Stevan White

- ***data analysis***
- ***software engineering***
- ***programming***

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Skills

- team management
- object-oriented design, analysis, and programming (OOA/OOD/OOP, UML)
- modular and structured programming (Java, C++, Python, Perl)
- computer cluster: design and specification, use: PBS (Torque/MAUI), SGE
- cluster parallel programming: MPI (MPICH, LAM, MVAPICH, OpenMPI)
- grid technologies: (Globus GTK, Web Services); distributed computing
- IDEs, SDKs: Eclipse, MS VC++/MFC/VB, Borland OWL, Gnu, CVS, Ant
- numerical algorithms: research, development and exposition
- signal noise analysis and filtering
- neural stimulus sequencing
- GUI applications programming: Java, Mac OS, Windows, X
- medical/clinical data processing and imaging
- database programming: SQL (C/BASE, MySQL)
- languages: XSLT, Java, C++, C, PHP, Perl, Python, FORTRAN, Pascal, BASIC
- operating systems: MS Windows, Mac OS, Linux/Unix, DOS
- Internet communications programming: TCP/IP, HTTP(S)
- WWW technologies: HTML, CSS, DOM, XML, XSL, SVG, DHTML, JavaScript
- system administration on Linux, Unix (A/UX, HP-UX, Solaris), Mac OS
- network administration: LAN, Internet

Employment

June 07–Present — *Scientific Programmer* — Astrophysikalisches Institut Potsdam

As a member of the German Astronomy Community Grid, work on computing resource sharing on the grid. Collaborate with cosmologists who run very large astrophysical simulations by developing applications to distribute computing jobs among clusters, and to make terabytes of information easily available. Research, document, publish and implement methods of integrating cluster use into the grid. Writing virtual observatory compatible database application with web front-end.

Sept 03–Dec 06 — *Scientific Programmer* — Max Planck Society Albert Einstein Institute

Worked on many projects with the Numerical Relativity Group, including specification and purchase of clusters and programming. Primary concern was the Cactus framework, for which wrote several utility modules ("thorns"), some involving Physics and MPI parallel programming.

Pushed for multi-core processors and InfiniBand networking in group's new cluster; Belladonna is judged the best for running group's simulations.

Mar 98–Mar 01 — *Team Leader / Application Designer / Programmer* — asterion

Lead team of programmers through full production cycle: conception, gathering specs, design, documentation, coding, testing, deployment, and maintenance.

Produced Java thin client interface for mainframe medical/insurance database application suite. This tied two deals with major clients.

Wrote and maintained suite's libraries. Worked closely with quality assurance group to maximize client satisfaction. Performed other managerial duties such as time-lining, prioritization, coordination with other departments.

Jun 92–Jan 98 — *Data Analyst and Programmer* — CTF Systems, Inc.

Responsible for research and implementation of methods for imaging of neuromagnetic data, and for solving data noise problems. Wrote analysis programs in C++, C, RLab, and Mathematica.

Designed, wrote real-time neural stimulus sequencing package in C++ for Windows.

Designed, wrote magnetic dipole tracking and display application in C++ for Mac. Member of team on large data analysis and display package in C for Mac.

Sept 88–May 92 — *Computer lab tech* — SFU Math Department

Maintained networked computer lab. Aided graduate students with computer use, typesetting and adding graphics to theses, Internet connectivity. Assembled and maintained the computer network.

Sept 82–May 91 — *Teaching assistant* — SFU Math Department

T.A.'d most undergraduate applied Math courses: Calculus, Introductory and Advanced Linear Algebra, Introductory and Advanced Ordinary Differential Equations, Partial Differential Equations and Boundary Value Problems, Introductory and Advanced Numerical Analysis, Vector Calculus, Linear Programming, Business Math courses.

Sept 80–Aug 82 — *Instructor / Teaching assistant* — Texas Tech Math Dept

Taught Calculus II, Geometry, and Business Math

Computer experience

Design	Completely designed several major industrial products, as well as dozens of smaller ones. Prefer to have fairly complete design agreed upon before coding any project, but practice an iterative approach, involving smaller increments that bring users real functionality, in order to draw users into the project as partners.
Teams	Lead a team of 2 to 4 programmers for two years. Worked in teams of a range of sizes, from a group of a dozen programmers, and often had sole responsibility for projects.
Environment	Wrote large and small programs for Windows, Unix, and Mac OS. Develop using modern IDEs, or with a text editor and a compiler. Hacked more spaghetti code than you can twirl a fork at, but often have designed from scratch. Work well under pressure.
Personal	International keyboard page in XML/XSLT, E-mail conversion utility in Python, HTML to LaTeX conversion program in Perl, gravitation simulator in Java and XML, tank game port to Java, various web-based toys in JavaScript, some using CSS and the DOM (calculator, animated smiley-face, paint program, Unicode browser, etc.), small web browser in Java, Web miner in PHP, Java, and MySQL, math program in Java to draw family of curves, C++ template library for tensor algebra featuring template metaprogramming, expression templates

Education

B.S. 1979 — *Mathematics (Physics)* — Texas Tech University

Studied: Calculus I, II, III, Linear Algebra, Complex Analysis, ODEs, PDEs, Rings and Fields, Statistics, Number Theory; Elementary Physics, Atomic Physics, Mechanics, Optics; French, Latin

M.S. 1982 — *Mathematics (Physics)* — Texas Tech University

Studied: Real, Complex, Numerical and Functional Analysis, Partial Differential Equations, Topology; Quantum Mechanics; Mandarin Chinese

Thesis: “Invariant Imbedding Applied to Singular Inhomogeneous Two-Point Boundary Value Problems”

Ph. D. (a. b. d.) — *Mathematics* — Simon Fraser University

Studied: Ordinary and Partial Differential Equations, Numerical Analysis (specialized in Two-Point Boundary Value Problems and Multigrid); Quantum Field Theory

Thesis: “The Resistive Strip Integral Equation”

Topic: Electromagnetism, Differential and Integral Equations, Numerical, Functional, Complex and Real analysis, and Topology