

# Don't Waste Papers You Have Read \*

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*Google Knows Our Contacts*

## Abstract

Junior researchers? If you ever spent lots of time in finding technique tricks from other papers to solve your research problem, you should read this article.

## 1 Introduction

The research methodology is not exactly identical in all research areas. Now, let us focus on the methodology of how to propose a better cryptographic scheme/protocol to solve a specific research problem that we have identified.

Being a senior researcher, he/she might have accumulated enough knowledge and skills in the past 10 years after reading hundreds (or, thousands by crazy researchers) academic papers. Given a research problem, what the senior researcher needs might be like the following:



After revisiting all knowledge and skills in their brains and thinking for a while, a new trick could be invented for solving that research problem.

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\*We came out this idea when our student was stuck in doing research.

Being a junior researcher (beginner), unfortunately, you cannot follow what senior researchers do. The main reason is that you don't have enough knowledge and skills in your head. Given a research problem, you might have to read some related papers and wish that those papers help you solve the problem. More precisely, the pattern you could apply is as follows.

- Read the first paper and briefly understand the technique trick in it. If it doesn't help, find the next paper. (calm)
- Read the second paper and briefly understand the technique trick in it. If it doesn't help, find the next paper. (still calm)
- Read the third paper and briefly understand the technique trick in it. If it doesn't help, find the next paper. (feeling not well)
- Read the fourth paper and briefly understand the technique trick in it. If it doesn't help, find the next paper. (upset)
- Read the fifth paper and briefly understand the technique trick in it. If it doesn't help, find the next paper. (upset +)
- Read the sixth paper and briefly understand the technique trick in it. If it doesn't help, find the next paper. (upset ++)
- Read the seventh paper and briefly understand the technique trick in it. If it doesn't help, find the next paper. (Anxiety because the meeting date is coming)
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Two weeks later, you have looked through many papers but have no progress in your research.



## The Infinite Loop

We hope that you are not one of the students working like this, but our student is stuck in this infinite loop. In this article, we share what we have found for those students who need research outcomes. Maybe, you can try the research methodology introduced on the next page and then share with us whether it has improved or not. Are you a genius? If yes, you start your career as a senior researcher and so the below methodology is not suitable for you.

## 2 Change Your Research Problem Based on What You Know

Here are our summaries:

- Being a junior researcher, the MOST IMPORTANT is learning how to do research and how to solve problems. As long as solving a problem will produce some novelty or benefit, then it is fine no matter what you have solved.
- Being a junior researcher, you should FULLY MASTER TRICKS by practicing them again and again. Without doing this, you cannot accumulate them and become a senior researcher in one day.
- NO MATTER YOU BELIEVER OR NOT, WE BELIEVE that fully understanding technique tricks in papers is harder than finding research problems <sup>1</sup> in our community.

Based on the above summaries, you should try the following methodology.

**Step 1** Given a research problem, you try to solve it using the knowledge and skills you have remembered in your head for a while. If succeed, congras. Go to the next step if you fail.

**Step 2** Try to read one new paper recommended by such as your supervisor. If it helps, congras. Go to the next step if it is not working.

**Step 3** Don't find the second paper immediately. Instead, you should think about this question:

*Can the new trick help me solve some other research problems?*

If you can produce something new, congras. Go back to the previous step if you fail.

You will obtain two types of skills when trying to answer the above question. First, how to find related research problems based on a given paper. Second, you will master the new trick because you have practiced and practiced on the trick again and again.

## 3 Experiments and Analysis

The experiment results will be published in another article in the year 2123 if we are still alive.



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<sup>1</sup>See <https://eprint.iacr.org/2023/715>

## 4 Conclusion

*Hi Supervisors,*

*I have one bad news and one good news for you!*

*The bad news is: I don't know how to solve the problem we discussed last time.*

*The good news is: I have found another interesting problem and known how to solve it.*

*Regards,*

*Your Junior Student*



=====ENNNNNNNNND=====