Annotated Bibliography

CSC 7351, Fall 2018

Due: 24 November 2018

Pick a fairly narrow compiler research topic and produce an annotated bibliography. List at least 20 research papers on the topic in a style in which they would be cited at the end of a paper. Read at least five of these papers and summarize the research contributions in one or two paragraphs each.

Here are some sample topics:

- interprocedural register allocation,

- pointer alias analysis,

- program slicing,

- points-to analysis,

- abstract interpretation,

- proof-carrying code,

- incremental compilation,

- loop transformations (e.g., fusion and tiling),

- automatic parallelization,

- power minimization for embedded systems,

- memory optimization for embedded systems,

- compilation for functional languages (e.g., graph reduction)

Of course, there are many more topics. You can find other topics in any textbook or by browsing compiler conferences.

Try to find mostly recent papers, say, within the last 2–5 years. For finding papers, of course, you could use Google searches, but you could also browse compiler conferences (e.g., PLDI, POPL, PACT, LCPC, SPLASH/OOPSLA, ECOOP, LCTES, CC, ICFP, google 'compiler conferences' for more lists), browse programming language and compiler journals (e.g., TOPLAS, Elsevier Computer Languages), use Google Scholar, CiteSeer, or the Science Citation Index, look in the references of papers you already found, or check the web pages of compiler researchers.

LATEX and BIBTEX

For writing the bibliography, I strongly recommend that you use LATEX and BIBTEX instead of Word. The programs `latex` and `bibtex` are installed on classes in

    /usr/bin

For sample LATEX documents, check out `small2e.tex` and `sample2e.tex` in

    /usr/share/texlive/texmf-dist/tex/latex/base

You can find sample BIBTEX bibliographies in

    /usr/share/texlive/texmf-dist/bibtex/bib/base

or on the web.

Emacs has a mode for writing a BIBTEX file. Simply open a file with the extension `.bib` in Emacs, use the Entry-Types menu to select an entry, fill in the details, and clean it up with C-c C-c.

For a quick introduction on how to use `latex` and `bibtex`, check out, e.g.,

    http://www.unf.edu/~wkloster/latex/bib.html

You can then translate the generated `.dvi` file to PostScript and the PostScript to PDF using

    dvips -Ppdf -t letter example.dvi
    ps2pdf example.ps

or, if your paper does not contain PostScript figures, you can generate PDF directly using `pdflatex` instead of `latex`.

The simplest way to install LATEX, BIBTEX and Emacs on a PC is as part of a Cygwin (`www.cygwin.com`) installation. With some versions of Cygwin and Vista, there are problems with the font creation, though. MikTeX (`www.miktex.org`) is a native Windows installation that works well, too. You can also install XEmacs as a native Windows application (`www.xemacs.org`). On Linux you could install texlive. There are also a varity of GUI LATEX editors, such as TeXmaker, or you could use Overleaf on the web (`www.overleaf.com`).

Submission

Put the source files for your annotated bibliography into the directory `prog1` in your `cs7351xx` account and submit it using

    ~cs7351_bau/bin/p_copy 1

(type in the tilde (˜) character, don't copy and paste it from PDF).