MTRAW, Lecture 4: Contribution and Dissertation Writing

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What is a contribution?

▶ Add a theoretical or empirical plus to the community

▶ A solution to a problem : industrial, economic, social, etc.

▶ A genuine problem

▶ Originality

Choosing the contribution and Originality

▶ Originality: not necessarily a radical solution, but a new way of addressing the problem at hand.

▶ One of the following schemes:

  ▶ Propose Approach A to solve Problem B

  ▶ Propose a new formulation of a problem P, after having conducted a good state of the art

  ▶ Propose some benchmarks

  ▶ Conduct a theoretical or practical analysis of **existing state-of-the-art approaches**

  ▶ Conduct a survey

Before implementing your solution

▶ Motivate every choice

▶ Once all choices are motivated, start devising your solution

Devising your solution

- ▶ Design (Conception in Fr):
  - ▶ System Architecture
  - ▶ An algorithm
- ▶ The type of the design method is decided upon the nature of the domain of your project: Information systems vs Networking
- ▶ Attention; never forget about the originality of your contribution
- ▶ The design phase is the last chance to detect your choice issues; So it is so crucial
- ▶ Never start from coding and generate your design later

Implementing your solution

- Two objectives:
  - Offer a final product to the end user
  - Validate the proposed solution
- Very important: the implementation phase is crucial for validating the proposed solution

Validation

- Implementation
- Comparisons
- Statistics
- Formal proofs
- etc.

There is no research project that does not need validation

Dissertation writing

▶ When? Once all results obtained

▶ Dissertation size: 40 pages are more than enough $\cdots$

▶ **Dissertation writing not GPT Chat**

▶ Read, Read, Read before write any element

▶ Outline is essential before start writing

▶ Source Cards and Note Cards