MASTER

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Summer 1994 Computational Science Workshop
Final Report
LANT BOX #9-XUO-D1260-1, Task #97

DEPARTMENT OF ELECTRICAL AND
COMPUTER ENGINEERING
COLLEGE OF ENGINEERING
UNIVERSITY OF NEW MEXICO

L# SUB-95-60

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Contents

1 Introduction	3
2 Call for Participants	4
3 Logistics	8
4 Speaker Information Packet	10
5 Final Program	12
6 Speaker Evaluations	15
7 Final Budget	17
8 Suggestions for Future Workshops	18
8.1 Pre-Workshop Problems and Remedies	18
8.2 Workshop Problems and Remedies	18
8.3 Looking Forward	19

1 Introduction

This report documents the work performed by the University of New Mexico Principal Investigators and Research Assistants while hosting the highly successful Summer 1994 Computational Sciences Workshop in Albuquerque on August 6-11, 1994 (under Los Alamos National Laboratory BOA #9-XUO-D1200-1, Task #97). Included in this report is a final budget for the workshop, along with a summary of the participants' evaluation of the workshop. The workshop proceeding have been delivered under separate cover.

In order to assist in the organization of future workshops, we have also included in this report detailed documentation of the pre- and post-workshop activities associated with this contract. Specifically, we have included a section that documents the advertising performed, along with the manner in which applications were handled. A complete list of the workshop participants in this section. Sample letters that were generated while dealing with various commercial entities and departments at the University are also included in a section dealing with workshop logistics. Finally, we have included a section in this report that deals with suggestions for future workshops.

2 Call for Participants

The primary instrument for publicizing the event was the posting of an ASCII advertisement and application form on a number of Usenet newsgroups. A graphics flyer on colored paper was also sent by U.S. Mail to participants in previous workshops (copies of these are given in Appendix A. The advertisement was posted to the net in late April, with a deadline for application date of June 1, 1994. The initial response generated nearly one hundred completed applications, and they continued to arrive after the June 1 date. Because of the finite funding, the actual cut-off date turned out to be June 8.

The following table lists the set of Usenet newsgroups to which the ASCII material was posted. The areas of interest areas are apparent in the names of the individual groups. An important objective was to attract participants in as wide a field of disciplinary areas as possible. And, indeed, the research interests shown in the CSW participant working database below indicates that we were successful in our effort.

Usenet Newsgroups for Advertisement

sci.chem	sci.cognitive	sci.econ.research
sci.engr	sci.fractals	sci.geo.fluids
sci.geo.geology	sci.geo.meteorology	sci.image.processing
sci.lang	sci.math	sci.math.num-analysis
sci.math.research	sci.math.symbolic	sci.nonlinear
sci.physics	sci.physics.research	sci.research
sci.systems	sci.virtual-worlds	sci.virtual-worlds.apps
news.announce.conferences	unm.general	comp.ai
comp.ai.neural-nets	comp.ai.vision	comp.edu
comp.graphics	comp.graphics.algorithms	comp.graphics.research
comp.graphics.visualization	comp.infosystems	comp.org.ieee
comp.os.research	comp.parallel	comp.programming
comp.simulation	comp.software-eng	comp.speech
comp.sys.misc	comp.theory	comp.theory.cell-automata
comp.theory.dynamic-sys	comp.theory.self-org-sys	
sci.astro	sci.aeronautics	sci.bio
sci.bio.ecology	sci.bio.evolution	sci.bio.technology

In addition, a World-Wide Web (WWW) server in Germany that makes information available in advance about a variety of technical conferences in HTML (hypertext markup language – the format used for graphical presentation “pages” accessible by such net-browsing programs as *Mosaic*) distributed our Usenet advertisement further.

A list of applicants is included in Appendix B. The following pages show sample letters that were sent to applicants. These letters were tailored to the applicant's affiliation based on the following categories: (1) LANL participants, (2) non-LANL participants residing in Albuquerque, and (3) non-LANL participants not residing in Albuquerque.

The University of New Mexico

Department of Electrical and
Computer Engineering
Room 110, EECE Building
Albuquerque, NM 87131-1356
(505) 277-2436

September 23, 1994

Dear Computational Sciences Workshop Participant,

Thank you for applying to the Computational Sciences Workshop to be held in Albuquerque, New Mexico, USA on August 1-5, 1994. I am pleased to inform you that your application has been accepted. There are a number of logistical items to be taken care of prior to the conference.

1. Travel. LANL participants should make their reservations with Lab travel. We will include forms for travel claims in the next mailing.
2. Maps of the city of Albuquerque, and the University of New Mexico will be distributed prior to your departure.

More information will be mailed to you as it becomes available. Please do not hesitate to snailmail to the address above or e-mail me at csw@eece.unm.edu with questions and/or comments at any time.

Sincerely,

Robert Luke, Research Assistant
Department of Electrical and Computer
Engineering

cc: Dr. Greg Heileman
Dr. Tom Caudell
Dr. Ann Hayes
Ms. Karen Haines

The University of New Mexico

Department of Electrical and
Computer Engineering
Room 110, EECE Building
Albuquerque, NM 87131-1356
(505) 277-2436

September 23, 1994

Dear Computational Sciences Workshop Participant,

Thank you for applying to the Computational Sciences Workshop to be held in Albuquerque, New Mexico, USA on August 1-5, 1994. I am pleased to inform you that your application has been accepted.

Maps of the University of New Mexico will be distributed prior to the workshop.

More information will be mailed to you as it becomes available. Please do not hesitate to snailmail to the address above or e-mail me at csw@eece.unm.edu with questions and/or comments at any time.

Sincerely,

Robert Luke, Research Assistant
Department of Electrical and Computer
Engineering

cc: Dr. Greg Heileman
Dr. Tom Caudell
Dr. Ann Hayes
Ms. Karen Haines

The University of New Mexico

September 23, 1994

Department of Electrical and
Computer Engineering
Room 110, EECE Building
Albuquerque, NM 87131-1356
(505) 277-2436

Dear Computational Sciences Workshop Participant,

Thank you for applying to the Computational Sciences Workshop to be held in Albuquerque, New Mexico, USA on August 1-5, 1994. I am pleased to inform you that your application has been accepted. There are a number of logistical items to be taken care of prior to the conference.

1. Travel and hotel. Arrangements have been made with American Airlines and the Holiday Inn in Albuquerque to procure discounted rates for CSW attendees. Please call Ms. Judie Plata, Travel Consultant, Rio Grande Travel at 1-800-778-6861 (toll free), (505) 277-8744 (toll - voice), and (505) 768-7927 (toll - fax) to make your reservations. Note that the Rio Grande Travel agency is open from 8:30 am to 5:00 pm Mountain Daylight Savings Time, Monday through Friday. (Mountain time is two hours behind Eastern Daylight Time, if that helps you calculate your local time more easily.) Ms. Plata is the travel agent with whom I have been working.
2. We have reserved fifty dormitory rooms on the University of New Mexico campus for a rate that is much reduced compared to the hotel rate. The price is US\$15/night/person (single) and US\$11.50/night/person (double). Dorm rooms are within walking distance to the workshop site, so if you want one, notify the travel agent and mail me too.
3. We are arranging shuttle bus service between the Holiday Inn hotel and campus so you should not need to rent a car. Shuttle bus service between the airport and the hotel is standard. You will be looking for the Holiday Inn shuttle outside the airport.
4. Maps of the state of New Mexico, the city of Albuquerque, and the University of New Mexico will be distributed prior to your departure.
5. Stipends. We have even less money available for stipends than we thought a couple of months ago. Please reconsider your financial situation carefully. If you really, *REALLY NEED* a stipend, please let me know. Tell Ms. Plata that you're making reservations only for the time being.

More information will be mailed to you as it becomes available. Please do not hesitate to snailmail to the address above or e-mail me at csw@eece.unm.edu with questions and/or comments at any time.

Sincerely,

Robert Luke, Research Assistant
Department of Electrical and Computer
Engineering

cc: Dr. Greg Heileman
Dr. Tom Caudell
Dr. Ann Hayes
Ms. Karen Haines

3 Logistics

A large amount of time was spent dealing with pre-workshop logistical details. These can be broken down into the following categories:

1. Travel accommodations—Arrangements were made with American Airlines (through Rio Grande Travel in Albuquerque) to procure discounted rates for attendees.
2. Housing—Fifty dormitory rooms were reserved at the University, and a block of rooms were reserved at a local Holiday Inn. The dormitory room rate was much reduced compared to the hotel rate.
3. Food—Break-time snacks and lunches were catered through the SUB at the University. In addition a banquet at the Maxwell Museum was also catered by the SUB.
4. Workshop lecture hall—Our first choice for a lecture hall was not available due to a conflict with a Physics conference which took place at the same time. Our second choice was available, and was adequate for the needs of the workshop.
5. Campus parking—The University of New Mexico is infamous for its parking difficulties. These were alleviated in large part by the following measures:
 - (a) A University shuttle service was reserved for transporting participants housed at the Holiday Inn.
 - (b) Participants housed in the dormitories were able to walk from the dorm rooms to the conference room.
 - (c) Week-long parking passes were purchased for Ann Hayes and Bonnie Yantis.

Sample letters dealing with these arrangements are included on the following pages.

The University of New Mexico

Department of Electrical and
Computer Engineering
Room 110, EECE Building
Albuquerque, NM 87131-1356
(505) 277-2436

September 23, 1994

Mr. Phillip Padilla
UNM Campus Parking

Dear Mr. Padilla,

The UNM Department of Electrical and Computer Engineering would like to reserve a bus for shuttling participants between the Holiday Inn at University and Menaul and the UNM campus for five days this August. The occasion is the Summer 1994 Computational Sciences Workshop jointly sponsored by the University of New Mexico and Los Alamos National Laboratory. We expect to have approximately 30 people who will need this transportation. Our schedule is as follows:

Monday, August 1	7:15 am	Holiday Inn to Campus
	5:00 pm	Campus to Holiday Inn
Tuesday, August 2	8:15 am	Holiday Inn to Campus
	8:00 pm	Campus to Holiday Inn
Wednesday, August 3	8:15 am	Holiday Inn to Campus
	5:45 pm	Campus to Holiday Inn
Thursday, August 4	8:15 am	Holiday Inn to Campus
	6:00 pm	Campus to Holiday Inn
Friday, August 5	8:15 am	Holiday Inn to Campus
	3:15 pm	Campus to Holiday Inn

Thank you in advance for your time and consideration. Please contact me at 277-2883 or e-mail luke@eece.unm.edu if you require further information.

Sincerely,

Robert Luke
Research Assistant

cc: Dr. Greg Heileman
Dr. Tom Caudell
Ms. Karen Haines

The University of New Mexico

Department of Electrical and
Computer Engineering
Room 110, EECE Building
Albuquerque, NM 87131-1356
(505) 277-2436

September 23, 1994

Mr. Nate Bobbitt
Los Alamos National Laboratory
Los Alamos, NM

Dear Mr. Bobbitt,

Per your request, this letter documents expected dormitory expenses accruing from the joint Los Alamos National Laboratory—University of New Mexico Computational Sciences Workshop on August 1–5, 1994 at UNM.

We have reserved fifty dormitory rooms in Coronado Dormitory on the UNM campus for the nights of July 31 – August 4, 1994. The rates are as follows. For a single person occupying each room, the rate is \$15/night/person. For two people occupying each room, the rate is \$11.50/night/person. If we assume that each room is occupied by one person, and that twenty graduate students are awarded stipends, then the total cost is \$1500. Additionally, cafeteria meals are available. Breakfast costs \$3.60/person/meal and dinner costs \$4.60/person/meal. Each person will require five breakfasts and two dinners so the total meal cost is expected to be \$544. Therefore, the total dormitory expense is expected to be \$2044.

Due to the date of the National Information Infrastructure workshop, the dormitories will be unavailable for our use. Therefore there are no expected dormitory expenses for this workshop.

If you require more information, please contact me at luke@eece.unm.edu or 505-277-2883.

Sincerely,

Robert A. Luke
Graduate Research Assistant

cc: Dr. Greg Heileman
Dr. Tom Caudell
Ms. Karen Haines

The University of New Mexico

Department of Electrical and
Computer Engineering
Room 110, EECE Building
Albuquerque, NM 87131-1356
(505) 277-2436

September 23, 1994

Mr. Nate Bobbitt
Los Alamos National Laboratory
Los Alamos, NM

Dear Mr. Bobbitt,

Per your request, this letter documents expected graduate research assistant expenses accruing from the joint Los Alamos National Laboratory — University of New Mexico Computational Sciences Workshop on August 1–5, 1994 and the National Information Infrastructure workshop on August 6–10, 1994 at UNM.

The approximate rate for research assistant salary is \$1800 per month per assistant. There is a fringe benefit rate of 1% or \$18 per month per assistant. The University of New Mexico imposes an overhead rate of 44.9% or \$816.28 per month per assistant. The total is roughly (based on actual salary) \$2634.28 per month per assistant.

If you require more information, please contact Mr. Robert Luke (luke@eece.unm.edu) or Ms. Karen Haines (karen@eece.unm.edu), Graduate Research Assistants, at (505) 277-2883.

Sincerely,

Nasir Ahmed, Chairman
Department of Electrical and Computer
Engineering

cc: Dr. Greg Heileman
Dr. Tom Caudell
Ms. Karen Haines
Mr. Robert Luke

The University of New Mexico

Department of Electrical and
Computer Engineering
Room 110, EECE Building
Albuquerque, NM 87131-1356
(505) 277-2436

September 23, 1994

Mr. Nate Bobbitt
Los Alamos National Laboratory
Los Alamos, NM

Dear Mr. Bobbitt,

Per your request, this letter documents expected faculty expenses accruing from the joint Los Alamos National Laboratory — University of New Mexico Computational Sciences Workshop on August 1–5, 1994 and the National Information Infrastructure workshop on August 6–10, 1994 at UNM.

The approximate rate for faculty salary is \$6414 per month per professor. There is a fringe benefit rate of 22% or \$1411 per month per professor. The University of New Mexico imposes an overhead rate of 44.9% or \$3513.43 per month per professor. The total is roughly (based on actual salary) \$11,338.43 per month per professor.

If you require more information, please contact Mr. Robert Luke (luke@eece.unm.edu) or Ms. Karen Haines (karen@eece.unm.edu), Graduate Research Assistants, at (505) 277-2883.

Sincerely,

Nasir Ahmed, Chairman
Department of Electrical and Computer
Engineering

cc: Dr. Greg Heileman
Dr. Tom Caudell
Ms. Karen Haines
Mr. Robert Luke

The University of New Mexico

Department of Electrical and
Computer Engineering
Room 110, EECE Building
Albuquerque, NM 87131-1356
(505) 277-2436

September 23, 1994

Mr. Nate Bobbitt
Los Alamos National Laboratory
Los Alamos, NM

Dear Mr. Bobbitt,

Per your request, this letter documents expected travel and hotel expenses accruing from the joint Los Alamos National Laboratory—University of New Mexico Computational Sciences Workshop on August 1–5, 1994 and the National Information Infrastructure workshop on August 6–11, 1994 at UNM.

For the Computational Science Workshop, we are currently planning for thirty advance-purchase airline tickets for speakers and stipendees (other than Ross Airline tickets to and from LANL) at a planned average cost of \$600 each. This represents a total of \$18,000.

For the National Information Infrastructure workshop, we plan to advance-purchase sixty-three airline tickets at a planned average cost of \$600 each for a total of \$37,800.

We have reserved fifty Holiday Inn hotel rooms for both conferences at an approximate cost of \$75 per night per room. For the five nights of the Computational Sciences Workshop the total costs of lodging for 50 attendees is \$18750. For the five nights of the National Information Infrastructure workshop the total costs of lodging for 63 attendees is \$15000. Note this estimate assumes double occupancy for most student attendees.

If you require more information, please contact me at luke@eece.unm.edu or Ms. Karen Haines (karen@eece.unm.edu), Graduate Research Assistants, at 505-277-2883.

Sincerely,

Robert A. Luke
Graduate Research Assistant

cc: Dr. Greg Heileman
Dr. Tom Caudell
Ms. Karen Haines

The University of New Mexico

Department of Electrical and
Computer Engineering
Room 110, EECE Building
Albuquerque, NM 87131-1356
(505) 277-2436

September 23, 1994

Dear Computational Sciences Workshop Participant,

Enclosed you will find maps of the Albuquerque and UNM campus areas. If you have any questions, please email me at csw@eece.unm.edu.

1. If you are receiving a CSW stipend, then you will be staying at the Coronado dormitory.
2. The conference is to be held at the Chemistry Building (circled on the enclosed map) in Room 101. On the map, it is marked as Bldg 22.
3. If you're staying in the dormitory: no city buses run on Sunday unfortunately. You'll have to take a taxi from the airport to campus. Taxi fare will not be reimbursed by CSW. You will be staying at Coronado Dormitory (circled in red on the map). It is labeled as Bldg 155 on the campus map and is on Redondo (East), south of Campus Blvd.
4. If you're staying at the Holiday Inn: call the hotel at 884-2511 for a shuttle. It runs every hour on the half-hour upon request.

We're looking forward to seeing you at the conference in a couple of weeks!

Sincerely,

Robert Luke, Research Assistant
Department of Electrical and Computer
Engineering

University of New Mexico

Central Campus

4 Speaker Information Packet

The University of New Mexico

Department of Electrical and
Computer Engineering
Room 110, EECE Building
Albuquerque, NM 87131-1356
(505) 277-2436

September 23, 1994

Dr. Nasir Ahmed, Chairman
Department of Electrical and Computer Engineering
University of New Mexico
Albuquerque, NM 87131

Dear Dr. Ahmed,

Thank you for accepting our invitation to speak at the Computational Sciences Workshop to be held August 1-5, 1994 at the University of New Mexico campus in Albuquerque.

You are scheduled to speak at 8:30 a.m. on Monday, August 1. I am enclosing an applicant list that provides the company name and position of each of the applicants and a schedule of the program. Also enclosed are maps of the city of Albuquerque and the University of New Mexico campus, showing the location of the workshop.

As soon as possible, please send us a copy of your overhead charts so that they can be included in the workshop notebook to be given to each of the participants and speakers. Colored viewgraphs often do not duplicate well, so send a black-and-white original of all colored viewgraphs. The workshop will pay for your travel, per diem, and lodging. Reimbursement for non-local speakers will be made for coach airfare only. LANL speakers, make your travel arrangements with the Laboratory's Travel Office, using cost Center 8H16, Program code E731. All others, call Ms. Judie Plata, Travel Consultant, Rio Grande Travel agency, 1-800-778-6861 and identify yourself as a participant in the workshop.

We are looking forward to your presentation at the workshop. I know that it will be of real benefit to the participants. If you will require any special equipment, such as video, computer, or internet connection, e-mail me at csw@eece.unm.edu at your earliest convenience. If you have any other questions, I can also be reached at (505) 277-2883.

Sincerely,

Robert Luke
Research Assistant

5 Final Program

The final program, shown on the following page, consisted of x speakers. X speakers were from LANL, x speakers were from UNM, and x speakers from other universities or industry.

One speaker, Shi-Yi Chen, did not show up. An discussion and demonstration of PVM was arranged for this time slot. A Ph.D. Student at UNM, John Greenfield, graciously agreed to cover this material.

The affiliations and email addresses of the speakers are given below:

Ed Angel	UNM	angel@cs.unm.edu
Jonathan Bradley	LANL	bradley@lanl.gov
Ralph Brickner	LANL	rgb@lanl.gov
Shi-Yi Chen	LANL	syc@lanl.gov
Vance Faber	LANL	vxf@lanl.gov
Dave Forslund	LANL	dwf@lanl.gov
Jim Gubernatis	LANL	N/A
Greg Heileman	UNM	heileman@eece.unm.edu
David Kilman	LANL	kilmand@lanl.gov
Tom Kraay	Booz-Allen & Hamilton	N/A
Peter Lomdahl	LANL	pxl@lanl.gov
Barney Maccabe	UNM	maccabe@cs.unm.edu
Bob Malone	LANL	rcm@lanl.gov
John Middleditch	LANL	jon@lanl.gov
Bernard Moret	UNM	moret@cs.unm.edu
John Rasure	Khoral Research	rasure@eece.unm.edu
John Reynders	LANL	reynders@lanl.gov
Jim Sanderson	LANL	jgsander@lanl.gov
Margaret Simmons	LANL	mls@lanl.gov
Patricia Teller	NMSU	teller@cs.nmsu.edu
Steve Tenbrink	LANL	sct@lanl.gov
Marydell Tholburn	LANL	marydell@lanl.gov
Wayne Vieira	Cray Research	waynev@lanl.gov
Harvey Wasserman	LANL	hjlw@lanl.gov
Jim White	LANL	jmw@lanl.gov
Bonnie Yantis	LANL	bcy@lanl.gov

The final program is given on the following page.

Summer 1994 Computational Science Workshop
 Los Alamos National Laboratory / University of New Mexico
 Albuquerque, New Mexico, USA, August 1-5, 1994

Monday, August 1, 1994

- 7:30 am Registration (coffee/rolls)
- 8:30 am Welcome: Bonnie Yantis, Los Alamos National Laboratory
and Nasir Ahmed, University of New Mexico
- 9:00 am *High Performance Computing*
John Reynders, Los Alamos National Laboratory
- 10:30 am Break
- 11:00 am *Parallel Programming Models and Architectures I*
Greg Heileman, University of New Mexico
- 12:30 pm Lunch provided
- 1:45 pm *Parallel Programming Models and Architectures II*
Bernard Moret, University of New Mexico
- 3:15 pm Break
- 3:30 pm *Parallel Programming Models and Architectures III*,
Patricia Teller, New Mexico State University

Tuesday, August 2, 1994

- 8:30 am *TMC CM-5 Architecture*
Ralph Brickner, Los Alamos National Laboratory
- 10:30 am Break
- 10:45 am *The Cray Research Massively Parallel Processor System Cray T3D*
Wayne Vieira and Dave Shirley, Cray Research Inc.
- 12:45 pm Lunch provided
- 1:45 pm *Distributed Computing*
Barney Maccabe, University of New Mexico
- 3:15 pm Break
- 3:30 pm *Scientific Visualization: An Introduction*
Ed Angel, University of New Mexico
- 6:00 pm Reception at the UNM Maxwell Museum Gallery

Wednesday, August 3, 1994

- 8:30 am *Multi-Million Particle Molecular Dynamics on the CM-5*
Peter Lomdahl, Los Alamos National Laboratory
- 9:30 am Break
- 9:45 am *Parallel FFTs*
John Middleditch, Los Alamos National Laboratory
- 10:45 am *Simulation of N-Body Problems*
Jim Gubernatis, Los Alamos National Laboratory
- 12:00 pm Lunch provided
- 1:30 pm *Object-Oriented Numerical Methods*
Dan Quinlan, John Reynders, Marydell Tholburn and David Kilman
Los Alamos National Laboratory
- 3:30 pm Break
- 3:45 pm *Lattice Gas and Lattice Boltzmann Computational Physics*
Shi-Yi Chen, Los Alamos National Laboratory
- 7:00 pm Formal Dinner at Holiday Inn.
Keynote speaker: Jim Sanderson "At Home with the Mountain Gorillas"

Thursday, August 4, 1994

- 8:30 am *Data Mining*
Jim White, Los Alamos National Laboratory
- 9:30 am *Wavelet Image Compression*
Jonathan Bradley, Los Alamos National Laboratory
- 10:30 am Break
- 10:45 am *The Sunrise Project: An NII Prototype*
Dave Forslund, Los Alamos National Laboratory
- 11:45 am Lunch Provided
- 1:00 pm *Routing*
Bernard Moret, University of New Mexico
- 3:00 pm Break
- 3:15 pm *High Performance Computing of Applications of Combinatorics*
Vance Faber, Los Alamos National Laboratory
- 4:15 pm *Global Ocean Modeling on Massively Parallel Computers*
Bob Malone, Los Alamos National Laboratory

Friday, August 5, 1994

- 8:30 am *Supercomputer Applications*
Tom Kraay, Booz-Allen & Hamilton
- 9:30 am *Petroleum Industry Applications*
Jim Sanderson, Los Alamos National Laboratory
- 10:30 am Break
- 10:45 am *Khoros: The Buildable Software*
John Rasure, Khoros Research and University of New Mexico
- 12:00 Lunch provided
- 1:00 pm *Computer Networks*
Steve Tenbrink, Los Alamos National Laboratory
- 1:45 pm *Performance Issues*
Margaret Simmons, Los Alamos National Laboratory
- 2:30 pm *Gigaflops and Other Politically Correct Performance Hype*
Harvey Wasserman, Los Alamos National Laboratory
- 3:15 pm Close of workshop

Robert Luke

Printed October 11, 1994

6 Speaker Evaluations

The participants were asked to provide an evaluation after each speaker. A sample evaluation form is given on the next page, and the following page contains a summary of the responses for each speaker.

Summer 1994 Computational Sciences Workshop

Overview of High-Performance Computing

Los Alamos National Laboratory / University of New Mexico
Albuquerque, New Mexico, USA, August 1-5, 1994

Session Title: High Performance Computing

Speaker: John Reynnders, Los Alamos National Laboratory

A. Rate the session's value using the following rating scale (circle one number for each statement)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The session content had excellent current technical quality.	5	4	3	2	1
2. The session content will be directly useful to me.	5	4	3	2	1
3. The speaker was very effective.	5	4	3	2	1
4. The handouts and/or visuals were very helpful.	5	4	3	2	1
5. I recommend this session for future workshops	5	4	3	2	1

B. The best part of this session was:

C. This session could be improved by:

D. Other topics that should be added for this session:

E. Other comments:

Please use the back of this sheet for additional comments.

Speaker	Question #				
	1	2	3	4	5
Vance Faber	4.4	3.1	4.2	4.0	4.0
Bob Malone	4.8	4.2	4.3	4.7	4.9
Harvey Wasserman	4.3	4.2	4.5	4.2	4.5
Bernard Moret	4.8	3.7	4.9	4.8	5.0
Margaret Simmons	4.7	4.0	4.2	4.3	4.5
Tom Kraay	4.4	3.6	4.5	3.6	4.4
Quinlan & Reynders	4.4	3.6	4.0	3.7	4.6
Jim Sanderson	4.0	3.7	4.4	4.1	4.4
John Rasure	4.4	4.4	4.3	4.1	4.4
Ed Angel	4.1	4.2	4.6	4.8	4.7
Bernard Moret	5.0	3.3	4.7	4.7	4.7
Steve Tenbrink	4.5	3.3	4.0	4.0	4.0
Jim White	4.4	3.8	4.8	4.1	4.3
Peter Lomdahl	4.8	3.8	4.8	4.8	4.9
Jonathan Bradley	3.4	3.9	4.0	3.8	4.1
Barney Maccabe	4.8	4.6	4.8	4.8	4.9
Dave Forslund	4.2	3.5	3.2	3.8	4.1
Ralph Brickner	4.5	3.5	4.1	4.3	4.1
Viera & Shirley	3.6	3.2	3.4	3.2	3.6
John Middleditch	2.7	2.5	2.5	2.1	2.7
Jim Gubernatis	4.2	3.0	3.7	3.7	3.5
Bernard Moret	4.6	4.3	4.6	4.4	4.5
Patricia Teller	4.5	3.9	3.8	4.1	4.1
Greg Heileman	4.3	4.3	4.4	4.4	4.6
John Reynders	4.2	4.0	4.6	3.4	4.4
Shi-Yi Chen	N/A				

7 Final Budget

The final costs for the workshop are detailed on the following page. The total cost was well under the amount budgeted for the workshop. This is largely due to the fact that a large portion of the graduate student support was actually covered through a LANL GRA. In addition, the actual number of participants was slightly less than the amount we budgeted for.

Budget information removed

8 Suggestions for Future Workshops

Based on the experience gained by the organizers, we have compiled a list of problems and their possible solutions for future workshops.

8.1 Pre-Workshop Problems and Remedies

The main problem before the start of the workshop was tracing the money trail throughout Los Alamos and UNM. After a few frustrating attempts to communicate with the Business people at the Laboratories and the University, Mr. Nate Bobbit at Los Alamos was assigned the task of following the trail at Los Alamos while Professors Heileman and Abdallah tried to move the process at the UNM end. Most of the problems encountered at this stage had to do with the fact that this interaction between UNM and Los Alamos is novel and no mechanism existed for transferring the money to UNM. This is no longer the case and future workshops should be much easier to fund and initiate as all parties are now experienced and willing to work together. There remain however a few suggestions that will move the process forward much faster and more efficiently.

1. The laboratories should assign a person who can follow up on the daily problems that arise with such a major undertaking. Mr. Bobbit was invaluable in moving the process forward and we would like to suggest that he (or someone equivalent) will be assigned a similar task in 1995.
2. The funding should be at UNM in early January, since the preparations for the workshop and the financial support for the students need to start around that time. This will help alleviate some of the last-minute decisions and provide the UNM personnel with a long-term plan for the workshop. It will also help in saving some costs incurred because of last-minute purchase decisions.
3. The applications and the forms for the workshop need to be sent out by early February to give potential attendees plenty of time, and to avoid some of the logistical problems encountered in 1994.
4. Both UNM and Los Alamos have expressed interest in having the workshop proceedings published by IEEE. This will require the workshop organizers to submit a proposal to IEEE 9 months before the workshop date. In addition it will require the potential speakers to greatly enhance their material and submit it in a form suitable for publications by IEEE standards. We at UNM feel that if we decide to get the proceedings published by IEEE, the speakers need to get their material to us in a postscript format, one month before the workshop date.

8.2 Workshop Problems and Remedies

The problems encountered during the workshop are logistical in nature and can be minimized if the pre-workshop issues are addressed. On the other hand, small and last minute crises were and will be managed successfully. As a sample of such problems we mention the late coffee break on the first morning of the workshop and parking problems.

8.3 Looking Forward

We would like to propose the following additions and improvements for next year's workshop:

1. Advertise on the Internet, and more extensively at LANL. We feel that early advertisement through Mosaic and other electronic means will greatly enhance the number and the quality of applicants. This was the major means of attracting participants for the workshop, and could be used more effectively in the future by creating an HTML workshop announcement for the World-Wide Web that is linked to home pages at LANL and UNM.
2. Start the graduate students working in January: The preparations for the workshop should start in January, and a couple of graduate students can effectively manage the pre-workshop problems, under the supervision of the faculty members.
3. Contact IEEE early regarding the publication of workshop proceedings: As mentioned before, it takes about 9 months to get a book proposal through IEEE. Based on prior experience with IEEE, we suggest contacting IEEE and lining up the support of an IEEE society before the end of 1994.
4. Contact Speakers early: This is both for the benefit of the organizers and the speakers. If we decide to publish the proceedings through IEEE, many of the speakers may need to revise and greatly enhance their presentations and write-ups. The earlier the speakers know about what is expected and the format, the better the final product will be. This will also alleviate such last-minute problems as photocopying somebody's fax immediately prior to their presentation.
5. Get lecture hall early: Although the hall for the 1994 workshop was adequate, an earlier reservation might have provided us with a better equipped lecture hall.
6. Set up accounts for the participants on the EECE computers prior to the start of the workshop.

Appendix A: Advertisements & Application

LOS ALAMOS NATIONAL LABORATORY / UNIV of NEW MEXICO

COMPUTATIONAL SCIENCE WORKSHOP

AUGUST 1-5, 1994, ALBUQUERQUE, NM

CALL FOR PARTICIPATION

- ▶ ADVANCED COMPUTER ARCHITECTURES
- ▶ DISTRIBUTED COMPUTING
- ▶ HIGH SPEED NETWORKING
- ▶ MODELS OF PARALLEL PROGRAMMING
- ▶ PERFORMANCE MEASUREMENT
- ▶ SCIENTIFIC VISUALIZATION
- ▶ PARALLEL NUMERICAL METHODS
- ▶ HIGH PERFORMANCE COMPUTING APPLICATIONS

**SOME TRAVEL STIPENDS ARE AVAILABLE. FOR MORE INFORMATION
AND REGISTRATION FORMS, SEND YOUR EMAIL AND POSTAL ADDRESSES
TO ROBERT LUKE, CSW@EECE.UNM.EDU**

Advanced Computing Laboratory
Los Alamos National Laboratory

/ EECE Department
/ University of New Mexico

Computational Science Workshop
Call For Participants
Summer 1994 Session --- August 1-5, 1994

The Advanced Computing Laboratory at Los Alamos National Laboratory and the University of New Mexico Electrical and Computer Engineering Department invite scientists and engineers to participate in the summer session of the 1994 Los Alamos Computational Science Workshop. The workshop, which will be held on the campus of the University of New Mexico in Albuquerque, NM, provides an opportunity for professionals to explore the application of high performance computing to current scientific problems.

The research environment at Los Alamos National Laboratory fosters high performance computing methodologies and innovative multi-disciplinary collaborations. Los Alamos has always been a leader in high performance computing; many of the nation's scientific "grand challenge" problems -- fundamental problems with broad economic and scientific impact -- are being addressed by researchers at the Laboratory. The Workshop is a seminar on high performance computational methods, environments and tools. It will consist of a one-week intensive overview presenting the technologies, the methodologies and the applications of high performance computing.

Specific topics that will be addressed will include:

* Advanced Computer Architectures	* Distributed Computing
* High Speed Networking	* Models of Parallel Programming
* Performance Measurement	* Scientific Visualization
* Parallel Numerical Methods	* High Performance Computing Applications

Those registering for the workshop should have:

- * Fortran or C programming experience or coursework
- * familiarity with UNIX
- * a strong foundation in physical or engineering sciences

There are no registration fees associated with the workshop. As a part of completing the registration form below, each applicant is requested to include a short statement of his/her research interests.

IMPORTANT DATES:

DEADLINE FOR APPLICATION: June 1, 1994
WORKSHOP: August 1-5, 1994

-----Registration cut here-----

Advanced Computing Laboratory / EECE Department
Los Alamos National Laboratory / Univ of New Mexico
1994 Computational Science Workshop
Registration Form

NAME: _____
 last First middle

HOME ADDRESS: _____
 street

_____ city state zip

HOME PHONE NUMBER: _____

EMPLOYER: _____

KIND OF BUSINESS OR ORGANIZATION OF EMPLOYER (e.g. Government, Industry,
University): _____

POSITION/TITLE: _____

DEPARTMENT OR GROUP: _____ MAIL STOP: _____

EMPLOYER ADDRESS: _____
 street

_____ city state zip

WORK ADDRESS: _____
(if different than employer) street

_____ city state zip

WORK PHONE NUMBER: _____

PREFERRED MAILING ADDRESS: _____ HOME _____ WORK

FAX NUMBER: _____

ELECTRONIC MAIL ADDRESS: _____

MY RESEARCH INTERESTS: _____

PLEASE SEND COMPLETED REGISTRATION FORM TO:

EECE, Robert Luke
Department of Electrical and Computer Engineering
University of New Mexico
Albuquerque, NM 87131-1356

or email to: csw@eece.unm.edu

Voice: (505) 277-2883
FAX: (505) 277-1413, Attn: Robert Luke

REGISTRATION DEADLINE: JUNE 1, 1994

Appendix B: List of Applicants

1994 Computational Science Workshop List of Applicants

Printed 05-Sep-94

Robert Luke

Ahmed	Ardsher	aahmed@umassd.edu
University of Massachusetts Dartmouth	Assistant Professor	
Electrical and Computer Engineering Department		
Old Westport Road		
North Dartmouth, MA 02747-2300		

Parallel computer architectures, parallel algorithm design, scientific computing and performance evaluation.

Anand	Harsh	harsh@cast.msstate.edu
Mississippi State University	Scientist	
Center for Air Sea Technology		
c/o Dr. Melvin Ray		
PO Box 6343		
Starkville, MS 39759		

Numerical methods, interpolation methods, data analysis, scientific visualization.

Archuleta	Kim Morrisette	karchule@perseus.unm.edu
University of New Mexico	Student	
Physics & Astronomy Department		
8623 Woodland NE		
Albuquerque, NM 87112		

High energy transport. Computational physics data reduction in both high energy physics and in astrophysics (large scale structure and its applications to galaxy creation and evolution).

Blocher	Sydney Allen	blocher@wendy.plk.af.mil
US Air Force Phillips Laboratory	Computational Physicist	
Modeling and Analysis Group		
3550 Aberdeen Ave., SE		
Kirtland AFB, NM 87117-5776		

Computational modeling of aerospace assets, including both coupling and scattering as well as antenna analysis, utilizing the finite difference time domain (FDTD) technique. Data reduction and processing utilizing wavelet techniques. Porting FDTD codes to MPP machines.

Brennan Sean M. sbrennan@dante.nmsu.edu
New Mexico State University / USDA Research Assistant
Physics and Mechanical Engineering Departments
300 E. College Dr.
Mesilla Park, NM 88047

Scientific visualization. High performance computing applications in relation to current work on visual cotton quality.

Bryan Thomas Albert tbryan@esd.ray.com
Raytheon Company Senior Development Engineer
Software Group
Mail Stop 9283
6380 Hollister Ave.
Goleta, CA 93117-3197

Numerical linear algebra, visualization, signal processing, direction-finding.

Buddhikot Mukund M. buddhi@cs.utexas.edu
University of Texas at Austin Ph.D. Student Research Assistant
Electrical and Computer Engineering Department
CERC (ENS)
Austin, TX 78712

Design and performance evaluation of architectures (with emphasis on massively parallel supercomputer architectures), distributed computing, parallel and distributed algorithm development, parallel programming and programming environment development, and parallel system prototyping.

Burris Randall David burrisrd@oml.gov
Martin Marietta Energy Systems Computing Consultant
Advanced Technology Integration and Development
Mail Stop 7586
PO Box 2003
Oak Ridge, TN 37831

High performance storage, virtual reality, non-Von-Neumann computing technologies.

Chen Ching Jen cjchen@evax.eng.fsu.edu
FAMU/FSU College of Engineering Dean of Engineering
Mechanical Engineering Department
PO Box 2175
Tallahassee, FL 32316

Heat transfer, fluid mechanics, computer simulation, flow visualization, turbulent flows and convective heat transfer.

Chen Mei-Qin chenm@citadel.edu
The Citadel Assistant Professor
Department of Mathematics and Computer Science
171 Moultrie St.
Charleston, SC 29409

Numerical methods and parallel computing in linear algebra and in optimization.

Cochran Robert James rjcochr@engsci.sandia.gov
Sandia National Laboratory Senior Member of the Technical Staff
Thermophysics Group, Mail Stop 0826
PO Box 5800
Albuquerque, NM 87185-0826

Computational heat transfer — moving mesh solutions for ablation, porous material drying, binder burnout modeling for ceramics processing and incompressible CFD for turbulent flow with heat transfer.

Dubash Rumi Minoo rdubash@houston.geoquest.slb.com
GeoQuest Senior Software Engineer
Geophysical Tools Development
5858 Westheimer, Suite 800
Houston, TX 77057

Distributed systems, artificial intelligence, massively parallel computing.

Dubberley John R. dubb@navo.navy.mil
Naval Research Laboratory Research Physicist
NRL Code 7181
Stennis Space Center, MS 39529-5001

Acoustical scattering

Edmundson Darran Edward dedmunds@sfu.ca
Simon Fraser University Ph.D. Student / Research Assistant
Department of Physics
Burnaby, B.C., Canada V5A 1S6

Solitons in nonlinear optics, chaos and dynamical systems.

Edwards James P.
Colorado State University
Atmospheric/Computer Science
Fort Collins, CO 80523

edwards@cartel.atmos.colostate.edu
Ph.D. Student

Atmospheric modeling for MPP. Numerical mathematics, atmospheric, and computer sciences. Models of parallel programming and parallel numerical methods; scientific visualization.

Foster Roger S.
Naval Research Laboratory
Remote Sensing Division, Code 7210
4555 Overlook Ave, SW
Washington, DC 20375

foster@rira.nrl.navy.mil
Radio Astronomer

Signal detection, image processing, parallel computing.

Golden Aaron Alain-Jon
Dublin City University
Computational Physics Group
School of Physical Sciences
Glasnevin, Dublin 11, Ireland

aag@frank.physics.dcu.ie
Research Assistant

Electron dynamics in low temperature plasmas. Applying kinetic codes to experimental parallel networks.

Haack Tracy
Naval Research Laboratory
Prediction Systems Branch
Grace Hopper Ave., Mail Stop #27
Monterey, CA 93943-5502

haack@nrlmry.navy.mil
Meteorologist

Nonhydrostatic atmosphere mesoscale model coupled with a multilevel ocean model. Multitasking and vectorization.

Haik Yousef Saad
FAMU/FSU College of Engineering
Mechanical Engineering Department
PO Box 2175
Tallahassee, FL 32316

haik@dirac.scri.fsu.edu
Research assistant

Computational fluid mechanics and heat transfer; computational magnetohydrodynamics for biological fluids; turbulent flows; computational acoustics.

Hembdt Gail V. hembdt@mw34.nl.nuwc.navy.mil
Naval Undersea Warfare Center Computer Scientist
Submarine Electromagnetic Systems Department
Mail Stop 3421
Smith Street
New London, CT 06320

Advanced computer architectures (including both hardware and software) for ESM systems. Distributed processing, high speed networks and parallel numerical methods.

Higgs Richard Earl higgs@lilly.com
Eli Lilly and Company Senior Engineer
Advanced Technologies Department
Lilly Research Laboratories
Lilly Corporate Research Center, M/S 3225
Indianapolis, IN 46285

Discovery and development of pharmaceuticals. Pattern recognition and matching of quantitative chemical information, pattern recognition and matching of DNA sequences, image processing and visualization of large datasets.

Horrell Jasper Mark jhorrel@eleceng.uct.ac.za
University of Cape Town Ph.D. student
Radar Remote Sensing Group
Electrical Engineering Department, Private Bag
Rondebosch, 7700, South Africa

Low frequency synthetic aperture radar, signal processing

Huang Guolin huangg@next1.msci.memst.edu
Memphis State University Instructor
Department of Physics
5858 Mt. Hickory Dr., #1
Memphis, TN 38115

Experimental studies of optical properties and processes of materials and devices using laser techniques: ultrafast phase relaxation and molecular vibrations in organic dye molecules, photodissociation dynamics of nitrogen dioxide, exciton phase relaxation in semiconductor-doped glasses, optical response of high temperature superconducting thin films.

Hunke Elizabeth Clare eclare@math.arizona.edu
University of Arizona Student
Program in Applied Mathematics, Bldg 89
Tucson, AZ 85721

Geophysical fluid dynamics. Developed a mathematical and numerical model of a tropical cyclone. Developing a sea ice model using parallel computing.

Huscroft Carey
University of California, Davis
Department of Physics
Davis, CA 95616

huscroft@landau.ucdavis.edu
Graduate Student

Computational condensed-matter physics; computer simulation of many-body systems.

Impelluso Thomas
University of California at San Diego
Department of Applied Mechanics and Engineering Science
7920 Avenida Navidad, Apt. # 142
San Diego, CA 92122

impellus@ames.ucsd.edu
Post-Doc

Physically based virtual reality.

Inggs Michael Rupert
University of Cape Town
Radar Remote Sensing Group
Electrical Engineering Department, Private Bag
Rondebosch, 7700, South Africa

mikings@eleceng.uct.ac.za
Associate Professor

Synthetic aperture radar, sub-surface radar, signal processing and communications.

Jagota Arun K.
Memphis State University
Mathematical Sciences Department
Memphis, TN 38152

jagota@next1.msci.memst.edu
Visiting Assistant Professor

Application of massively parallel neural network models to the approximate solution of combinatorial optimization problems.
NP-hard graph optimization.

Jaw Shenq Yuh
FAMU/FSU College of Engineering
Mechanical Engineering Department
PO Box 2175
Tallahassee, FL 32316

c/o haik@evax.eng.fsu.edu
Visiting Professor of Mechanical Engineering

Heat transfer, fluid mechanics, computer simulation, flow visualization, turbulent flows and convective heat transfer.

Kleinman Leonid Shamitch
University of Missouri — Rolla
Chemical Engineering Department
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Rolla, MO 65401

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Graduate Teaching Assistant

Computational fluid dynamics, interphase heat and mass transfer, numerical methods, scientific computing

Kloeppel Keenan Lawrence
USAF Phillips Lab
Electromagnetic Modeling, Mail Stop: WSR
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Kirtland AFB, NM 87117-5776

kloeppel@plk.af.mil
Computer Scientist

High powered microwaves.

Knight Alastair Rupert
University of Cape Town
Radar Remote Sensing Group
Electrical Engineering Department, Private Bag
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Ph.D. Student

Synthetic aperture radar processing

Knupp Patrick M.
Ecodynamics Research Associates
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Albuquerque, NM 87119

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Staff Scientist

Computational fluid dynamics

Langman Alan
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Radar Remote Sensing Group
Electrical Engineering Department, Private Bag
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alangman@eleceng.uct.ac.za
Ph.D. student

Sub-surface radar, signal processing and electromagnetics.

Leland Robert
Planning Systems Inc.
436 N. Monroe Street
Arlington, VA 22201-1738

leland@banyan.mitre.org
Software Engineer

Distributed computing, distributed objects with mathematical notations to describe interrelations.

Letterio James D.
USAF Phillips Laboratory
PL/WSR
3550 Aberdeen Ave SE
Kirtland AFB, NM 87117

letterio@ppws11.plk.af.mil
Computer Scientist

Finite element and finite difference time domain methods for electromagnetic modeling.

Lin Wanlai
Florida A&M and Florida State Universities
Department of Mechanical Engineering
150-12 Bliss Drive
Tallahassee, FL 32306

lin@evax12.eng.fsu.edu
Ph.D. Candidate

Parallel numerical methods, models of parallel programming, scientific visualization, computational fluid dynamics.

Liou May-Fun
NASA Lewis Research Center
Internal Fluid Mechanics Division
Mail Stop 5-11
21000 Brookpark Rd
Cleveland, OH 44135

fsmfl@mfiou.lerc.nasa.gov
Aerospace Engineer

Parallel eigenvalue solver for large matrices to solve stability problems encountered in the propulsion system of aircraft, especially for inlets.

Lister Bradford C.
Northeastern University
Departments of Information Systems and Biology
54 Franklin St.
Brookline, MA 02146

lister@neu.edu
Director R&D for Information Systems

Behavioral and community ecology, stochastic dynamic models. Extend the SDMs to construct individual-based models of ecological communities that take into account information related decision making of component species.

Luehr Charles P.
University of New Mexico, NMERI
Applied Mechanics Division
920 Continental Loop SE, Apt # 27
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luehr@jake.plk.af.mil
Senior Research Scientist

Scientific computing and smoothed particle hydrodynamics computational methods. Mathematical physics, tensor analysis, theory of spinors, differential geometry, and applications in physics.

Maxwell Thomas P.
University of Maryland
Environmental and Estuarine Studies
International Institute for Ecological Economics
CBL, Box 38
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Faculty Research Scientist

Environmental and economic systems; simulation workstations; modular, distributed, hierarchical simulation; automatic parallel code generation.

Miel George J.
University of Nevada at Las Vegas
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National Supercomputing Center for Energy & Environment
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Professor

Scientific modeling on parallel processors.

Padilla Leonard Gregory
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Atmospheric Science Department
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Research Assistant/Graduate Student

Mesoscale and boundary layer numerical modeling. Scientific visualization, visualization animations of mesoscale cloud model results, regional air pollution dispersion model simulations.

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Florida A&M and Florida State Universities
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Research Assistant

Fluid mechanics, turbulent flow, heat transfer, flow visualization, magnetohydrodynamics.

Panigrahi Suranjan
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Agricultural Engineering Department
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Assistant Professor

Computer vision (including 3D), pattern recognition, neural networks, fuzzy logic, expert system and virtual reality for biological and agricultural applications. Multi-disciplinary "bio-imaging facility." Computer vision, expert systems and neural networks for inspection and quality control applications in food industries.

Park Chan IK
Pohang University of Science and Technology Assistant Professor
Computer Science Department
SAN-31, Hyoja Dong
Pohang, Korea 790-600

Parallel I/O and tasking partitioning/allocation for massively parallel computers. Prototype parallel computer system for image processing applications. Efficient node kernel, a parallel file system, and a graphical user interface for the machine.

Patil Rajendra B.
Los Alamos National Laboratory
CNLS
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Los Alamos, NM 87545

rbp@pintail.lanl.gov
Graduate Research Assistant

Distributed computing, scientific visualization

Patterson James H.
Photon Research Associates
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jhp@photon.com
Computer Systems Director

Modeling IR backgrounds, targets and sensor systems.

Pero Carlos Alfredo
Argonne National Laboratory
Advanced Photon Source Department
651 Chestnut St.
Deerfield, IL 60015

pero@aps.anl.gov
Design Engineer

Human/computer interface, processing, and visualization. Artificial intelligence, information systems, virtual reality.

Portniaguine Oleg Nikolaevitch
University of Utah
Department of Geology & Geophysics
717 W.C. Browning Bldg
Salt Lake City, UT 84112-1183

oportnia@mines.utah.edu
Research Assistant

Electromagnetic methods in geophysics. Modelling and inversion.

Proffer William J.
S-Cubed, Maxwell Laboratories
Applied Technology Group
PO Box 895
Del Mar, CA 92014-0895

proffer@scubed.com
Senior Staff Scientist

Heterogeneous distributed computing. PCTH code conversion to run under PVM/MPI on a distributed network of workstations for theater missile defense calculations.

Raghavan Srikanth
University of New Mexico
Department of Physics and Astronomy
141 Columbia Dr., SE, Apt. 5
Albuquerque, NM 87106

srirag@hydra.unm.edu
Research Assistant

Nonlinear phenomena in condensed matter physics and theoretical approaches to such problems.

Salari Kambiz
Ecodynamics Research Associates
PO Box 9229
Albuquerque, NM 87119

(no e-mail address provided)
Research Scientist

Unsteady computational fluid dynamics

Shah Nimesh Yeshvantlal
University of Missouri — Rolla
Chemical Engineering Department
143 Schrenk Hall
Rolla, MO 65401

nimesh@umr.edu
Ph.D. Candidate/Graduate Teaching Assistant

Scientific/high performance computing, fluid mechanics, numerical methods, neural networks.

Song Dae G.
The MacNeal-Schwendler Corporation
Nastran Development
815 Colorado Blvd
Los Angeles, CA 90041

d_song@macsch.com
Project Manager/Senior Software Engineer

High performance computing for finite element analysis.

Stark Donald Richard
Los Alamos National Laboratory
Mathematical Modeling (T-7), Mail Stop B-258
PO Box 1448
PO Box 1448
Los Alamos, NM 87544

dstark@goshawk.lanl.gov
Graduate Research Assistant

Numerical evaluation of nonlinear PDEs, especially nonlinear wave equations and dynamical systems from problems in geophysical fluid dynamics and sediment transport.

Traynin Peter N.
University of Utah
Department of Geology and Geophysics
717 WBB
Salt Lake City, UT 84112

ptraynin@mines.utah.edu
Postdoctoral Fellow

3D electromagnetic modeling and inversion using integral equations method, FD and FE schemes for modeling and genetic algorithms for inversion.

Vaddi Bala Venkateswar
Auburn University
Department of Chemical Engineering
215 S. Gay St., #208
Auburn, AL 36830

bvaddi@eng.auburn.edu
Graduate student

Modeling, simulation, optimization, and control of chemical engineering systems.

von Sadvosky Tony Frank
University of Nevada, Reno
Physics Department
34 West 9th Street
Reno, NV 89503

tony@rigel.physics.unr.edu
Ph.D. Candidate, RATA

Application of novel computational algorithms to problems in theoretical atomic and molecular physics. Genetic algorithms in conjunction with dilatation transformation techniques to determine the energies and lifetimes of electron scattering resonances and autoionizing states of various atomic species.

Wang Tianjun
Michigan State University
Department of Mathematics
East Lansing, MI 48824-1027

tjwang@math.msu.edu
Ph.D. Student T.A.

Scientific computing and scientific visualization, in particular, parallel numerical methods, computer graphics and geometric modeling, high performance computing.

Weddle Danny Beamer
Naval Air Warfare Center
Mail Stop GS01
NAWC AD PAX
Patuxent River, MD 20676

cs01a@tecnet1.jcte.jcs.mil
Director, Computer Sciences

Computational fluid dynamics, operations research, artificial intelligence

Wilson Weldon J.
University of Central Oklahoma
Physics Department, Box 177
100 N. University Drive
Edmond, OK 73034

wilsonw@aol.com
Professor

Computer modeling of dynamic fracture propagation in elastic media (rock), nonlinear wave (soliton) propagation.

Wu Lixin Larry
The Hong Kong University of Science and
Technology
Mathematics Department
Clearwater Bay, Kowloon, Hong Kong

malwu@uxmail.ust.hk
Lecturer

Numerical analysis; computational fluid dynamics and scientific visualization.

Wu Yanan
University of Western Ontario
Department of Applied Mathematics
London, Ontario, CANADA N6A 5B7

wy@look1.apmaths.uwo.ca
Ph.D. Candidate

Large-scale computer simulations on multiple-phase fluid phase separation and membranes.

Yeh Edwin R. ery2@po.cwru.edu
Case Western Reserve University Research Assistant
School of Medicine
Neurology and Biomedical Engineering Department
11457 Mayfield Rd., #1053
Cleveland, OH 44106

Computational neuroscience and application of engineering principle to neurological problems. Modeling and simulation of both the biologically realistic models as well as an artificial electronic analogue.

Yu Wenbin ywb@mps.ohio-state.edu
Ohio State University Graduate Research Assistant
Physics Department
174 W. 18th Ave.
Columbus, OH 43210

Dynamical simulation of Josephson junction arrays and simulation of particle diffusion in liquid.

Zaidi Baqar bzaidi@nmsu.edu
New Mexico State University/USDA Research Assistant
Electrical and Computer Engineering Department
300 E. College Drive
Mesilla Park, NM 88047

Advanced computer architecture, performance measurement, high performance computing, image processing.