

## **Kin K. Leung's Publications in or before 1997**

### **Journal Publications**

#### *Wireless and Mobile IP Networking*

- [1] K.K. Leung and Y. Levy, "Global Mobility Management by Replicated Databases in Personal Communication Networks," *IEEE Journal on Selected Areas in Communications*, Vol. 15, No. 8, Oct. 1997, pp. 1582-1596.
- [2] K.K. Leung, "An Efficient Approach to Updating Replicated Databases in Wireless and Advanced Intelligent Networks," *IEEE Trans. on Computers*, a special issue on mobile computing, Vol. 46, No. 3, March 1997, pp. 362-367.
- [3] K.K. Leung, W.A. Massey and W. Whitt, "Traffic Models for Wireless Communication Networks," *IEEE Journal on Selected Areas in Communications*, Vol. 12, No. 8, Oct. 1994, pp. 1353-1364.

#### *Communication Networks*

- [4] G.L. Choudhury, K.K. Leung and W. Whitt, "Efficiently Providing Multiple Grades of Service With Protection Against Overloads," *AT&T Technical Journal*, Vol. 74, No. 4, July/Aug. 1995, pp. 50-63.
- [5] K.K. Leung and D.M. Lucantoni, "Two Vacation Models for Token-Ring Networks Where Service is Controlled by Timers," *Performance Evaluation*, Vol. 20, 1994, pp. 165-184.
- [6] K.K. Leung, B. Sengupta and R.W. Yeung, "A Credit Manager for Traffic Regulation in High Speed Networks: A Queueing Analysis," *IEEE/ACM Trans. on Networking*, Vol. 1, No. 2, April 1993, pp. 236-245.
- [7] W.W. Chu, W. Haller and K.K. Leung, "Reservation Channel Access Protocol for High Speed Local Networks with Star Configurations," *IEEE Trans. on Computers*, Vol. C-32, No. 8, Aug. 1983, pp. 763-766.

#### *Performance Analysis and Modeling*

- [8] G.L. Choudhury, K.K. Leung and W. Whitt, "An Algorithm to Compute Blocking Probabilities in Multi-Rate Multi-Class Multi-Resource Loss Models," *Advances in Applied Probability*, Vol. 27, pp. 1104-1143, Dec. 1995.
- [9] G.L. Choudhury, K.K. Leung and W. Whitt, "An Inversion Algorithm to Compute Blocking Probabilities in Loss Networks with State-Dependent Rates," *IEEE/ACM Trans. on Networking*, Vol. 3, Oct. 1995, pp. 585-601.
- [10] G.L. Choudhury, K.K. Leung and W. Whitt, "Calculating Normalization Constants of Closed Queueing Networks by Numerically Inverting Their Generating Functions," *Journal of ACM*, Vol. 42, No. 5, September 1995, pp. 935-970.
- [11] H. Takagi and K.K. Leung, "Analysis of a Discrete-Time Queueing System with Time-Limited Service," *Queueing Systems*, Vol. 18, 1994, pp. 183-197.
- [12] K.K. Leung, "Cyclic-Service Systems with Non-Preemptive, Time-Limited Service," *IEEE Trans. on Communications*, Vol. 42, No. 8, Aug. 1994, pp. 2521-2524.

- [13] K.K. Leung, "An Execution/Sleep Scheduling Policy for Serving an Additional Job in Priority Queueing Systems," *Journal of ACM*, Vol. 40, No. 2, April 1993, pp. 394-417.
- [14] K.K. Leung, "On the Additional Delay for M/G/1 Queue with Generalized Vacations and Exhaustive Service," *Operations Research*, Vol. 40, Supp. No. 2, May-June 1992, pp. S272-283.
- [15] K.K. Leung and M. Eisenberg, "A Single-Server Queue with Vacations and Non-Gated Time-Limited Service," *Performance Evaluation*, Vol. 12, April 1991, pp. 115-125.
- [16] K.K. Leung, "Cyclic-Service Systems with Probabilistically-Limited Service," *IEEE Journal on Selected Areas in Communications*, Vol. 9, No. 2, Feb. 1991, pp. 185-193.
- [17] K.K. Leung and M. Eisenberg, "A Single-Server Queue with Vacations and Gated Time-Limited Service," *IEEE Trans. on Communications*, Vol. 38, No. 9, Sept. 1990, pp. 1454-1462.

#### *Distributed Processing Systems*

- [18] W.W. Chu, C.M. Sit and K.K. Leung, "Task Response Time for Real-Time Distributed Systems with Resource Contentions," *IEEE Trans. on Software Engineering*, Vol. 17, No. 10, Oct. 1991, pp. 1076-1092.
- [19] W.W. Chu and K.K. Leung, "Module Replication and Assignment for Real-Time Distributed Processing Systems," *Proceedings of IEEE*, May 1987, pp. 547-562.

#### *Numerical Algorithms*

- [20] C.F. Chen and K.K. Leung, "A New Look at Partial Fraction Expansion from a High-Level Language Viewpoint," *Computer & Maths. with Appls.*, Vol. 7, No. 5, 1981, pp. 361-367.

### **Major Conference Publications**

#### *Wireless and Mobile IP Networking*

- [1] K.K. Leung and Y. Levy, "Use of Centralized and Replicated Databases for Global Mobility Management in Personal Communication Networks," *IEEE ICUPC'96*, Cambridge, MA, Sept. 1996, pp. 852-859.
- [2] K.K. Leung, W.A. Massey and W. Whitt, "Traffic Models for Wireless Communication Networks," *Proceedings of IEEE Infocom'94*, Toronto, Canada, June 1994, pp. 1029-1037.

#### *Communication Networks*

- [3] Z. Guo and K.K. Leung, "Signaling Link Assignment on the AT&T 5ESS@ Switch/STP," *Proceedings of International Conference on Communication Technology*, Shanghai, China, June 1994, pp. 12.04.1-12.04.4.
- [4] K.K. Leung and D.M. Lucantoni, "Two Vacation Models for Token-Ring Networks Where Service is Controlled by Timers," *Performance'93*, Rome, Italy, Sept. 1993, pp. 163-182.

- [5] K.K. Leung, B. Sengupta and R.W. Yeung, "Interdeparture Time Distribution for a Credit Manager in High Speed Networks," *Proceedings of ICCS/ISITA'92*, Singapore, Nov. 1992, pp. 1008-1014.
- [6] K.K. Leung, B. Sengupta and R.W. Yeung, "Queueing Analysis of a Credit Manager for Flow Control of High Speed Networks," *Proceedings of IEEE Infocom'92*, Florence, Italy, May 1992, pp. 2368-2377.
- [7] W.W. Chu, W. Haller and K.K. Leung, "A Contention Based Channel Reservation Protocol for High Speed Local Networks," *Proceedings of 7th Conference on Local Computer Networks*, Minneapolis, MN, Oct. 1982, pp. 110-117.

*Performance Analysis and Modeling*

- [8] K.K. Leung, "Load-Dependent Service Queues With Application to Congestion Control in Broadband Networks," *Proceedings of IEEE Globecom'97*, Phoenix, AZ, Nov. 1997, pp. 1674-1679.
- [9] G.L. Choudhury, K.K. Leung and W. Whitt, "An Inversion Algorithm for Loss Networks with State-Dependent Rates," *Proceedings of IEEE Infocom'95*, Boston, MA, April 1995, pp. 513-521.
- [10] G.L. Choudhury, K.K. Leung and W. Whitt, "Resource-Sharing Models with State-Dependent Arrivals of Batches," presented at *the 2nd International Workshop on the Numerical Solution of Markov Chains*, Raleigh, NC, Jan. 1995; also in *Computations with Markov Chain*, W.J. Stewart (Ed.), Kluwer Academic Publishers, Boston, 1995, pp. 255-282.
- [11] G.L. Choudhury, K.K. Leung and W. Whitt, "An Algorithm for Product-Form Loss Networks Based on Numerical Inversion of Generating Functions," *Proceedings of IEEE Globecom'94*, San Francisco, CA, Nov. 1994, pp. 1123-1128.
- [12] G.L. Choudhury, K.K. Leung and W. Whitt, "An Algorithm to Compute Blocking Probabilities in Multi-Rate Multi-Class Multi-Resource Loss Models," presented at *IEEE 5th International Workshop on Computer-Aided Modeling, Analysis, and Design of Communication Links and Networks*, Princeton, NJ, April 1994.
- [13] G.L. Choudhury, K.K. Leung and W. Whitt, "An Algorithm for Closed Queueing Networks Based on Numerical Transform Inversion," *Proceedings of the 1994 Conference on Information Sciences and Systems*, Princeton, NJ, March 1994, pp. 7-11.
- [14] H. Takagi and K.K. Leung, "Analysis of a Discrete-Time Queueing System with Time-Limited Service," *Proceedings of Symposium Performance Models for Information Communication Networks*, Hakone, Japan, January 1994, pp. 167-177.
- [15] K.K. Leung, "An Approach to Characterizing Response Time Based on Queue-Length Probabilities in Queueing Systems," *Proceedings of IEEE Globecom'91*, Phoenix, Arizona, Dec. 1991, pp. 352-357.
- [16] K.K. Leung, "Performance Analysis of a Processor Sharing Policy with Interactive and Background Jobs," *Proceedings of International Conference on the Performance of Distributed Systems and Integrated Communication Networks*, Kyoto, Japan, Sept. 1991, pp. 163-181.

- [17] K.K. Leung, "Cyclic-Service Systems with Probabilistically-Limited Service," presented at *TIMS/ORSA Joint National Meeting*, Nashville, TN, May 1991.
- [18] K.K. Leung, "Waiting Time Distributions for Token-Passing Systems with Limited-k Service via Discrete Fourier Transforms," *Performance'90*, Edinburgh, Scotland, Sept. 1990, pp. 333-347.
- [19] K.K. Leung, "Response Time for an Additional Job Served by an Execution/Sleep Scheduling Policy in Priority Systems," *Performance'90*, Edinburgh, Scotland, Sept. 1990, pp. 209-220.
- [20] K.K. Leung and M. Eisenberg, "A Single-Server Queue with Vacations and Non-Gated Time-Limited Service," *Proceedings of IEEE Infocom'90*, San Francisco, June 1990, pp. 277-283.
- [21] K.K. Leung, "Waiting Time Distributions for Token-Passing Systems with Limited-One Service via Discrete Fourier Transforms," *Proceedings of IEEE Infocom'90*, San Francisco, CA, June 1990, pp. 1111-1118.
- [22] K.K. Leung, "A Better Form of Stochastic Decomposition and Its Applications for M/G/1 with Generalized Vacations and Exhaustive Service," presented at *TIMS/ORSA Joint National Meeting*, Las Vegas, Nevada, May 1990.
- [23] K.K. Leung and M. Eisenberg, "A Single-Server Queue with Vacations and Gated Time-Limited Service," *Proceedings of IEEE Infocom'89*, Ottawa, Canada, April 1989, pp. 897-906.

*Distributed Processing & Database Systems*

- [24] K.K. Leung, "An Efficient Approach to Updating Replicated Databases in Wireless and Advanced Intelligent Networks," *Fifth WINLAB Workshop on Third Generation Wireless Information Networks*, East Brunswick, NJ, April 1995, pp. 421-449; also in *Wireless Information Networks: Architecture, Resource Management, and Mobile Data*, J.M. Holtzman (Ed.), Kluwer Academic Publishers, Boston (1996), pp. 379-393.
- [25] K.K. Leung, "An Efficient Approach to Updating Replicated Databases for PCN and UPT Services and Its Performance," presented at *ITC Mini Seminar on Mobility and Intelligent Networks*, Quebec, Canada, Oct. 1994.
- [26] W.W. Chu and K.K. Leung, "Task Response Time Model and Its Applications for Real Time Distributed Processing Systems," *Proceedings of 5th Real-System Symposium*, Austin, Texas, Dec.4-6, 1984, pp. 225-236.