
Project 2

Research on Computer Architecture

Description

Projects (Research):

- Do some *original research* in computer architecture and organization (e.g., define the problem, survey related work, propose design solution, conduct experiments, and show results.) ---*A real challenging requirement!*

or

- Revalidate the results from some recently published papers (recent 5 years) with *personal comments* on whether the results are consistent with those in the paper or not, and why.

or

- Write a survey paper in an area of computer architecture with *personal opinion* of the strengths and weaknesses of designs presented in the survey.

Description

◆ Working in groups

- 2~3 students in a group. (team work required)

◆ Submit a final report (paper) in research paper format.

- Format Requirement: IEEE Conference Proceeding Format. (in English)
 - Website:
http://www.ieee.org/conferences_events/conferences/publishing/templates.html
- Length Requirement: double-column, single-space, 6-12 pages.
- At least five references required.

Experimental Tools

◆ SimpleScalar

- <http://simplescalar.com/>

◆ Gem5

- <http://gem5.org/>

◆ Sniper

- <http://snipersim.org/>

◆ GPGPU-Sim

- <http://www.gpgpu-sim.org/>

Benchmarks

◆ SPEC

- <http://www.spec.org/>

◆ PARSEC

- <http://parsec.cs.princeton.edu/>

◆ SPLASH-2

- <http://www.capsl.udel.edu/splash/>

◆ MediaBench

- <http://euler.slu.edu/~fritts/mediabench/>

◆ MiBench

- <http://www.eecs.umich.edu/mibench/>

Deadline

- ◆ **Final Project Due: 11:59 pm, Final Exam Day (Firm Deadline, No Extension).**
- ◆ **Both hardcopy and softcopy are accepted.**
 - **If submitting by email (softcopy), please make sure you receive my confirmation.**

IEEE Conference Proceeding Format

Preparation of Papers in Two-Column Format for Conference Proceedings Sponsored by IEEE

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Abstract-These instructions give you basic guidelines for preparing papers for conference proceedings.

I. INTRODUCTION

Your goal is to simulate the usual appearance of papers in an *IEEE conference proceedings*. For items not addressed in these instructions, please refer to the last issue of your conference's proceedings or your Publications chair.

Preparing your Electronic Paper

Prepare your paper in full-size format, on US letter paper (8 ½ by 11 inches). For A4 paper, use the A4 settings.

Type Sizes and Typefaces: Follow the type sizes specified in Table I. As an aid in gauging type size, 1 point is about 0.35 mm. The size of the lowercase letter "j" will give the point

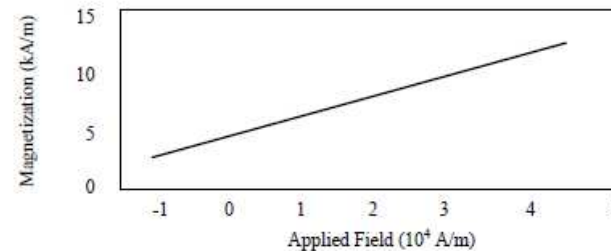


Fig. 1. Magnetization as a function of applied field.
Note how the caption is centered in the column.

II. HELPFUL HINTS

A. *Figures and Tables*

Position figures and tables at the tops and bottoms of

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parentheses to avoid ambiguities in denominators. Punctuate equations with commas or periods when they are part of a sentence, as in

$$a + b = c. \quad (1)$$

Symbols in your equation should be defined before the equation appears or immediately following. Use “(1),” not “Eq. (1)” or “equation (1),” except at the beginning of a sentence: “Equation (1) is ...”

E. Other Recommendations

The Roman numerals used to number the section headings are optional. If you do use them, do not number ACKNOWLEDGMENT and REFERENCES, and begin Subheadings with letters. Use two spaces after periods (full stops). Hyphenate complex modifiers: “zero-field-cooled magnetization.” Avoid dangling participles, such as, “Using (1), the potential was calculated.” Write instead, “The potential was calculated using (1),” or “Using (1), we calculated the potential.”

Use a zero before decimal points: “0.25,” not “.25.” Use “cm³,” not “cc.” Do not mix complete spellings and abbreviations of units: “Wb/m²” or “webers per square meter,” not “webers/m².” Spell units when they appear in text: “...a few henries,” not “...a few H.” If your native language is not English, try to get a native English-speaking colleague to proofread your paper. Do not add page numbers.

“principal” and “principle.” Do not confuse “imply” and “infer.” The prefix “non” is not a word; it should be joined to the word it modifies, usually without a hyphen. There is no period after the “et” in the Latin abbreviation “et al.” The abbreviation “i.e.” means “that is,” and the abbreviation “e.g.” means “for example.” An excellent style manual for science writers is [7].

ACKNOWLEDGMENT

The preferred spelling of the word “acknowledgment” in America is without an “e” after the “g.” Try to avoid the stilted expression, “One of us (R. B. G.) thanks ...” Instead, try “R.B.G. thanks ...” Put sponsor acknowledgments in the unnumbered footnote on the first page.

REFERENCES

- [1] G. Eason, B. Noble, and I.N. Sneddon, “On certain integrals of Lipschitz-Hankel type involving products of Bessel functions,” *Phil. Trans. Roy. Soc. London*, vol. A247, pp. 529-551, April 1955.
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- [4] K. Elissa, “Title of paper if known,” unpublished.
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- [7] M. Young, *The Technical Writer's Handbook*. Mill Valley, CA: University Science, 1989.