

The Reconfigurable Wireless Networking Lab

2005 Progress Update

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Sophia Fotopolou-Prigipia, M.S.E.E. Thesis (CDSP)
Francis Wong, M.S.E.E. Thesis (CDSP)
Cesar Santivanez, Ph.D. (CDSP)

Major Student Achievements

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| December 2005 | <ul style="list-style-type: none">• Daniel Ugarte: M.S. Thesis Defense
<i>Modeling and Analysis of Dynamic
Dynamic Spectrum Access in Wireless Ad Hoc Networks</i> |
| December 2005 | <ul style="list-style-type: none">• Mustafa Ozdemir: Ph.D. Comprehensive Exam and Proposal
<i>Analysis of Reconfigurable Wireless Networks:
An Ergodic Queuing Model with Enhancements for QoS Enabled MAC</i> |
| December 2005 | <ul style="list-style-type: none">• Yue Fang: Ph.D. Final Oral Dissertation Defense
<i>The Deferral Set Framework: A Novel Methodology
for the Performance Analysis of Multi-hop Wireless Networks</i> |
| December 2005 | <ul style="list-style-type: none">• Roy Abi-Younis: M.S. Research Project
<i>A Global Undersea Position System:
Part One: Multi-Cluster Mobile Underwater Acoustic Networks</i> |
| September 2005 | <ul style="list-style-type: none">• Yue Fang: Ph.D. Comprehensive Exam and Proposal
<i>The Deferral Set Framework: A Novel Methodology
for the Performance Analysis of Multi-hop Wireless Networks</i> |

Refereed Articles Published or Accepted in 2005

- Ozdemir, M. and McDonald, A.B., “*On the Performance of Ad Hoc Wireless LANs: A Practical Queueing Theoretic Model*”, **Performance Evaluation: An International Journal**, Special Issue on Performance Modeling and Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks. Elsevier Computer Science Journal. In Press (11/2005).
- Gopalan, A., Dawived, S., Znati, T.F. and McDonald, A.B., “*On the Implementation and Performance of the (α, t) -Protocol on Linux.*” **Simulation: Transactions of the Society for Computer Simulation and Modeling International**, Special Issue on Modeling and Simulation of Wireless and Sensor Network Technologies and Applications. In Press (06/2005).
- Ugarte, D. and McDonald, A.B., “*Dynamic Spectrum Management: Capacity Analysis Enabled Through Spot Market Deregulation.*” To Appear in Proceedings of **The 1st IEEE International Symposium on New Frontiers in Dynamic Spectrum Access Networks (DySPAN’05)**, Baltimore Harbor, MD, November 8-11, 2005.
- Fang, Y., Gu, D., McDonald, A.B. and Zhang, J., “*On the Performance Enhancement of Wireless LANs — a Multipolling Mechanism with Hidden Terminal Solution*”, To Appear in **Proceedings of IEEE Global Telecommunications Conference (GLOBECOM’05)**. St. Louis, MO., November 28 - December 2. 2005.
- Ugarte, D and McDonald, A.B., “*On the Network Capacity of Multi-Hop Wireless Networks Using Dynamic Spectrum Allocation*”, To Appear in **Proceedings of the IEEE Seventh International Conference on Mobile and Wireless Communications Networks (MWCN’05)**. Marrakeck, Morocco, September 19-20, 2005.
- Ozdemir, M. and McDonald, A.B., “*A Queueing Model of Multihop Ad Hoc Networks*”, To Appear in **Proceedings of the IEEE Seventh International Conference on Mobile and Wireless Communications Networks (MWCN’05)**. Marrakeck, Morocco, September 19-20, 2005.
- Fang, Y., Gu D., McDonald, A.B. and Zhang, J., “*A Two-level Carrier Sensing Mechanism for the Overlapping BSS Problem in Wireless LANs*”, To Appear in **Proceedings of 14th IEEE Workshop of Local and Metropolitan Area Networks (LANMAN’05)**. Chania, Crete, Greece, September 18-21, 2005.
- Ozdemir, M. and McDonald, A.B., “*A Queueing Theoretic Model for Wireless Ad Hoc LANs.*” To Appear in **Proceedings of the IEEE/ACM International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob’05)**, Monreal, Canada, August 22-24, 2005.
- Ozdemir, M. and McDonald, A.B. and Ramanathan, R. “*Asynchronous Reservation-Oriented Multiple Access for Wireless Networks (AROMA).*” **Proceedings of the IEEE International Conference on Wireless Networks, Communications, and Mobile Computing (WIRELESSCOMM’05)**, International Symposium of Wireless Quality-of-Service (WiQoS’05), Maui, Hawaii, June 13-16, 2005.