**VE370 Introduction to Computer Organization**

Summer 2021

Literature Search & Presentation Assignment

Documents Submission Due: **July 27th 1:00PM (CST)**

Presentation**: In class/Online (Feishu), July 27th 4:00pm – 5:40pm (CST)**

Background & Goals

Literature search & review is a process to examine published information on a particular topic or field. It is an important skill for engineers or researchers to understand the picture of all extant research work undertaken in a specific subject. A literature review is not just limited to one format (such as a written review), rather, has different styles such as a short presentation.

The goal of this assignment is to develop skills of searching literatures (within a specific topic field) using the campus library resources, identify the key information in literature and be able to interpret all findings into a short presentation. Critical thinking and paper critiques are highly encouraged.

In this assignment, you will **1) pick a specific topic that is relevant to this course (some examples are listed in the last page of this document, your choices are not limited to this list); 2) Use the library resources and search for research literatures (preferred published in the last 5 years) and identify one or two interesting papers; 3) Read through the paper(s) and understand the novelty and major contributions of the work, and try to think about any limitations or critiques (even it is not fully justified); 4) Prepare a 5-minute presentation to summarize your findings and present your critiques (if there are).**The presentation should clearly show the motivation of the work, the proposed method and the conclusion.

Literature Search[[1]](#footnote-1)

Here are useful resources for accessing campus library databases for literature search. Our class is in the field of computer science and engineering, so most commonly used databases are [IEEE Xplore](https://ieeexplore.ieee.org/Xplore/home.jsp) and [ACM Digital Library](https://dl.acm.org/). But you are free to use [Web of Science](https://www.webofscience.com/wos/alldb/basic-search) (which give you more results) too.

1. Literature Search Strategies for Engineering Majors, by Miss Qinling Huang (SJTU Library) ([Slides](https://umjicanvas.com/courses/2041/files/folder/Homework/Literature%20Search%20%26%20Presentation/Useful%20Resources?preview=542076)) ([Video](https://umjicanvas.com/courses/2041/files/folder/Homework/Literature%20Search%20%26%20Presentation/Useful%20Resources?preview=542077))
2. EndNote: Bibliographies Made Easy, by Miss Qinling Huang (SJTU Library) ([Slides](https://umjicanvas.com/courses/2041/files/folder/Homework/Literature%20Search%20%26%20Presentation/Useful%20Resources?preview=542075)) ([Video](https://umjicanvas.com/courses/2041/files/folder/Homework/Literature%20Search%20%26%20Presentation/Useful%20Resources?preview=542074))
3. Strategies for IEEE Xplore, by Paul Henriques (IEEE Client Services Manager) ([Slides](https://umjicanvas.com/courses/2041/files/folder/Homework/Literature%20Search%20%26%20Presentation/Useful%20Resources?preview=543798))
4. GUIDE to ACM Digital Library Database ([Slides](https://umjicanvas.com/courses/2041/files/folder/Homework/Literature%20Search%20%26%20Presentation/Useful%20Resources?preview=543817))

Presentation

In this short presentation, you should motivate your audience (start with some background to connect with what we have learned), highlight the contributions of the selected paper(s), and propose your suggestions for improvement (if any). You can choose to organize your presentation or use the provided [template](https://umjicanvas.com/courses/2041/files/folder/Homework/Literature%20Search%20%26%20Presentation?preview=544088). You can even choose to interact with your audiences and prepare questions for discussions. There are no limitations on template to use or how many slides you need to have. The rule of thumb is usually one minute per slide. The following are several links and tips you might find helpful.

1. Top 5 Tips to a Successful Conference Presentation <https://mitendicotthouse.org/top-5-tips-to-a-successful-conference-presentation/>
2. How to give a technical presentation (how to give a scientific talk) <https://homes.cs.washington.edu/~mernst/advice/giving-talk.html>
3. Guidelines for Oral Presentations <https://ocw.mit.edu/courses/biological-engineering/20-109-laboratory-fundamentals-in-biological-engineering-spring-2010/assignments/guidelines-for-oral-presentations/>

A few tips for a good presentation:

* Well-defined scope
* Well balanced text vs. pictures
* Pick up only one aspect, clearly describe the novelty of the work
* Always think from your audiences’ perspectives, in this case, your audiences will be your peers
* Proper references are required
* Good time management
* Being confident

Deliverable 1 (Upload to Canvas)

1. Fill out the Literature Search Homework form and upload to canvas (**20%**).
2. Upload your slides named as FirstName\_LastName.ppt (or .pdf) (**30%**).

Deliverable 2 (In-class/Online Presentation) (**50%**)

For this deliverable, you need to make a **5-minute** presentation either in person or through Feishu to the class. For online students, please log into the Feishu (<https://vc.feishu.cn/j/153288820>) and share your screen during the presentation, it is highly recommended to open your camera while presenting. Please be on time, and make sure your presentation doesn’t go over the time limit. The order for the presentation will be randomly selected, and will be posted before the class.

Assessment

1. The presentation will be **peer-reviewed** by your classmates and the instructor, each student will have a review form, in which they can grade the performance of other students based on the quality of the presentation. The form will be distributed during the class, and an electronic version will be uploaded for online attendees. For online students, please upload the form after the class.
2. The instructor and TA will grade this assignment based on the feedback from the peer-review form, the completeness of the submission and the quality of the presentation.

Notes:

1. If you don’t participate in-class presentation, but you submitted slides and other documents, you will get 50/100 *at a maximum*;
2. If you participate the presentation and submit slides & requested documents, you will be guaranteed to get 80/100 *at a minimum*;
3. If you don’t submit anything *and* you don’t show up to present, you will get 0/100 for this assignment.

**Appendix: Topics Examples (Keywords)**

* Process-in-Memory/In-Memory Computing
* 3DIC
* Branch Prediction
* Hardware Acceleration
* High Bandwidth Memory (HBM)
* Hybrid Memory Cube (HMC)
* Hamming encoding/decoding
* Out of order
* Superscalar
* Cache controller
* branch prediction
* deep pipeline
* RISC-V ISA
* Cloud computing
* Multilevel cache
* Multicore
* Dark silicon
* Moore’s’ Law
* Amdahl’s Law
* Technology scaling
* NAND Flash
* NOR Flash
* Thermal-aware Design
* RAID
* Reliability through redundancy
* MTTF
* GPU
* AI Chip
* Heterogeneous system
* System On Chip
* Power-aware Deisgn
* Low-power Microarchitectures
* Hardware Security
* Approximate Computing
* Floating Point Unit
* …

1. All files are under Canvas > Files > Homework > Literature Search & Presentation > Useful Resources [↑](#footnote-ref-1)