

Francisco José Chinchilla

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I am seeking a full-time software development or research position starting in the Fall of 2005. My interests are High Performance Computing on GPU clusters, PS2 clusters, and other multi-processor systems, Grid and web services, mobile computing, and networking. In particular, I enjoy experimental analysis and data visualization, and writing scripts and visualization tools to aid and speed up the discovery process.

Education:

<i>University of North Carolina at Chapel Hill (UNC-CH)</i>	2002 -	Graduate student in Computer Science
<i>University of Richmond (UR)</i>	1998-2002	B.S. double major in Mathematics and Computer Science with a minor in Physics (magna cum laude and only Computer Science major to graduate with Departmental Honors in Class of 2002)
<i>Mazapán School</i>	1994-1998	High School Diploma (Valedictorian) Bachillerato en Ciencias y Letras (Medalla de Oro)

Skills:

<i>Computer Languages And Interfaces</i>	Ada, Brook, C, Cilk, Cg, C++, C#, FORTRAN, HTML, Java (J2SE 1.5 and J2EE), LISP, Mathematica, Matlab, MIPS, MPI, OpenGL, OpenMP, Pascal, Perl, Smalltalk, SOAP, SQL, XML
<i>Operating Systems Technologies</i>	CiscoOS, Linux, MacOS, Unix, Windows (NetG Certification for A+ in Windows 95) 802.11, ECN, Globus, HTTP, MPEG, RED, Remote Frame Buffer protocol, RTP, TCP (and some of its variants), UDDI
<i>Interpersonal</i>	Ability to lead and work with others on projects, excellent technical communication and presentation skills, fully bilingual in English and Spanish

Research Experience:

2004-	<u>Research Assistant</u> – Profs. Daniel A. Reed and Diane Pozefsky, UNC-CH Computer Science Department / Renaissance Computing Institute <ul style="list-style-type: none">* Developing adaptive code selection infrastructure for high performance scientific codes* Parallel and Scientific Computation on Playstation 2 cluster and on graphics hardware based PC clusters* Transforming Autopilot, a real-time adaptive control of parallel and distributed computing resources, into a web services/grid services compatible system* Playstation 2 Cluster system administration
2003-2004	<u>Research Assistant</u> – Prof. Maria Papadopouli, UNC-CH Computer Science Department <ul style="list-style-type: none">* Setting up a traffic monitoring system at wireless access points* Analysis of traffic and association patterns of users in the campus wireless infrastructure
2000-2002	<u>Research Assistant</u> – Prof. Michael Vineyard and Gerard Gilfoyle, UR Physics Department <ul style="list-style-type: none">* Development of database-capable calibration software for the Large Angle Calorimeter of the CEBAF Large Acceptance Spectrometer in Hall-B of Thomas Jefferson National Accelerator Facility* Rebuilding Large Angle Calorimeter bank information for the data acquired in the 3.1GeV energy subset of the Hall-B G1C Run Period* Development and maintenance of a Linux Computing Cluster

Work Experience:

- 2000-2002 System Administrator - UR Physics Linux Computing Cluster
* Install, configure, and upgrade OS, software, hardware on PC-Linux
* Maintain security
- 1999-2000 Help Desk Assistant - UR Computing Help Desk
* Install, configure, and upgrade OS, software, hardware on PC-Windows
- 1999 Consultant - Tropico Network
* Install, configure, and upgrade OS, software, and hardware on Cisco Layer 3 Switches and Paradyne DSU's for use in an ISP
- 1997-1998 Office Assistant – Cash and Associates Real Estate
* Web Design
* Translator (English and Spanish)

Teaching Experience:

- 2002-2003 COMP 014 Teaching Assistant – UNC-CH Computer Science Department
* Teach recitations for the Introduction to Computer Science course
* Grade homework, projects, and exams
* Hold review sessions
* Liaison between lab assistants and other teaching assistants
* Define the grading criteria for homework, projects, and exams
- 1999-2001 HTML Instructor – UR Information Services
* Teach an HTML Basics course
- 1999-2001 CS 150 Lab Assistant - UR Computer Science Department
* Assist the professor in lab sessions for the Introduction to Computer Science course

Publications and Presentations:

- 2004 Francisco Chinchilla, Mark Lindsey, and Maria Papadopouli.
“Analysis of wireless information locality and association patterns in a campus”
IEEE Infocom 2004, Hong Kong, March 7-11, 2004. (**acceptance rate: 18%**)
- Poster presented at SAMSI Workshop on Internet Tomography and Sensor Networks
Research Triangle Park, NC, October 13-15
- 2003 Mark R. Lindsey, Maria Papadopouli, Francisco Chinchilla, and Abhishek Singh
"Measurement and Analysis of the Spatial Locality of Wireless Information and
Mobility Patterns in a Campus"
Technical Report TR03-006, March 2003
The University of North Carolina at Chapel Hill Computer Science
- 2002 Brian Wyman and Francisco Chinchilla
"Game strategy development"
Talk presented at MathFest (**winner of the American Mathematical Society Award
for Outstanding Student Paper Presentations**).
Burlington, VT, July 31 - August 2
- 2002 Van Bowen and Francisco Chinchilla
“A Non-Conventional Application of Statistical Thinking”
Invited talk at the American Statistical Association’s 2002 Quality & Productivity
Research Conference.
Tempe, AZ, June 5-7
- 2001 F. Chinchilla, M. F. Vineyard, J.Lachniet, and V. Sapunenko
“Development and Testing of Calibration Software for the CLAS Large Angle
Calorimeter”
Bulletin of the American Physical Society, Vol 46 No. 7, MS 34 p. 99
- Poster presented at the First Joint Meeting of the Nuclear Physicists of the American
and Japanese Physical Societies.
Maui, HI, October 17-20

2001 F. Chinchilla, M.S. Fetea, G.P. Gilfoyle, and M.F. Vineyard
"From Quarks to Nucleons"
Talk given at 14th Summer School on Understanding the Structure of Hadrons.
Prague, Czech Republic, July 9-13

2000 F. Chinchilla, M.F. Vineyard, and G.P. Gilfoyle
"Development and Maintenance of a Linux Computing Cluster"
Bulletin of the American Physical Society, Vol 45 No. 5, AS 15 p. 19

Poster presented at the Conference Experience for Undergraduates at the Fall 2000 Meeting of the Division of Nuclear Physics of the American Physical Society.
Williamsburg, VA, October 4-7

Relevant Courses:

Computer Science Algorithms, Compilers, Computer Graphics, Computer Architecture, Database Systems (**honors**), Distributed Systems, General Programming on Graphics Processors, Images and Vision, Independent Study on Network Traffic Self-Similarity, Internet Architecture and Performance, Mobile Computing and Peer-to-Peer Networks, Multimedia Networking, Operating Systems, Parallel and Distributed Computation, Programming Languages (**honors**), Software Engineering Practicum (**team leader**), Technical Communication, Technical Writing

Mathematics Abstract Algebra I, Coding Theory, Complex Analysis, Discrete Mathematical Models, Fundamentals of Abstract Math, Linear Algebra, Mathematical Statistics I and II, Modern Geometry, Multivariate Calculus, Numerical Analysis, Real Analysis I, Scientific Computation II

Volunteer Activities:

1998-2002 Virginia Department for the Blind and Visually Impaired
* Make Braille Books
* Assist System and Database Administrators
* Clean and repair audio cassette players

1999-2001 Casa Feliz
* Mentor physically, psychologically, and/or sexually abused children