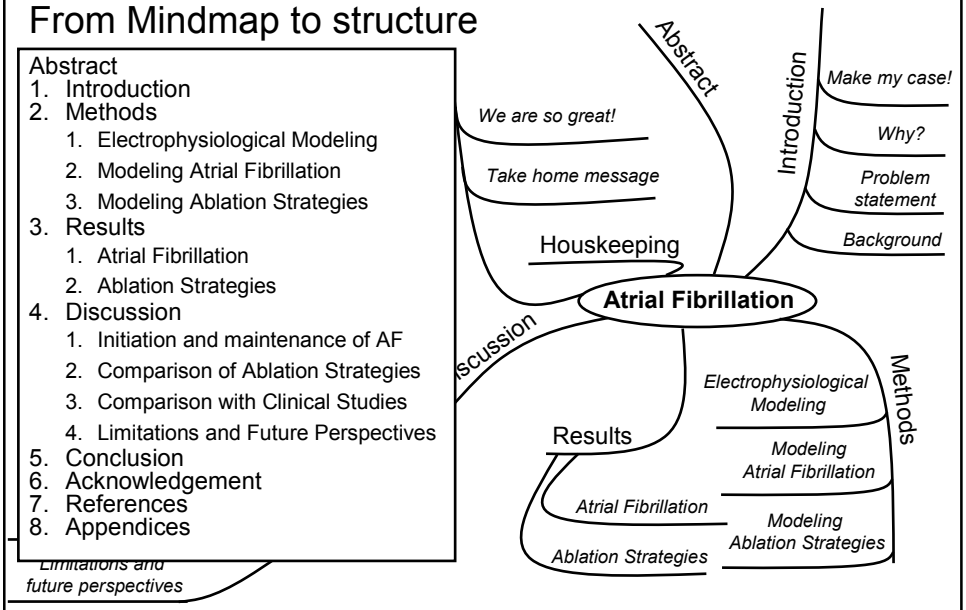


From Mindmap to structure

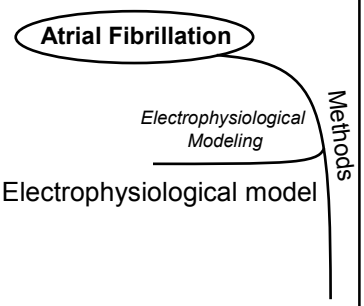
Abstract
1. Introduction
2. Methods
   1. Electrophysiological Modeling
   2. Modeling Atrial Fibrillation
   3. Modeling Ablation Strategies
3. Results
   1. Atrial Fibrillation
   2. Ablation Strategies
4. Discussion
   1. Initiation and maintenance of AF
   2. Comparison of Ablation Strategies
   3. Comparison with Clinical Studies
   4. Limitations and Future Perspectives
5. Conclusion
6. Acknowledgement
7. References
8. Appendices



From outline to first draft

- How do I start writing?
  - Remember creative writing
  - Take someone else's words and make them your own
  - Write when you feel writing – the first draft may be rough
  - But try not to loose focus too much
  - Remember your leitmotif
- The importance of a break
  - Do take breaks if you get stuck
  - Do something completely different
    - Go running
    - Cook a nice dinner
    - Read a novel or fantasy book
    - Take a shower/bath
    - Sleep!

How far can a mindmap take me?



- The mindmap gives the structure of your manuscript
  - Sections, chapters, subchapters
- Bulletpoints
  - Write down the main points you want to cover in a paragraph
  - One word per line
  - Sort them according to the flow of your manuscript
  - Make one sentence out of every word – if you need more sentences: KEEP WRITING!
  - OR: break it down into more bullet points

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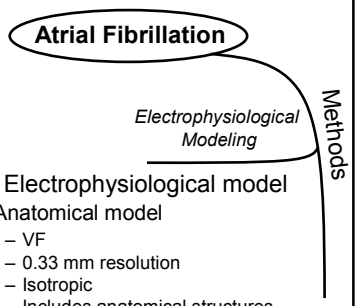

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- 2.1 Electrophysiological model
  - Anatomical model
    - VF
    - 0.33 mm resolution
    - Isotropic
    - Includes anatomical structures
      - Pulmonary veins
      - Crista terminalis
      - Bachmanns bundle
      - Pectinate muscles
  - Electrophysiological Cell model
    - Atrial cell model by Courtemanche et al.
    - Precompute 9 x 4 times
    - 9 frequencies & 4 refractive periods
  - Excitation/Diffusion – Cellular Automaton
    - Rule based
    - Can do many things

Know yourself!

- Diamonds are created under pressure.
- “If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle.” (Sunzi)
- Know:
  - When your creative phase is during the day
  - Remember the 80:20 rule!
  - Create the environment that is best for you to write in

What is next?

- Revise, revise, revise!
- But first, enjoy finishing the first draft. Enjoy the silence and your accomplishment!
- Let the manuscript rest for a night or a day
- The bad news: When the first draft is finished, only 30 – 50 % of the work is done
- The eye of the reader
- The eye of the reviewer

Remember

- The storyline
  - Tell your story – do not wander off!
- Stay focused and sharp!
  - What am I trying to say?
- Allow yourself a break
  - know yourself and remember the 80:20 rule

A good wine takes a long time to mature –
allow your manuscript to rest and mature, too!