

Eric Matthew Aitala

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Information Technology and Web Development Experience:

Summary of Qualifications

- Programming in high energy physics and astronomy research – 15 years.
- Webmaster, web designer, and web application developer – 10+ years
- University Webmaster at the University of Mississippi – 5 years.
- Extensive system administration in heterogeneous computer environments.
- Extensive background in collaborative research and information technology projects.

Selected Accomplishments and Skills

Graduate Research Assistant, Department of Physics and Astronomy, University of Mississippi.

- System Administration of 60+ node, parallel processing UNIX based (DEC Ultrix) computer system, including file and print servers, and installation of memory, processor upgrades, hard drives, and tape drives.
- Programming (Fortran, C) on multi-node, parallel processing computer system within a large code base.
- Programming (Fortran) for Fermilab E-791 High Energy Physics experiment, including low voltage monitoring and event display.
- Creation and testing of particle identification subroutines and Monte Carlo simulations, and testing of Exabyte tape handling software.
- Maintenance of High Energy Physics (HEP) software packages (PAW and Cernlib) and creation of PAW macros and ntuples used in data analysis.

University Webmaster, Office of Information Technology, University of Mississippi.

- Design of User Interface for multiple University of Mississippi web sites and for web based SAP Campus Management (Student/Faculty/Staff Information Services) implementation.
- Development of web sites and web applications using HTML, CSS, DHTML, Javascript, perl, PHP, XML/XSLT, Java, JSP, C, Unix shell.
- Development and support of database driven web sites and web applications using MySQL, mSQL, phpMyAdmin, and Filemaker Pro.
- Maintenance of multiple web sites and critical web applications.
- Provided support to departmental and administration webmasters.
- Implementation of Network Security, including SSL, openSSL, secure web servers, PGP, antivirus software and recovery.
- Administration of multiple Apache Web servers, including installation, maintenance, and upgrades.
- Co-chair of the University of Mississippi Web Planning Committee.
- Created and oversaw the UM Webmaster Group.
- Assisted IT Helpdesk frontline user support for Windows XP, Mac 9/X/X Server, web and security issues.
- Presented HR enrichment seminars on HTML, Web Design, and Macromedia Dreamweaver.
- Software expertise – Dreamweaver, Fireworks, Illustrator, Flash, Photoshop, MS Office, iMovie, iDVD, Final Cut Pro, LaTeX, PDF creation.

Other – F1 Multimedia Services and FIM.com, Owner/Operator

- Use of Web Content Management Systems – PostNuke, Drupal, phpWebSite, phpNuke, Macromedia Web Publishing System.
- Expertise in Operating Systems and System Administration – Mac OS 9/X, Mac OS X Server, Linux, Windows 2K/XP/2K3, Unix (Solaris 8/9, Irix, Ultrix).
- Expertise in Networking – TCP/IP, 802.11 b/g wireless, routers, switches.

Scientific Research Experience:Summary of Qualifications

- Experienced research assistant in High Energy Physics and Astronomy – 10 years.
- Member of Fermilab E791 Collaboration.
- Ph. D. in High Energy Physics.

Selected Accomplishments and Skills

Graduate Research Assistant, Department of Physics and Astronomy, University of Mississippi.

- Maintenance of E-791 systems - Cerenkov counters, gas system, and low voltage power supply monitor system.
- Programming (Fortran) for Fermilab E-791 High Energy Physics experiment, including low voltage monitoring and event display.
- Creation and testing of particle identification subroutines and Monte Carlo simulations, and testing of Exabyte tape handling software.
- System Administration of 60+ node, parallel processing UNIX based (DEC Ultrix) computer system, including file and print servers, and installation of memory, processor upgrades, hard drives, and tape drives.
- Maintenance of High Energy Physics (HEP) software packages (PAW and Cernlib) and creation of PAW macros and ntuples used in data analysis.
- HEP hardware - PMTs, SWM, NIM, CAMAC.
- Maintenance of 15" Kennon refractor and observatory.

Graduate Research Assistant, Department of Physics and Astronomy, Michigan State University.

- CCD image processing, spectral analysis, and data reduction using IRAF.
- Observing run on WIRO 2m telescope.

Education Experience:Summary of Qualifications

- Adjunct Professor, Astronomy 104, Spring Semester 2005, University of Mississippi.
- Co-created lab based undergraduate Astronomy 103/104 classes with Dr. Donald J. Summers.
- Co-authored *Introductory Astronomy Laboratory Manual* with Dr. Donald J. Summers.

Selected Accomplishments and Skills

Graduate Teaching Assistant, Department of Physics and Astronomy, University of Mississippi.

- Designed, constructed, and maintained Astronomy labs and equipment.
- Taught Astronomy laboratory classes, 5+ years.
- Taught Astronomy classes for Oxford Summer Science Camp.
- Started and presented Astronomy Open Houses at Kennon Observatory.
- Maintenance of 15" Kennon refractor and observatory.
- Established science outreach program in Astronomy in northern Mississippi.

Employment History:

Pennsylvania State University, University Park, PA Programmer/Analyst, Information Technology Services	May 2007 – Current
Pennsylvania State University, University Park, PA Web Developer, part-time, Environmental Health & Safety	March 2006 – May 2007
University of Mississippi, Oxford, MS Web Services Consultant	September 2005 – May 2007
University of Mississippi, Oxford, MS Instructor, Astronomy, Spring 2005 semester University Webmaster Graduate Research Assistant, High Energy Physics (HEP) Group	January 1995 – September 2005

Michigan State University, East Lansing, MI
 Graduate Research Assistant, Department of Astronomy
 Graduate Teaching Assistant, Department of Physics

September 1993 – December 1994

University of Mississippi, Oxford, MS
 Graduate Research Assistant, HEP Group, University of Mississippi
 Graduate Teaching Assistant, Department of Physics

September 1989 – August 1993

Education:

B.S. in Astronomy, Pennsylvania State University.
 Ph. D. and M.S. in Physics, University of Mississippi.

Papers and Publications:

- “A Search for the Rare and Forbidden Decays $D^0 \rightarrow V\ell^+\ell^-$ ”, Dissertation, 2003.
 “Search for rare and forbidden charm meson decays $D^0 \rightarrow V\ell^+\ell^-$ and $hh\ell$ ”, Physics Review Letters 86 (2001).
 “Search for rare and forbidden dilepton decays of the D^+ , D_s^+ , and D^0 charmed mesons”, Physics Letters B 462 (1999).
Introductory Astronomy Laboratory Manual, Donald J. Summers and Eric M. Aitala. McGraw-Hill, 1995-2005.
 “A Study of the Atomic Number Dependence of Charmed D Meson Hadroproduction”, Master's Thesis, 1993.

Other:

Penn State Web Standards User Group
 The Formula 1 Modeling Website, <http://www.f1m.com>, Sole proprietor and Webmaster, 1995-2007.
 F1 Multimedia Services, <http://www.f1m.info>, Sole proprietor, 1998-2007.
 Ole Miss Fencing Club founding member 1989.
 University of Mississippi Mac User Group.