RESEARCH METHODOLOGY

French research system, bibliographic methods, how to {write/speak/PhD}

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And you? Where do you come from? \LaTeX{} and you?

The course  10 hours = 3 + 2 + 2 + 3

Arche, personal page  Slides, information, useful links

Assessment  Presentations about research systems in countries other than France
Create a document in LaTeX that contains a table and a figure. Give each object a caption, put the table caption above the table and the figure caption below the figure. Create a BibTex file with a few citations in it. Add a sentence that contains these citations and then add a bibliography to your document.
USEFUL LINKS

https://tex.stackexchange.com/
https://www.tablesgenerator.com/
http://detexify.kirelabs.org/classify.html
https://www.latextemplates.com/
French research system

Ph.D. fundings in France

Ph.D.: where and when?

After a Ph.D. (in France)

Scientific communication
FRENCH RESEARCH SYSTEM
Public research is conducted jointly between universities and research organizations
CNRS Centre National de la Recherche Scientifique
National Center for Scientific Research

→ Fundamental research in all disciplines of science, created in 1939 http://www.cnrs.fr/en

In 2018 Budget : 3.4 billion €; 32,000 employees.

**Figure** – 10 institutes in the CNRS.
INRIA Institut National de Recherche en Informatique et Automatique
French Research Institute for Digital Sciences


In 2018 Budget: 240 million €; 2,500 employees.

**FIGURE** – 8 Inria research centers.
OTHER MAJOR EPST

**INSERM** Institut National de la Santé et de la Recherche Médicale
National Institute of Health and Medical Research

➤ Focuses on health, medical issues and bio-medicine, created in 1964.

**INRA** Institut National de Recherche Agronomique
National Institute for Agricultural Research

➤ Focuses on research in agriculture, agronomy, nutrition, environment, green bio-technologies, biodiversity, epidemiology. Created in 1946.

**Not an EPST CEA:** Commissariat à l’Énergie Atomique (French Alternative Energies and Atomic Energy Commission), a national research organization dedicated to nuclear and alternative energies.
UPR « Unités Propres », consist of only one type of EPST.

Ex: LSPM – Laboratoire des Sciences des Procédés et des Matériaux (Laboratory of Process and Materials Sciences), CNRS UPR 3407

UMR « Unités Mixtes », bring together researchers from several institutes and/or universities

Ex: LORIA, UMR 7503 = Université de Lorraine + CNRS + INRIA
PH.D. FUNDINGS IN FRANCE
TYPES OF FUNDING

- Doctoral contract
- Funding by research institutes
- Industrial funding: CIFRE (Conventions Industrielles de Formation par la Recherche)
- Co-funding by the region/other (institute, laboratory funds)
- Research contracts: with the own resources of a research team (ANR, ERC, other)
**Who?** No age limit, no obligation to have obtained a Master’s degree in the prior year.

**Selection** Local.

**Complementary activity?** Teaching, scientific and technique information, expert assessment or technological surveillance for companies or community.

**Wage** 1684.93 euros raw/month for research activity only; 2024.70 euros raw/month if complementary activity.
Most EPST have their own money (from government) to fund Ph.D. projects.

**Complementary activity?** Generally possible. Teaching, scientific and technique information, expert assessment or technological surveillance for companies or community.

**Ex: CNRS** Bourse Docteur Ingénieur (BDI), requires to have an Engineer diploma. 1757 euros raw/month.

**Ex: INRIA** CORDI-S programme. 1957.54 euros raw/month.
Who? Having obtained a Master’s degree in the last three years.

Selection ANRT: Association Nationale de la Recherche Technique (National Association of Technical Research).

Complementary activity? No.

Wage Depends on the company! Minimal 1957 raw/month.
Each case is different 😊
Contact your possible future supervisor(s)!
Your future supervisors may work within a research project funded by a national, European or international agency, and may therefore have a specific budget for a Ph.D. project.

Contact your possible future supervisor(s)!
PH.D.: WHERE AND WHEN?
Crawl & stalk & spam:

- Research institutes
- Research centers
- Doctoral schools
- Mailing lists of your favorite research topics:
  - Linguist List
  - Liste Langage Naturel (LN)
  - Groupes de recherche (GdR)
A.S.A.P.

Ph.D. proposals generally have to be submitted between beginning of February and beginning of April by the supervisors. Most application campaigns open beginning of May.
AFTER A PH.D. (IN FRANCE)
Research Career Perspectives

**ATER**  Attaché Temporaire de Recherche et d’Enseignement (Temporary Research and Teaching Officer) in a University – 2 years at most

**Post-doctorate**  Contract researcher, in France or abroad

**Maître de conférence**  Assistant, then associate professor – university lecturer and researcher, on local competitive recruitment of universities, requires a CNU qualification

**Chargé de Recherche**  Civil servant researcher in one of the EPST – on national or local competitive recruitment depending on the EPST

**Lecturer/researcher of the private sector**
WHERE DOES THE MONEY COME FROM?

National and European funding plans:

**ANR**  Agence Nationale de la Recherche (National Research Agency): individual or collaborative national or international calls for proposals

**Region**  Generally devoted to a specific theme and regional collaborations between public and private organizations

**Programs of research institutes**

**European Commission**  Ex: Horizon 2020 Programme
Criteria common to all types of calls:

- Subject relevance (bibliography, state-of-the art, clear presentation of the objectives).
- Scientific excellence and innovative aspects for technological research.
- Quality of the project structure/implementation and its feasibility.
- Global impact of the project.

Then, depending of the call type:

- Presence of the industrial sector via industrial partners
- International collaborations
SCIENTIFIC COMMUNICATION
**Figure** – 5 sections: abstract, intro, methods, results, discussion (AIMRD).
1. **General introduction of the subject** (with plan explanation)

2. **Detailed presentation of the subject and objectives**
   - State-of-the-art: existing work (theoretical & technical)
   - Presentation of your objectives and hypotheses: put into the context of the existing works

3. **Your methods**
   - Presentation of your methods (e.g. your new method compared to the existing works)

4. **Your results**
   - Result presentation
   - Result analysis/Discussion

5. **Conclusion**

6. **Bibliography**

7. **Potential Annexes**
I want to be able to write texts in English, but also en français. Yet: typography rules are different in those languages! There must be more than 1,000.5 rules in English, 1 000,5 en français. I would give $3 billion and 3 milliards € to learn them!

French  http://www.schplaf.org/kf/VadeMecum_Memoire.php

English "bla" → “bla”
French "bla" → « bla »

Attention please: guillemets (French quotation marks) need space!
The most important part is the content use simple styles and avoid dense poster/slides.

Colours the most important keywords could be coloured, or in bold.

Text the less text the better. No full sentences; graphics/pictures help to visualise.

Details your presentation should lead people to read your paper, you don’t have to pack everything in it.
**POSTERS**

**Attract people** main idea and main findings should be clear (1 min).

**Talk to people** a poster is a base. Prepare a speech (2-5 mn) that goes quickly through the poster.

**Font** the title should be readable from about 3-5 meters, the rest from about 1-2 meter.

**Reading path** generally easier: left to right, up to bottom, either by columns or by rows.

**Structure** follow the paper: motivations (what is the problem, why it is interesting) maybe an example, then approach and contributions, experiments, results and a conclusion.
**Time/slide** 1 slide per minute (at most!)

**Outline** for short presentations, don’t repeat the outline.

**Outline (again)** it isn’t necessary!

**Structure** the paper contains more than the slides, select the most important content. Adapt to your audience!

**Transitions** try to have a sentence link between your slides (you don’t get lost + the audience follows your story).

**The end** a “Thank you!” slide.
**Time/slide** 1 slide per minute (at most!)

**Outline** for short presentations, don’t repeat the outline.

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**The end** a “Thank you!” slide.

What not to do:

https://www.youtube.com/watch?v=KbSPPFYxx3o.
• Use spell-checkers (ex (on-line, English):) 
  http://www.reverso.net/spell-checker/english-spelling-grammar/.

• **THEN**: look out for:
  Homogeneity caps, punctuation, general style.
  Logic outline, transitions.
  Formulations https://www.deepl.com/
  Rehearse rehearse, rehearse.

“The term ‘bullet-point’ comes from people firing guns at annoying presenters.”
DEMO
Any claim must be justified by a citation.

Any extract from a published work (book, report, article, internet, etc), must be quoted.
Harvard system  alphabetical ordering in the “Bibliography” section, no numbering. The citation is made with the author’s last name, followed by their first name, and the year of publishing.

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Vancouver system  references cited with numbers corresponding to their appearance number; ordered by number in the “Bibliography” section.

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**Mixed systems** references numbered and ordered according to the alphabetical order in the “Bibliography” section; cited with their numbers.
The BibTeX software of \LaTeX{} provides us with a large choice of bibliography styles, giving both, the citation format in the main text and the reference format of the “Bibliography” section.
@article{amblard-etal2015,
  author = {Amblard, Maxime and Fort, Karén, and Demily, Caroline and Franck, Nicolas and Musiol, Michel},
  title = {Analyse lexicale outillée de la parole transcrite de patients schizophrenes},
  year = {2015},
  journal = {Traitement Automatique des Languages},
  volume = {55},
  issue = {3},
  pages = {91-115}
}
@book{asher2003logics,  
    Author = {Asher, Nicholas and Lascarides, Alex},  
    Publisher = {Cambridge University Press},  
    Title = {Logics of conversation},  
    Year = {2003}  
}

@mastersthesis{boritchev2017,  
    author = {Maria Boritchev},  
    title = {{Approaching dialogue modeling in a dynamic framework}},  
    school = {Universit\'e de Lorraine},  
    year = {2017}  
}

USEFUL LINKS

How to communicate with professors?

How to write an academic resume/CV