



ورشة عمل بعنوان Scientific Paper Writing Skills

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Outlines

المحاور الرئيسية

- ❑ **Introduction**
- ❑ **General Structure of a Paper**
- ❑ **References (Listing and Citation)**
- ❑ **Select a Paper Title**
- ❑ **Introduction Writing**
- ❑ **Main Body Writing: Description of your work**
- ❑ **Writing about your Experiments**
- ❑ **Writing your Conclusions**
- ❑ **Abstract Writing**

Introduction



- **General rules before you start**
 - ✓ **A research cycle:**
 - **Paper reading**
 - **Idea generation**
 - **Experimental results**
 - **Paper writing**
 - **Successful publication.**
 - ✓ **Strategic arrangement:**
 - (i) **Experiment design (test data, benchmark)**
 - (ii) **Your selling points**
 - (iii) **Browsing your mathematics handbook.**

General Structure of a Scientific Paper

- ✓ **Title**
- ✓ **Introduction**
- ✓ **Description of work done and methods**
- ✓ **Results and Discussion**
- ✓ **Conclusions and Recommendations**
- ✓ **References and Bibliography**
- ✓ **Appendices**

General Structure of a Scientific Paper

Section	Purpose
Title	Clearly describes contents
Authors	Ensures recognition for the writer(s)
Abstract	Describes what was done
Key Words (some journals)	Ensures the article is correctly identified in abstracting and indexing services
Introduction	Explains the problem
Methods	Explains how the data were collected
Results	Describes what was discovered
Discussion	Discusses the implications of the findings
Acknowledgements	Ensures those who helped in the research are recognized
References	Ensures previously published work is recognized
Appendices (some journals)	Provides supplemental data for the expert reader

References

(Listing and Citation)

❑ Listing:

✓ Journal paper:

[1] J. Hoey and J. J. Little, “ Value-Directed Human Behavior Analysis from Video Using Partially Observable Markov Decision Processes”, IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 29, No. 7, pp. 1118-1132, July 2007.

References

(Listing and Citation)

✓ Conference paper:

[2] M. Figueiredo and A. K. Jain:

“ Unsupervised Selection and Estimation of Finite Mixture Modes ”, Proceedings of 15 th International Conference on Pattern Recognition, Barcelona, Spain, Sept, 2000, pp 87-90, ISBN.....

References

(Listing and Citation)

✓ Book:

[3] A. K. Jain and R. C. Dubes, ‘ Algorithms for Clustering Data’ , Englewood Cliffs, NJ: Prentice-Hall, 1988, ISBN.....

□ Citation:

- ❖ Hoey [28] states that
- ❖ Client/ server environments [28] are important
- ❖ Jain (1988) suggests that

The best example is given in the paper you read during your interactive reading !

Paper Title

Clearly describes contents of a paper.

TO Select a Title:

- ✓ **Be concise, specific and accurate;**
- ✓ **Highlight your contribution, discovery and achievements.**
- ✓ **Appealing to readers as much as possible;**
- ✓ **Avoid generic title.**

Introduction Writing

- ✓ **Clearly state the:**
 - **Problem being investigated**
 - **Background that explains the problem**
 - **Reasons for conducting the research**
 - **Identify the questions you are answering**
- ✓ **Introduce the current status of the area;**
- ✓ **Summary of your literature survey on existing work, solutions, and methodologies (citation of references);**

Introduction Writing

- ✓ **Analyses their weakness to provide justification for your work.**
- ✓ **Summary of your contribution, highlighting the novelty and originality of your work (*State how your work differs from published work*).**

Introduction Writing

✓ **Summary of the structure of your paper.**

Example:

The rest of the paper is organized into four sections, where section 2 describes abrupt cut detection, section 3 describes gradual transition detection, and section 4 reports experimental results and evaluations of the proposed algorithm in comparison with all participating teams for TRECKVID2007. Finally, section 5 provides conclusion remarks to finish this paper.

Introduction Writing

Papers Examples

**Title , introduction writing , references,
summary of a paper structure.**

Main Body writing: Description of your work

- ✓ **Text description;**
- ✓ **Mathematical description;**
- ✓ **Diagram description and illustration;**
- ✓ **A full working example;**
- ✓ **Pseudo-code or flow-chart description;**
- ✓ **Integrated approach.**

Description of your work

Important Principle in Describing Your Work:

Not Only tell WHAT you have done, but also WHY?

Description of your work

Techniques of Telling “WHY”:

- ✓ **Reveal and analyze the weakness of existing method;**
- ✓ **Justify your solution via theoretical explanation;**
- ✓ **Highlight the advantages and strength of your choice.**

Description of your work

Papers Examples

Description of your work

Writing about your Experiments

- **Experiments Design:**
 - i. Test data set;**
 - ii. Benchmarking selection;**
 - iii. Overall design.**

- **Presentation of experimental results:**
 - i. Tables;**
 - ii. Graphs;**
 - iii. Samples.**

Writing about your Experiments

- ❑ **Analysis of the experimental results:**
 - i. Comparison of advantages and disadvantages;**
 - ii. Highlight of strength and weakness;**
 - iii. Justification of your strength as well as weakness.**

Writing about your Experiments

Papers Examples

Results and Discussion

Writing your Conclusions

- ✓ **Summaries what you discover after the work;**
- ✓ **Highlight your contribution;**
- ✓ **Identify your future work to attract attention and follow-up work from the community.**

Abstract Writing

- ❑ **The reader can decide whether or not to read the whole article.**
- ✓ **Highlight the background of your work (why);**
- ✓ **Highlight the weakness of existing solutions;**
- ✓ **Highlight your methodologies (How?);**
- ✓ **Highlight your results, discoveries, or achievements (What ?)**
- ✓ **Support your conclusions.**

Conclusion & Abstract Examples

Papers Examples

شكرا على حسن الاستماع

