



Mauricio Naranjo, Chief Architect – Lucasian Consulting Services

11 Years Experience: Vision, Strategy, Architecture, Processes and Governance



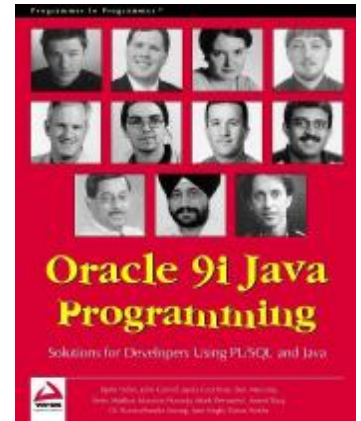
Mauricio is the Chief Architect at Lucasian Consulting Services specialized in Global Financial IT Services (2003-2008). Mauricio was the first Oracle ACE Director for Oracle Fusion Middleware for Latin America (2007-2008). Consultant architect for Inter-American Development Bank (IDB) for the Central Bank of Costa Rica (BCCR) (2002-2003). Co-author of the book: Oracle 9i Java Programming (2001). Speaker at IOUG A-Live '99 (1999). ITIL Foundation Version 3 certification (2008).

Up today, Mauricio's 11 years experience and has than 12,000 hours in consulting in 30 successful projects for Financial and Telecommunication's companies from Latin-America. Strong expertise on assessment, definition and implementation of strategic plans, Core IT governance process frameworks (COBIT, ITIL, MOF), large-scale enterprise application's architecture with Java Enterprise Edition, SOA Integration with BACK-END applications and Internet services, Business Process Management, Enterprise Application Frameworks, Application Design Patterns, Integration Patterns, Security Patterns, RUP, UML, Oracle SOA Project Methodology, TOGAF.

- ü Technical speaker at IOUG-A Live'99 (International Oracle Users Week). USA (1999)
- ü Co-author of the book: Oracle 9i Java Programming - Wrox Press. ENGLAND. (2001)
- ü Consultant Architect for Inter-American Development Bank - IDB, Central Bank of Costa Rica. COSTA RICA (2002 - 2003)
- ü Chief Architect of Lucasian Consulting Services. COLOMBIA (2003 - 2007)
- ü Oracle ACE Director, with major expertise on Oracle Fusion Middleware. Oracle Corp. USA (2007).
- ü BLOG Principal Editor: SOA for Business: www.lucasian.com/soa (2007)
- ü Regular speaker with more than 50 conferences given (2003 - 2007)
- ü Technical instructor with +1,000 hours of training courses (2003 - 2007).
- ü ITIL Foundation Version 3 certification (2008).

Consulting Experience in Financial Services

- ü Banco Interamericano de Desarrollo - San José, Costa Rica (2002-2003)
- ü Banco Central de Costa Rica - San José, Costa Rica. (2002-2003)
- ü Grupo SAMA - San José, Costa Rica. (2003)
- ü Banco de Crédito - Helm Financial Services. Bogotá D.C. , Colombia (2007 - 2008)
- ü ACH de COLOMBIA. Bogotá D.C. , Colombia (2007 - 2008)
- ü DECEVAL - Depósito Centralizado de Valores. Bogotá D.C. , Colombia (2007 - 2008)
- ü ATH - A Toda Hora S.A. - Bogotá D.C. , Colombia (2004 - 2007)
- ü Grupo AVAL - Bogotá D.C. , Colombia (2004 - 2007)
- ü Porvenir S.A. - Bogotá D.C. , Colombia (2004 - 2006)
- ü Banco de Bogotá - Bogotá D.C. , Colombia (2004 - 2006)
- ü Banco de Occidente - Bogotá D.C. , Colombia (2004 - 2006)
- ü Banco Popular - Bogotá D.C. , Colombia (2004 - 2006)
- ü Banco AV Villas - Bogotá D.C. , Colombia (2004 - 2007)
- ü Redeban Multicolor - Mastercard - Bogotá D.C. , Colombia (2004 - 2007)
- ü OpenCard S.A. - Bogotá D.C. , Colombia (2004 - 2007)



Wrox Press (England) 2001. Coauthor of the book from Wrox Press: "Oracle 9i Java Programming". www.amazon.com

Publisher: Wrox Press Inc; 1st edition (Dec. 2001) ISBN: B0000B0SXM



Oracle ACE Director (2007-2008).

In 2007, Mauricio was selected as Oracle ACE Director for Oracle Fusion Middleware from Oracle Headquarters (California). Oracle ACE Directors are known for their strong credentials as Oracle community evangelists and technical educators. More info at: http://www.oracle.com/technology/community/oracle_ace/index.html



International Oracle Users Group, IOUG A-Live '99. USA. 1999. Speaker at the IOUG A-Live '99. Mauricio presented the architecture of a framework he designed for building enterprise Web applications with neutral Look & Feel using the PL/SQL cartridge. www.ioug.org



BLOG: SOA for Business www.lucasian.com/soa (2007 -2008). Mauricio started the Latin-American community of IT professionals, "SOA Para Negocios" dedicated to share experience and best-practices on effective architecture, implementation and deployment of Service Oriented Architecture on financial, telecommunication and government companies.



Mauricio Naranjo, Chief Architect – Lucasian Consulting Services 11 Years Experience: Vision, Strategy, Architecture, Processes and Governance

- ü Comfenalco Valle - Cali, Colombia. (2007)
- ü Suratep - Medellín, Colombia. (2006)

Consulting Experience in Telecommunications

- ü ETB - Empresa de Telecomunicaciones de Bogotá. Bogotá D.C. , Colombia (2003-2004)
- ü Open Intl. Systems. Cali, Colombia (1997 - 2002)
- ü Telefónica de Ecuador - Quito, Ecuador (2007)

Sun Microsystems (Colombia) 2003-2005.
Technical instructor for the architecture, design and development training courses around Java Enterprise Edition.

Indudata Ltda. (Colombia) 2003 - 2005.
Technical instructor for the architecture and design training courses with UML and RUP from IBM Rational.

Lucasian Labs Ltda. (Colombia) 2005 - 2007.
Technical instructor for the architecture, design and development training courses: Java Enterprise Edition, SOA and Web Services. Frameworks for architectural description, definition and assessment: ABD, ATAM, TOGAF, IFM, RUP / 4+1 View Model, Suntone AM / The Cube.

Relevant Consulting Experience 1997 - 2008

2008.



Sep. 2007 - Until NOW. FINANCIAL: BANCO DE CRÉDITO - HELM FINANCIAL SERVICES. Bogotá D.C., Colombia - <http://www.bancodecredito.com.co>. Consultant architect in charge of the assessment, crash plan definition and implementation of continual service improvement of Internet Services Channel for personal and business banking. *An assessment of the complete IT Strategy included recommendations for IT Vice-president and supporting IT departments (development, SOA, maintenance and support services, production operations), Risk Vice-president, Business Vice-President with detailed action plans for stabilization and continual service improvement of Internet Banking Services in the following aspects: technologies, standards, core IT processes, roles and responsibilities. The processes improvement strategy covered the definition and implementation of the following core IT governance processes and supporting roles and responsibilities for: change management, incident management, problem management, capacity management, performance and availability management, release and deployment management). The measurement strategy for the service's improvement was done through key performance indicators (KPIs), aligned with the Key Business Objectives (KBOs) and the Balance Score Card. The technical platform optimization strategy covered: corporate technologies and standards definition, application and integration services optimization, BACK-END optimization, network optimization, secure high availability server's configuration, monitoring strategy.*



Sep. 2007 - Until NOW. FINANCIAL: ACH DE COLOMBIA. Bogotá D.C., Colombia. Consultant architect for: technical review and stabilization of Internet applications: SOI version 1 and 2 (<https://www.soi.com.co/>), PLANILLA ASISTIDA, PSE. *SOI is a national wide application for Social Security Payments with more than 150,000 users, and it has integration for payments with 19 BANKS in COLOMBIA and EPS (Health Promoting Entities).*

2007.



Oct. 2007 - Until NOW. FINANCIAL: DECEVAL - DEPOSITO CENTRAL DE VALORES. Bogotá D.C., Colombia - <http://www.deceval.com.co/>. Consultant architect in charged of designing a high-performance interfase for processing the security's transactions sent from BOLSA DE VALORES DE COLOMBIA (<http://www.bvc.com.co/>) to DECEVAL. *500,000 transactions / month.*



Jun. 2007 - Jul. 2007. HEALTH / FINANCIAL: Comfenalco Valle. Cali, Colombia - <http://www.comfenalcovalle.com.co/>. Consultant architect for the modernization of Integration architecture of Comfenalco Valle's enterprise systems (SAP, SIPE and SIRAP) using Oracle SOA Suite 10g, Oracle BPEL, Oracle JDeveloper.



Mar. 2007 - Apr. 2007. FINANCIAL: Banco AV Villas - Grupo AVAL. Bogotá, Colombia - <http://www.avvillas.com.co>. Consultant architect for the SOA Integration architecture of enterprise systems of Banco AV Villas using Oracle SOA Suite 10g, Oracle BPEL, Oracle JDeveloper.



Jan. 2007 - Feb. 2007. TELECOMMUNICATIONS: Telefonica Ecuador. Quito, Ecuador - <http://www.telefonica.com.ec>.

Consultant architect for the SOA Integration architecture of the databases with prepaid and postpaid cell phones of Telefonica Ecuador using Oracle

SOA Suite 10g, Oracle Advanced Queue, AQ Adapter, Web Services, Oracle Streams and Oracle 9i DB.
Transaction load: 400.000 records / hour.

2006.



Oct. 2004 - Nov. 2006. FINANCIAL: ATH / Grupo AVAL: Banco de Bogotá, Banco de Occidente, Banco Popular y Banco AV Villas. Bogotá, Colombia - <http://www.ath.com.co>.

Consultant architect for the personal and business banking Internet services of the 4 banks of Grupo AVAL using Java Enterprise Edition, S1 Enterprise Platform. 250,000 users, integration with the core banking systems (savings accounts, checking accounts, financial switch and credit card systems) of the 4 Banks using IFX Web Services and different legacy

protocols. [BEA WebLogic Server 8.1](#), [IBM WebSphere Dev. Studio y SQL Server](#).



May. 2006 - Dec. 2006. EDUCATION: Los Andes University. Bogotá, Colombia -

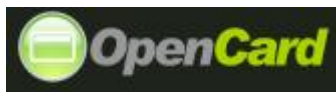
<http://www.uniandes.edu.co/>. Consultant architect for the reconstruction and definition of the enterprise architecture from Los Andes University, with major focus on: SOA Integration, Java Enterprise Edition, Content Management and Identity Management.



Jul. 2006 - Sep. 2006. FINANCIAL: SURATEP S.A. Medellín, Colombia - <http://www.suratep.com.co>.

Consultant architect for the reconstruction and definition of the enterprise architecture from SURATEP with major focus on: Business Process Architecture, Integration Architecture with SOA, Applications Architecture with Java Enterprise Edition, Information Architecture and Security Architecture.

2005.



May. 2005 - Until now. FINANCIAL: Opencard Ver 7. Bogotá, Colombia - <http://www.opencard.com>.

Consultant architect for the new version of the Opencard v7, using Java Enterprise Edition. The new architecture of this core banking system product has a scaleable, high-performance, multi-platform (application server and data base server independence), multi-tier architecture using JSF, AJAX, WS, Session EJB, MDBs and JDBC. It supports Multilanguage, multicurrency, multi-enterprise. The previous versions of OPENCARD are installed in 14 banks from Latin America.

2004.



Nov. - Dic. 2004 - GOVERNMENT: Fiscalia General de la Nación / Paradigma Ltda. Bogotá, Colombia -

<http://www.fiscalia.gov.co>. Consultant architect for Sistema Penal Oral Acusatorio (SPOA) from the Colombian government. [Oracle 10g AS](#), [Oracle 10g DB y JDeveloper 10g](#).



Abril - Ago. 2004 - FINANCIAL: ATH / Grupo AVAL: Banco de Bogotá, Banco de Occidente y Banco Popular. Bogotá, Colombia - <http://www.grupoaval.com>. Consultant architect for the migration of the Foreign Trading System (Sistema de Comercio Internacional - SISCOI) from the Banks of Grupo AVAL. The new architecture of this system is multi-tier, patterns and frameworks based, platform independent, using JSF, Session EJB, MDBs, and JDBC.

Mauricio was responsible for the SISCOI architecture definition using the Java Enterprise Platform. Interface with the old-forfe system was done using CORBA. Interfaces with other enterprise systems such as People Soft were done using HTTP and XML. [Oracle AS 10g](#), [JDeveloper 10g](#), [Oracle 8i DB](#).



May. 2004 - FINANCIAL: Redeban / MasterCard. Bogotá, Colombia - [http://www.redebanmulticolor](http://www.redebanmulticolor.com.co)

Consultant architect for the Web Service of credit card authorization for Redeban / Mastercard implemented with Java Enterprise Edition. Interface with the TANDEM was done using TCP-IP Sockets. [Oracle 9i AS](#), [Oracle 9i DB](#).

2003.



Oct. 2003- Jun. 2004 - TELECOMMUNICATIONS: Empresas de Telecomunicaciones de Bogotá (ETB) / SIGTECH Ltda. Bogotá, Colombia. Consultant architect for the enterprise architecture committee of ETB. Mauricio defined the Reference Architecture for the Java Enterprise Applications, design patterns, frameworks and best-practices for applications

integration. Mauricio has also the lead architect of the billing claims system, (Sistema de Ajustes y Abonos por Web - SAAW). Integration with Daleen RevChain (Billing System) uses EJBs, RMCA - SAP using JCo and with the ETB Customer Care, Enlace, using EJBs. [BEA WebLogic Server 8.1](#), [Oracle 9i DB](#) y [JBuilder X](#).



Jun. 2002- Jun. 2003. FINANCIAL: Interamerican Development Bank, Central Bank of Costa Rica (BCCR) y Costa Rica government. San José, Costa Rica. Consultant architect and technical leader for the large

values security settlement system (Servicios de Anotación en Cuenta - SAC) for all of the 18 banks and 20 stock traders from Costa Rica. SAC offers a near-real time high performance and secure financial interface for bilateral and multi-lateral operations with securities among the financial institutions from the Costa Rica market. Integration with the Sistema Interbancario de Pagos Electrónicos (SINPE) from the Central Bank and Bolsa Nacional de Valores (BNV) using Web Services. *The consultancy was approved by the Interamerican Development Bank.* [Cluster de BEA WebLogic Server 7 en Solaris 8](#), [Oracle Real Application Cluster](#), [JBuilder 8](#).



Feb. 2003 - Abr. 2003 - FINANCIAL: Grupo SAMA. San José, Costa Rica - <http://www.gruposama.com>.

Reviewer architect for the architectural assessment of the J2EE system, FALCON, which supports the core system for stock trading of Grupo SAMA in Costa Rica.



Mauricio Naranjo, Chief Architect – Lucasian Consulting Services 11 Years Experience: Vision, Strategy, Architecture, Processes and Governance

1997 - 2002.



TELECOMMUNICATIONS: Open Intl. Systems (Colombia and USA) - <http://www.openinternational.com>.

Consultant engineer at the Research & Development division of Open Intl. Systems. Architect of the framework Open@Web for building Web interfaces with neutral Look & Feel with Java y Oracle PL/SQL Web cartridge. Architect and technical leader of the Open Intl. Systems' Customer Care using Java. Architect and technical leader for the bill presentment and payment site with Java.



Mauricio Naranjo, Chief Architect – Lucasian Consulting Services 11 Years Experience: Vision, Strategy, Architecture, Processes and Governance

Capacity Planning, Availability and Performance Management, Service Level Monitoring, Trouble Shooting Experience – 2003 - 2008



Mauricio Naranjo

Chief Architect

Lucasian Labs

2007.

Jul. **EDUCATION: Los Andes University. Bogotá, Colombia. "BANNER - Registro de Materias Semestrales"**. Performance analysis of the: 1,600 users using Parasoft WebKing. Technical platform: Oracle Application Server 10g, Sun ONE LDAP Directory, Solaris OS. Universidad de los Andes, Bogotá, Colombia.

2006.

Sep - Oct. **FINANCIAL: ATH / Grupo AVAL: Banco de Bogotá, Banco de Occidente, Banco Popular y Banco AV Villas. Bogotá, Colombia. "Proyecto S1 EP"**. Setup, configuration and performance analysis and tuning of the personal and business banking interface of the four banks from Grupo AVAL: 250,000 users, 3 BEA WebLogic Server 8.1 clusters, 12 machines, 32 virtual servers under Windows 2000 Server. Banco AV Villas, Banco de Bogotá, Banco de Occidente y Banco Popular. Proyecto S1 J2EE (PSJ) de A Toda Hora S.A. Bogotá, Colombia.

Feb - Apr. **FINANCIAL: SURATEP S.A. Medellín, Colombia. "Servicios en Línea"**, Troubleshooting in production and performance tuning of the online services from Suratep S.A. Tomcat 5 under Solaris 9. Medellín, Colombia.

2005.

Nov. **FINANCIAL: ATH / Grupo AVAL: Banco de Bogotá, Banco de Occidente, Banco Popular y Banco AV Villas. Bogotá, Colombia. "IFX Server Framework"**, Architecture, design, implementation and performance analysis and tuning of the IFX integration Server for the personal and business banking Internet services. Response time threshold of 60 milliseconds, 250,000 users. Banco AV Villas, Banco de Bogotá, Banco de Occidente y Banco Popular. Proyecto S1 J2EE (PSJ) de A Toda Hora S.A. Bogotá, Colombia.

Jun. **FINANCIAL: ATH / Grupo AVAL: Porvenir S.A. Bogotá, Colombia. "Sistema Multifondos"**, Performance analysis and tuning of the Multifondos project of Porvenir. Oracle Application Server 10g under Windows 2000 Server. Porvenir S.A. Bogotá, Colombia.

2004.

Jul. **FINANCIAL: ATH / Grupo AVAL: Banco de Bogotá, Banco de Occidente, Banco Popular. Bogotá, Colombia. "Sistema de Comercio Internacional (SISCOI)"**, Performance analysis and tuning of the SISCOI Project. Oracle 10g AS under Windows 2000 Server. ATH/Grupo AVAL: Banco de Bogotá, Banco de Occidente y Banco Popular. Bogotá, Colombia.

Jun. **TELECOMMUNICATIONS: Empresas de Telecomunicaciones de Bogotá (ETB) / SIGTECH Ltda. "Sistema de Abonos y Ajustes Por Web (SAAW)"**, Performance analysis and tuning of the SAAW project from ETB. BEA WebLogic Server 8.1 under HP-UX. Empresa de Telecomunicaciones de Bogotá (ETB). Bogotá, Colombia.

2003.

Sep. **FINANCIAL: Interamerican Development Bank, Central Bank of Costa Rica (BCCR) y Costa Rica government. San José, Costa Rica. "Servicios de Anotación en Cuenta (SAC)"**, Performance analysis and tuning of the SAC Project. BEA WebLogic Server 7 cluster with 2 machines under Solaris 8. Interamerican Development Bank, Central Bank of Costa Rica (BCCR). San José, Costa Rica.

Education: Seminars and Training Courses Taken – 1998 - 2008



Mauricio Naranjo

Chief Architect

Lucasian Labs

Mauricio at the Enterprise Architect Summit 2005. Key Biscayne, Florida. USA.

2006.

Sep. **"Certification Course for PMP - Project Management Professional"**, Escuela Colombiana de Ingeniería, Bogotá D.C., COLOMBIA.

Aug. **"Oracle Enterprise Service Bus (ESB) Training"**, Oracle Office, Miami, Florida, USA.

2005.

May. **"Enterprise Architect Summit 2005"**, Ritz-Carlton, Key Biscayne, Florida, USA.

May. **"Java Network 2005"**, Centro Gonzalo Jiménez de Quesada, Bogotá, Colombia.

Feb. **"S1 Enterprise Platform ver 3"**, on-site training, Atlanta, USA.

2003.

Feb. **"Architecture Assessment"**, BEA Systems on-site mentoring, BCCR, San José, Costa Rica.

2002.

Oct. **"Administration of BEA Web Logic Server Ver. 7.0"**, BEA Systems on-site training, BCCR, San José, Costa Rica.

Oct. **"Developing Business Logic Components with Enterprise Java Beans using BEA Web Logic Server 7.0"**, BEA Systems on-site training, San José, Costa Rica.

2001.

May. **"Architecting and Designing J2EE Applications (SL-425)"**, Sun Educational Services, Burlington-Massachusetts. USA.

Apr. **"International Oracle Users Week: IOUG A-Live 2001"**, Dolphin & Swan Disney Hotels, Orlando. Florida-USA.

2000.

Oct. **"Oracle OpenWorld 2000"**, Moscone Center, San Francisco, California - USA.

Sep. **"Oracle Java Development Workshop"**, Oracle Education, Bethesda - Washington. USA.

Sep. **"Oracle XML Workshop"**, Oracle Education, Bethesda - Washington. USA.

Feb. **"Graphical User Interface design"**, Telia SwedTel of Colombia. Open Intl. Systems Corp. Cali. Colombia.

1999.

May. **"Distributed Programming with Java (SL-301)"**, Sun Educational Services, New York. USA.

May. **"International Oracle Users Week: IOUG-A Live! '99"**, Colorado Convention Center, Denver. USA.

May. **"New features in Oracle 8i"**, University Seminar, IOUG-A Live! '99, Denver. USA.

Feb. **"Developing Internet Applications with Oracle Workflow"**, Open Intl. Systems Corp. Cali. Colombia.

1998.

Nov. **"Programming with Microsoft Visual C++"**, Open Intl. Systems Corp., Cali. Colombia.

Jul. **"Programming with Java"**, San Buenaventura University, Cali. Colombia.

Apr. **"International Oracle Users Week: IOUG-A Live! '98"**, Orange County Convention Center, Orlando, Florida. USA.

Apr. **"Unified Modeling Language"**, University Seminar, IOUG-A Live! '98, Orlando, Florida. USA.

Mar. **"Oracle Discoverer R3 for Administrators"**, Oracle Education, Cali. Colombia.

Feb. **"Advanced PL/SQL Programming"**, Open Intl. Systems Corp., Cali. Colombia.



Speaker and Instructor
– 1998 - 2008

2007

Sep. **“Oracle Architect Forum: Real case studies of SOA implementation in financial and telecommunications industry”**, Technical presentation at the Oracle Architect Forum. Quito, Ecuador.

Sep. **“Oracle DAY Architect Panel: Myths and Realities of a Service-Oriented Enterprise”**, Technical Forum at the Oracle DAY. Bogotá D.C., Colombia.

Ago. **“Real case studies of SOA implementation in financial and telecommunications industry”**, Technical presentation at SISA (Seguros e Inversiones) - Citigroup. San Salvador. El Salvador.

Ago. **“Oracle Architect Forum: Real case studies of SOA implementation in financial and telecommunications industry”**, Technical presentation at the Oracle Architect Forum. Bogotá D.C. Colombia.

Feb. **“Oracle SOA Project Methodology Workshop”**, Workshop for the Banco Nacional de Costa Rica. San José. Costa Rica.

Feb. **“Oracle SOA Project Methodology Workshop”**, Workshop for the Banco de la República (Central Bank). Bogotá. Colombia.

Jan. **“10 Lessons Learned of SOA”**, Telefónica Ecuador. Quito. Ecuador.

Jan. **“Lessons learned about Software Applications Architecture with the Java Enterprise Platform”**, Telefónica Ecuador. Quito. Ecuador.

2006.

Dec. **“10 Lessons Learned of SOA”**, Banks and financial entities from Grupo AVAL: Banco de Bogotá, Banco Occidente, Banco Popular, Banco AV Villas, Porvenir S.A., ATH S.A. Bogotá. Colombia.

2005

Nov. **“LEAF 3i - Lucasian Enterprise Application Framework - Advanced Architecture”**, Technical presentation at the seminar organized by Lucasian Labs, Integrated Technologies S.C. and Layer 7 Technologies: “Security and Productivity for J2EE, SOA and Web Services”. Tequendama Intercontinental Hotel. Bogotá, Colombia.

Sep. **“Software Architecture Foundations”**, Presentation at the ACIS (Asociación Colombiana de Ingenieros de Sistemas), seminar: “Enterprise Architecture: Myths and Realities”. Bogotá, Colombia.

Aug. **“Foundations of Software Architecture in RUP, IFM and SunTone AM”**, Technical Presentation at the Javeriana University. Bogotá, Colombia.

Mar. **“WS-60I: Architecture and Design of JEE Applications with UML”**, Technical training course of Lucasian Labs Ltda. For: Grupo AVAL (Banco de Bogotá, ATH, Banco AV Villas). Bogotá, Colombia.

Feb. **“WS-50I: Enterprise Java Beans”**, Technical training course of Lucasian Labs Ltda. For: Grupo AVAL (Banco de Bogotá, ATH, Banco AV Villas). Bogotá, Colombia.

2004.

Sep. **“Best Practices In Object Oriented Analysis and Design From IBM Rational Unified Process”**, Training course from INDUDATA for Grupo Intent. Bogotá, Colombia.

Sep. **“Architecture and Design principles of JEE Applications”**, Technical presentation at Quindio University. Armenia, Colombia.

Jul. **“Lineamientos de Arquitectura y diseño de aplicaciones Java 2 Enterprise Edition”**, Presentación para las entidades de Grupo AVAL. Auditorio del Banco de Bogotá, Bogotá, Colombia.

2004 (continued)

Jun. **“Software Architecture Introduction”**, Technical presentation for the Banks of Grupo AVAL. Banco de Bogotá auditorium. Bogotá, Colombia.

May. **“SL-425: Architecting and Designing J2EE Applications”**, Curso de Sun Microsystems for División de Impuestos y Aduanas Nacionales (DIAN). Javeriana University, Bogotá, Colombia.

2003

Nov. **“OO-226. Object Oriented Analysis and Design Using UML”**, Technical training course of Sun Microsystems for Empresas Públicas de Medellín (EE.PP.M), Medellín, Colombia.

Oct. **“SL-275. Java Programming Language”**, Technical training course of Sun Microsystems for Empresas Públicas de Medellín (EE.PP.M), Medellín, Colombia.

Sep. **“Java 2 Enterprise Edition - Architecture”**, Presentación de Sun Microsystems en la Universidad EAFIT, Medellín, Colombia.

Sep. **“Software Architecture Introduction”**, Technical Presentation at Quindio University, Armenia, Colombia.

Ago. **“Object-Oriented Analysis and Design Using UML”**, Technical Training course from IBM Rational. Bogotá, Colombia.

1999.

Abr. **“Using Java for Generating PL/SQL Cartridge applications with neutral look & Feel. Paper 913”**. Technical presentation at IOUG (International Oracle Users Week) A-Live '99. Colorado Convention Center, Denver. USA.