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Dr. Kien A. Hua received the B.S. degree in Computer Science from the University of Illinois at Urbana-Champaign, in 1982, where he was ranked in the top one percent of his graduating class. In 1983, he implemented a logic synthesis system for VLSI circuits as an intern at IBM Mid-Hudson Laboratory. As a result of this work, the company granted him a \$75,000 monetary award to support Ph.D. research on the topic of his choice. He returned to the University of Illinois, and completed the M.S. and Ph.D. degrees in Electrical Engineering in 1984 and 1987, respectively.

In 1987, upon his graduation the Exploratory Systems Department at IBM again hired Dr. Hua to design the company's future-generation mainframe computer. His design later became a series of IBM products. When the product was announced in 1991, it was called *InPAC* (Integrated Parallel Accelerator). This was a precursor to the series of highly successful massively parallel computer systems known as SPx (e.g., SP1, SP2, etc.).

While at IBM, Dr. Hua was also involved in the design of a high-performance processor. This work led to an important patent for IBM and earned him a *Best Paper Award* from the *1990 IEEE International Conference on Computer Design*. Besides conducting several successful research and development projects at IBM, Dr. Hua organized, and served as the Program Chair, for the *IBM Internal Symposium on Cache Design for Mainframe Computer Systems* held in Kingston, New York, in 1988. In the same year, he was chosen for the *IBM Executive Resource Program*.

In 1990, Dr. Hua joined the University of Central Florida to help develop new research programs in Computer Science. He was appointed the first Director of the Data Systems Laboratory in 1995. His current research interest primarily focuses on multimedia computing, databases, network and wireless communications, sensor networks, mobile computing, computer-aided diagnosis of medical images, intelligent transportation systems, and parallel and distributed computing. Dr. Hua, have published over 230 refereed articles in professional journals and conferences. Among them are 11 papers recognized as best/top papers at various conferences and a paper selected as the best article published in the *International Journal of Interdisciplinary Telecommunications and Networking* for 2010.

Besides being a productive researcher, Dr. Hua is active in professional services. He has served as Conference Chair, Program Vice-Chair, Associate Chair, Demo Chair, Program Committee Member, and Associate Editor for numerous ACM and IEEE conferences, and journals. Dr Hua is also an effective speaker and instructor. He received, by an audience vote, the *Best Presenter Award* at the *1990 IEEE International Conference on Computer Design*. These skills carry over into instruction in classrooms, and he has received three teaching awards at the University of Central Florida. Dr. Hua is a Fellow of IEEE.

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CURRENT RESEARCH INTERESTS:

Image and Video Retrieval, Databases, Network and Wireless Communications, Location-based Services, Sensor Networks, Data Mining, Computer-Aided Diagnosis of Medical Images, Intelligent Transportation Systems, Parallel and Distributed Computing.

EDUCATION:

- Ph.D. in Electrical Engineering, University of Illinois at Urbana-Champaign, 1987.
- M.S. in Electrical Engineering, University of Illinois at Urbana-Champaign, 1984.
- B.S. in Computer Science, University of Illinois at Urbana-Champaign, 1982.

PROFESSIONAL EXPERIENCE:

- *Professor*, Department of Computer Science, University of Central Florida, Florida, August 1990 - Present.
- *Interim Associate Dean for Research*, College of Engineering and Computer Science, University of Central Florida, 2003-2005.
- *Advisory Engineer*, IBM Fellow Group, IBM Mid-Hudson Laboratories, New York, June 1987 - August 1990. Led a project, as the lead architect, to develop a highly parallel computer, a precursor to the series of highly successful products known as SPx (e.g., SP1, SP2, etc.)

HONORS:

- IEEE Fellow
- Best Paper Award, *International Conference on Internet Multimedia Computing and Service*, 2011.
- Distinguished Paper Presentation Award, *International Conference on Multimedia Communications, Services and Security*, 2011.
- Best Published Journal Article in *International Journal of Interdisciplinary Telecommunications and Networking* for 2010.
- Top LCN Paper, a paper in IEEE LCN'07 selected for a special issue of the best papers from *the IEEE International Conferences on Local Computer Networks* in recent years, 2010.
- Top Paper (selected for journal publication), *IEEE International Workshop on Multimedia Information Processing and Retrieval*, 2010.

- Best Paper Award, *International Conference on Communication Theory, Reliability, and Quality of Service*, 2008.
- Top Paper (selected for journal publication), *IEEE International Conference on e-Technology, e-Commerce and e-Service*, 2005.
- Top Paper (selected for journal publication), *IEEE International Conference on Intelligent Transportation Systems*, 2004.
- UCF College of Engineering & Computer Science Distinguished Research Lecturer, 2003.
- UCF Research Excellence Award, 2003
- Best Paper Recognition, *Int'l Conference on Data Warehousing and Knowledge Discovery*, 1999.
- UCF Teaching Awards, 1993, 1998, and 2009.
- Top Paper Recognition, *WebNet98*, 1998.
- Best Paper Recognition, *Int'l Conference on Parallel and Distributed Information Systems*, 1993.
- Best Paper Award, *IEEE Int'l Conference on Computer Design*, 1990.
- Best Presenter Award, *IEEE Int'l Conference on Computer Design*, 1990.
- Selected to IBM Executive Resource (trainees for future executives), 1988.
- \$75,000, IBM monetary award for Ph.D. Research, 1984-1987.

REFEREED PUBLICATIONS

Journal Papers:

1. Ning Jiang, Kien A. Hua, and Hao Cheng, "A Multiple-Direction Search Technique for Image Annotation Propagation," to appear in *Journal of Visual Communication and Image Representation* (Accepted on October 18, 2011).
2. Alexander J. Alex and Kien A. Hua, "A General Framework for Managing and Processing Live Video Data with Privacy Protection," to appear in *Multimedia Systems Journal* (Accepted on August 6, 2011).
3. Fuyu Liu and Kien A. Hua, "Moving Query Monitoring in Spatial Network Environments," to appear in *Journal of Mobile Networks and Applications* (MONET), (Accepted on February 10, 2011).
4. Ai H. Ho, Yao H. Ho, Kien A. Hua, and Han-Chieh Chao, "An Efficient Broadcast Technique for Vehicular Networks," in *Journal of Information Processing Systems*, Vol. 7, No. 2, June 2011, pp. 221-240. (invited paper).
5. Ning Yu, Kien A. Hua, and Danzhou Liu, "Client-Side Relevance Feedback Approach for Image Retrieval in Mobile Environment," in *International Journal of Multimedia Data Engineering and Management*, Vol. 2, Issue 2, April-June 2011, pp. 42-53.
6. Fuyu Liu and Kien A. Hua, "A Hybrid Communication Solution to Distributed Moving Query Monitoring Systems," in *Journal of Electronic Commerce Research and Applications*, Vol. 10, No. 2, March – April 2011, pp. 214-226.
7. Fei Xie, Kien A. Hua, and Ning Jiang, and Yao H. Ho, "Study of Patching-based and Caching-based Video-on-Demand in Multi-Hop WiMax Mesh Network," in a special issue on architectures and protocols for wireless mesh, ad hoc, ad sensor networks (selected papers from *IEEE Conferences on Local Computer Networks* in recent years) of

- the *Wireless Communications and Mobile Computing journal*, Vol. 11, Issue 3, March 2011, pp. 357-370. (invited paper)
8. Ai H. Ho, Yao Ho, and Kien A. Hua, "Handling High Mobility in Next-Generation Wireless Ad Hoc Networks," in a special issue on next generation networks of the *International Journal of Communication Systems*, Vol. 23, Issue 9-10, September-October 2010, pp. 1078-1092.
 9. Fei Xie, Kien A. Hua, and Ning Jiang, "Optimizing Patching-based Multicast for Video on Demand in Wireless Mesh Networks," in a special issue on next generation networks of the *International Journal of Communication Systems*, Vol. 23, Issue 9-10, September-October, 2010, pp. 1057-1077.
 10. Fuyu Liu and Kien A. Hua, "Protecting User Privacy Better with Query I-Diversity," in *International Journal of Information Security and Privacy (IJISP)*, Vol. 4, No. 2, April-June, 2010, pp. 1-18.
 11. Rui Peng, Alex Aved, and Kien A. Hua, "Real Time Query Processing on Live Videos in Networks of Distributed Cameras," in *International Journal of Interdisciplinary Telecommunications and Networking*, Vol. 2, Issue 1, 2010, pp. 27-48 (**Best Published Journal Article in International Journal of Interdisciplinary Telecommunications and Networking for 2010**).
 12. Ning Jiang, Simon Sheu, Kien A. Hua, and Onur Ozyer, "A Finite-State-Model Scheme for Efficient Cooperation Enforcement in Mobile Ad Hoc Networks," in a special issue on ubiquitous computing and mobile networking of the *International Journal of Wireless and Mobile Computing.*, Vol. 4, Issue 1, 2010, pp. 3-16.
 13. Rui Peng, Kien A. Hua, Hao Cheng, and Fei Xie, "An Internet Framework for Pervasive Sensor Computing," in *International Journal of Advanced Pervasive and Ubiquitous Computing*, Vol. 1, No. 3, July-September 2009, pp. 1-22.
 14. Hao Cheng, Kien A. Hua, and Ning Yu, "An Automatic Feature Generation Approach to Multiple Instance Learning and Its Applications to Image Databases," in a special issue on Emerging Multimedia Applications of the *International Journal of Multimedia Tools and Applications (MTAP)*, Vol. 47, No. 3, May 2009, pp. 507-524.
 15. DanZhou Liu, Kien A. Hua, Khanh Vu, and Ning Yu, "Fast Query Point Movement Techniques for Large CBIR Systems," in *IEEE Transactions on Knowledge and Data Engineering*, Vol. 21, No. 5, May 2009, pp. 729-743.
 16. Yao H. Ho, Ai H. Ho, Kien A. Hua, and Fei Xie, "Cooperation Enforcement in a Highly Dynamic Mobile Ad Hoc Network," in a special issue on Data Security and Privacy Protection in Pervasive Computing Environment of the *Journal of Universal Computer Science*, Vol. 15, Issue 5, 2009, pp. 1090-1118.
 17. DanZhou Liu, Kien A. Hua, and Ning Yu, "Efficiently Support Concurrent Queries in Multiuser CBIR Systems," in *Journal of Multimedia Tools and Applications*, Vol. 42, Issue 3, May 2009, pp. 273-293.
 18. Hao Cheng, Khanh Vu, and Kien A. Hua, "SubSpace Projection: A Unified Framework for a Class of Partition-based Dimension Reduction Techniques," in *Information Sciences*, Vol. 179, Issue 9, April 2009, pp. 1234-1248.
 19. Tai Do, Kien A. Hua, Ning Jiang, and Fuyu Liu, "PatchPeer: A Scalable Video-on-Demand Streaming System in Hybrid Wireless Mobile Peer-to-Peer Networks," in *Peer-to-Peer Networking and Applications (Springer)*, Vol. 2, Issue 3, September 2009, pp. 182-201.

20. Yao H. Ho, Ai H. Ho, Georgiana Hamza-Lup, and Kien A. Hua, "3-CE: A Cooperation Enforcement Technique for Connectionless-Oriented Approach in Vehicular Networks," in a special issue, with selected papers based on previously awarded publications, of the *International Journal on Advances in Internet Technology*, Vol. 2, No. 1, 2009, pp. 194-205 (invited paper).
21. Georgiana Hamza-Lup, Kien A. Hua, Minh Le, and Rui Peng, "Dynamic Plan Generation and Real-Time Management Techniques for Traffic Evacuation," in *IEEE Transactions on Intelligent Transportation Systems*, Vol. 9, No. 4, December 2008, pp. 615-624.
22. Khanh Vu, Hao Cheng, and Kien A. Hua, "Image Retrieval in Multipoint Queries," in a special issue on Multimedia Information Retrieval of the *International Journal of Imaging Systems and Technology*, Vol. 18, No. 2-3, 2008, pp. 170-181.
23. Danzhou Liu, Kien A. Hua, and Kiminobu Sugaya, "A Generic Framework for Internet-based Interactive Applications of High-Resolution 3D Medical Image Data," in *IEEE Transactions on Information Technologies in Biomedicine*, Vol. 12, No. 5, September 2008, pp. 618-626.
24. Yao H. Ho, Ai H. Ho, and Kien A. Hua, "Routing Protocols for Inter-Vehicular Networks: A Comparative Study in High-Mobility and Large Obstacles Environments," to appear in a special issue on mobility protocols for ITS/VANET of the *Computer Communications Journal* (Elsevier), Vol. 31, No. 12, July 2008, pp. 2767-2780.
25. Khanh Vu, Kien A. Hua, H. Cheng, and S. D. Lang, "Bounded Approximation: A New Criterion for Dimensionality-Reduction Approximation in Similarity Search," in *IEEE Transactions on Knowledge and Data Engineering*, Vol. 20, No. 6, June 2008, pp. 768-783.
26. Fei Xie, Kien A. Hua, and Ning Jiang, "A Cross-Layer Framework for Video-on-Demand Service in Multi-Hop WiMax Mesh Networks," in a special issue on modeling, testbeds, and applications in wireless mesh networks of the *Computer Communications Journal* (Elsevier), Vol. 31, No. 8, May, 2008, pp. 1615-1626.
27. Tai T. Do, Kien A. Hua, and Mounir Tantaoui, "Robust Video-on-Demand Streaming in Peer-to-Peer Environments," in a special issue on disruptive networking with peer-to-peer systems of the *Computer Communications Journal* (Elsevier), Vol. 31, No. 3, February 2008, pp. 506-519.
28. Georgiana Hamza-Lup, Kien A. Hua, and Rui Peng, "Leveraging E-Transportation in Real-Time Traffic Evacuation Management," in *Electronic Commerce Research and Applications* journal, Vol. 6, No. 4, December 2007, pp 413-424.
29. Ning Jiang, Kien A. Hua, and DanZhou Liu, "A Scalable and Robust Approach to Collaboration Enforcement in Mobile Ad Hoc Networks," in *Journal of Communications and Networks*, Vol. 9, No. 1, March 2007, pp. 56-66.
30. Ying Cai, Wallapak Tavanapong, and Kien A. Hua, "A Double Patching Technique for Efficient Bandwidth Sharing in Video-on-Demand Systems," in *Journal of Multimedia Tools and Applications.*, Vol. 32, No. 1, January 2007, pp. 115-136.
31. Yao H. Ho, Ai H. Ho, and Kien A. Hua, "Connectionless Protocol – A Localised Approach to Wireless Ad Hoc Networks," in a special issue on pervasive computing through networked sensing devices of the *International Journal of Ad Hoc and Ubiquitous Computing*, Vol. 2, No. 1/2, 2007, pp. 21-35.
32. Ying Cai, Kien A. Hua, Guohong Cao, and Toby Xu, "Real-Time Processing of Range-Monitoring Queries in Heterogeneous Mobile Databases," *IEEE Transactions on Mobile Computing*, Vol. 5, No. 7, pp. 931-942, July 2006, pp. 931-942.

33. Simon Sheu, Wallapak Tavanapong, and Kien A. Hua, "A Video Broadcasting System," in *Journal of Multimedia Tools and Applications*, Vol. 28, No. 3, March 2006, pp. 321-345.
34. Kien A. Hua and Duc A. Tran, "Range Multicast for Video on Demand," in *Journal of Multimedia Tools and Applications*, Vol. 27, No. 3, December 2005, pp. 367-392.
35. Ning Jiang, Roy Villafane, Kien A. Hua, Abhijit Sawant, and Kiran Prabhakara, "ADMIRE: An Algebraic Multiple Data Mining Approach to System Performance Analysis," in *IEEE Transactions on Knowledge and Data Engineering*, Vol. 17, No. 7, July 2005, pp. 888-901.
36. Kien A. Hua, M. Tantaoui, and W. Tavanapong, "Video Delivery Technologies for Large-Scale Deployment of Multimedia Applications," in *the Proceedings of the IEEE*, special issue on Evolution of Internet Technologies, Vol. 92, No. 9, September 2004, pp. 1440-1452 (invited paper).
37. M. Tantaoui, Kien A. Hua, and Tai Do, "BroadCatch: A Periodic Broadcast Technique for Heterogeneous Video-on-Demand," in *IEEE Transactions on Broadcasting*, Vol. 50, No. 3, September 2004, pp. 289-301.
38. D. Tran, Kien A. Hua and T. Do, "A Peer-to-Peer Architecture for Media Streaming," in *IEEE Journal on Selected Areas in Communications*, special issue on Service Overlay Networks, Vol. 22, No. 1, January 2004, pp. 121-133.
39. Y. Cai and Kien A. Hua, "Sharing Multicast Videos Using Patching Streams," in *Multimedia Tools and Applications* journal, Vol. 21, No. 2, November 2003, pp. 125-146.
40. K. Vu, Kien A. Hua, and W. Tavanapong, "Image Retrieval Based on Regions of Interest," *IEEE Transactions on Knowledge and Data Engineering*, Vol. 15, No. 4, July-August 2003. pp. 1045-1049.
41. Kien A. Hua, J-H Oh and K. Vu, "An Adaptive Video Multicast Scheme for Varying Workloads," *ACM-Springer Multimedia Systems Journal*, Vol. 8, Issue 4, August 2002, pp. 258-269.
42. D. Tran, Kien A. Hua and K. Vu, "An Object-based Video Data Model for Multimedia Systems," in *Journal of Applied Systems Studies*, special issue on Distributed Multimedia Systems with Applications, Vol. 2, No. 3, 2001.
43. Kien A. Hua, Ying Cai and Simon Sheu, "Leverage Client Bandwidth to Improve Service Latency in Distributed Multimedia Applications," in *Journal of Applied Systems Studies*, special issue on Distributed Multimedia Systems with Applications, Vol. 2, No. 3, 2001, pp. 686-704.
44. Y-L Lo, Kien A. Hua and H. Young, "GeMDA: A Multidimensional Data Partitioning Technique for Multiprocessor Database Systems," *Distributed and Parallel Databases* (Kluwer Academic Publishers), Vol. 9:3, May 2001, pp. 211-236.
45. W. Tavanapong and Kien A. Hua, "Design and Implementation of a Video Browsing System for the Internet," *IEEE Software Practice & Experience journal*, Vol. 31, No. 5, April 2001, pp. 471-503.
46. K. Vu, Kien A. Hua and D. Tran, "Handling Free-Shaped Queries in Large Image Databases using a Sampling-Based Image Retrieval Technique," in *Journal of Applied Systems Studies*, Vol. 2, No. 2, 2001.
47. R. Villafane, Kien A. Hua, D Tran and Basab Maulik, "Knowledge Discovery from Series of Interval Events," *Journal of Intelligent Information Systems*, Vol. 15, No. 1, July/August 2000, pp. 71-89.

48. Kien A. Hua, S. Sheu, "An Efficient Periodic Broadcast Technique for Digital Video Libraries," *Multimedia Tools and Applications*, Vol. 10, No. 2/3, April 2000, pp. 157-177.
49. Kien A. Hua, W. Tavanapong and J. Wang, "2PSM: An Efficient Framework for Searching Video Information in a Limited-Bandwidth Environment," *ACM-Springer Multimedia Systems Journal*, Vol. 7, No. 5, September 1999, pp. 396-408.
50. Kien A. Hua, W. Tavanapong and Yu-Lung Lo, "Performance of Load Balancing Techniques for Join Operations in Shared-Nothing Database Management Systems," *Journal of Parallel and Distributed Computing*, Vol. 56, No. 1, January 1999, pp. 17-46.
51. Kien A. Hua, C. Lee and C. M. Hua, "Dynamic Load Balancing in Multicomputer Database Systems Using Partition Tuning," *IEEE Transactions on Knowledge and Data Engineering*, Vol. 7, No. 6, December 1995, pp. 968-983.
52. Kien A. Hua, Y.-L. Lo and H. Young, "Optimizer-Assisted Load Balancing Techniques for Multicomputer Database Management Systems," *Journal of Parallel and Distributed Computing*, Vol. 25, No. 1, February 1995, pp. 42-57
53. X. Li, Kien A. Hua and J. M. Moshell, "Distributed Database Designs and Computation Strategies for Networked Interactive Simulation," *Journal of Parallel and Distributed Computing*, Vol. 25, No. 1, February 1995, pp. 72-90.
54. C. Lee, Kien A. Hua "A Self-Adjusting Data Distribution Mechanism for Multidimensional Load Balancing in Multiprocessor-Based Database Systems," *Information Systems*, Vol. 19, No. 7, 1994, pp. 549-567.
55. Kien A. Hua and J. Su, "Dynamic Load Balancing in Very Large Shared-Nothing Hypercube Database Computers," *IEEE Transactions on Computers*, Vol. 42, No. 12, December 1993, pp. 1425-1439.
56. Kien A. Hua, L. Liu and J. K. Peir, "Designing High Performance Processors Using Real-Address Prediction," *IEEE Transaction on Computers*, Vol. 42, No. 9, September 1993, pp. 1146-1151.
57. Kien A. Hua, C. Lee and H. C. Young, "Data Partitioning for Multicomputer Database Systems: A Cell-Based Approach," *Information Systems*, Vol. 18, No. 5, September 1993, pp. 329-342.
58. Kien A. Hua, Y. L. Lo and H. Young, "Considering Data Skew Factor in Multi-way Join Query Optimization for Parallel Execution," *VLDB Journal*, Vol. 2, No. 3, July 1993, pp. 303-330.
59. Kien A. Hua, C. Lee and J. K. Peir, "A High Performance Hybrid Architecture for Concurrent Query Execution," *International Journal on Information Science and Engineering*, Vol. 9, No. 2, June 1993, pp. 177-199.

Refereed Conference Papers:

1. Fei Xie and Kien A. Hua, "Sharing Online Video Streams in Wireless Mesh Access Networks," in *Proceedings on IEEE Globecom Conference*, December 5-9, 2011, Houston, Texas.
2. Ai H. Ho, Yao H. Ho, and Kien A. Hua, "Mercury-like Routing for High Mobility Wireless Ad Hoc Networks," in *Proceedings of IEEE Conference on Local Computer Networks*, October 4-7, 2011, Bonn, Germany.

3. Steven Nichols and Kien A. Hua, "Design and Implementation of Intelligent Mesh Nodes for Wireless Video Stream Sharing," in *Proceedings of ACM International Conference on Internet Multimedia Computing and Service*, August 5-7, 2011, Chengdu, China (**Best Paper Award**).
4. Alex Aved, Kien A. Hua, and Varalakshmi Gurappa, "An Informatics-based Approach to Object Tracking for Distributed Live Video Computing," in *Proceedings of 4th International Conference on Multimedia Communications, Services and Security*, Jun-3, 2011, Krakow, Poland (**Extended version invited to appear in the *Multimedia Tools and Applications* journal**).
5. Jun Ye and Kien A. Hua, "Scalability Study of Wireless Mesh Networks with Dynamic Stream Merging Capability," in *Proceedings of 4th International Conference on Multimedia Communications, Services and Security*, Jun-3, 2011, Krakow, Poland (**Distinguished Paper Presentation Award**).
6. Fuyu Liu, Yao-Hua Ho, and Kien A. Hua, "Privacy Protected Query Processing with Road Network Embedding," in *Proceedings of 25th IEEE International Conference on Advanced Information Networking and Applications (AINA)*, March 22-25, 2011, pp. 481-487.
7. Himanshu Pagey and Kien A. Hua, "TagPay: A Payment Atomic RFID ownership Transfer Protocol," in *Proceedings of 12th IEEE International Conference on Commerce and Enterprise Computing*, November 10-12, 2010, pp. 196-203.
8. Sirikunya Nilpanich, Kien A. Hua, Antoniya Petkova, and Yao H. Ho, "A Lazy Processing Approach to User Relevance Feedback for Content-based Image Retrieval," in *Proc. of IEEE Int'l Symposium on Multimedia (ISM'2010)*, December 13-15, 2010, pp. 342-346. (**Extended version invited to appear in the *International Journal of Multimedia and Data Engineering***).
9. Fuyu Liu, Georgiana Hamza-Lup, and Kien A. Hua, "Using Broadcast to Protect User Privacy in Location-based Applications," in *Proc. of IEEE Globecom 2010 Workshop on Web and Pervasive Security (WPS 2010)*, December 10, 2010, pp. 1561-1565.
10. Yao H. Ho and Kien A. Hua, "Failure-Resilient Vehicular Networks," in *Proc. of IEEE Conference on Local Computer Networks (LCN'2010)*, October 10-13, 2010, pp. 340-343.
11. Kien A. Hua and Fei Xie, "A Dynamic Stream Merging Technique for Video-on-Demand Services over Wireless Mesh Access Networks," in *Proc. of IEEE International Conference on Sensor, Mesh and Ad Hoc Communications and Networks, Boston (SECON'2010)*, June 21-25, 2010.
12. Antoniya Petkova, Kien A. Hua, and Soontharee Koompaiojn, "Processing Approximate Rank Queries in a Wireless Mobile Sensors Environment," in *Proc. of International Conference on Mobile Data Management*, Kansas City, May 23-26, 2010.
13. Soontharee Koompaiojn, Kathleen Hua, Kien A. Hua, and Jintavaree Srisomboon, "Computer-Aided Diagnosis of Lumbar Stenosis Conditions," in

Proc. of Computer-Aided Diagnosis Conference, part of SPIE Symposium on Medical Imaging, San Diego, February 13-18, 2010.

14. Fei Xie and Kien A. Hua, "A Caching-based Video-on-Demand Service in Wireless Relay Networks," in *Proceedings of 2009 International Conference on Wireless Communications and Signal Processing*, November 13-15, 2009.
15. DanZhou and Kien A. Hua, "Incremental Query Evaluation for Support Vector Machines," in *Proceedings of 18th ACM Conference on Information and Knowledge Management*, November 2-6, 2009, pp. 1815-1818.
16. DanZhou Liu and Kien A. Hua, "Transfer Non-metric Measures into Metric for Similarity Search," in *Proceedings of ACM Multimedia*, October 19-24, 2009, pp. 693-696.
17. Jonathan Cazalas and Kien A. Hua, "Leveraging Computation Sharing and Parallel Processing in Location-based Services," in *Proceedings of IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC'09)*, August 29-31, 2009, pp. 221-228.
18. Antoniya Petkova, Kien A. Hua, and Alex Aved, "Processing Approximate Moving Range Queries in Mobile Sensor Environments," in *Proceedings of Symposium on Embedded and Pervasive Systems*, August 29-31, 2009, pp. 452-457.
19. Alex Aved, Kien A. Hua, and Antoniya Petkova, "CAWA: Continuous Approximate Where-about Queries," in *Proc. of 4th International Conference on Scalable Information Systems (InfoScale'09)*, June 10-12, 2009, pp. 241-257.
20. Tai Do, Kien A. Hua, Ning Jiang, and Fuyu Liu, "PatchPeer: Scalable Video-on-Demand Streaming in Mobile Wireless Hybrid Networks," in *Proc. of IEEE International Conference on Communications*, June 14-18, 2009, pp. 1-6.
21. Himanshu Pagey, Kien A. Hua, and Chow-Sing Lin, "Caching as Privacy Enhancing Mechanism in Location-based Services," in *Proc. of International Conference on Mobile Data Management*, May 18-20, 2009, pp. 238-243.
22. Fuyu Liu, Kien A. Hua, and Ying Cai, "Query I-Diversity in Location-based Services," in *Proc. of International Conference on Mobile Data Management*, May 18-21, 2009, pp. 436-442.
23. Tai Do, Kien A. Hua, and Chow-Sing Lin, "ExtRange: Continuous Moving Range Queries in Mobile Peer-to-Peer Networks," in *Proc. of International Conference on Mobile Data Management*, May 18-20-2009, pp. 317-322.
24. Ai H. Ho, Yao H. Ho, Kien A. Hua, and Roy Villafane, "A Near Optimal Broadcast Technique for Vehicular Networks," in *Proc. of IEEE Wireless Telecommunications Symposium*, April 22-24, 2009, pp. 413-420.
25. Georgiana Hamza-Lup, Yao H. Ho, and Kien A. Hua, "A Corsim-based Simulation Framework for Real-Time Traffic Evacuation Management," in *Proc. of 15th World Congress on ITS*, November 16-20, 2008.
26. Rui Peng, Kien A. Hua, Alex Aved, and Georgiana Hamza-Lup, "An IP-Based Live Database Approach to Surveillance Application Development," in *Proc. of International WWW/Internet Conference*, October 13-15, 2008.

27. Hao Cheng, Kien A. Hua, and Khanh Vu, "Constrained Locally Weighted Clustering," in *Proc. of International Conference on Very Large Data Bases (VLDB)*, August 24-30, 2008, pp. 90-101.
28. Hao Cheng, Yao Hua Ho, Kien A. Hua, Danzhou Liu, Fei Xie, and Ynn-Pyng Tsaur. "A Service-Oriented Approach to Storage Backup," in *Proceedings of the IEEE International Conference on Services Computing (SCC)*, July 8-11, 2008, pp. 413-421.
29. Hao Cheng and Kien A. Hua, "Leverage User Query Log: Toward Improving Image Data Clustering" in *Proc. of ACM International Conference on Image and Video Retrieval (CIVR)*, July 7-9, 2008, pp. 27-36.
30. Hao Cheng, Kien A. Hua, and Ning Yu, "Mining User Query Log for Better Image Clustering," in *Proc. of International Conference on Multimedia & Expo*, June 23-16, 2008, pp. 1241-1244.
31. Ning Yu, Kien A. Hua, and Hao Cheng, "Dynamic Directional Navigation in Content-based Image Retrieval," in *Proc. of International Conference on Multimedia & Expo*, June 23-16, 2008, pp. 1253-1256.
32. Yao H. Ho, Ai H. Ho, Georgiana Hamza-Lup, and Kien A. Hua, "Cooperation Enforcement in Vehicular Networks," in *Proc. of International Conference on Communication Theory, Reliability, and Quality of Service*, June 29 – July 5, 2008. **(Best Paper Award)**
33. Soontharee Koompaiojn, Antoniya Petkova, and Kien A. Hua, "Semi-Automatic Segmentation and Volume Determination of Brain Mass-like Lesion," in *Proc. of IEEE International Symposium on Computer-Based Medical Systems*, June 17-19, 2008.
34. Yao H. Ho, Ai H. Ho, and Kien A. Hua, "Dynamic Route Diversion in Vehicular Networks," in *Proc. of 15th International Conference on Telecommunications*, June 16-19, 2008.
35. Yao H. Ho, Kien A. Hua, Ning Jiang, and Fei Xie, "Dynamic Route Diversion in Connectionless Mobile Ad Hoc Networks," in *Proc. of International Conference on Networking, Architecture, and Storage*, June 12-14, 2008, pp. 53-61.
36. Fuyu Liu and Kien A. Hua, and Fei Xie, "On Reducing Communication Cost for Distributed Moving Query Monitoring Systems," in *Proc. of International Conference on Mobile Data Management (MDM)*, April 27-30, 2008, pp. 156-164.
37. Hao Cheng, Kien A. Hua, and Khanh Vu, "Semi-Supervised Dimensionality Reduction in Image Feature Space," in *Proc. of ACM Symposium on Applied Computing*, March 16-20, 2008, pp. 1207-1211.
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2. Kien A. Hua and Wallapak Tavanapong, "Parallel Database Management Systems," to appear in *Wiley Encyclopedia of Computer Science and Engineering*, 4th edition, Benjamin Wah (Ed.), John Wiley & Son, Inc, 2003. (updated in 2009)
3. Kien A. Hua and M. Tantaoui, "Cost Effective and Scalable Video Streaming Techniques," in *Handbook of Video Databases*, B. Furht and O. Marques (Eds.), CRC Press, 2003.
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- J. Coleman, R. Coleman, O. Monroe, R. Stucke, E. Vanderbeck, S. Bello, J. Hattersley, Kien A. Hua, D. Pruett, and G. Rollo, "Multiprocessor System with Distributed Memory," U.S. Patent 5,517,662 and European Patent EP0543512 (owned by IBM), May 14, 1996.
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GRANTS:

- Kien A. Hua (PI), "Scalable Wireless Mesh Network Technology at the Edge for Efficient Mobile Video Data Access on Demand," National Science Foundation (NSF), 2009-2012, \$420,000.
- Kien A. Hua (PI), "Real-Time Route Diversion Research," Florida Department of Transportation, 2005 - 2008, \$444,640.
- Kien A. Hua (PI), "Distributed Techniques for Reliable High-Performance Low-Cost Data Protection Systems," *Symantec Corporation*, 2007, \$148,937 (including \$59,753 from the *Florida High-Technology Council*).
- Kien A. Hua (PI), "A Quality of Service Assessment System for Call Centers," *Kaizen Consulting, Inc.*, 2007, \$8,247 (including \$2,749 from the *Florida High-Technology Council*).
- Kien A. Hua (PI), "A Peer-to-Peer Backup System to Leverage Less Expensive Hardware while Achieving Better Scalability and Reliability," *Symatec Corporation*, 2006, \$137,213 (including \$54,885 from the *Florida High-Technology Council*).
- Kien A. Hua (PI), "Autonomous Ground Vehicle for DARPA Grand Challenge 2005," *Florida High Tech Corridor Council*, \$10,000.
- Kien A. Hua (PI), "A Multidimensional Archive System for Financial Applications," *ImageSoft Technologies*, 2004, \$200,000 (including \$80,000 from the *Florida High-Technology Council*).
- Kien A. Hua (PI), "An Advanced Distributed Image Management System," *ImageSoft Technologies*, 2002-2003, \$228,956.
- Kien A. Hua (PI), "An Advanced Distributed Image Management System," *Florida High-Technology Council Matching Grant*, 2003, \$80,000.
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- Kien A. Hua (PI), "Next-Generation Database Integration and Management System for the Construction Implementation Domain," *Millennium Technology*, 2002, \$50,000.
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- P. Windyga (PI) and Kien A. Hua (Co-PI), "Teleangiography/Image-Guided Surgery," *Florida Hospital*, 2001-2002, \$50,000.
- P. Windyga (PI) and Kien A. Hua (Co-PI), "Teleangiography/Image-Guided Surgery," *Florida High-Technology Council*, 2001-2002, \$50,000.

- Kien A. Hua (PI), "A Scalable Multicast Protocol to Enable Future-Generation Large Scale Multimedia Applications," *National Science Foundation* (NSF), 2001-2004, \$300,000.
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- Kien A. Hua (PI), "An Intelligent Hierarchical Storage for Image Management Systems," Florida High-Technology Council Matching Grant, 2000, \$55,000.
- Kien A. Hua (PI), "Automatic tools for System-Stability Analysis," *Oracle Corporation*, 1999-2000, \$100,000.
- Kien A. Hua (PI), "Automatic tools for System-Stability Analysis," *Florida High-Technology Council Matching Grant*, 1999-2000, \$100,000.
- Kien A. Hua (PI), "Data Mining Techniques for System Performance Analysis," *Florida High-Technology Council Grant*, 1998-1999, \$250,000.
- E. Gelenbe (PI), M. Bassiouni (Co-PI), N. Deo (Co-PI), N. da Vitoria Lobo (Co-PI), M. Shah (Co-PI), Kien A. Hua (Co-PI) "Realtime Video Computing," *Florida High-Technology Council Grant*, 1998-1999, \$250,000.
- Kien A. Hua (PI), "Enabling Future Multimedia Information Systems to Leverage Next-Generation Networking Technologies," *National Science Foundation* (NSF), 1998-2000, \$188,000.
- Kien A. Hua (PI), Software grant, *Sybase*, 1998, \$72,000.
- Kien A. Hua (PI), Software grant, *DTS Software*, 1998, \$8,000.
- Kien A. Hua (PI), Software grant, *Microsoft*, 1997, \$27,823.
- A Supplemental Grant to "Parallel Computation in the Undergraduate Computer Science Curriculum" for a Summer Workshop on Parallel Computing, with R. Guha (PI), N. Del, T. Frederick, C. Hughes, A. Mukherjee, U. Vemulapati, *National Science Foundation*, 1995-1996, \$10,000.
- Kien A. Hua (PI), "Technologies for Next Generation Parallel Database Management Systems," Equipment grant: 16-processors iPSC/2 parallel computer, *IBM Almaden Research Center*, 1993, valued at \$200,000.
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- Kien A. Hua (PI), "Scalable Software Technologies," UCF In-House Awards, 1993, \$4,500.
- Kien A. Hua (PI), "Recursive Query Processing on A Scalable Multiprocessor Computer," *UCF In-House Awards*, 1992, \$5,000.
- Yann-Hang Lee (PI) and Kien A. Hua (Co-PI), "Real-Time Communication for Distributed Interactive Simulation Systems," *Florida High Technology and Industry Council*, 1992, \$25,957.
- Yann-Hang Lee (PI) and Kien A. Hua (Co-PI), "Real-Time Communication for Distributed Simulators," *Florida High Technology and Industry Council*, 1991, \$26,500.
- Ratan K. Guha (PI), N. Deo, T. Frederick, Kien A. Hua, C. Hughes, A. Mukherjee, U. Vemulapati, "Parallel Computation in the Undergraduate Computer Science Curriculum," *National Science Foundation*, 1992-1994, \$579,690. (Additional UCF Contribution: \$789,654.00.)

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- Associate Editor, *International Journal of Multimedia Tools and Applications*, 2003-present.
- Associate Editor, *IEEE Transactions on Knowledge and Data Engineering*, 2001-2005.
- Voting Member, *IEEE ComSoc Multimedia Communications Technical Committee*, 2010 – present.
- Program Committee Member, *International Conference on Mobile Data Management*, 2012

- Program Committee Member, *International Conference on Ubi-media Computing*, 2012.
- Program Committee Member, *IEEE International Conference on Advanced Information Networking and Applications (AINA)*, 2012.
- Program Committee Member, *IEEE International Conference on Data Mining*, 2011.
- Program Committee Member, *ACM International Conference on Information and Knowledge Management (CIKM)*, 2011.
- Program Committee Member, *12th International Conference on Mobile Data Management*, 2011.
- Program Committee Member, *4th IEEE International Conference on Ubi-media Computing (U-Media 2011)*, 2011.
- Program Committee Member, *International Conference on Advanced Information Networking and Applications*, 2011.
- Program Committee Member, *ACM International Conference on Information and Knowledge Management*, 2010.
- Program Committee Member, *International Conference on Mobile Data Management*, 2010.
- Program Committee Member, *IEEE International Conference on Data Engineering*, 2010.
- Panelist, NSF Cyber-Physical Systems Review Panel (medium proposals), 2009.
- Program Committee Member, *IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC)*, 2009.
- Program Committee Member, *International Conference on Network-Based Information Systems*, 2009
- Program Committee Member, *International Conference on Mobile Data Management*, 2009.
- Program Committee Member, *IEEE International Conference on Advanced Information Networking and Applications (AINA)*, 2009.
- Program Committee Member, *International Conference on Communication Theory, Reliability, and Quality of Service*, 2009.
- Program Committee Member, *IEEE International Conference on Multimedia Computing and Systems (ICMCS)*, 2009.
- Program Committee Member, *IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC)*, 2008.
- Program Committee Member, *IEEE International Conference on Sensor Networks, Ubiquitous and Trustworthy Computing (SUTC)*, 2008.
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- Program Committee Member, *International Conference on Mobile Data Management*, 2008.
- Program Committee Member, *IASTED International Conference on Wireless and Optical Communications*, 2008.
- Program Committee Member, *IEEE International Conference on Multimedia & Expo*, 2007.

- Program Committee Member, *IEEE Joint Conference on E-Commerce Technology and Enterprise Computing, E-Commerce and E-Services*, 2007.
- Program Committee Member, *1st International Workshop on Scalable Stream Processing Systems*, 2007.
- Keynote Speaker, “Emerging Information Technologies for Intelligent Transportation Systems,” *2006 AI Forum*, 2006.
- Conference Co-Chair, *IEEE International Conference on Mobile Data Management*, 2006.
- Program Committee Member, *ACM Multimedia Conference*, 2006.
- Program Committee Member, *IEEE International Conference on Multimedia & Expo*, 2006.
- Program Committee Member, *IEEE International Conference on Data Engineering*, 2006.
- Program Committee Member, *Workshop on P2P Streaming*, in conjunction with *Qshine*, 2006.
- Program Committee Member, *Pacific Rim Multimedia Conference*, 2006.
- Program Committee Member, *ACM Multimedia Conference*, 2005.
- Program Committee Member, *IASTED International Conference on Communications and Computer Networks*, 2005.
- Program Committee Member, *2005 International Conference on Distributed Computing Systems*.
- Program Committee Member, *2004 International Conference on Web-Age Information Management*.
- Program Committee Member, *2003 IEEE Data Mining Conference*.
- Program Committee Member, *2003 IEEE International Conference on Parallel Processing* (“Web Technologies” track).
- Associate Chair, *2002 ACM Multimedia Conference*.
- Program Committee Member, *11th International Conference on World Wide Web*, 2002.
- Program Committee Member, *6th Pacific Area Knowledge Discovery and Data Mining Conference*, 2002.
- Program Committee Member, *2002 IEEE Data Engineering Conference*.
- Panelist, *2002 National Science Foundation Network Research Panel*.
- Panelist, *2001 National Science Foundation Information Technology Research Panel* (Operating Systems and Compilers Program).
- Demo Chair, *2001 ACM Multimedia Conference*.
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- Program Committee Member, *7th International Conference on Database Systems for Advanced Applications*, 2001.
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- Associate Chair, *1999 ACM Multimedia Conference*.
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- Program Vice-Chair, *1998 IEEE Data Engineering Conference*.
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- Registration Chair, *1998 IEEE Workshop on Research Issues in Data Engineering - Media Databases*.
- Program Committee Member, *1996 IEEE International Conference on Parallel and Distributed Information Systems*.
- Program Committee Member, *1995 ACM SIGMOD International Conference on Management of Data*.
- Session Chair, *1995 IEEE International Conference on Data Engineering*.
- Organizing Committee Member, *1994 Summer Workshop on Parallel Computing* (Sponsored by NSF).
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