

DANIELA ALVIM SEABRA DE OLIVEIRA

(United States permanent resident)

RESEARCH AND WORK INTERESTS

Software security and protection/recovery, and analysis/control of malicious activities interference in the OS and virtual machine level.

EDUCATION

09/2004 – present **Department of Computer Science, University of California, Davis**

PhD Student.

Advisor: Prof. S. Felix Wu (Ph.D. Columbia University, 1995)

03/99 – 02/2001 **Department of Computer Science, Federal University of Minas Gerais, Belo Horizonte, MG, Brazil**

M.Sc. in Computer Science, 2001

Thesis: Performance Analysis of a Distributed Video on Demand Service

Advisor: Prof. Berthier Ribeiro-Neto (PhD, University of California, Los Angeles, 1995)

Co-Advisor: Prof. Sergio Vale Aguiar Campos (PhD, Carnegie Mellon University, 1997)

08/94 – 02/99 **Department of Computer Science, Federal University of Minas Gerais, Belo Horizonte, MG, Brazil**

Bachelor in Computer Science, 1999

RESEARCH AND INDUSTRY EXPERIENCE

07/2005 - present **University of California, Davis**

Research Assistant – Computer Security Group

Malware protection, analysis and recovery.

Advisor: Prof. S. Felix Wu (Ph.D. Columbia University, 1995)

08/2003 - present **Synergia – Department of Computer Science – Federal University of Minas Gerais**

Quality Assurance Manager: in charge of Quality and Configuration

Management of all software developed in the organization.

We developed software using Java and the Praxis Process, which is an implementation of the Unified Process.

03/2002 - 07/2003 **Synergia – Department of Computer Science – Federal University of Minas Gerais**

Implementation Team Leader: coordinated the work of 15 people during Construction Phase of software projects.

We developed software using Java and the Praxis Process, which is an implementation of the Unified Process.

03/2001 - 02/2002 **Synergia – Department of Computer Science – Federal University of Minas Gerais**

Systems analyst and Java developer.

Sun Certified Programmer for the Java 2 Platform (91% score - December 2000).

Java Certified Instructor (Sun Microsystems, July 2000).

03/98 – 02/99 **Scientific Research during Undergraduate Studies (B.S.)**

COPASA and Federal University of Minas Gerais Agreement

COPASA is one of the largest Brazilian companies for water treatment.

Researched strategies to migrate legacy systems to the Web environment.

Advisors: Prof. Alberto H. F. Laender (PhD, University of East Anglia, England, 1984)
Prof. Berthier Ribeiro-Neto

06/97 – 02/98 **Scientific Research during Undergraduate Studies (B.S.)**
Audiolab and Federal University of Minas Gerais Agreement
Researched schemes to perform data migration between relational and real-time databases in the XOMNI software. Used C Language under QNX Operating System.
XOMNI is a SCADA (Supervisory Control and Data Acquisition) software with specific functions for electric systems control. This software has been used in many important Brazilian electricity provider companies.
Advisor: Prof. Claudionor Nunes Coelho Junior (PhD, Stanford University, 1996)

02/97 – 06/97 **Internship at Start Software Brasil**
Visual Basic 5.0 developer.

08/96 – 01/97 **Internship at USIMINAS**
USIMINAS is one of the largest steel producer companies of Latin America.
Systems analyst.

05/96 – 04/97 **Scientific Research during Undergraduate Studies (B.S.)**
FAPEMIG (Research Support Foundation of the State of Minas Gerais) Fellowship
Federal University of Minas Gerais, Belo Horizonte, MG, Brazil
In charge of a project which used the Prolog language to simplify Boolean logic expressions.
Advisor: Prof. Jose Lopes de Siqueira Neto (Docteur, Université de Paris-Sud, France, 1992)
Prof. Claudionor Nunes Coelho Junior

FOREIGN LANGUAGES

English: Read, write and speak fluently.

CPE (Certificate of Proficiency in English) – University of Cambridge – UK
December 2000.

ECPE (Examination for the Certificate of Proficiency in English) – The University of Michigan - USA
November 2000.

Spanish : intermediate level.

DELE - Diploma de Español como Lengua Extranjera - (Initial Certificate in Spanish)
Universidad de Salamanca - Spain - November 2002

TEACHING EXPERIENCE

09/2004 – 06/2005 **Teaching Assistant - University of California, Davis**
Subject: Computer Networks
In charge of leading discussion sections, grading exams and school assignments.

08/99 – 12/99 **Teaching Assistant - Federal University of Minas Gerais**
Subject: Object-Oriented Programming
Professor: Roberto da Silva Bigonha (PhD, University of California, Los Angeles, 1981)
In charge of grading exams and school assignments.

08/97 – 12/97 **Teaching Assistant - Federal University of Minas Gerais**

Subject: Computer Organization I
Professor: Berthier Ribeiro-Neto
In charge of grading school assignments.

AWARDS AND HONORS

- 07/2005 – present University of California, Davis
Research Assistant Position
Support to graduate studies (Ph.D.)
- 09/2004 – 06/2005 University of California, Davis – Graduate Group in Computer Science
Nonresident Tuition Fellowship and Teaching Assistant Position
Support to graduate studies (Ph.D.)
- 03/99 – 02/2001 CAPES (Improvement Coordination Foundation of Graduate Research) Fellowship (Brazil)
Support to graduate studies (M.Sc.).
Field: Multimedia
- 03/98 - 02/99 FUNDEP (Research Development Foundation) Fellowship (Brazil)
Support to scientific investigation during undergraduate studies.
Field: Database
- 06/97 - 02/98 AUDIOLAB (Brazilian company) Fellowship
Support to scientific investigation during undergraduate studies.
Field: Real-time systems
- 05/96 – 04/97 FAPEMIG (Research Support Foundation of the State of Minas Gerais) Fellowship (Brazil)
Support to scientific investigation during undergraduate studies.
Field: Artificial Intelligence

PUBLICATIONS

- Daniela A.S. de Oliveira, Jedidiah R. Crandall, Gary Wassermann, Shaozhi Ye, Felix Wu, Zhendong Su, and Frederic T. Chong. *Bezoar: Automated Virtual Machine-based Full-System Recovery from Control-Flow Hijacking Attacks*. Accepted to the 2008 IEEE/IFIP Network Operations and Management Symposium (NOMS 2008). Salvador-Bahia, Brazil. April 2008
- Daniela A. S. de Oliveira, Jedidiah R. Crandall, Gary M. Wassermann, S. Felix Wu, Zhendong Su, and Frederic T. Chong. *ExecRecorder: VM-Based Full-System Replay for Attack Analysis and System Recovery*. Workshop on Architectural and System Support for Improving Software Dependability - ASID'06 (with ASPLOS 2006). October 21st, 2006.
- Jedidiah R. Crandall, Gary Wassermann, Daniela A. S. de Oliveira, Zhendong Su, S. Felix Wu, and Frederic T. Chong. *Temporal Search: Detecting Hidden Malware Timebombs with Virtual Machines*. Twelfth International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS XII). San Jose, CA. October 2006.
- Daniela Alvim Seabra dos Santos, Bruno Santos Pimentel, Fabiana Trindade Machado, Gisele Silva Cardoso e Wilson de Pádua Paula Filho. *Personalization and Implantation of Quality Management Procedures in the Context of a Software Process Improvement Program* (original work in Portuguese), in the Proceedings of the III Brazilian Symposium on Quality of Software (SBQS'2004). Brasilia, DF, Brazil. June 2004.
- Daniela A. S. dos Santos, Alex Borges Vieira, Berthier Ribeiro-Neto and Sergio Vale Aguiar Campos. "Performance Analysis and Optimization of a Distributed Video on Demand Service". 2003 IEEE International Symposium on Performance Analysis of Systems and Software, Austin, Texas, USA. March 2003.

Daniela Oliveira (oliveira@cs.ucdavis.edu) - Resume

Daniela A. S. dos Santos , Alex Borges, Matheus Ribeiro, Joao Caram, Berthier Ribeiro-Neto and Sergio Campos. *Architectures for a New Generation of VoD Servers* (original work in Portuguese), in the Proceedings of the VIII Brazilian Symposium on Multimedia and Hypermedia Systems (SBMIDIA'2002). Fortaleza, CE, Brazil. October 2002.

Lucio Mauro Pereira, Berthier Ribeiro-Neto and Daniela A. S. dos Santos. *Performance Analysis of a Video Server in Multiple Resolutions* (original work in Portuguese), in the Proceedings of the VIII Brazilian Symposium on Multimedia and Hypermedia Systems (SBMIDIA'2002). Fortaleza, CE, Brazil. October 2002.

Daniela A. S. dos Santos, Berthier Ribeiro-Neto and Sergio V. A. Campos. *Performance Analysis of a Distributed Video on Demand Service* (original work in Portuguese), in the Proceedings of the VII Brazilian Symposium on Multimedia and Hypermedia Systems (SBMIDIA'2001). Florianopolis, SC, Brazil. October 2001.

Daniela A. S. dos Santos, Marcio T. Oliveira, Reuber G. Duarte, Antonio Alfredo F. Loureiro, Geraldo Robson Mateus and Berthier Ribeiro-Neto. *Adaptive Exhibition of MPEG Video for Mobile Environments* (original work in Portuguese), in the Proceedings of the III Brazilian Workshop on Wireless Communication and Mobile Computing. Recife, PE, Brazil. August 2001.

Luciano Bertini, Sergio V. A. Campos, George L. Jamil, Autran Macedo, Berthier Ribeiro-Neto, Claudemberg F. Santos and Daniela A. S. dos Santos. *Performance Analysis of the ALMADEM-VoD Video Server* (original work in Portuguese), in the Proceedings of the V Brazilian Symposium on Multimedia and Hypermedia Systems (SBMIDIA'99). Goiania, GO, Brazil. June 1999.

Daniela A. S. dos Santos, Jose L. S. Neto and Claudionor N. Coelho Junior. *SIMSEL – A Syntax-based Simplifier of Logic Expressions* (original work in Portuguese), in the Proceedings of the VI Undergraduate Research Week of Federal University of Minas Gerais. Belo Horizonte, Minas Gerais, Brazil. June 1997.

Daniela Oliveira (oliveira@cs.ucdavis.edu) - Resume