

WILLIAM RICHTER

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Objective: Computer Programmer, Unix System Administrator, DBA, Unix QA tester.

COMPUTER SKILLS

Emacs-20 Pretester. Since Summer '97, report to head of GNU project, 100s of bug reports. Wrote some C code for mouse/X interaction. Ran Emacs under source-level C debugger GDB. Wrote 100 lines GDB/Emacs documentation. Learned enough C, X, & configure to take active part in investigations, and RCS to keep up with patches. One bug: found pointer which was garbage-collected prematurely. Wrote/maintained code for international character display long enough that Emacs needed legal papers for the copyright. Clarified car, cons, setcar sections of Emacs Lisp manual: a cons cell is a pair of pointers.

Emacs-19 Bug Reporter/Pretester. 100s of posts to gnu.emacs.bug since '92. Submitted patches, wrote original mouse.el code for secondary selections. Debugged Emacs Lisp code with Edebug. Sometimes ran Emacs under GDB. Nearly 1000 lines code .emacs file.

Operating Systems and GUIs. SunOS, X-Windows, Linux, AIX, Next, Macs. Administered Sun ELC & Sparc 1+ as standalone. Configured/installed Emacs, gcc, ispell, bison, GDB, ghostscript, kermit, guile, gambit, MIT-Scheme, RCS, patch, \LaTeX 2 ϵ on SunOS 4.1. Installed Red Hat Linux 4.2 & 5.0 on PCs: tuned XFree86, recompiled kernels, made PPP connection through AT&T WorldNet and Prodigy ISPs. Got Linux to coexist with Windows 95/98 and NT (without creating Linux partitions via NT Disk Administrator).

Languages. Fortran, C, Mathematica, Emacs Lisp, \LaTeX , Postscript, sh scripts, Scheme (including OOP basics), some Java. Longest interesting program: 500 line Mathematica program makes 29 stellations of icosahedron. Wrote interface between 2 \LaTeX commutative diagram packages, Pb-diagram & Xy-pic. Understanding of C aided by Lisp. Enough Html for web page (<http://www.math.nwu.edu/~richter>). Math (published 7 papers, refereed 3) developed programming skill: write/referee papers similar to write/debug code.

Unix/X Interface Support. Customize Emacs and X configuration. Dvorak keyboard via xmodmap. Write sh scripts, e.g. for xdvi with \LaTeX 2 ϵ , allows 'file.dvi', 'file.' or 'file':

```
IFS=.; set $1; IFS=; xdvi -s 3 -mfmode ljfour -p 600 -expert \  
-topmargin 1 -sidemargin 1.5 -geom 1100x875+0+20 $1 &
```

Valuable computer resource in 4 Math Depts since '89: build/test Emacs and MIT-Scheme for sysadmin to install; explain interface to users (e.g. regular poster to gnu.emacs.help).

ACADEMIC MATH CAREER

Northwestern/Purdue University	Visiting Scholar 1995–1998
Purdue University	Visiting Assistant Professor 1994–95
Northwestern University	Visiting Assistant Professor 1992–94
NSF Postdoc Math. Sciences	1991–94
MIT	C.L.E. Moore Instructor 1990–92
University of Washington	Ph.D., Mathematics, 1989
Northwestern University	M.S., Mathematics, 1982
Princeton University	studied Math, 1976–80

Two research projects begun at Princeton ultimately led to 3 publications in major journals:

- [1] The H -space squaring map on $\Omega^3 S^{4n+1}$ factors through the double suspension. Proc. Amer. Math. Soc. **123**, 3889–3900 (1995)
- [2] High dimensional knots with $\pi_1 \cong \mathbf{Z}$ are determined by their complements in one more dimension than Färber's range. Proc. Amer. Math. Soc. **120**, 285–294 (1994)
- [3] A homotopy theoretic proof of Williams's Poincaré embedding theorem. Duke Math. J. **88**, 435–447 (1997)