

Some experience of research

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Outline

- Essential research skills
 - ✓ Choose a research topic
 - ✓ Propose feasible objectives
 - ✓ Search and select suitable papers for reading
 - ✓ Read and summarize a paper
- How to write a paper
 - ✓ Structure of a research paper
 - ✓ How to write specific sections
 - ✓ Some writing tips
- Statistical test

Choose a research topic

- Criteria
 - ✓ Hot
 - ✓ Suitable
- How
 - ✓ Supervisors
 - ✓ Read recent survey papers

Propose feasible objectives

- Should propose several big objectives
- How
 - ✓ Future directions in existing papers
 - ✓ Good background related research topic
- Each proposed objective
 - ✓ Propose some sub objectives
 - ✓ Why?
 - ✓ How?

Search and select suitable papers for reading

- Link down papers: <http://gen.lib.rus.ec/scimag/index.php>
- Select suitable papers
 - ✓ Year
 - ✓ Authors
 - ✓ Citation
 - ✓ Publisher

Read and summarize a paper

- Survey papers: get overall ideas
- Specific paper:
 - ✓ Key ideas
 - ✓ How?
 - ✓ Results?
 - ✓ **Limitation?**

Structure of a research paper

- Title
- Abstract
- Introduction
- Related work
- Proposed methods
- Experiment design
- Results and discussion
- Further analysis
- Conclusion and future work

Introduction

- Why?
 - ✓ General statement
 - ✓ Motivation
 - ✓ What have been done/summarise
 - ✓ Limitation of existing works: 1,2,3
- What (goals)
 - Overall goal
 - Specific goals
- Organization

Related work

- Answer more details why in introduction
- Related to proposed methods; benchmark methods
- **Critical analysis**

Proposed method

- Overall ideas
- Part 1, 2, 3..
- Summary

Experiment design

- Benchmark methods: common, state of art
- Benchmark datasets
- Parameter settings

Results and discussion

- Run multiple times
- Use statistical tests
- Should use: line graph, bar chart...

Abstract

- General statement
- Existing methods and limitation
- Key ideas of proposed methods
- Summarize results

Conclusion and future work

- General statement
- Summarize the proposed methods
- Summarize results
- Future work

Some writing tips

- Academic word list: [AWLmostfreqsublists.pdf](#)
- IELTS style: topic sentence-> supporting sentences
- Simple words, simple structures, coherence

Thank
You

