

Curriculum Vitae

Name : John Stephen White
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• Education

- 1998 PhD University of Victoria, Canada, Experimental High Energy Physics.
- 1994 MSc University of Victoria, Canada, Experimental High Energy Physics.
- 1991 BSc University of Victoria, Canada, Physics.

• Work and Research Experience

- October 2000 - present: Researcher for the Helsinki Institute of Physics, Technology Program, CERN, Geneva, Switzerland.

- Supervisors: (HIP) Dr. Ari-Pekka Hameri (Ari-Pekka.Hameri@cern.ch)
(EDG WP2) Peter Kunszt (Peter.Kunszt@cern.ch)
(EGEE JRA3) Dr. Ake Edlund (Ake.Edlund@cern.ch)

· Enabling Grids for E-Science (EGEE)

I am currently working in the Northern cluster development team for the EU-funded Enabling Grids for E-Science (EGEE) project in the field of Grid security. This work entails developing and providing security solutions for various EGEE Web and Grid services. In particular, I am delivering the security solution that will authenticate users to the data access and control through the SOAP protocol. My current work also includes the development and deployment of an encrypted data storage system that allows Grid users to store data in an encrypted form with the encryption keys held in a separate system. This work comprises both development of code and contact with clients (other physicists and bio-medical researchers). In this project I am involved in the development of software within the EGEE gLite system, deployment and debugging of EGEE gLite modules. Another important part of my work is writing deliverable and milestone documents for the EGEE project. Currently, I hold the position of Security Cluster manager. This position entails maintaining contact with other various EGEE boards and ensuring that actions are completed. I am responsible to make sure the correct security modules are included in the gLite build system.

· European DataGrid (EDG)

Worked in a team for the European DataGrid (EDG) project, data handling and security, Work Package 2 (WP2). Within the CERN EDG effort I have written Java and Web Service-based Grid software that allows secure access to remote databases. My direct contribution was contributing to the development

and deployment of a web-based secure database access program for the European DataGrid (EDG) project, the software is part of the EDG release. This work involved the development, deployment and testing of the EDG data access product, Spitfire. This job required that I was familiar with all aspects of the installation and configuration of the EDG software.

- **HIP–NorduGrid**

I have also been working on the problem of running the various flavours of physics software in a Grid environment. This work has focused on running the CMS and ATLAS collaborations' Monte Carlo simulations in a Grid environment both with the EDG and the NorduGrid environments. This work includes installing, debugging and coordinating Grid and physics software and networks in the various computing resources, Linux and other, at CERN and in Finland. As part of the NorduGrid effort this work includes integrating NorduGrid-specific software with generic Globus installations.

- **HIP Grid program**

I was involved in the development and deployment of a web-based Grid portal and am currently responsible for its maintenance and updates. This portal is based on various Java technologies and is designed to be used by physicists for configuring and running high energy physics detector and accelerator simulations. This portal is currently in production use with the NorduGrid collaboration. Earlier work included working with the C++ and Java APIs to the Objectivity database and also developing a Java interface to this database for the Finnish CMS program.

- I have also been active in promoting Grid technology to Geneva-area businesses and trying to match their requirements to this new technology. I give talks to CERN visitors about the present and future computing and physics. Another project that I am currently working on gives secure access to medical databases for the purpose of monitoring skin cancers.

- April 1998 - October 2000 Post-doctoral Researcher at Carleton University, Ottawa, Canada.

- Supervisor: Dr. Robert Carnegie (carnegie@physics.carleton.ca).

- **Carleton University OPAL Collaboration**

I was based in Ottawa, Canada (1998-1999), and was responsible for maintaining software for a physics collaboration and synchronization of versions between CERN and Canada. I worked with graduate students on fundamental research, ie. measuring double charm-quark production from B-mesons. This entailed the collection, filtering and analysis of experimental results from the OPAL detector at LEP, CERN. As a member of the OPAL collaboration I also served in an editorial capacity for papers about to be published in peer-reviewed journals. Later, based at CERN (1999-2000), I worked directly on the OPAL detector. I was responsible for a central detector element, Central Vertex Chamber (CV). These responsibilities included both hardware and software. The hardware tasks included the safe operation of the CV detector and replacement/repair of electronics. The software duties included maintaining legacy software and, if necessary, updating old code to new machines or operating systems. The installation main-

tenance of databases that managed the operating and calibration parameters of this detector was an important part of this job. I was specifically responsible for on-line and off-line calibration of the CV detector and worked as a part of the OPAL calibration team. Other OPAL activities were the maintenance and development of the OPAL Linux cluster along with migration of physics code from the HP-UX operating system to Linux.

- January 1994 - April 1998 PhD student, University of Victoria.
 - Supervisor: Dr. R. J. Sobie (rsobie@uvic.ca).
 - I was based at CERN (September 1994 - October 1995) and worked as part of the Reconstruction of OPAL Events group (ROPE). I was part of a team responsible for ensuring that all experimental data events were collected, stored and delivered to the collaboration in a timely fashion. This job involved installing, maintaining and manipulating various databases that gave the location of every experimental event collected by the OPAL detector. The work for my PhD thesis produced experimental results and measured the rate of decay of tau leptons to single hadrons (with zero or more π^0 's)
- September 1991 - December 1993 MSc student, University of Victoria.
 - Supervisor: Dr. M. Lefebvre (Michel.Lefebvre@cern.ch).
 - Earlier work, for my Masters degree, included test-beam experience at CERN with the RD3 liquid argon calorimeter group. This work included taking test-beam shifts; equipping, calibrating and testing the detector modules; working with the trigger logic; and debugging software.

• Skills

- Languages: English (native), French (spoken), Finnish (some).
- Computing Skills:
 - Systems: Linux, HP UNIX, MS Windows 95/NT/3.11/DOS, OS-9, Digital VAX.
 - Languages: Java, Web Services, JSP, Fortran, C/C++, HTML, Perl, Unix Scripts.
 - Software: Gsoap, Objectivity OODB, MySQL, Oracle SQL, LDAP, \LaTeX , Globus, MatLab, PAW.

• Honours and Awards

- 1994-1996, NSERC PGS-B scholarship, \$17,000 (CDN)
- 1991-1993, NSERC PGS-A scholarship, \$17,000 (CDN)

• Interests and Hobbies

- Building and running computers.
- Rebuilding and racing old cars.
- Skiing, hiking and windsurfing.

• **Papers (Principal authorship)**

1. J. Hahkala, J. White
“Set-up of accounting techniques and distributed budgets”
EGEE Milestone Document, CERN, 2005
2. Y. Demchenko, J. Hahkala, J. White
“Secure Credential Storage” EGEE Milestone Document, CERN, 2005
3. J. White, M. Niinimäki, W. Som de Cerff, T. Niemi, J. Hahkala, M. Pitkänen,
“Using Virtual Organizations Membership System with EDG s Grid Security and Database Access” submitted to: Grid and Peer-to-Peer Computing Impacts on Large Scale Heterogeneous Distributed Database Systems (GLOBE’2004), Zaragoza, Spain.
4. J. White, M. Niinimäki, T. Niemi J. Karppinen,
“GridBlocks - Web Portal and Client for Distributed Computing”
accepted by: International Conference on Enterprise Information Systems, 2004 Porto, Portugal.
5. J. White, M. Niinimäki, T. Niemi,
“Virtual Organizations and Database Access - A Case Study” accepted by: International Conference on Enterprise Information Systems, 2004 Porto, Portugal.
6. J. White, M. Niinimäki, J. Herrala,
“Executing and Visualizing High Energy Physics Simulations with Grid Technologies”
accepted by: Second International Symposium on Parallel and Distributed Computing 2003, Ljubljana, Slovenia.
7. J. White, M. Niinimäki, T. Niemi,
“OpenGrid – a web based portal to Grid applications”, accepted by: The 3rd IEEE/ACM International Symposium on Cluster Computing and the Grid, 2003.
8. J. White, M. Heikkurinen, M. Käki,
“Data Visualization in High Energy Physics”, CSC News, December 2000, p 22.
9. M. Lefebvre, R. K. Keeler, R. Sobie, J. White,
“Propagation of Errors for Matrix Inversion”, **Nucl.Instrum.Meth. A451**, 2000, 520-528.
10. J. White,
“Testing Lepton Universality using One-Prong Hadronic Tau Decays”, PhD Thesis, 1998.
11. J. White, R. Sobie for OPAL Collaboration, “Measurement of the one-prong hadronic tau branching ratios at LEP”, **Eur.Phys.J. C4**, 1998, 193-206.
12. P. Jenni and J. White,
“Physics and Experimental Challenges of Future Hadron Colliders”, Proceedings of the Eighth Lake Louise Winter Institute, (1994), 81-152.
13. J. White, “Spatial Reconstruction of Electrons with an Accordion Geometry Electromagnetic Calorimeter”, MSc thesis, 1993.

- Papers (in collaboration with others)