

Publications of Prof. ANURAG KUMAR

• Books

1. Anurag Kumar, D. Manjunath, and Joy Kuri, *Communication Networking: An Analytical Approach*, published by Morgan Kaufman Publishers (a division of Elsevier Science) in the Morgan Kaufman Networking Series (edited by David Clark), May 2004, 929 pages.
 - In addition to its use in graduate programs in India (including the Visvesvaraiya Technological University, Karnataka), this book has been used as a text book in California Institute of Technology, Drexel University, University of Maryland (College Park), Rensselaer Polytechnic Institute, University of California (Riverside), Rice University, University of Toronto, and University of Waterloo.
2. Anurag Kumar, D Manjunath, and Joy Kuri, *Wireless Networking*, published by Morgan Kaufman Publishers (a division of Elsevier Science) in the Morgan Kaufman Networking Series (edited by David Clark), March 2008, 450 pages.
 - This book has been used as a text book in Wayne State University, University of South Florida, Minnesota State University, Johns Hopkins University, and Auburn University. In May 2012, the Korea Advanced Institute of Science and Technology (KAIST) ran a course based (chapter-by-chapter) on this book; this course was instructed by and attended by professors from several academic institutions in Korea.
3. Anurag Kumar, *Discrete Event Stochastic Processes: Lecture Notes for an Engineering Curriculum*, 2012; manuscript available on the author's homepage.

• Invited Book Chapters and Survey/Tutorial Papers

1. Anurag Kumar and D. Manjunath, "A Tutorial Survey of Topics in Wireless Networking," *Sādhana*, Indian Academy of Sciences Proceedings in Engineering Sciences, Vol. 32, No. 6, December 2007.
2. Anurag Kumar and Aditya Karnik, "Performance Analysis of Wireless Ad Hoc Networks," *The Handbook of Ad Hoc Networks*, CRC Press, December 2002.

• Conference Proceedings Edited

1. Anurag Kumar and V.U. Reddy, *International Conference on Communications Control and Signal Processing*, Bangalore, July 2000.
2. Anurag Kumar and V.U. Reddy, *Signal Processing, Communications and Networking*, Bangalore, July 1997.
3. Sanjay K. Bose and Anurag Kumar, *ITC Seminar on Teletraffic Analysis Methods for Current and Future Telecom Networks*, Bangalore, November 1993.

• Journal Papers (in preparation, or under review)

1. Samrat Mukhopadhyay, Pramod M.J., Anurag Kumar, "Approximate Mean Delay Analysis for a Signalized Intersection with Indisciplined Traffic," in preparation.

2. Avishek Ghosh, Arpan Chattopadhyay, Anish Arora, and Anurag Kumar, "Measurement Based As-You-Go Deployment of Two-Connected Wireless Relay Networks," submitted.
3. Abhijit Bhattacharya and Anurag Kumar, "Mean Delay Analysis of Cache Assisted File Transfers over the Internet," submitted.
4. Naveen Kolar Purushothama, Eitan Altman, Anurag Kumar, "Competitive Selection of Ephemeral Relays in Wireless Networks," submitted.
5. Abhijit Bhattacharya, Akhila Rao, Deeksha G. Rao Sahib, Aniruddha Mallya, Rachit Srivastava, Sanjay M. Ladwa, S.V.R. Anand, and Anurag Kumar "SmartConnect: A System for Design and Deployment of Wireless Sensor Networks," in revision.
6. Arpan Chattopadhyay, Abhishek Sinha, Marceaux Coupechoux, and Anurag Kumar, "Optimal Capacity Relay Node Placement in a Multi-hop Wireless Network on a Line," submitted.
7. Albert Sunny, Sumankumar Panchal, Aditya Prakash, Nikhil Vidhani, Subhashini Krishnasamy, S.V.R. Anand, Malati Hegde, Joy Kuri, Anurag Kumar, "ADWISERv2: A Plug-and-play Controller for Managing TCP Transfers in IEEE 802.11 Infrastructure WLANs with Multiple Access Points," submitted.
8. Santosh Ramachandran, Chandramani Singh, S. V. R. Anand, Malati Hegde, Anurag Kumar, Rajesh Sundaresan "Neighbor Oblivious and Finite-State Algorithms for Circumventing Local Minima in Geographic Forwarding," submitted.

• **Journal Papers**

- J1. Arpan Chattopadhyay, Marceaux Coupechoux, and Anurag Kumar, "Sequential Decision Algorithms for Measurement-Based Impromptu Deployment of a Wireless Relay Network along a Line," *IEEE/ACM Transactions on Networking*, to appear.
- J2. Chandramani K. Singh, Anurag Kumar, and Rajesh Sundaresan, "Combined Base Station Association and Power Control in Multi-channel Cellular Networks," *IEEE/ACM Transactions on Networking*, to appear.
- J3. Rachit Srivastava, Sanjay Motilal Ladwa, Abhijit Bhattacharya, Anurag Kumar, "A Fast and Accurate Performance Analysis of Beaconless IEEE 802.15.4 Multi-Hop Networks," *Ad Hoc Networks*, (an Elsevier Journal), vol. 37, pages 435-459, 2016.
- J4. Abhijit Bhattacharya and Anurag Kumar, "An Approximation to the QoS Aware Throughput Region of a Tree Network under IEEE 802.15.4 CSMA/CA with Application to Wireless Sensor Network Design," *Ad Hoc Networks*, (an Elsevier Journal), vol. 33, pages 35-54, 2015.
- J5. K.P. Naveen and Anurag Kumar, "Relay Selection with Channel Probing in Sleep-Wake Cycling Wireless Sensor Networks," *ACM Transactions on Sensor Networks (TOSN)*, Vol. 11, No. 3, Article 52, 38 pages, May 2015.
- J6. Manoj Panda and Anurag Kumar, "Cell-Level Modeling of 802.11 WLANs," *Ad Hoc Networks*, (an Elsevier Journal), vol. 25, pages 84-101, 2015.
- J7. Abhijit Bhattacharya and Anurag Kumar, "A Shortest Path Tree Based Algorithm for Relay Placement in a Wireless Sensor Network and its Performance Analysis," *Computer Networks* (an Elsevier journal), vol. 71, pages 48-62, 2014.

- J8. Abhishek Sinha, Arpan Chattopadhyay, K.P. Naveen, Prasenjit Mondal, Marceaux Couchoux, and Anurag Kumar, "Optimal Sequential Wireless Relay Placement on a Random Lattice Path," *Ad Hoc Networks*, (an Elsevier Journal), vol. 21, pages 1-17, 2014.
- J9. Srinivasan Venkatramanan and Anurag Kumar, "Co-evolution Content Spread and Popularity in Mobile Opportunistic Networks," *IEEE Transactions on Mobile Computing*, vol. 13, no. 11, pages 2498-2509, November 2014.
- J10. Chandramani K. Singh, Eitan Altman, Anurag Kumar, and Rajesh Sundaresan, "Optimal Forwarding in Delay Tolerant Networks with Multiple Destinations," *IEEE/ACM Transactions on Networking*, vol. 21, no. 6, pages 1812-1826, December 2013.
- J11. Malati Hegde, Pavan Kumar, K. R. Vasudev, N. N. Sowmya, S. V. R. Anand, Anurag Kumar, and Joy Kuri, "Experiences with a Centralised Scheduling Approach for Performance Management of IEEE 802.11 Wireless LANs," *IEEE/ACM Transactions on Networking*, vol. 20, no. 2, pages 648-662, April 2013.
- J12. K.P. Naveen and Anurag Kumar, "Relay Selection for Geographical Forwarding in Sleep-Wake Cycling Wireless Sensor Networks," *IEEE Transactions on Mobile Computing*, vol. 12, no. 3, pages 475-488, March 2013.
- J13. Eitan Altman, Anurag Kumar, Chandramani K. Singh, Rajesh Sundaresan, "Spatial SINR Games of Base Station Placement and Mobile Association," *IEEE/ACM Transactions on Networking*, vol. 20, no. 6, pages 1856-1869, December 2012.
- J14. Venkatesh Ramaiyan, Anurag Kumar, and Eitan Altman, "Optimal Hop Distance and Power Control for a Single Cell, Dense, Ad hoc Wireless Network," *IEEE Transactions on Mobile Computing*, vol. 11, no. 11, pages 1601-1612, November 2012.
- J15. Swaprava Nath, N.E. Venkatesan, Anurag Kumar, P. Vijay Kumar, "Theory and Algorithms for Hop-Count-Based Localization with Random Geometric Graph Models of Dense Sensor Networks," *ACM Transactions on Sensor Networks*, Vol. 8, Issue 4, November 2012.
- J16. Manoj K. Panda and Anurag Kumar, "State Dependent Attempt Rate Modeling of Single Cell IEEE 802.11 WLANs with Homogeneous Nodes and Poisson Packet Arrivals," *Performance Evaluation* (an Elsevier Journal), Volume 69, Issue 9, Pages 413-439, September 2012.
- J17. K. Premkumar, Venkata Prasanthi, and Anurag Kumar, "Delay Optimal Event Detection on Ad Hoc Wireless Sensor Networks," *ACM Transactions on Sensor Networks (TOSN)*, Volume 8, Issue 2, March 2012.
- J18. Chandramani K. Singh, Saswati Sarkar, Ali Reza Aram, and Anurag Kumar, "Cooperative Profit Sharing in Coalition Based Resource Allocation in Wireless Networks," *IEEE/ACM Transactions on Networking*, Vol. 20, No. 1, pp. 69-73, February 2012.
- J19. Sri Harsha, Anurag Kumar, and Vinod Sharma, "An Analytical Model for Performance Evaluation of Multimedia Applications over EDCA in an IEEE 802.11e WLAN," *Wireless Networks* (a Springer Journal), vol. 16, issue 2, page 367, 2010.
- J20. Venkatesh Ramaiyan, Eitan Altman, and Anurag Kumar, "Delay Optimal Scheduling in a Two-Hop Vehicular Relay Network," *ACM/Springer Mobile Networks and Applications (MONET)*, (Special Issue on Advances and Applications in Vehicular Ad Hoc Networks,) vol. 15, no. 1, pp. 97-111, 2010.

- J21. Onkar Bhardwaj, G.V.V. Sharma, Manoj Panda, and Anurag Kumar, "Modeling Finite Buffer Effects on TCP Traffic over an IEEE 802.11 Infrastructure WLAN," *Computer Networks* (an Elsevier journal), Vol. 53, pages 2855-2869, 2009.
- J22. George Kuriakose, Sri Harsha, Anurag Kumar and Vinod Sharma, "Analytical Models for Capacity Estimation of IEEE 802.11 WLANs using DCF for Internet Applications," *Wireless Networks* (a Springer Journal), Vol. 15:2, pp. 259–277, February 2009.
- J23. Venkatesh Ramaiyan, Anurag Kumar, and Eitan Altman, "Fixed Point Analysis of Single Cell IEEE 802.11e WLANs: Uniqueness and Multistability," *IEEE/ACM Transactions on Networking*, Vol. 16, No. 5, pp. 1080-1093, October 2008.
- J24. Munish Goyal, Anurag Kumar, and Vinod Sharma, "Optimal Cross-Layer Scheduling of Transmissions over a Fading Multiaccess Channel," *IEEE Transactions on Information Theory*, Vol. 54, No. 8, pp. 3518-3537, August 2008.
- J25. C. K. Singh, Anurag Kumar and P. M. Ameer, "Performance Evaluation of an IEEE 802.15.4 Sensor Network with a Star Topology," *Wireless Networks* (a Springer Journal), Vol. 14, No. 4, August 2008.
- J26. Nilesh Khude, Anurag Kumar, and Aditya Karnik, "Time and Energy Complexity of Distributed Computation of a Class of Functions in Wireless Sensor Networks," *IEEE Transactions on Mobile Computing*, Vol. 7, No. 5, pp. 617-632, May 2008.
- J27. Anitha Varghese and Anurag Kumar, "Design of a TDD Multisector TDM MAC for the WiFiRe Proposal for Rural Broadband Access," *IETE Technical Review*, Invited paper in the IETE ATC-Special Issue on "Electronics and Communication Technologies – A Focus on Rural India", Vol. 24, No. 4, pp. 225–242, July–August 2007.
- J28. Srinivas Shakkottai, Eitan Altman, Anurag Kumar, "The case for Noncooperative multihoming of users to access points in IEEE 802.11 WLANs," *IEEE Journal on Special Areas in Communications*, Issue on Noncooperative Behavior in Networking, Vol. 25, No. 6, pp. 1207 - 1215, August 2007.
- J29. Krishna Paul, Anitha Varghese, Sridhar Iyer, Bhaskar Ramamurthi, Anurag Kumar, "WiFiRe: Rural Broadband Access using the WiFi PHY and a Multisector TDD MAC," *IEEE Communications Magazine*, Special Issue, Jan-Feb 2007.
- J30. Aditya Karnik and Anurag Kumar, "Distributed Optimal Self-Organisation in Ad Hoc Wireless Sensor Networks," *IEEE/ACM Transactions on Networking*, Vol. 15, No. 5, pp. 1035-1045, October 2007.
- J31. Malati Hegde, S.V.R. Anand, Anurag Kumar, and Joy Kuri, "WLAN Manager (WM): a Device for Performance Management of a WLAN," *International Journal of Network Management*, (a Wiley Interscience journal), vol. 17, pages 155-170, January 2007
- J32. Anurag Kumar, Eitan Altman, Daniele Miorandi and Munish Goyal, "New Insights from a Fixed-Point Analysis of Single Cell IEEE 802.11 WLANs," *IEEE/ACM Transactions on Networking*, Vol. 15, No. 3, pp. 588 - 601, June 2007.
- J33. Munish Goyal, Anurag Kumar, and Vinod Sharma, "A Stochastic Control Approach for Scheduling Multimedia Transmissions over a Polled Multiple Access Fading Channel," *Wireless Networks* (A Springer Journal), vol. 12, no. 5, pp. 605–621, October 2006.

- J34. Aditya Karnik, Anurag Kumar and Vivek Borkar, "Distributed Self-Tuning of Sensor Networks," *Wireless Networks* (A Springer Journal), vol. 12, no. 5, pp. 531-544, October 2006.
- J35. Arzad Kherani and Anurag Kumar, "Long Range Dependence in Network Traffic and the Closed Loop Behaviour of Buffers under Adaptive Window Control," *Performance Evaluation* (an Elsevier Science Journal) special issue on Long Range Dependence and Heavy Tail Distributions, Volume 61, Issues 2-3, pp 95 - 127, July 2005.
- J36. Aditya Karnik and Anurag Kumar, "Performance of TCP Congestion Control with Explicit Rate Feedback: Rate Adaptive TCP (RATCP)," *IEEE/ACM Transactions on Networking*, vol. 13, no. 1, pages 108-120, February 2005.
- J37. Arzad Kherani and Anurag Kumar, "The Lightning Effect of Adaptive Window Control," *IEEE Communications Letters*, June 2003.
- J38. Lilly Kutty Jacob and Anurag Kumar, "Establishing the Region of Stability of an Input Queueing Cell Switch," *IEE Proceedings - Communications*, Vol. 148, No. 6, pp 343-347, December 2001.
- J39. Santosh P. Abraham and Anurag Kumar, "A New Approach for Asynchronous Distributed Rate Control of Elastic Sessions in Integrated Packet Networks," *IEEE/ACM Transactions on Networking*, Vol. 9, No. 1, pp 15 - 30, February 2001.
- J40. Sanjay Shakkotai and Anurag Kumar, Aditya Karnik and Ajit Anvekar, "TCP Performance over End-to-End Rate Control and Stochastic Available Capacity," *IEEE/ACM Transactions on Networking*, Vol. 9, No. 4, pp 377-391, August 2001.
- J41. Anurag Kumar, Malati Hegde, S.V.R. Anand, B.N. Bindu, Dinesh Thirumurthy, and A.A. Kherani, "Nonintrusive TCP Connection Admission Control for Bandwidth Management of an Internet Access Link," *IEEE Communications Magazine*, Vol. 38, No. 5, pp 160-167, May 2000.
- J42. K. Maheshwari and Anurag Kumar, "Performance Analysis of Microcellization for Supporting Two Mobility Classes in Cellular Wireless Networks," *IEEE Transactions on Vehicular Technology*, Vol. 49, No. 2, pp 321- 333, May 2000.
- J43. Malati Hegde, M.K. Narana, and Anurag Kumar, "Netmon: An SNMP Based Performance Monitoring Tool for Packet Data Networks," *IETE Journal of Research*, Vol. 46, Nos. 1/2, pp 15-25, 2000.
- J44. Lilly Kutty Jacob and Anurag Kumar, "Comparative Performance of Scheduling Strategies for Switching and Multiplexing in a Hub Based ATM Network: A Simulation Study", *Computer Networks and ISDN Systems*, Vol. 30, pp 1341-1354, 1998.
- J45. Anurag Kumar, "Comparative Performance Analysis of Versions of TCP in a Local Network with a Lossy Link," *IEEE/ACM Transactions on Networking*, Vol. 6, No. 4, pp. 485-498, August 1998.
- J46. Anurag Kumar and Jack Holtzman, "Comparative Performance Analysis of Versions of TCP in a Local Network with a Mobile Radio Link," *Sādhanā*, Indian Academy of Sciences Proceedings in Engineering Sciences, special issue on New Results in Signal Processing and Communications, Vol. 23, Part 1, pp. 113-129, February 1998.

- J47. Joy Kuri and Anurag Kumar, "On the Optimal Control of Arrivals to a Single Queue with Arbitrary Feedback Delay," *Queueing Systems: Theory and Applications (QUESTA)* (a J.C. Baltzer Science Journal), Vol. 27, pp. 1-16, 1997.
- J48. Rajeev Shorey, Anurag Kumar, and Kiran M. Rege, "Instability and Performance Limits of Distributed Simulators of Feedforward Queueing Networks," *ACM Transactions on Modelling and Computer Simulation*, Vol. 7, No. 2, pp. 210-238, April 1997.
- J49. Anurag Kumar and Deepak Patil, "Stability and Throughput analysis of CDMA-ALOHA with Finite Number of Users and Code Sharing," *Telecommunication Systems* (a Baltzer Science Journal), Vol. 8, pp. 257-275, 1997.
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- J51. Lilly Kutty Jacob and Anurag Kumar, "Delay Performance of Some Scheduling Strategies in an Input Queueing ATM Switch with Multiclass Bursty Traffic," *IEEE/ACM Transactions on Networking*, Vol. 4, No. 2, pp. 258-271, April 1996.
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- J53. Anurag Kumar, "Link Failure Detection for Maintaining Session Continuity in Packet Data Networks," *International Journal of Communication Systems* (a John Wiley Journal), Vol. 8, No. 4, pp. 239-252, 1995.
- J54. Joy Kuri and Anurag Kumar, "Optimal Control of Arrivals to Queues with Delayed Queue Length Information," *IEEE Transactions on Automatic Control*, Vol. 40, No. 8, pp. 1444-1450, August 1995.
- J55. Lilly Kutty Jacob and Anurag Kumar, "Saturation Throughput Analysis of an Input Queueing ATM Switch with Multiclass Bursty Traffic", *IEEE Transactions on Communications*, Vol. 43, Nos. 2/3/4, pp. 757-762, Feb./Mar./Apr. 1995.
- J56. Anurag Kumar and Robert G. Cole, "Comparative Performance of Interleaved and Non-Interleaved Pipelining in ATM Terminal Adapters", *Computer Networks and ISDN Systems* (an Elsevier Science Journal), Vol. 27, pp. 521-535, 1995.
- J57. Joy Kuri and Anurag Kumar, "On the Optimal Allocation of Customers that Must Depart in Sequence", *Operations Research Letters*, Vol. 15, pp. 41-46, 1994.
- J58. Anurag Kumar and Rajeev Shorey, "Performance Analysis and Scheduling of Stochastic Fork-Join Jobs in a Multicomputer System", *IEEE Transactions on Parallel and Distributed Systems*, Vol. 4, No. 10, pp. 1147-1164, October 1993.
- J59. Anurag Kumar, B. Hareesh Kumar, and B. Madhavi, "Modelling and Performance Analysis of a Digital Switching System - Case Study of the C-DoT DSS", Invited paper, Special Issue on Telematics of the *Journal of the Institution of Electronics and Telecommunications Engineers (IETE)*, India, Vol. 39, No. 2, pp. 77-97, March - April 1993. **The above paper was conferred the IETE's CDIL award for 1993.**

- J60. Anurag Kumar, "On the Average Idle Time and Queue Length Estimates in an M/M/1 Queue", *Operations Research Letters*, Vol 12, pp. 153-157, Sept. 1992.
- J61. Anurag Kumar, "Task Allocation in Multiserver Systems - A Survey of Results", *Sādhana*, Indian Academy of Sciences Proceedings in Engineering Sciences, Vol. 15, Parts 4 and 5, pp. 381-395, Dec. 1990.
- J62. Flavio Bonomi and Anurag Kumar, "Adaptive Optimal Load Balancing in a Nonhomogeneous Multiserver System with a Central Job Scheduler", *IEEE Transactions on Computers*, Vol. 39, No. 10, pp. 1232-1250, October 1990.
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- J64. Anurag Kumar, "Adaptive Load Control of the Central Processor in a Distributed System with a Star Topology", *IEEE Transactions on Computers*, Vol. 38, No. 11, pp. 1502-1512, November 1989.
- J65. Anurag Kumar, "Component Inventory Costs in an Assembly Problem with Uncertain Supplier Lead-Times", *Transactions of the Institute of Industrial Engineers*, Vol. 21, No. 2, pp. 112-121, June 1989.
- J66. Anurag Kumar, "SNA/SDLC Performance over ISDN Frame-Relay, Virtual-Circuit Data Networks", *AT&T Technical Journal*, Vol. 67, No. 5, pp. 27-40, Sept.-Oct. 1988.
- J67. Harry Heffes and Anurag Kumar, "Stochastic Damage Models and Dependence Effects in the Survivability Analysis of Communication Networks", *IEEE Journal on Selected Areas in Communications*, Vol. SAC-3, No. 2, pp. 234-242, March 1986.
- J68. Harry Heffes and Anurag Kumar, "Incorporating Dependent Node Damage in Deterministic Connectivity Analysis and Synthesis of Networks", *Networks* (a John Wiley Journal), Vol.16, No. 1, pp. 51-65, Spring 1986.
- J69. Anurag Kumar and Terrence L. Fine, "Stationary Lower Probabilities and Unstable Averages", *Zeitschrift fur Wahrscheinlichkeitstheorie verw. Geb.* (now Probability Theory and Related Fields), Vol. 69, Pgs. 1-17, 1985.
- J70. Anurag Kumar, "Equivalent Queueing Networks and Their Use in Approximate Equilibrium Analysis", *Bell System Technical Journal*, Vol. 62, No. 10, pp. 2893-2910, Dec. 1983.

• **Refereed Papers in Conferences/Workshops with Published Proceedings**

- C1. Abhijit Bhattacharya and Anurag Kumar, Modeling, "Performance Analysis, and Optimization of Single Hop IEEE 802.11 Networks with Large Propagation Delays: Challenges and Solutions," *Proc. IEEE Infocom 2016*, San Francisco, April 2016.
- C2. Samrat Mukhopadhyay, Pramod M.J., Anurag Kumar, "An Approach for Analysis of Mean Delay at a Signalized Intersection with Indisciplined Traffic," Workshop on Intelligent Transportation Systems, COMSNETS 2015, Bangalore, January 2015.
- C3. Abhijit Bhattacharya, Akhila S. Rao, Nishanth P.P., S.V.R. Anand, and Anurag Kumar, "QoS Constrained Optimal Sink and Relay Placement in Planned Wireless Sensor Networks," to appear in Proceedings of SPCOM 2014, Bangalore, July 2014.

- C4. Avishek Ghosh, Arpan Chattopadhyay, Anish Arora, and Anurag Kumar, “As-You-Go Deployment of a 2-Connected Wireless Relay Network for Sensor-Sink Interconnection,” to appear in Proceedings of SPCOM 2014, Bangalore, July 2014.
- C5. Srinivasan Venkatramanan and Anurag Kumar, “Competition for Content Spread over Multiple Social Networks,” Workshop on Social Networks, in The 6th International Conference on Communication Systems and Networks (COMSNETS), Bangalore, January 2013.
- C6. Eitan Altman, Parmod Kumar, Srinivasan Venkatramanan, and Anurag Kumar, “Competition over Timeline in Social Networks,” *SNAA 2013: The 3rd Workshop on Social Network Analysis in Applications*, Niagara Falls, Canada, 25-28 August 2013.
- C7. Arpan Chattopadhyay, Marceau Coupechoux, Anurag Kumar, “Measurement Based Impromptu Deployment of a Multi-Hop Wireless Relay Network,” *WiOpt’13: 10th Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks*, Tsukuba Science City, Japan, May 2013.
- C8. Abhijit Bhattacharya, Akhila Rao, Deeksha G. Rao Sahib, Aniruddha Mallya, Rachit Srivastava, Sanjay M. Ladwa, S.V.R. Anand, and Anurag Kumar “Smart Connect: A System for Design and Deployment of Wireless Sensor Networks,” The 5th International Conference on Communication Systems and Networks (COMSNETS), Bangalore, January 2013. **Best Paper Award**
- C9. K.P. Naveen and Anurag Kumar, “Relay Selection with Channel Probing for Geographical Forwarding in Wireless Sensor Networks,” *WiOpt’12: 10th Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks*, Paderborn, Germany, May 2012. **Best Student Paper Award**
- C10. Arpan Chattopadhyay, Abhishek Sinha, Marceau Coupechoux, and Anurag Kumar, “Optimal Capacity Relay Node Placement in a Multi-hop Network on a Line,” *RAWNET (Resource Allocation in Wireless Networks), a workshop in WiOpt’12 (The 10th Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks)*, Paderborn, Germany, May 2012.
- C11. Srinivasan Venkatramanan and Anurag Kumar, “Co-evolution of Content Popularity and Delivery in Mobile P2P Networks,” *Proc. IEEE Infocom 2012, mini-conference*, Orlando, Florida, March 2012.
- C12. Prasenjit Modal, K.P. Naveen, and Anurag Kumar, “Optimal Deployment of Impromptu Wireless Sensor Networks,” *Proc. National Communications Conference (NCC) 2012*, IIT Kharagpur, February 2012.
- C13. Rachit Srivastava and Anurag Kumar, “Performance Analysis of Beacon-Less IEEE 802.15.4 Multi-Hop Networks,” *Proc. of the Fourth International Conference on Communication Systems and Networks, COMSNETS 2012*, Bangalore, January 2012.
- C14. Subhashini Krishnaswamy and Anurag Kumar, “Modeling the Effect of Transmission Errors on TCP Controlled Transfers over Infrastructure 802.11 Wireless LANs,” *MSWIM’11: The 14th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems*, Miami, Oct-Nov 2011.
- C15. Chandramani K. Singh, Anurag Kumar, Rajesh Sundaresan, and Eitan Altman, “Optimal Forwarding in Delay Tolerant Networks with Multiple Destinations,” *WiOpt’11: 9th*

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- C16. Srinivasan Venkatramanan and Anurag Kumar, “Information Dissemination in Socially Aware Networks Under the Linear Threshold Model,” *Proc. National Communications Conference (NCC) 2010*, IISc, Bangalore, Jan-Feb 2011.
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- C18. Abhijit Bhattacharyya and Anurag Kumar, “Delay Constrained Optimal Relay Placement for Planned Wireless Sensor Networks,” *IWQoS 2010: The 18th IEEE International Workshop on Quality of Service*, Beijing, June 2010.
- C19. Chandramani K. Singh, Anurag Kumar, and Rajesh Sundaresan, “Delay and Energy Optimal Two-Hop Relaying in Delay Tolerant Networks,” *WiOpt’10: 8th Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks*, Avignon, France, May-June 2010.
- C20. Pranav Agrawal, Anurag Kumar, Joy Kuri, Manoj Panda, Ramchandra Ramjee, Vishnu Navda, “OPSM - Opportunistic Power Save Mode for Infrastructure IEEE 802.11 WLANs,” *Proc. ICC 2010 Workshop on Energy Efficiency in Wireless Networks & Wireless Networks for Energy Efficiency (E2NETS)*, Cape Town, South Africa, June 2010.
- C21. K.P. Naveen and Anurag Kumar, “Tunable Locally-Optimal Geographical Forwarding in Wireless Sensor Networks with Sleep-Wake Cycling Nodes,” *Proc. IEEE Infocom 2010*, San Diego, April 2010.
- C22. Santosh Ramachandran, S.V.R.Anand, Malati Hegde, Anurag Kumar, Rajesh Sundaresan, “Neighbor Oblivious Link Reversal over Duty-Cycled WSNs,” *Proc. National Communications Conference (NCC) 2010*, I.I.T. Madras, Jan-Feb 2010.
- C23. Pranav Agrawal, Anurag Kumar, Joy Kuri, Manoj Panda, Ramchandra Ramjee, Vishnu Navda, Venkat Padmanabhan, “Analytical Models for Energy Consumption in Infrastructure WLAN STAs Carrying TCP Traffic,” *Proc. of the Second International Conference on Communication Systems and Networks, COMSNETS 2010*, January 2010.
Best Paper Award
- C24. Shrirang Mare, David Kotz, and Anurag Kumar, “Experimental Validation of Analytical Performance Models for IEEE 802.11 Networks,” *Proc. WISARD Workshop 2010*, January 2010.
- C25. Eitan Altman, Anurag Kumar, and Yezekael Hayel, “A Potential Game Approach for Uplink Resource Allocation in a Multichannel Wireless Access Network,” *Proc. ACM/ICST International Workshop on Game Theory for Communication Networks (GAMECOMM)*, Pisa, Italy, October 2009.
- C26. K. Premkumar, Anurag Kumar, and Joy Kuri, “Distributed Detection and Localization of Events in Large Ad Hoc Wireless Sensor Networks,” *Forty-Seventh Annual Allerton Conference on Communication, Control, and Computing*, Allerton, Illinois, September 2009.

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