How to write an abstract.

Why is an abstract important?

Nowadays, the search for scientific publications has moved almost exclusively to the internet. However, online publication databases typically contain only abstracts. The abstract serves the function of **'selling' your work**, so it is vital to write a complete but concise description of your work to entice readers into purchasing your article or listening to your presentation.

Parts of an abstract

In addition to be concise, an abstract should include the following sections:

Motivation:

Why *do we care* about the problem and the results?

Articulate the importance of your work, the difficulties of the research area, and the impact your research might have.

Problem statement:

What *problem* are you trying to solve?

State the scope of your work (a generalized approach or for a specific situation). However, be careful not to use too much jargon.

Approach:

How did you go about solving or making progress on the problem?

Describe your methodology (simulation, analytical approach, prototype, experiment, etc.) and its most important parameters.

Results:

What *is the answer?*

Express your results in numbers whenever possible. Avoid vague expressions such as 'very', 'small' or 'significant'; use instead 'orders-of-magnitude', etc.

Conclusions:

***What** are the implications* of your research?

Tell the reader if your work is going to change the world, is a significant step forward or simply serves as a road sign indicating that this path is a waste of time (all those results are useful). State also if your results are general or specific to a particular case.

Related to the theme:

In today's increasingly complex and interconnected world, it is essential for scientists to move beyond the boundaries of their individual disciplines and engage in meaningful communication with experts from other fields, as well as with the broader public. Scientific innovation no longer occurs in isolation; rather, it thrives at the intersections of different areas of knowledge, driven by collaboration exchange of ideas. By effectively sharing their insights and working collaboratively, scientists can transform their research findings into practical applications that address real-world problems and contribute to the development of impactful technologies.

Reflecting this vision, this year's theme for the Empa PhD Symposium, ***From Lab to Life: Interdisciplinary Steps to Real-Life Change***, emphasizes the importance of bridging the gap between research and implementation. It encourages projects that foster collaboration among scientists from diverse disciplines, as well as partnerships with industry and communication with society. Such cooperation not only accelerates the translation of scientific knowledge into tangible outcomes but also ensures that innovations are relevant, sustainable, and beneficial to society as a whole.

Additional tips

- Think about search phrases and **keywords related to your work** and use them in your abstract.
- PhD students who just started their projects and do not yet have results may write their abstract based on the first three sections, namely: motivation, problem statement and planned approach
- Count your words! The word limit for the Empa PhD Symposium is **250 words**, which is a commonly used prescription. Please make sure that the abstract does **not exceed the limit.**
- **Optional:** You are free to add **one picture** along with your abstract if you think it is important for explaining your project. This could include a method or a result.