

# 2012Advanced Computer Networks

## **Final Project**

- ◆ 一至兩人一組，從以下 11 個主題選定一個主題，各組不得重複主題。
- ◆ 報告兩人一組至少要參考 2 篇論文，一人一組則至少參考 1 篇以上，報告內容至少 6 頁以上，中英文不拘，專有名詞以英文為主。
- ◆ 2012 年 6/24 上午 9 時前將期末 報告 (載明參考的論文出處) 寄到 sunny@ntu.edu.tw，逾期不收。

	Topics	Recommended papers
1	Packet Scheduling	<ol style="list-style-type: none"><li>1. H. Zhang, "Service Disciplines for Guaranteed Performance Service in Packet-Switching Network," Proc. IEEE, Vol. 83, October 1995, pp. 1374-1396.</li><li>2. J. C. R. Bennett and H. Zhang, "Hierarchical Packet Fair Queueing Algorithms," IEEE/ACM Transactions on Networking, Vol. 5, No. 5, pp.675-689, 1997.</li><li>3. Sally Floyd and Van Jacobson, "Link-Sharing and Resource Management Models for Packet Networks," IEEE/ACM Transactions on Networking, Vol. 3, No. 4, pp. 365-386, 1995.</li></ol>
2	Packet Classification	<ol style="list-style-type: none"><li>1. Pankaj Gupta and Nick McKeown, "Algorithms for Packet Classification," IEEE Network Magazine, March/April 2001, pp.24-32.</li><li>2. Florin Baboescu and George Varghese, "Scalable Packet Classification," ACM SIGCOMM 2001.</li><li>3. Sundar Iyer, Ramana Rao Kompella, and Ajit Shelat, "ClassiPI: An Architecture for Fast and Flexible Packet Classification," IEEE Network Magazine, March/April 2001, pp. 33-41.</li></ol>
3	Wireless LAN Performance	<ol style="list-style-type: none"><li>1. Y. C. Tay and K. C. Chua, "A Capacity Analysis for the IEEE 802.11 MAC Protocol," Wireless Networks, Vol. 7, pp. 159-171, 2001.</li><li>2. Federico Cali, Marco Conti, and Enrico Gregori, "Dynamic Tuning of the IEEE 802.11 Protocol to</li></ol>

		<p>Achieve a Theoretical Throughput Limit,” IEEE/ACM Transactions on Networking, Volume 8 Issue 6, December 2000.</p> <p>3. ”IEEE 802.11 Wireless Local Area Networks,” IEEE Communications Magazine, September, 1997.</p> <p>4. Andras Veres, Andrew T. Campbell, Michael and Li-Hsiang Sun, “Supporting Service Differentiation in Wireless Packet Networks Using Distributed Control,” IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS, Vol. 19, No. 10, October 2001.</p> <p>5. Giuseppe Bianchi, “Performance Analysis of the IEEE 802.11 Distributed Coordination Function,” IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS, Vol. 18, No. 3, March 2000, pp. 535-547.</p>
4	Scheduling in Wireless Networks	<p>1. T. S. Eugene Ng, I. Stoica, and H. Zhang, “Packet Fair Queueing Algorithms for Wireless Networks with Location-Dependent Errors,” INFOCOM 1998.</p> <p>2. J. Luo, S. Lu and V. Bhaghavan, “A New Model for Packet Scheduling in Multihop Wireless Networks,” ACM Mobicom 2000.</p> <p>3. N. H. Vaidya, P. Bahl and S. Gupta, “Distributed Fair Scheduling in a Wireless LAN,” ACM Mobicom 2000.</p>
5	Joint scheduling and QoS routing	<p>1. Yu Wang, Weizhao Wang, Xiang-Yang Li, and Wen-Zhan Song, “Interference-Aware Joint Routing and TDMA Link Scheduling for Static Wireless Networks,” IEEE Transactions on Parallel and Distributed Systems, vol. 19, no. 12, Dec. 2008.</p> <p>2. Peter Djukic and Shahrokh Valaee, “Link Scheduling for Minimum Delay in Spatial Re-use TDMA,” INFOCOM 2007.</p>
6	TCP	<p>1. H. Balakrishnan, V. N. Padmanabhan, and R. H. Katz, “The effects of asymmetry on TCP</p>

		<p>performance,” ACM MobiCom 1997, pp. 77-89.</p> <p>2. S. M. ElRakabawy, A. Klemm, and C. Lindemann, “TCP with adaptive pacing for multihop wireless networks,” ACM MobiHoc 2005, pp. 288-299.</p> <p>3. Ruy de Oliveira and Torsten Braun, “A Dynamic Adaptive Acknowledgment Strategy for TCP over Multihop Wireless Networks,” IEEE INFOCOM 2005, pp. 1863-1874.</p> <p>4. S. Pilosof, Ramjee Ramachandran, D. Raz, Y. Shavitt, and <u>Prasun Sinha</u>, “Understanding TCP Fairness over Wireless LAN,” INFOCOM 2003.</p>
7	TCP Congestion Control & Rate Control	<p>1. Wu-chang Feng, Dilip D. Kandlur, Debanjan Saha, and Kang G. Shin, ”Understanding and Improving TCP Performance Over Networks with Minimum Rate Guarantees”, IEEE/ACM Transactions on Networking, Vol. 7, No. 2, 1999.</p> <p>2. Ikjun Yeom and A. L. Narasimha Reddy, ”Modeling TCP Behavior in Differentiated Services Network”, IEEE/ACM Transactions on Networking, February, 2001.</p> <p>3. L. Kalampoukas and A. Varma, ”Improving TCP Throughput Over Two-Way Asymmetric Links: Analysis and Solutions”, SIGMETRICS 98.</p>
8	Mobility Management	<p>1. Ramon Caceres and Venkata N. Padmanabhan, ”Fast and Scalable Handoffs for Wireless Networks”, MOBICOM 96.</p> <p>2. Pravin Bhagwat, Charles Perkins, and Satish Tripathi, ”Network Layer Mobility: An Architecture and Survey”, IEEE Personal Communications, June, 1996.</p> <p>3. R. Ramjee, T. La Porta, S. Thuel, K. Varadhan and S.Y. Wang ”HAWAII:A Domain-based Approach for Supporting Mobility in Wide-area Wireless Network”, ICNP 99.</p> <p>4. ”IP Mobility Support for IPV4”, RFC 3220.</p>
9	Cognitive Network	<p>1. Omer Ileri, Dragan Samardzija, Theodore Sizer and Narayan B. Mandayam, “Demand</p>

		<p>Responsive Pricing and Competitive Spectrum Allocation via a Spectrum Server,” DySPAN 2005.</p> <p>2. Ian F. Akyildiz, Won-Yeol Lee, Mehmet C. Vuran, Shantidev Mohanty, “NeXt Generation/Dynamic Spectrum Access/Cognitive Radio Wireless Networks: A Survey,” COMPUTER NETWORKS 2006.</p>
10	QoS in WiMAX, HSDPA, LTE	<p>1. D. Niyato and E. Hossain, “Queue-Aware Uplink Bandwidth Allocation for Polling Services in 802.16 Broadband Wireless Networks,” in Proc. IEEE GLOBECOM 2005, pp.3702-3706.</p> <p>2. E.-C. Park, H. Kim, J.-Y. Kim and H.S. Kim, “Dynamic Bandwidth Request-Allocation Algorithm for Real-Time Services in IEEE 802.16 Broadband Wireless Access Networks,” in Proc. IEEE INFOCOM 2008, pp. 852-860.</p>
11	Multimedia Streaming	<p>1. Dapeng Wu, Yiwei Thomas Hou, Wenwu Zhu, Ya-Qin Zhang, and Jon M. Peha,” Streaming Video over the Internet: Approaches and Directions,” IEEE Transactions on Circuits and Systems for Video Technology, March 2001.</p> <p>2. K. Jonas, M. Kretschmer, and J. Modeker, ”Get a KISS – Communication Infrastructure for Streaming Services in a Heterogeneous Environment,” ACM Multimedia 1998.</p> <p>3. Leonardo Chiariglione, ”MPEG and Multimedia Communications”, IEEE Transactions on Circuits and Systems for Video Technology, June 1997.</p> <p>4. Jiangchuan Liu, Bo Li, and Ya-qin Zhang, “ An End-to-End Adaptation Protocol for Layered Video Multicast Using Optimal Rate Allocation,” IEEE Transactions on Multimedia 2004.</p>