

Andree Jacobson

The University of New Mexico

Department of Computer Science
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EDUCATION

THE UNIVERSITY OF ARIZONA, Tucson, Arizona
Master of Science, Computer Science, GPA: 3.613

December 2002

LULEÅ UNIVERSITY OF TECHNOLOGY, Luleå, Sweden
Master of Science, Computer Science and Engineering,
Networking Major, Networking GPA: 4.0, Overall GPA: 3.6

May 2000

EMPLOYMENT

THE UNIVERSITY OF NEW MEXICO, Albuquerque, New Mexico
Senior Lecturer.

August 2005 – Current

With the Department of Computer Science:

- Teach various courses in the undergraduate computer science curriculum
- Participate in the development and evaluation of current undergraduate curriculum
- Serve as an undergraduate student adviser
- Organize and coordinate the efforts of undergraduate teaching assistants
- Participate in, and organize K-12 outreach

Honors Received:

- UNM 2007-2008 Outstanding Lecturer of the Year Award, May 2008
- School of Engineering, Junior Teaching Excellence Award, May 2007

Courses taught:

- CS 152 – (3cr) – 8 Semesters – Programming Fundamentals for Computer Science Majors. Basic programming concepts in Java. Recently adapted to be a core class for the Interdisciplinary Film and Digital Media program offered at UNM. Now this class teaches Python programming in addition to Java. Typical enrollment: ~100 students/semester.
- CS 241 – (3cr) - 4 Semesters – Data Organization (Data structures in C). Efficient implementation of data structures, memory handling, debugging, and profiling C programs. Typical enrollment: ~40 students/semester.
- CS 251 – (3cr) – 7 Semesters – Intermediate Programming. Second java class in succession, some data structures, object oriented programming, Software design process, Inheritance. Typical enrollment: ~50 students/semester.
- CS 341 – (3cr) – 2 Semesters – Introduction to Computer Architecture and Organization. MIPS Assembly programming, memory organization, cache memory, low level i/o, Pipelining, etc. Typical enrollment: ~30 students/semester

LOS ALAMOS NATIONAL LABORATORY (through NM Institute of Advanced Studies), Los Alamos, New Mexico

Instructor & Coordinator: Computer System, Cluster, and Networking Summer Institute.

Summer 2008

Teach the second offering of the successful summer class piloted previous year.

Instructor & Coordinator: Computer System, Cluster, and Networking Summer Institute.

Summer 2007

Teach and evaluate a pilot course on high performance computer clusters and networks. The typical supercomputer these days is a complex structure of software and computer hardware, often with specialized high speed interconnect networks. The class aims to familiarize students with the technologies used in such systems through hands-on laboratories, and invited guest speakers from the field. Topics covered include: Linux Administration, Infiniband, 10Gig-Ethernet, MPI Programming, Parallel I/O, machine-room issues, and performance evaluation.

THE UNIVERSITY OF ARIZONA, Tucson, Arizona

Application Systems Analyst, Senior.

September 2003 – August 2005

With the Terrestrial Biophysics and Remote Sensing Laboratory (TBRS):

- Coordinate the design, development, and implementation of high-performance processing systems for Earth Observing Satellite data systems, for the NASA MODIS project, using HDF/HDF-EOS.
- Supervise activities of algorithm developers, science analysts, and students within the TBRS lab in the processing of satellite-based, time series data for environmental applications.
- Administer two SGI Mainframes running IRIX 6.5, backup and organize 15TB disk system, maintain a number of other Linux, and Windows based computers, all part of the lab research network.

Achievements:

- Implemented *MOD13C1* – Coarse resolution, 16 day, Climate Modeling Grid which help scientists track the effects of global climate changes. In current production with NASA.

THE UNIVERSITY OF ARIZONA, Tucson, Arizona

Adjunct Lecturer.

Aug 2004 – Dec 2004

Teaching a 200-level class in computer organization and design, at the department of Computer Science. There are ~50 students enrolled. The position includes supervising the work of one graduate teaching assistant that is assisting me with grading and lab hours.

Adjunct Lecturer.

Jan 2004 – Jun 2004

Teaching a 100-level class in introductory computer science, at the department of Computer Science. There were 70 students enrolled. The position includes supervising the work of six undergraduate section leaders that are assisting me with grading and lab hours.

RELEVANT EXPERIENCE

THE UNIVERSITY OF ARIZONA, Tucson, Arizona. Student Employment

Research Assistant, Department of Soil, Water, and Environmental Science

Summer 2003

- Develop computer programs used to facilitate research in the TBRS Laboratory.
- Optimize existing software and increase utilization available hardware.

Course Instructor, Department of Computer Science

- 100-level computer science data structures course (Java) Spring 2003
~ 90 students enrolled. Supervised eight undergraduate section leaders.
- 300-level course on Foundations of Computer Systems (C & Assembly programming) Summer 2001
~ 50 students enrolled. Supervised two graduate teaching assistants

Research Assistant, Department of Computer Science

- Develop an infrastructure for aiding development of location aware applications Spring 2002

Teaching Assistant, Department of Computer Science

- 300-level course in Data structures and Algorithms in Java Fall 2000
- 400-level course in Principles of computer networking Spring 2001
- 500-level graduate course in Distributed and Parallel Programming Fall 2001
- 300-level course in Systems Programming and UNIX Fall 2002

Duties:

Teach guest lectures and review sessions. Evaluate student assignments, exams, and projects. Assign grades. Assist instructors with lecture preparations, exam questions, and assignment specifications. Help students one-on-one in office hours, and maintain course web sites.

ENATOR DOTCOM, Luleå, Sweden

Summer Intern, Summer 1998 & Summer 1999

- Develop and maintain the company website.
- Write ASP web pages utilizing SQL to access Microsoft Access database
- Administer Microsoft Internet Information Server, and product databases.

LULEÅ UNIVERSITY OF TECHNOLOGY, Luleå, Sweden

Course Instructor, Dept. of Computer Science, Div. of Computer Networking

- 200-level Java programming class with 50 students enrolled

Spring 2000

RELEVANT GRADUATE COURSEWORK

Computer Architecture, Advanced Operating Systems, Queuing theory and Markov processes, Theory of Computation, Principles of Compilation, Parallel and Distributed Programming, Principles of Computer Networking, Geometric Algorithms, Distributed Mobile Systems, Principles of Programming Languages, Object-Oriented Simulation & Discrete Event Models, Modern Computer Architecture, Computer System and Network Evaluation, High Performance Computing

PUBLICATIONS

Andree Jacobson. **Metrics in Ad Hoc Networks**. Master's thesis,

Luleå University of Technology, 2000. ISSN: 1402-1617

URL:<http://epubl.luth.se/1402-1617/2000/146/index-en.html>

Abstract: Ad hoc networks can form whenever two or more devices capable of communicating start exchanging data. All nodes have to act as routers, forwarding packets for the other nodes. However, traditional internet routing protocols will not work in mobile environments. This thesis presents two metrics that can be used to evaluate performance of ad hoc routing protocols.

POSITIONS OF RESPONSIBILITY

DEPT. OF COMPUTER SCIENCE, UNIVERSITY OF ARIZONA, Tucson, Arizona

2001 – 2002

Graduate student representative for the Research and Computing Committee

- Convey graduate students' opinions on departmental research and computing environment to the committee, and report outcome back to students

LULEÅ UNIVERSITY OF TECHNOLOGY, Luleå, Sweden

Head of the student Helpdesk

Aug 1998 – Jul 2000

- Provide computer hardware and software support for 10000 students
- Supervised a team of twelve students
- Represent all students in university committees.
- Write documentation and instructional web pages for supported software
- Maintain and find problems with the campus network

HONORS

THE UNIVERSITY OF ARIZONA FOUNDATION, Tucson, AZ

For Meritorious Performance in Teaching

April 2001

Presented annually to outstanding graduate teaching assistants

THE SWEDEN-AMERICA FOUNDATION, Stockholm, Sweden

Funding for a year of doctoral studies at the University of Arizona,

April 2001

DEPARTMENT OF COMPUTER SCIENCE, THE UNIVERSITY OF ARIZONA, Tucson, AZ

In recognition of outstanding qualifications,

August 2000

LM ERICSSON AB, Stockholm, Sweden

Covering admission tests and travel to the United States,

May 2000

PROFESSIONAL MEMBERSHIPS

ACM SigCSE

SKILLS

Programming languages: C/C++, Java, Perl, Python, Visual Basic, MIPS, SML, Modula2/3, Pascal

Special programming skills: HDF/HDF-EOS Libraries, C+MPI+Pthreads Libraries

Operating Systems: Windows 95/98/NT/2000/XP, Linux, FreeBSD, Solaris, IRIX64

Internet related: HTML, ASP, XML, CGI, Java Script, VB Script, SQL, IIS

Special skills: Project Group Management & Organizational skills, Fluent Swedish, Fluent English

REFERENCES

On Request