

Computer Science

Newsletter

Vol. 786, No. 7

*Newsletter of the Department of Computer Science, Louisiana State University (Baton Rouge)
Spring, 1997*

25th Anniversary Symposium

The Department of Computer Science at Louisiana State University will celebrate its 25th Anniversary on April 18 - 19, 1997. The Department is pleased to invite alumni, students, present and former faculty members, colleagues, and friends to join in this celebration.

April 18, 1997 (Distinguished Seminars)	
11:00	An Assessment of Computer Science: It's Nature, Impact and Future J. Hartmanis, Cornell Univ. & NSF (1991 ACM Turing Award Winner)
1:30	Computing with Words - A Paradigm Shift Lofti Zadeh, UC - Berkeley (Inventor of Fuzzy Set Theory)
3:00	Perspectives on Software Engineering C.V. Ramamoorthy, UC - Berkeley (1994 IEEE Centennial Medal Winner)
3:30	Multi Robot Cooperation L.E. Parker, Oak Ridge National Lab. (Distinguished Scientist)
6:30	Bush's Intelligent System Revisited Raj. Reddy, Carnegie Mellon University (1995 ACM Turing Award Winner)
April 19, 1997 (Distinguished Seminars)	
9:30	Compression and Processing of Images Using Wavelets R.L. Kashyap, Purdue University (1992 K.S. Fu Research Award Winner)
12:00	Computing in Industries Gregg Demar, IBM Vice President, Atlanta

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Organizing Committee:

S. Iyengar, D. Kraft, J. Tyler, A. Nakano, P. Chen
(Chair)

News

Computers! The microlab computer network is now running Microsoft Windows NT 4.0 with 21 clients and one server. Login IDs and passwords will be required to be able to login and use the system. All students in Computer Science are eligible for login IDs on this NT network. However, no IDs are being issued at the moment, pending extensive testing of the network. It will be announced later as to when IDs will be issued.

Users will be able to use such software packages as Microsoft Office, Visual C++, Visual Basic, Visual FoxPro, CircuitMaker, Netscape Navigator, and other packages. Users can also 'telnet' and 'ftp' to other machines in the department and on campus to do their work in text mode.

Also, a laser printer has been added and it has proven very helpful in cutting down on printing time and producing quality output.

More Computers! The DEC/Unix machines are now supporting well over 1000 class accounts for over 15 different classes in Computer Science. This will inevitably cause some performance degradation, so please be alarmed!

Undergraduate

The following outstanding students were honored at the college of Basic Science honor's convocation that was held on March 19, 1997 at the Lod Cook Alumni center. Students honored here have earned a minimum of sixty hours in college credits and have maintained 3.50 overall and LSU grade point average. In addition, a student must have been enrolled full-time in the previous semester in Basic Sciences.

Mark Everett Adams, Ingrid Bustamante, Jeffrey Clark Carver, Jason Lee Chambers, Olver Champet, Rafael Gonzalez, Amy Susan Horsman, Marino Jaen, Jae-Chul Joh, Lana Leigh Konstanzer, Didier Kwok Chung Yee, Charles Sagrera Nguyen, Toni-Thao Phuong Nguyen, Oleg Alekseivic Poutilin, Carrie Elizabeth Rabalais, Allen Paul Rome Jr., Aaron Michael Simmons, Britt Edward Skrivanek, Wee Leong Tan, Clifton Ray Williams

The following students are given the special recognition by the Department of Computer Science at the college honors convocation.

- Charles Nguyen
- Allen Paul Rome Jr.
- Jeffrey Clark Carver

Jeffrey Clark Carver has been invited to join Phi Beta Kappa.

Update

The Office of Academic Affairs has extended the deadline to drop courses or resign from the University to **Monday, April 7, 1997.**

Research Publications

Oct. 16, 1996 - Feb. 28, 1997

S.S. Stubbs, Doris L. Carver, "IPCC++: Interprocess Communication with C++", *Journal of Object Oriented Programming*, Feb. 1997, pp. 31 - 40.

B. L. Achee, Doris L. Carver, "Object Extensions to Z: A Survey", *International Journal of Software Engineering and Knowledge Engineering*, vol. 6, no. 3, 1996, pp. 507-530.

B. L. Achee and Doris L. Carver, "Evaluating Quality of Reverse-Engineered Object-Oriented Designs", *Proceedings of 1997 IEEE Aerospace Conference*.

Jianhua Chen, "A Sound and Complete Proof Theory for the Generalized Logic of Only Knowing", accepted by *Journal of Experimental and Theoretical AI*.

A. Yang and P. Chen, "Fast Data Retrieval and Manipulation using Boolean Entity Lattice," *Data & Knowledge Engineering*, 1996.

Dr. Peter Chen, "Fast Data Retrieval and manipulation using Boolean Entity Lattice," in *Data & Knowledge Engineering*.

Dr. Peter Chen, "English, Chinese, and ER Diagrams," in *Data & Knowledge Engineering*, in press.

J.M. Zachary and S.S. Iyengar, "Three-dimensional data fusion for biomedical surface reconstruction," to appear in the *Proceedings of SPIE Conference*, April 24-26, 1997, Orlando, Florida.

N.E. Brener, S.S. Iyengar (LSU); M. Cannon, and P.M. Kelly (Los Alamos National Laboratory), "Information fusion algorithms for evaluation of document quality", to appear in the *Proceedings of SPIE Conference*, April 24-26, 1997, Orlando, Florida.

R. K. Kalia, A. Nakano, K. Tsuruta, and P. Vashishta "Morphology of pores and interfaces and

mechanical behavior of nanocluster-assembled silicon nitride ceramic”, *Physical Review Letters*, No. 78, p689, 1997.

A. Nakano, R. K. Kalia, A. Omeltchenko, K. Tsuruta, and P. Vashishta “Fracture of nanophase ceramics: A molecular dynamics study”, *Materials Research Society Symposium Proceedings*, in press.

T. J. Campbell, A. Nakano, A. Omeltchenko, R. K. Kalia, and P. Vashishta “Fracture in silicon nitride and alumina thin films”, *Materials Research Society Symposium Proceedings*, in press.

Kenji Tsuruta, Andrey Omeltchenko, Aiichiro Nakano, Rajiv K. Kalia, and Priya Vashishta “Structure, mechanical properties, and dynamic fracture in nanophase silicon nitride via parallel molecular dynamics”, *Materials Research Society Symposium Proceedings*, in press.

X.-H. Sun and J. Zhu, “Performance Prediction: A case study using a shared-virtual-memory machine,” *IEEE Parallel & Distributed Technology*, pp. 36-49, Winter 1996.

H. Cohl, X.H. Sun, and J. Tohline, “Parallel Implementation of a Data-Transpose Technique for the Solution of Poisson’s Equation in Cylindrical Coordinates,” accepted to appear in *Proc. of the SIAM Conference on Parallel Processing for Scientific Computing*, March, 1997.

X.H. Sun, and Y. Zhuang, “A Highly Accurate Fast Solver for Helmholtz Equations,” accepted to appear in *Proc. of the ACM International Conference on Supercomputing*, July, 1997.

S. Latifi and S.Q. Zheng, “On Link-Disjoint Hamiltonian Cycles of Torus Net works,” *International Journal of Computers and Electrical Engineering*, Vol. 23, No. 1, pp. 25-32, 1997.

X. Yang, Z. Wen and S.Q. Zheng, “Increasing Storage Density of Phase-code Multiplexed Holographic Memories by Rotation Multiplexing,” to appear in *Optics Letters*.

Y. Li, Y. Pan and S.Q. Zheng, “A Pipelined TDM Optical Bus with Conditional Delays,” to appear *Optical Engineering*.

Professional Activities

March 1, 1996 - May 18, 1996

Professor Doris Carver is a member of the program committee for the 21st International Computer and Software Applications Conference.

Professor Doris Carver was a session chair for the Second World Conference on Integrated Design and Process Technology.

Professor Don Kraft was selected as an editorial board member of the new journal *Information Retrieval* to be published by Kluwer Press.

Dr. X.-H. Sun has been selected to be an editorial board member of the *Journal of Performance Evaluation and Modeling for Computer Systems*.

Dr. X.-H. Sun is serving as a minitrack co-chair/organizer of the Hawaii International Conference on System Sciences (HICSS-31), Jan, 1998.

Dr. S.Q. Zheng presented a paper and chaired a session at the *8th IEEE Symposium on Parallel and Distributed Processing*, which was held in New Orleans, Oct. 23 - 26, 1996.

Dr. S.Q. Zheng presented two papers at the *SPIE Photonics West '97, Optoelectronics Conference*, which was held in San Jose, Feb. 8-14, 1997.

Dr. S.Q. Zheng was invited to serve as an associated editor of the *International Journal of Computers and Their Applications*.

Grants:

Oct.16, 1996 - Feb. 28, 1997

“Mechanical and Thermal Properties of Porous Ceramics: Enabling Simulation Technologies for Rational Design”, A. Nakano, Petroleum Research Fund, American Chemical Society \$50,000 (1997-1999)

Graduate Students:

MS System science:

The following students have successfully defended their projects toward their MS degrees during the Summer Semester of 96.

Xianhong Zhang, "Ellison Tool Company Information System", Advisor: Jianhua Chen.

Kasidit Chanchio, "MpPVM: A Software System for Non-Dedicated Heterogeneous Computing," Advisor: Xian-He Sun.

Duo Chen, "A Prototype of LSU Multimedia On-Line Registration System Using CGI and Oracle Database". Advisor: Dr. S.Q. Zheng.

Dongsheng Zhang, "On-Line Fingerprint Retrieval System for Crime Control". Advisor: Dr. S.Q. Zheng.

Weixing Shen, "A Distributed Version of Crack", Advisor: Dr. S.Q. Zheng.

Lijue Lin, "An On-Line Banking Transaction System", Advisor: Dr. S.Q. Zheng.

Seminars

May 19, 1996 - Oct. 15, 1996

Dr. H. Shen from Griffith Univ., Australia, gave a seminar on Oct. 22, 1996. The topic was "Generalized Parallel Selection in Sorted Matrices."

Mr. Gustavo Martinez from Louisiana State Univ. gave a seminar on Dec. 6, 1996. The topic was "The Protein Folding Problem: a Simplified Exact Model."

Dr. Ioannis A. Kakadiaris from Univ. of Pennsylvania gave a seminar on Jan 21, 1997. The topic was "Motion-Based Part Segmentation, Shape and Motion Estimation of Multi-Part Objects: Application to Human Body Tracking."

Dr. Ashim Grag from Brown Univ. gave a seminar on Jan. 30, 1997. The topic was "Information Visualization: Graphs and Networks."

Dr. Kiriakos N. Kutulakos from Univ. of Rochester gave a seminar on Feb. 7, 1997. The topic was "Interactive and Autonomous 3D Modeling from Live Video Images."

Dr. Y. Charlie Hu from Harvard Univ. gave a seminar on Feb. 12, 1997. The topic was "Data-Parallel Hierarchical Methods for Large Scale N-body Simulations."

Dr. Andreas Stathopoulos from University of Minnesota gave a seminar on February 27, 1997. The topic was "Parallel Methods and Software Tools for Predicting Material Properties."

Further Information

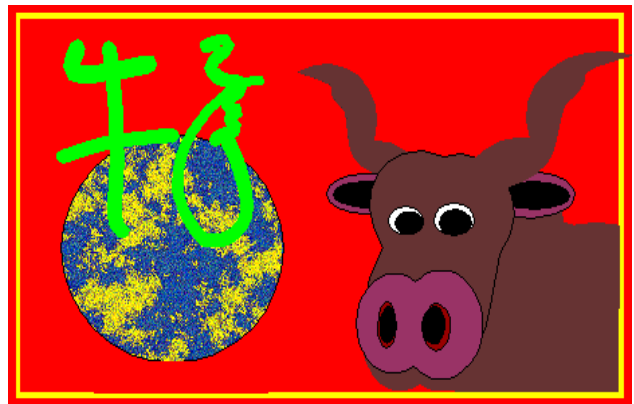
The "Computer Science Newsletter" serves as a guide to activities in the department and other functions on and off campus.

Items to be included in the newsletter should be submitted to Professor Sun in 283 Coates (sun@bit.csc.lsu.edu).

Previous issues of the newsletter can be found on the departmental home page at

<http://bit.csc.lsu.edu/newsletter/index.html>

The **Computer Science Newsletter** is published by the Department of Computer Science, Louisiana State University (Baton Rouge).
Xian-He Sun, editor.



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