



**Areas of interests:** Reconfigurable computing, distributed computing, service-oriented architecture, distributed object technology, database management.

Dr. Lam has over 20 years of research and development experience in the area of database management, specializing in active and object-oriented database management. He has participated in several consortium projects, funded by the National Institute of Science and Technologies, each involving a number of industrial companies (e.g., IBM, Boeing) and universities. The results of these projects advanced the knowledge in the areas of event-trigger-rule technology, automated negotiation, business process modeling, and object-oriented technologies. The systems developed in these projects have been integrated and demonstrated with several commercial products and research systems produced by industrial companies and universities which participated in the projects. Currently, his work is focused on two main areas: reconfigurable computing and service-oriented architecture. Dr. Lam has authored or co-authored over 80 refereed journal and conference articles and one textbook. In addition, he has earned numerous teaching awards, including awards for co-chairman of a best Ph.D. dissertation in his department, outstanding supervisor of a core laboratory in his department, and outstanding teaching award in the College of Engineering, and UF University Teaching Improvement Program (TIP) award.

### **Publications - Book**

Lam, H. and O'Malley, John R., Fundamentals of Computer Engineering - Logic Design and Microprocessors, John Wiley & Son, New York, N.Y., 1988, 490 pages.

### **Publications - Refereed Journal Publications**

Degwekar, Seema, Lam, Herman Lam, and Su, Stanley Y.W., "Constraint-based Brokering (CBB) for Publishing and Discovery of Web-services", *Journal of Electronic Commerce Research*, Vol. 7, 2007, pp. 45 – 67.

Matsunaga, Andréa M.; Tsugawa, Maurício O.; Adabala, Sumalatha; Figueiredo, Renato J.; Lam, Herman; and Fortes, José A.B. 'Science gateways made easy: the In-VIGO approach'. *Journal of Concurrency and Computation: Practice and Experience*, Wiley Press, v. 19(6), p.905-919, October, 2006.

Meng, Jie, Su, Stanley Y. W., Lam, Herman, Helal, Abdelsalam, Xian, Jingqi, Liu, Xiaoli, and Yang, Seokwon, "DynaFlow: A Dynamic Inter-Organizational Workflow Management System," *Int. J. Business Process Integration and Management*, Vol. 1, No. 2, 2006, pp. 101 – 115.

Yang, S. Su, S.Y.W, and Lam, H. "A Non-Repudiation Message Transfer Protocol for Collaborative E-commerce", *International Journal of Business Process Integration and Management (IJBPIIM)*, Vol. 1, No. 1, 2006, pp. 34-42.

Li, Haifei, Su, S.Y.W., and Lam, H., "On Automated E-business Negotiations: Goal, Policy, Strategy, and Plans of Decision and Action," *Journal of Organizational Computing and Electronic Commerce*, Volume 16, No.1, 2006, pp. 1-29.

Lee, M.S., Su, S. Y. W., and Lam, H., "A Knowledge Network Approach for Implementing Active Virtual Marketplaces", *Journal on Data Semantics*, Vol. 3360 / 2005, pp. 113–135, February 2005.

Liang, Q., Chakarapani, L. N., Su, S.Y.W., Chikkamagalur, R. N. and Lam, H. "A Semi-automatic Approach to Composite Web Services Discovery, Description and Invocation," *International Journal of Web Services Research (JWSR)*, Vol. 1, No. 4, pp. 64–89, 2004.

Nagarajan, K., Lam, H., Su, S.Y.W., "Integration of Business Event and Rule Management with the Web Services Model", *International Journal of Web Services Research (JWSR)*, Vol. 1, No. 1, pp. 41-57, 2004.

Lee, M.S., Su, S. Y. W., and Lam, H., "Event and Rule Services for Achieving a Web-based Knowledge Network, Knowledge-based Systems", *Journal of Knowledge Based Systems*, Vol. 17, pp. 179-188, August 2004.

Liu, Youzhong, Yu, Fahong, Su, Stanley Y. W., and Lam, Herman, "A Cost-benefit Evaluation Server for Decision Support in e-Business," *Journal of Decision Support Systems and Electronic Commerce*, Vol. 36/1, September, 2003, pp 81 -97.

Lee, Minsoo, Su, S.Y.W., and Lam, H., "A Web-based Knowledge Network for Supporting Emerging Internet Applications," *WWW Journal*, Vol. 4, No. 1/2, 2001, pp. 121-140.

Su, Stanley Y. W., Huang, C., Hammer, J., Huang, Y., Li, H., Wang, L., Liu, Y., Pluempitiwiriyaewej, C., Lee, M., and Lam, H., "An Internet-Based Negotiation Server for E-Commerce," *The VLDB Journal*, Vol. 10, No. 1, Aug. 2001, pp. 72-90.

Su, S.Y.W., Lam, H., et. al., "NCL: A Common Language for Achieving Rule-Based Interoperability among Heterogeneous Systems", *Journal of Intelligent Information Systems, Special Issue on Intelligent Integration of Information*, Vol. 6, 1996, pp. 171-198.

Shyy, Y.M., Arroyo, J., Su, S.Y.W., and Lam, H., "The Design and Implementation of K: A High-Level Knowledge Base Programming Language of OSAM\*.KBMS", *Very Large Data Base (VLDB) Journal*, Vol. 5, No. 3, 1996, pp. 181-195.

Thakore, A.K., Su, S.Y.W., and Lam, H., "Algorithms for Asynchronous Parallel Processing of Object-Oriented Databases", *IEEE Transactions on Knowledge and Data Engineering*, Vol. 7, No. 3, June 1995, pp. 487-504.

Su, S.Y.W., Guo, M.S., and Lam, H., "Association Algebra: A Mathematical Foundation of Object-oriented Databases", *IEEE Transactions on Knowledge and Data Engineering*, Vol. 5, No. 5, Oct. 1993, pp. 775-798.

Su, S.Y.W., Lam, H., et. al., "Database Research at the University of Florida", *SIGMOD Record*, Vol. 22, No. 3, Sept. 1993, pp. 84-90.

Lee, C., Lam, H., and Su, S.Y.W., "An Object Flow Computer for Database Applications", *Journal of Parallel and Distributed Computing*, Vol 17, 1993, pp. 298-314.

Goldschmidt, A., Chida, J., Su, S.Y.W., Lam, H., et. al., "Integration of OSAM\*.KBMS/ROSE

Technologies for CIM, IBM Journal of AIXpert, May 1992, pp. 79-80.

Lam, H., Su, S.Y.W., et. al., "GTOOLS: An Active Graphical User Interface Toolset for an Object-oriented KBMS", International Journal of Computer Science and Engineering, Vol.7 No. 2, April 1992, pp. 69-85.

Lam, H., Lee, C., and Su, S.Y.W., "A Special Function Unit for Database Operations (SFU-DB): Design and Performance Evaluation", IEEE Transactions on Computers, Vol. 40, No. 3, March 1991, pp. 263-275.

Krishnamurthy, V., Su, S.Y.W., and Lam, H., "IMDAS - An Integrated Manufacturing Data Administration System", Data and Knowledge Engineering Journal, Vol. 3, 1988, pp.109-131.

Lam, H., Su, S.Y.W., and Koganti, N., "A Physical Database Evaluation System for CODASYL Databases", IEEE Transactions on Software Engineering, Vol. 14, No. 17, July 1988, pp. 1010-1022.

Raschid, L., Fei, T., Lam, H., and Su, S.Y.W., "A Special Function Unit for Sorting and Sort-based Database Operations", IEEE Transactions on Computers, Vol. C-35, No. 12, December 1986, pp. 1071-1077.

Su, S.Y.W., Lam, H., and Lo, D.H., "Transformation of Data Traversals and Operations in Application Programs to Account for Semantic Changes of Databases", ACM Transactions on Database Systems, Vol. 6, No. 2, 1981, pp. 255-294.

### **Publications - Refereed Conference and Workshop Publications**

Q. A. Liang and H. Lam, "Web Service Matching By Ontology Instance Categorization", to appear Proc. 2008 IEEE International Conference on Services Computing (SCC 2008), Honolulu, Hawaii, July 7-11, 2008.

J. Shin, J. Hammer, and H. Lam, "RDF-based Approach to Data Transform Composition", to appear Proc. IEEE International Workshop on E-activity (IWEA 2008), Portland, Oregon, May 14, 2008.

B. Holland, K. Nagarajan, S. Merchant, H. Lam, and A. George, "Lessons Learned with Performance Prediction and Design Patterns on Molecular Dynamics," Proc. Military and Aerospace FPGA and Applications (MAFA) Meeting, Palm Beach, FL, Nov. 27-29, 2007.

R. Hymel, A. George, and H. Lam, "Evaluating Partial Reconfiguration for Embedded FPGA Applications," Proc. High-Performance Embedded Computing Workshop (HPEC), MIT Lincoln Lab, Lexington, MA, Sep. 18-20, 2007.

Lee, M.S., Su, S. Y. W., and Lam, H., "An Event-Trigger-Rule Model for Supporting Collaborative Knowledge Sharing among Distributed Organizations", International Workshop on Modeling Inter-Organizational Systems focusing on Collaboration and Interoperability, Architectures and Ontologies (MIOS-CIAO 2006), Montpellier, France, Oct. 31 – Nov. 1, 2006.

Zhu, L., Matsunaga, A., Sanjeevan, V., Lam, H., Fortes, J. A. B., "Application Modeling and Representation for Automatic Grid-enabling of Legacy Applications", Proceedings of the First IEEE International Conference on e-Science and Grid Computing, Melbourne, Australia, December 5-8, 2005, pp.24-31.

Matsunaga, A., Tsugawa, M., Zhao, M., Zhu, L., Sanjeevan, V., Adabala, S., Figueiredo, R., Lam, H., and Fortes, J.A.B, "On the Use of Virtualization and Service Technologies to Enable Grid-Computing", Proceedings of Euro-Par 2005, Parallel Processing, 11th International Euro-Par Conference, Lisbon, Portugal, August 30 - September 2, 2005, pp. 1-12.

Sanjeevan, V., Matsunaga, A., Zhu, L., Lam, H., Fortes, J. A. B., "A Service-oriented Scalable Approach to Grid-enabling Legacy Scientific Applications," Proceedings of International Conference on Web Services (ICWS 2005), Orlando, FL, July 2005, pp. 560-568.

Tsugawa, M., Matsunaga, A., Zhu, L., Sanjeevan, V., Lam, H., Figueiredo, R., Fortes, J.A.B., "In-VIGO Virtual Networks and Virtual Application Services: Automated Grid-enabling and Deployment of Applications", Proceedings of 14th International Symposium on High Performance Distributed Computing (HPDC) 2005 (poster), July, 2005, pp. 312-313.

Matsunaga, Andréa; Tsugawa, Maurício; Adabala, Sumalatha; Figueiredo, Renato; Lam, Herman; and Fortes, José. 'Science gateways made easy: the In-VIGO approach'. In Workshop on Science Gateways, Global Grid Forum, June, 2005.

Yu, L., Lam, H. and, Su, S. Y. W., "Adaptive Grid Service Flow Management: Framework and Model", Proceedings of International Conference on Web Services (ICWS04), San Diego, California, July 6-7, 2004, pp.558-565.

Degwekar, S., Su, S. Y. W., and Lam, H., "Constraint Specification and Processing in Web Services Publication and Discovery", Proceedings of International Conference on Web Services (ICWS04), San Diego, California, July 6-7, 2004, pp. 210-217.

Su, S. Y. W., Liang, Q., Chakarapani, L.N, Chikkamagalur, R.N., and Lam, H, "A Web Service Composition Framework: Discovery, Description, and Invocation", The Sixth International Conference on Electronic Commerce Research (ICECR-6), October, 2003.

Yang, Seokwon, Su, Stanley Y. W., and Lam, Herman, "A Non-repudiation Message Protocol for E-commerce," Proceedings of the IEEE International Conference on Electronic Commerce, Newport Beach, CA., June 24-27, 2003, pp. 320 - 327.

Nagarajan, Karthik, Lam, Herman, Su, Stanley Y.W., "Integration of Business Event and Rule Management with the Web Services Model", Proceedings of the First International Conference on Web Services (ICWS'03), June 23-26, 2003, Las Vegas, Nevada.

Liu, Youzhong, Shi, Yuan, Lam, Herman, Su, Stanley Y. W., Pillalamarri, Kaushik and Islamraja, Mazhar, "A Rule Warehouse System for Knowledge Sharing and Business Collaboration," in Proceedings of the IASTED International Conference on Information and Knowledge Sharing, November 18-20, 2002, St. Thomas, USA, pp. 142-151.

Yang, S., Su, S.Y.W., and Lam, H., "A Trust-Based Security Architecture and Model for Enabling Collaborative E-Business", Proceedings of The 5th International Conference on Electronic Commerce Research, Montreal, Canada, Oct 23-27, 2002.

Yang, S., Lam, H., and Su, S.Y.W., "Trust-based Security Model and Enforcement Mechanism for Web Service Technology", The 3rd VLDB Workshop on Technologies for E-Services (TES'02), Hong Kong, Aug. 23-24, 2002, pp151-160.

Meng, Jie, Su, S. Y. W., Lam, H., and Helal, A, "Achieving Dynamic Inter-organizational Workflow Management by Integrating Business Processes, Events, and Rules", Proc. of Hawaii International Conference on System Sciences (HICSS-35), Big Island, Hawaii, January 7-10, 2002.

Lee, M., Su, S.Y.W., and Lam, H., "Event and Rule Services for Achieving a Web-based Knowledge Network," Proceedings of the 2001 International Conference on Web Intelligence (WI-2001), Maebashi City, Japan, Oct. 23-26, 2001, pp. 205-216.

Su, S. Y. W., Lam, H., Lee, M. S., Bai, S, and Shen, M., "An Information Infrastructure and E-services for Supporting Internet-based Scalable E-business Enterprises", the Proceeding of the Enterprise Distributed Object Computing Conference (EDOC 2001), Seattle, Washington, Sept. 4-7. pp. 2-13.

Su, S. Y. W., Liu, Y. Z., Meng, J., Lee, M. S., Lam, H., "Distributed and Concurrent Processing of Business Object Documents in Support of e-Enterprise Integration," the 4th International Enterprise Distributed Object Computing Conference (EDOC 2000), Makuhari, Japan, September 25-28, 2000, pp. 107-111.

Su, S. Y. W. and Lam, H., "IKnet: Scalable Infrastructure for Achieving Internet-based Knowledge Network," Proceedings of International Conference on Advances in Infrastructure for Electronic Business, Science, and Education on the Internet, l'Aquila, Rome, Italy, July 31-Aug. 6, 2000. pp. 80. (full length paper in CD).

Lee, Minsoo, Su, S.Y.W., and Lam, H., "Parallel Rule Processing in a Distributed Object Environment," Proceedings of the 1999 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA '99), Las Vegas, NV, June 28-July 1, 1999, pp. 410-416.

Barry, J., H. Lam, et. al., "NIIP-SMART: An Investigation of Distributed Object Approaches to Support MES Development and Deployment in a Virtual Enterprise", Proc. of the 2nd International Enterprise Distributed Object Computing Workshop (EDOC '98), November 2-5, 1998, La Jolla, San Diego, CA.

Lam, H. and Su, S.Y.W., "Component Interoperability in a Virtual Enterprise Using Events/Triggers/Rules", Proc. of OOPSLA '98 Workshop on Objects, Components, and Virtual Enterprise, October 18-22, 1998, Vancouver, BC, Canada, pp. 47-53.

Gilman, C.R., Lam, H., et. al., "Integration of Design and Manufacturing in a Virtual Enterprise Using Enterprise Rules, Intelligent Agents, STEP, and Workflow", Proc. Of SPIES International Symposium on Intelligent Systems and Advance Manufacturing, Pittsburgh, PA, pp. 172-184, October 13-17, 1997.

Su, S. Y. W., Lam, H., et. al., "An Extensible Knowledge Base Management System for Supporting Rule-based Interoperability among Heterogeneous Systems," Keynote Paper, Conference on Information and Knowledge Management, Baltimore, MD., Nov. 28 -Dec. 2, 1995., pp. 1-10.

Su, S.Y.W., Lam, H., et. al., "On Bridging and Extending OMG/IDL and STEP/EXPRESS for Achieving Information Sharing and System Interoperability", Proc. of EXPRESS Users' Group (EUG '95), Grenoble, France, Oct. 21-22, 1995.

Missikoff, M. and Lam, H., "On Semantic Verification of Object-Oriented Database Schemas", Proc. of the Int'l Workshop on Next Generation Information Technologies and Systems (NGITS '93), Haifa, Israel, June 28-30, 1993.

Su, S.Y.W., Lam, H., et. al., "OSAM\*.KBMS: An Object-oriented Knowledge Base Management System for Supporting Advanced Applications", Proc. of ACM SIGMOD 1993, Washington, D.C., May 25-28, 1993, pp. 540-541.

Su, S.Y.W. and Lam, H., "An Object-Oriented Knowledge Base Management System for Supporting Advanced Applications", Proc. of the 4th. Int'l Hong Kong Computer Society Database Workshop, Dec. 12-13, 1992, pp. 3-21.

Sharma, M., Prasad, N., Ruhela, V., Lam, H., Su, S.Y.W., "X/Motif based GUI Toolset for an Object-oriented KBMS", Proc. of the International Workshop on Interfaces to Database Systems (IDS 92), Glasgow, Scotland, July 1-3, 1992.

Su, S.Y.W., Lam, H., et. al., "An Integrated Object-oriented Knowledge Base Management System OSAM\*.KBMS/ROSE for Supporting Design and Manufacturing", Proc. of the IEEE Second International Conf. on Systems Integration, Morristown, N.J., June 15-18, 1992, pp. 152-161.

Alashqur, A.M., Su, S.Y.W., and Lam, H., "Constraint Specification on Object-Oriented Databases", Proc. of the IEEE 4th. Int'l Conf. on Computer Languages, Oakland, California, 1992, pp. 300-309.

Lee, C., Lam, H., and Su, S.Y.W., "A Database Computer Architectures Performance Evaluation System (DACPES)", Proc. of 11th. Annual IEEE International Conference on Computers and Communications, Phoenix, AZ, April, 1992.

Zhang, X., Schueller, J.K., and Lam, H., "Object-oriented Knowledgebase Application to Hydraulic Design", Proc. Of 1991 Off-Highway & Powerplant Congress and Expo. SP-882, Milwaukee, Wisconsin, September 9-12, 1991.

Yaseen, R., Su, S.Y.W., and Lam, H., "An Extensible Kernel Object Management System", Proc. of the Conference on Object-Oriented Programming Systems Languages, and Applications (OOPSLA '91), Phoenix, AZ., Oct. 6-11, 1991, pp. 247-263.

Su, S.Y.W., Chen, Y.H., and Lam, H., "Multiple Wavefront Algorithms for Pattern-based Processing of Object-oriented Databases", Proc. First Inter. Conf. on Parallel and Distributed Information Systems (PDIS), Miami Beach, FL, Dec. 1991, pp. 46-55.

Guo, M.S., Su, S.Y.W., and Lam, H., "An Association Algebra for Processing Object-oriented Databases", Proc. of the Seventh International IEEE Conference on Data Engineering, Kobe, Japan, April, 1991, pp.23-32.

Su, S.Y.W., Raschid, L., and Lam, H., "Knowledge Base Techniques for Computer Integrated Engineering and Manufacturing", Proc. of 17th. Annual Conference on Design and Manufacturing Systems Research, Univ. of Texas, Austin, TX, Jan. 9-11, 1991, pp. 593-600.

Su, S.Y.W., Puranik, S.G. and Lam, H., "Heuristic Algorithms for Path Determination in a Semantic Network", Proc. of the 14th. Annual International Computer Software & Applications Conference (COMPSAC '90), Chicago, Illinois, Oct. 31- Nov. 2, 1990, pp. 587-592.

Lam, H., et. al., "A Graphical Interface for an Object-oriented Query Language", Proc. of the 14th. Annual International Computer Software & Applications Conference (COMPSAC '90), Chicago, Illinois, Oct. 31 - Nov. 2, 1990, pp. 231-237.

Navathe, S.B., Geum, S., Desai, D.K., and Lam, H., "Conceptual Design for Non-database Experts with an Interactive Schema Tailoring Tool", Proc. of 9th. International Conference on Entity-Relationship Approach, Lausanne, Switzerland, October 8-10, 1990.

Thakore, A.K., Su, S.Y.W., Lam, H., and Shea, D.G., "Asynchronous Parallel Processing of Object Bases Using Multiple Wavefronts", Proc. of 19th International Conf. on Parallel Processing, St. Charles, Illinois, Aug. 13-17, 1990, pp. 127-135.

Alashqur, A.M., Su, S.Y.W., and Lam, H., "A Rule-base Language for Deductive Object-oriented Databases", Proc. of Sixth International Conference on Data Engineering, Los Angeles, CA, Feb. 5-9, 1990, pp. 58-67.

Su, S.Y.W. and Lam, H., "Object-oriented Knowledge Base Management Technology for Improving Productivity and Competitiveness in Manufacturing", Proc. of 16th. Conference on Design and Manufacturing Systems Research, Arizona State University, Jan. 8-12, 1990, pp. 161-167.

Kuldarni, R.S., Schueller, J.K., Navathe, S.B., Lam, H., "Computer Integrated Design of Hydraulic Systems", Proc. of Productivity in Computer Integrated Engineering and Manufacturing Conference (PROCIEM), Orlando, FL., Nov., 1989, pp. 155-160.

Lam, H. et. al., "Prototype Implementation of an Object-oriented Knowledge Base Management System", Proc. of Productivity in Computer Integrated Engineering and Manufacturing Conference (PROCIEM), Orlando, FL., Nov., 1989, pp. 68-70.

Lam, H., Su, S.Y.W., and Alashqur, A.M., "Integrating the Concepts and Techniques of Semantic Modeling and the Object-oriented Paradigm", Proc. of the 13th. International Computer Software and Applications Conference (COMPSAC 89), Sept. 18-22, 1989, Orlando, Florida, 1989, pp.209-217.

Lam, H., Lee, C., and Su, S.Y.W., "An Object Flow Computer for Database Applications", Proc. of the Sixth International Workshop on Database Machines, Deauville, France, June

19-21, 1989, pp. 1-17.

Alashqur, A.M., Su, S.Y.W., and Lam, H., "OQL - A Query Language for Manipulating Object-oriented Databases", Proc. of the 15th. International Conference on Very Large Databases (VLDB 89), Amsterdam, The Netherlands, Aug. 22-25, 1989, pp. 433-442.

Su, S.Y.W., Lam, H., et. al., "An Object-oriented Computing Environment for Productivity Improvement in Automated Design and Manufacturing", Proc. of Productivity in Computer Integrated Manufacturing Conference (PROCIM), Orlando, FL., Nov. 14-15, 1988, pp. 68-69.

Krishnamurthy, V., Su, S.Y.W., and Lam, H., "A Distributed Database Architecture for an Integrated Manufacturing Facility", Proc. of the Conference on Data and Knowledge Systems for Engineering and Manufacturing, Oct. 19-20, 1987, Hartford, Conn., pp. 4-13.

Lee, C., Su, S.Y.W., and Lam, H., "Algorithms for Sorting and Sort-based Database Operations by a Special-Function Unit", Proc. of the 5th. International Workshop on Database Machine, Oct. 5-8, 1987, Karuizawa, Japan, pp. 158-171.

Lam, H., Su, S.Y.W., Seeger, C., Lee, C., Eisenstadt, W.R., "A Special Function Unit for Database Operations within a Data-Control Flow System", Proc. of the 16th. Int'l Conf. on Parallel Processing, Aug. 17-21, 1987, St. Charles, Illinois, pp. 330-339.

Bermudez, M.E., Lam, H., et al, "An Object-Oriented Computing Environment for Productivity Improvement in Automated Design and Manufacturing", Proc. of SoutheastCon '87, April 5-8, 1987, Tampa, FL., pp. 221-227.

Su, S.Y.W., Lam, H., et al, "The Architecture and Prototype Implementation of an Integrated manufacturing Data Administration System", Proc. of IEEE COMCOMP International Conference, March 3-6, 1986, San Francisco, Calif., pp. 137-146.

Lam, H. and Su, S.Y.W., "A Case Study of Database System Conversion", Proc. of the Sixth International Computer Software and Applications Conference, Nov. 8-12, 1982, Chicago, Illinois, pp. 129-138.

Lam, H., et al., "Program Analysis and Conversion Due to DBMS Migration", Proc. of the Fourth International Computer Software and Applications Conference, Oct. 29-30, 1980, Chicago, Illinois, pp. 129-138.

Lam,H. and Su, S.Y.W., "A Semi-automatic Database Translation System", Proc. of the ACM Pacific Regional Conference, San Francisco, 1975, pp. 71-79.

Su, S.Y.W. and Lam, H., "A Semi-automatic Database Translation System for Achieving Data Sharing in a Network Environment", Proc. of the ACM's SIGFIDET Workshop on Data Access, Translation, and Control, 1974, pp. 227-247.

### **Publications - Book Chapters and Others**

Lee, M.S., Su, S. Y. W., and Lam, H., "An Event-Trigger-Rule Model for Supporting Collaborative Knowledge Sharing Among Distributed Organizations", a chapter in *On the*

Move to Meaningful Internet Systems, Springer Berlin / Heidelberg, 2006, pp. 780-791.

Lee, M.S., Su, S. Y. W., and Lam, H., "An Event-Trigger-Rule Model for Supporting Collaborative Knowledge Sharing among Distributed Organizations", International Workshop on Modeling Inter-Organizational Systems focusing on Collaboration and Interoperability, Architectures and Ontologies (MIOS-CIAO 2006), Montpellier, France, Oct. 31 – Nov. 1, 2006.

Magazine article: Liang-Jie Zhang, Haifei Li and Herman Lam, "Services Computing: Grid Applications for Today," IT Professional, July/August, 2004 (Vol. 6, No. 4).

Magazine article: Liang-Jie Zhang, Haifei Li and Herman Lam, "Toward a Business Process Grid for Utility Computing", IT Professional, September/October, 2004 (Vol. 6, No. 5).

Su, Stanley Y. W., Lam, H., Lodha, R., Bai, S., and Shen, Z. J., "Collaboration Technologies for Supporting E-supply Chain Management," a chapter in Applications of Supply Chain Management and E-Commerce Research in Industry, coedited by E. Akcaly, J. Geunes, P.M. Pardalos, H.E. Romeijn, and Z.J. Shen, Kluwer, 2004.

Su, Stanley Y. W., Liu, Y. Z., Meng, J. , Lee, M. S. , Lee G., and Lam, H., "Distributed and Concurrent Processing of Business Object Documents in E-business Scenarios," Chapter in Datenbanken und Informationssysteme, FernUniversitat in Hagen, Germany, W. Benn, P. Dadam, S. Kirn, and R. Unland (eds.), 2003, pp. 273-299.

S. Y. W. Su, Y. H. Chen, and H. Lam, "Parallel Multi-Wavefront Algorithms for Pattern-Based Processing of Object-Oriented Databases," Chapter 6 in Emerging Trends in Database and Knowledge-Base Machines, ed. by M. Abdelguerfi and S. Lavington, IEEE Computer Society Press, 1995, pp. 77 - 103.

Su, S.Y.W, Krishnamurthy, V., Lam, H., "An Object-oriented Semantic Association Model (OSAM\*) for Modelling CAD/CAM Databases", a chapter in Artificial Intelligence: Manufacturing Theory and Practice, edited by R.L. Kashyap, S. Kumara, and A.L. Soyster, published by the American Institute of Industrial Engineers, 1990, Norcross, GA., pp. 463-493.

Lam, H., Su, S.Y.W., Seeger, C., Lee, C., Eisenstadt, W.R., "A Special Function Unit for Database Operations within a Data-Control Flow System", Parallel Architecture for Database Systems, ed. A.R. Hurson, L.L. Miller, S.H. Pakzad, IEEE Computer Society Press, Washington, D.C., 1989, pp. 397-404.

Su, S.Y.W. and Lam, H., "Conversion of Application Programs to Account for Database Changes", in Advances in Data Base Management, Heyden & Son, Inc., 1980, Chapter 8, pp.144-171.

### **Awards**

Tau Beta Pi, 1986-87 undergraduate teaching award, College of Engineering, University of Florida.

Department of Electrical Engineering, University of Florida, award for outstanding supervisor of an EE core laboratory, 1988-1989.

Department of Electrical Engineering, University of Florida, award for outstanding supervisor of an EE core laboratory, 1989-1990.

Department of Electrical Engineering, University of Florida, award for co-chairman of Best Ph.D. dissertation, 1990.

Department of Electrical Engineering, University of Florida, award for outstanding supervisor of an EE core laboratory, 1990-1991.

Outstanding Paper Award (Co-author), Seventh International IEEE Conference on Data Engineering, Kobe, Japan, April, 1991.

Department of Electrical Engineering, University of Florida, award for supervisor of the Outstanding Senior Design Project, 1991-92.

College of Engineering, University of Florida, undergraduate teaching award, 1991-1992.

University of Florida, Teaching Improvement Program (TIP) Award, December 1993.

### **Professional Activities**

Reviewer for journals:

IEEE Transactions on Software Engineering.

International Journal of Computer and Information Science.

IEEE Transactions on Computers.

ACM Computing Surveys.

Data and Knowledge Engineering Journal.

IEEE Transactions on Knowledge and Data Engineering.

IEEE MICRO

Journal of Computer Systems Science and Engineering.

IEEE Internet Computing.

IEEE Journal of Transactions on Parallel and Distributed Systems

IBM Systems Journal

Reviewer, 7th. International Conference on Very Large Data Bases, 1981.

Exhibits Chairman, ACM-SIGMOD Intern. Conf. on Management of Data, 1982.

Reviewer, ACM-SIGMOD Intern. Conf. on Management of Data, 1985.

Program committee, Fifth International Conference on Data Engineering, 1988.

Session chair, IEEE's 12th Computer Software & Applications Conf., 1988.

Reviewer, 16th. Intern. Conf. on Parallel Processing, 1988.

Invited lectures at universities in China, 1988:

Zhoushan Univ. and Univ. of Science & Engr. in Guang-Zhou

Xi'an Jiaotong Univ. in Xi'an

Qing-Hua Univ. in Beijing

Program committee, 13th. International Computer Software and Applications Conference (COMPSAC 89), 1989.

Session chair, 13th. International Computer Software and Applications Conference (COMPSAC 89), 1989.

Co-chair for Database Track, 14th. International Computer Software and Applications Conference (COMPSAC '90), 1989.

Reviewer, 18th. Intern. Conf. on Parallel Processing, 1990.

Program committee, 9th. International Conference on Data Engineering, 1992.

Program committee, International Computer Science Conference '92 (ICSC '92), 1992.

Sabbatical visit to IASI (Istituto Di Analisi Dei Sistemi Ed Informatica), Rome, Italy, September 1992 through January 1993.

Sabbatical visit to GMD University, Darmstadt, Germany, February 1993 through June 1993.

Proposal Reviewer, Dept. Of Defense EPSCoR Program, Louisiana State Board of Regents, 1996.

Proposal Reviewer, Sino Software Research Centre, Univ. Of Science and Technology, Hong Kong, 1996, 1997.

Program committee, The Twelfth International Conference on Information and Knowledge Management CIKM 2003.

Program committee, IEEE Conference on E-Commerce Technology (CEC'04), San Diego, California, USA , July 6-9, 2004.

Program committee, The Fifth International Conference on Web Information Systems (WISE 2004), Brisbane, Australia, November 2004.

Editorial Board Member of the International Journal of Business Process Integration and Management (IJBPIIM) 2003 - present.

Program committee, IEEE International Conference on Web Services (ICWS 2005), Orlando, Florida, July 12-15, 2005.

Program committee, 6th International Conference on Web Information Systems Engineering (WISE 2005), New York City, NY, November 2005.

National Science Foundation review panel of NSF Middleware Initiative (NMI), a major infrastructure program in Grid middleware, June 17-18, 2004.

Review panel to evaluate IT proposals submitted to the Portuguese Science Foundation (FCT), November 2004.

Program committee, IEEE International Conference on Web Services (ICWS 2006),

Chicago, Illinois, September 18-22, 2006.

Program committee, 7th International Conference on Web Information Systems Engineering (WISE 2006), Wuhan, China, October 23-26, 2006.

Program committee, IEEE International Conference on Web Services (ICWS 2007), Salt Lake City, Utah, July 9-13, 2007.

Program committee, 8th International Conference on Web Information Systems Engineering (WISE 2007), Nancy, France, December 3-7, 2007.

Program committee, IEEE International Conference on Web Services (ICWS 2007), Beijing, China, September 23-26, 2008.

Program committee, workshop for ICEBE 2008 (International Conference on ebusiness Engineering), Xi'an, China, October 22-24, 2008.

### **Grants and Research Support**

“Exploration of a Research Roadmap for Application Development and Execution on FPGA-based Systems” DARPA (subcontract from George Washington University), \$175K, September 1, 2007 – June 16, 2008, A. George, PI, H. Lam, Investigator.

“Equipment Grant for FPGA-based Laboratory Equipment for a New Course in Reconfigurable Computing”, Rockwell Collins, \$24K, August 2007, A. George, PI, H. Lam, Co-PI.

“Research on Data Management in High-Performance Reconfigurable Computing”, NSF, I/UCRC Fundamental Research Supplement, \$75K, May 2007 – December 2009, A. George, PI, H. Lam, Co-PI.

“NMI Deployment (Eng): Nanohub”, NSF, \$587,810, October 1, 2004 – September 30, 2007, participate in the project as a senior personnel.

“Research on Advanced Technologies to Support Internet-based Scalable E-business Enterprises (ISEE)”, NSF, \$100,000, Sept. 1, 2000 – Aug. 31, 2001, S. Y. W. Su, PI, H. Lam, Co-PI, and Sherman Bai, Co-PI.

“Extended Enterprise Coalition for Integrated Collaborative Manufacturing Systems (EECOMS)”, NIST, \$895,000, Oct. 1997 – June 2001, S. Y. W. Su, PI, H. Lam, Co-PI, and J. Hammer, Co-PI.

“Establishment of a Sloan Center for Information-Technology-Enhanced Learning”, a proposal to the Alfred P. Sloan Foundation, \$135,000, H. Latchman (PI), H. Lam, Investigator.

National Institute of Standards and Technology (NIST)  
"Solution for MES-Adaptable Replicable Technology (SMART)"  
Co-principal Investigator, \$600,800, June 1996 - May 2000.

National Institute of Standards and Technology (NIST)- funded through IBM: "Consortium for Integrated Intelligent Manufacturing Planning and Execution (CIIMPLEX)"  
Co-principal Investigator, \$582,800, March 1996 - June 30, 1999.

IBM/ARPA: "National Industrial Information Infrastructure Protocols (NIIP)"  
Co-principal Investigator, \$1.4 million for 3 years, April 1, 1994 - August 31, 1997.

Enterprise Florida Innovation Partnership, Inc.  
"Commercialization of a Schema Translation and Integration System ORECOM"  
Co-principal Investigator, \$45,000, 2/94-1/95.

IBM: "Integration of OSAM\*.KBMS and ORECOM Technologies with CDF/MVS"  
Co-principal Investigator, \$150,000, 3/93 - 3/94

State of Florida High Technology and Industrial Council  
"An Object-oriented Rule-based Approach to Product Data Exchange and Specification", Co-principal Investigator, \$49,983, 1/93 - 7/94.

IBM: "Integration of OSAM\*.KBMS and ROSE Technologies",  
Co-principal Investigator, \$90,000, 12/1/90 - 12/31/91.  
Co-principal Investigator, \$90,000, 3/2/92 - 3/1/1993.

State of Florida High Technology and Industrial Council  
"An Object-oriented Rule-based Approach to Product Data Exchange and Specification", Co-principal Investigator, \$78,000, 12/27/90 - 12/26/92.

National Science Foundation  
"An Object Flow Computer for Object-oriented Database Applications",  
Co-principal Investigator, \$163,000, 7/1/89 - 6/30/92.

National Institute of Standards and Technologies  
"Semantic Models and Their Transformations", Co-principal Investigator, \$75,000,  
9/1/89 - 8/31/91.

National Science Foundation  
"A Special Function Unit for Sorting and Sort-based Database Operations"  
Co-principal Investigator, \$131,000, September 1984 - February 1987.