

JORGE MENA

<http://www.cs.ucr.edu/~jmena/>

PO Box 56804
Riverside, CA 92553

(951) 662-2438
jorgemena@gmail.com

OBJECTIVE: A software engineering position with future project management opportunities.

EDUCATION: **Computer Science, MS** December 2007
Computer Science, BS June 2004
Information Systems, BS June 2004
University of California, Riverside, **Magna Cum Laude**

Cisco Certified Network Associate Course Curriculum June 2004
Riverside Community College

COURSE WORK:

Network Design	Distributed Systems	Data Mining
Compiler Design	Database Management	Advanced Algorithms
Network Routing	Software Evolution	Adv. Comp. Architecture
Software Design	Numerical Analysis	Combinatorics
Artificial Intelligence	Operating Systems	Computer Security

EXPERIENCE: **Teacher Assistant in C++ Programming** **Sep 2004 – Dec 2007**
The TA helps solving problems through programming of algorithms using the C++ object-oriented language. The work also covers software analysis, design, testing, and debugging.

Instructor of the Operating Systems course **Summer 2006**
The lecturer is the leader in charge of the overall design and application of the lesson plan based on the course objectives envisioned by the Computer Science department. This person performs the lectures, prepares the entire course material, and evaluates the performance of his students.

Tutor in C++ Programming & Mathematics. **Sep 2002 – Jun 2003**
Tutors provide skills and knowledge to students and show concepts of pair programming, team organization, and dynamic analysis of complex problem solving.

Head Web Master **Sep 2001 – Jun 2003**
Executive Board Officer of Society of Hispanic Professional Engineering. I held a lead position of a small group of student engineers to develop the first version of SHPE web presence at UCR. <http://www.engr.ucr.edu/~shpe/>

PUBLICATIONS & TECHNICAL DOCUMENTS:

J. Mena and V. Kalogeraki. **Dynamic Relay Node Placement in Wireless Networks.** The 2008 International Symposium on Applications and the Internet (SAINT 2008), Turku, Finland, July – August 2008.

J. Mena and R. Rusich. **SCTP: Stream Control Transmission Protocol, An Analysis.** Technical Paper: January, 2006.

A. Vlavianos and J. Mena. **HISTORIAN: A learning based Distributed Algorithm for Dynamic Spectrum Allocation.** Technical Paper: December, 2005.

N. Barton and J. Mena. **Addressing Security Issues in BGP.** Technical Paper: March, 2005.

TECHNICAL EXPERTISE:

Languages: C/C++, Java, Python, Matlab, VB 6/.Net, Perl, XML, HTML, JavaScript, VHDL, SQL, Scilab.

Platforms: MSDOS, Windows 3.11/95/98/2000/XP/2003, Linux (Mandrake, Red Hat, Fedora, Debian, SUSE, CentOS, Ubuntu), UNIX.

Environments: Emacs/VI, Visual Studio .Net, Eclipse, NetBeans, Cisco IOS v12.

Familiar with: TCP/IP, Linux Kernel Internals, Socket Programming, OpenSSL, PostgreSQL, Network Design and Configuration, Network Security, Software Models, Software Analysis, Design, Requirements, Software Evolution, Maintenance and Support, Design Patterns, XP Programming, Agile Programming.

Simulators: Network Simulator (ns2), Omnet++

PROJECTS:**Dynamic Relay Node Placement in Wireless Networks** **Fall 2007**

Master's Thesis. Given an ad hoc wireless network, the goal of the project is to find congestion/bottlenecks hot spots that decrease the overall throughput of the network and "patch" them with a minimum number of relay nodes that are multi-channel, multi-interface in an attempt to increase the capacity of the network. The fact that we use these types of nodes allows us to achieve our goal since we try to eliminate congestion in a shared resource using another shared resource that is currently not being used around the area.

Distributed Algorithm for Dynamic Spectrum Allocation **Winter 2006**

A simulated implementation of a multi-hop network of wireless devices that utilizes a novel distributed algorithm to allocate current unused frequencies in the spectrum.

Clustering Using K-means and Dendrograms **Spring 2005**

A data mining investigation of the K-means algorithm to cluster data sets that uses Dendrograms as tools to corroborate the results observed.

Dynamic Register Allocation **Spring 2005**

An implementation of a register allocation mechanism that uses graph coloring techniques on an existing compiler to optimize the register utilization in the resulting output language at the back-end of the compiler.

ENKO: A Social Networking Community **Spring 2004**

ENKO is a beta version of a community that is targeted to software developers with emphasis on security access mechanisms and developed under the XP Programming principles. Leading a group of eight people, I manage to overcome common issues in software development teams and present results in meetings held with our client.

In-N-Out Restaurant Locator – Senior Design Project II **Winter 2004**

The DBMS handles spatial queries to locate a restaurant in the close vicinity of a given location. A market research and analysis was made by interviewing potential users to determine the project specifications and requirements; it was then designed, developed, tested, and packaged with full documentation provided.

P2P File-sharing Tool – Senior Design Project I **Fall 2003**

Named Perestroika after the liberation of the Soviet Union countries, this Java P2P tool allows the freely distribution of files among a network of peers that sign up to it. Full design, implementation, and documentation of the final product was packaged in a compact disk for release.

Certificate of Authenticity Verifier Tool **Spring 2003**

A tool that accompanies a web browser to request and verify a Certificate of Authenticity from a web site that claims to be the identity that is says.

Volcano DBMS **Winter 2003**

A travel agency DBMS implemented using PostgreSQL platform that included flight, hotel, and car rental booking.

Timed Token Algorithm over FDDI **Fall 2003**

A Python implementation of the Timed Token Algorithm simulated over an FDDI Token Ring network. The project includes an implementation of messages (the token) as well as statistical observations of the state of the nodes in the ring.

HONORS & ACTIVITIES:

Magna Cum Laude
Golden Key Int. Honor Society
Society of Hispanic Professional Engineers
Association of Computing Machinery

National Honor Society
Dean's List (several quarters)
Engineering Honor Society

LANGUAGES:

Fluent in Spanish and English