

# Annotated Bibliography

For Grad Students  
CSC 4351, Spring 2012

Due: 23 April 2012

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 our 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, OOPSLA, ECOOP, LCTES, CC, ICFP, google ‘compiler conferences’ for more lists), browse programming language and compiler journals (e.g., TOPLAS), 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.

## **L<sup>A</sup>T<sub>E</sub>X and B<sub>I</sub>B<sub>T</sub>E<sub>X</sub>**

For writing the bibliography, I strongly recommend that you use L<sup>A</sup>T<sub>E</sub>X and B<sub>I</sub>B<sub>T</sub>E<sub>X</sub> instead of Word. The programs `latex` and `bibtex` are installed on classes in

```
/usr/bin
```

For sample L<sup>A</sup>T<sub>E</sub>X documents, check out `small2e.tex` and `sample2e.tex` in

```
/usr/share/texmf/tex/latex/base
```

You can find sample B<sub>I</sub>B<sub>T</sub>E<sub>X</sub> bibliographies in

```
/usr/share/texmf/bibtex/bib/base
```

or on the web.

Emacs has a mode for writing a B<sub>I</sub>B<sub>T</sub>E<sub>X</sub> 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://blogs.sun.com/yunpu/entry/how\_to\_use\_bibtex
```

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 L<sup>A</sup>T<sub>E</sub>X, B<sub>I</sub>B<sub>T</sub>E<sub>X</sub> and Emacs on a PC is as part of a Cygwin ([www.cygwin.com](http://www.cygwin.com)) installation. With some versions of Cygwin and Vista, there are problems with the font creation, though. MikTeX ([www.miktex.org](http://www.miktex.org)) is a native Windows installation and should work on Vista. You can also install XEmacs as a native Windows application ([www.xemacs.org](http://www.xemacs.org)). On Linux you could install teTeX (which is what's installed on classes and what comes with Cygwin) or the newer TeX Live distribution.

## **Submission**

Put the source files for your annotated bibliography into the directory `prog7` in your `cs4351xx` account and submit it using

```
~cs4351_bau/bin/p_copy 7
```