

Juan Rafael Álvarez Correa

Engineering Department
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Education

Computer Science Engineer, December 2005
EAFIT University, Medellín, Antioquia, Colombia

Work Experience

Fluidsignal Group *Medellín, Antioquia, Colombia*
Engineering Director and Co-Founder *April 2003 to date*

Coordination of the Engineering Department, achievement of security information advisory projects: risk analysis, intrusion tests, source code auditing. Design, coordination and development of infrastructure and ISP management software for one of the 3 biggest telecommunication enterprises in the country. Implementation of ISO/IEC NTC 9001 and 27001 standards. Analysis, design, and development of a defect/effort control system.

ne Digital *Medellín, Antioquia, Colombia*
Software Architect *April 2002–March 2003*

J2EE developmental framework for the organization. Architecture and development of application brand name managing. Web application performance testing. Software configuration management.

Fluidsignal Group *Medellín, Antioquia, Colombia*
Project Engineer and Co-Founder *July 2001–March 2002*

Implementation and integration of free software-based security and networking solutions. Web application performance testing software development.

GeoNet *Medellín, Antioquia, Colombia*
Software Developer *June 2000–June 2001*

Application development and implementation: Free webmail system, managing content software distribution module, SMTP to pager gateway, web application to exchange motor parts among concessionaries.

Ada Sistemas Computadores *Medellín, Antioquia, Colombia*
Project Engineering *January 2000–May 2000*

Implementation and integration of free software-based security and networking solutions.

Correa Motos *Envigado, Antioquia, Colombia*
Systems Assistant *Febrero de 1997–Diciembre de 1999*
ERP system operator.

Teaching Experience

EAFIT University *Medellín, Antioquia, Colombia*
Adjunct Instructor *Academic Semester 1, 2006*

Operating Systems, coordinated by Juan Francisco Cardona McCormick, M.Sc. from EAFIT University. Undergraduate mandatory course. Computer Science Engineering Program, Academic Semester VIII.

Universidad Pontificia Bolivariana *Medellín, Antioquia, Colombia*
Adjunct Instructor *Academic Semesters 2, 2005 and 1, 2006*

Distributed Systems, coordinated by Jackson Reyna. Undergraduate mandatory course. Information Technology Engineering Program, Academic Semester VIII.

Universidad Pontificia Bolivariana *Medellín, Antioquia, Colombia*
Adjunct Instructor *Academic Semester 1, 2005*

Computer Networks. Coordinated by Jorge Mario Londoño, M.Sc. and Ph.D. student from Boston University. Undergraduate elective course. Electronics, Information Technology, and Telecommunications Engineering Programs.

Al Cuadrado - Aptech *Medellín, Antioquia, Colombia*
Instructor *Julio de 2003–Diciembre de 2004*

Java, Basic Java, Advanced Java, Introduction to J2EE and EJB courses. Java and Oracle Certification programs. Government Plan - Connectivity Agenda.

Enrique Vélez-Escobar School *Itagui, Antioquia, Colombia*
Private Teacher *October and November 1999*

Training courses in GNU/Linux directed to teachers of Information Technology, who will apply this technology in basic primary education.

Lecturing

Arbitrary Code Execution Through Format Strings. November 3, 2005. Information Security Lecturing. EAFIT University, Medellín, Colombia.

Input Validation Vulnerabilities: Syntactic Content Injection. October 6, 2005. Information Security Lecturing. EAFIT University, Medellín, Colombia.

Exploits: Attack techniques on buffer overflow. September 8, 2005. Information Security Lecturing. EAFIT University, Medellín, Colombia.

How to break a system using buffer overflow. June 24, 2005. V National Encounter on Information Security. Colombian Association of Computer Science Engineers, Bogotá, Colombia.

Helping the advance of Linux. October 29, 2004. Third Day Technician of Information Technology Engineering and Telecommunications. Universidad Pontificia Bolivariana, Medellín, Colombia.

Information Technology Risk Analysis with OCTAVE. October 7, 2004. Information Security Lecturing. EAFIT University, Medellín, Colombia.

Extreme programming. with William Velasquez. 2002. Software Engineering Lecturing. EAFIT University, Medellín, Colombia.

Free software. May 12, 2001. TecnoCom. Visitors' center, Medellín, Colombia.

Publications

Attack Model and Residual Risk for Buffer Overflow. Juan Rafael Álvarez-Correa, Juan G. Lalinde-Pulido, Ph.D. Information Security Iberoamerican Conference, November 21-25, 2005, Universidad Técnica Federico Santamaria, Valparaiso, Chile. ISBN 956-7051-10-0.

Awards

Dean's Honor List for having obtained the highest average score among all Computer Science Engineering students (4.71/5.00). December 2000. EAFIT University, Medellín, Colombia.

Thesis Commendation Award. Jury: Mr. Christian Trefftz, Ph.D Michigan State University, Mr. Marco Carvalho M.Sc University of West Florida. Advisor: Mr. Juan G. Lalinde Ph.D Universidad Politécnica de Valencia. December 2005. EAFIT University, Medellín, Colombia.

Score above 99% of Computer Science Engineering test takers (8332) in the Higher Education Qualification Test of Colombia (ECAES). Perfect scores in Theoretical Computer Science and Computer Architecture. ICFES. National Ministry of Education. Bogota, Colombia.

Other Activities

Member of the 181 ICONTEC Standardization Committee. Homologation of ISO/IEC 27001 Standard - Information Security Management System into the Colombian Technical Standards. Colombian Institute of Technical Standards.

Operating System GNU/Linux Debian Developer since 2003. Package support, source-code auditing, and work activity publication at the regional level.

Certifications

Certified Information Systems Auditor, CISA. Information Systems Audit and Control Association, ISACA. 2005.

Java 2, May, 2002. *Java 1,* May, 2002. *Unix Administration,* January, 2001. *Analyst and Programmer Aptitude,* January, 2001. *TCP/IP Administration,* October, 2000. *Internet Concepts,* October, 2000. *Internet Security,* October, 2000. *Máster in Linux Administration.* January, 2000. Brainbench Inc.

Skills

Languages: Spanish (native), English (MELICET 81, TOEFL 240).

Technology: Java, Python y C. Object Oriented, Aspect Oriented and literate programming. CVS, Subversion y ClearCase. Windows y UNIX. SQL y LDAP. Extreme Programming and Unified Software Development Process (USDP).