Chadi Barakat

List of publications

Edited Journals and Books, Book Chapters, Editorials

[1] Chadi Barakat, Cristel Pelsser, Theophilus A. Benson, David Choffnes (Eds.), Proceedings of the 22nd ACM Internet Measurement Conference, IMC'22, October 25-27, 2022, Nice, France. ACM 2022, ISBN 978-1-4503-9259-4.

[2] Chadi Barakat, Renata Teixeira, K. K. Ramakrishnan, Patrick Thiran (Eds.), Proceedings of the 2012 Conference on emerging Networking Experiments and Technologies, CoNEXT'12, December 10-13, 2012, Nice, France. ACM 2012, ISBN 978-1-4503-1775-7.

[3] Eitan Altman, Konstantin Avrachenkov, Chadi Barakat, Kartikeya Chandrayana, "A Multilevel Approach for the Modelling of Large TCP/IP Networks", Chapter 4 in "Recent Advances in Modeling and Simulation Tools for Communication Networks and Services" published by Springer, September 2007.

[4] Chadi Barakat, Gianluca Iannaccone, Jim Kurose, Darryl Veitch, "Sampling the Internet: techniques and applications", IEEE Journal of Selected Areas in Communications, vol. 24, no. 12, December 2006.

[5] Chadi Barakat, "Evaluation des performances des réseaux WIFI 802.11", Techniques de l'Ingénieur, Lettre réseaux sans fil, Numéro Novembre-Décembre 2006.

[6] Chadi Barakat, Ian Pratt: Passive and Active Network Measurement, 5th International Workshop, PAM 2004, Antibes Juan-les-Pins, France, April 19-20, 2004, Proceedings. Lecture Notes in Computer Science 3015 Springer 2004, ISBN 3-540-21492-5.

Refereed Journal and Magazine Papers

[7] Houssam Elbouanani, Chadi Barakat, Walid Dabbous, Thierry Turletti, "Troubleshooting Distributed Network Emulation", in Springer Annals of Telecommunications, February 2024.

[8] Bernard Tamba Sandouno, Yamen Alsaba, Chadi Barakat, Walid Dabbous, Thierry Turletti, "A novel approach for ray tracing optimization in wireless communication", in Elsevier Computer Communications Journal, vol. 209, pp. 309-319, September 2023.

[9] Houssam ElBouanani, Chadi Barakat, Walid Dabbous, Thierry Turletti, "Passive Delay Measurement for Fidelity Monitoring of Distributed Network Emulation", in Elsevier Computer Communications Journal, vol. 195, pp. 40-48, November 2022.

[10] Tingting Yuan, Wilsons Neto, Christian Rothenberg, Katia Obraczka, Chadi Barakat, Thierry Turletti, "Machine Learning for Next-Generation Intelligent Transportation Systems: A Survey", in Wiley Transactions on Emerging Telecommunications Technologies, vol. 33, no. 4, pp e4427, April 2022.

[11] Tingting Yuan, Christian Esteve Rothenberg, Katia Obraczka, Chadi Barakat, Thierry Turletti, "Harnessing UAVs for Fair 5G Bandwidth Allocation in Vehicular Communication via Deep Reinforcement Learning", in IEEE Transactions on Network and Service Management, vol. 18, no. 4, pp. 4063 - 4074, December 2021.

[12] Othmane Belmoukadam, Chadi Barakat, "Unveiling the end-user viewport resolution from encrypted video traces", in IEEE Transactions on Network and Service Management, vol. 18, no. 3, pp. 3324-3335, September 2021.

[13] Tingting Yuan, Wilson da Rocha Neto, Christian Esteve Rothenberg, Katia Obraczka, Chadi Barakat, Thierry Turletti, "Dynamic Controller Assignment in Software Defined Internet of Vehicles through Multi-Agent Deep Reinforcement Learning", in IEEE Transactions on Network and Service Management, vol. 18, no. 1, pp. 585-596, March 2021.

[14] Othmane Belmoukadam, Muhammad Jawad Khokhar, Chadi Barakat, "On Accounting for Screen Resolution in Adaptive Video Streaming: a QoE driven bandwidth sharing framework", in Wiley International Journal of Network Management, vol. 31, no. 1, pp. e2128, January 2021.

[15] Luigi Vigneri, Thrasyvoulos Spyropoulos, Chadi Baraat, "Quality of Experience-Aware Mobile Edge Caching through a Vehicular Cloud", in IEEE Transactions on Mobile Computing, vol. 19, no. 9, pp. 2174 - 2188, September 2020.

[16] Muhammad Jawad Khokhar, Nawfal Abbassi Saber, Thierry Spetebroot, Chadi Barakat, "An Intelligent Sampling Framework for Controlled Experimentation and QoE Modeling", in Elsevier Computer Networks Journal, vol. 147, pp. 246-261, December 2018.

[17] Luigi Vigneri, Thrasyvoulos Spyropoulos, Chadi Barakat, "Low Cost Video Streaming through Mobile Edge Caching: Modelling and Optimization", in IEEE Transactions on Mobile Computing, vol. 18, no. 6, pp. 1302 - 1315, June 2019.

[18] Xuan-Nam Nguyen, Damien Saucez, Chadi Barakat, Thierry Turletti, "Rules Placement Problem in OpenFlow Networks: a Survey", in IEEE Communications Surveys and Tutorials, vol. 18, no. 2, pp. 1273-1286, Secondquarter 2016.

[19] Damien Saucez, Stefano Secci, Chadi Barakat, "On the Incentives and Incremental Deployments of ICN technologies for OTT Services", in IEEE Network Magazine: Special Issue-Information-Centric Networking Beyond Baseline Scenarios: Research Advances and Implementation, vol. 28, no. 3, pp. 20-25, May-June 2014.

[20] Rosa Vilardi, Luigi Alfredo Grieco, Chadi Barakat, Gennaro Boggia, "Lightweight Enhanced Monitoring for High-speed Networks", in Wiley Transactions on Emerging Telecommunications Technologies, vol. 25, no. 11, pp. 1095-1113, November 2014.

[21] Amir Krifa, Chadi Barakat, Thrasyvoulos Spyropoulos, "Message Drop and Scheduling in DTNs: Theory and Practice", in IEEE Transactions on Mobile Computing, vol. 11, no. 9, September 2012.

[22] Luigi Alfredo Grieco, Chadi Barakat, Michele Marzulli, "Spectral Models for Bitrate Measurement from Packet Sampled Traffic", in IEEE Transactions on Network and Service Management, vol. 8, no. 2, June 2011.

[23] Karim Sbai, Chadi Barakat, "Experiences on enhancing data collection in large networks", in Elsevier Computer Networks Journal, vol. 53, no. 7, pp. 1073-1086, May 2009.

[24] Mohammad Malli, Chadi Barakat, Walid Dabbous, "CHESS: An application-aware space for enhanced scalable services in overlay networks", in Elsevier Computer Communications Journal, vol. 31, no. 6, pp. 1239-1253, April 2008.

[25] T. Tansupasiri, K. Kanchanasut, Chadi Barakat, Philippe Jacquet, "Using Active Networks Technology for Dynamic QoS", in Elsevier Computer Networks Journal, vol. 50, no. 11, pp. 1692-1709, August 2006.

[26] Chadi Barakat, Mohammad Malli, Naomichi Nonaka, "TICP: Transport Information Collection Protocol", in Springer Annals of Telecommunications, vol. 61, no. 1-2, pp. 167-192, 2006.

[27] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, Arzad-Alam Kherani, Balakrishna Prabhu, "Analysis of MIMD Congestion Control Algorithm for High Speed Networks", in Elsevier Computer Networks Journal, vol. 48, no. 6, pp. 972-989, August 2005.

[28] Eitan Altman, Chadi Barakat, Victor M. Ramos R., "Analysis of AIMD protocols over paths with variable delay", in Elsevier Computer Networks Journal, vol. 48, no. 6, pp. 960-971, August 2005.

[29] Imad Aad, Qiang Ni, Chadi Barakat, Thierry Turletti, "Enhancing IEEE 802.11 MAC in Congested Environments", in Elsevier Computer Communications Journal, vol. 28, no. 14, pp. 1605-1617, September 2005.

[30] Gion Reto Cantieni, Qiang Ni, Chadi Barakat, Thierry Turletti, "Performance Analysis under Finite Load and Improvements for Multirate 802.11", in Elsevier Computer Communications Journal, special issue on Performance of Wireless LANs, PANs, and Ad Hoc Networks, vol. 28, no. 10, pp. 1095-1109, June 2005.

[31] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, "A Stochastic Model of TCP/IP with Stationary Random Losses", in IEEE/ACM Transactions on Networking, vol. 13, no. 2, pp. 356- 369, April 2005.

[32] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, Parijat Dube, "Performance Analysis of AIMD Mechanisms over a Multi-state Markovian Path", in Elsevier Computer Networks Journal, vol. 47, no. 3, pp. 307-326, February 2005.

[33] Antonio Nucci, Nina Taft, Chadi Barakat, Patrick Thiran, "Controlled Use of Excess Backbone Bandwidth for Providing New Services in IP-over-WDM Networks", in IEEE Journal on Selected Areas in Communications, vol. 22, no. 9, pp. 1692-1707, November 2004.

[34] Chadi Barakat, Alaeddine Al Fawal, "Analysis of link-level hybrid FEC/ARQ-SR for wireless links and long-lived TCP traffic", in Elsevier Performance Evaluation Journal, vol. 57, no. 4, pp. 423-500, August 2004.

[35] Chadi Barakat, Eitan Altman, "A Markovian Model for TCP Analysis in a Differentiated Services Network", in Springer Telecommunication Systems Journal, vol. 25, no. 1,2, pp. 129-155, January 2004.

[36] Sara Alouf, Eitan Altman, Chadi Barakat, Philippe Nain, "Optimal Estimation of Multicast Membership", in IEEE Transactions on Signal Processing - Special Issue on Signal Processing in Networking, vol. 51, no. 8, August 2003.

[37] Chadi Barakat, Patrick Thiran, Gianluca Iannaccone, Christophe Diot, Philippe Owezarski, "Modeling Internet backbone traffic at the flow level", in IEEE Transactions on Signal Processing - Special Issue on Signal Processing in Networking, vol. 51, no. 8, August 2003.

[38] Chadi Barakat, Eitan Altman, "On ACK filtering on a slow reverse channel", in Wiley International Journal of Satellite Communications and Networking, vol. 21, pp. 241-258, 2003.

[39] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, Rudesindo Núñez-Queija, "State-dependent M/G/1 type queueing analysis for congestion control in data networks", in Elsevier Computer Networks Journal, vol. 39, no. 6, pp. 789-808, August 2002.

[40] Eitan Altman, Chadi Barakat, Victor Ramos, "Queuing analysis of simple FEC schemes for voice over IP", in Elsevier Computer Networks Journal, vol. 39, no. 2, pp. 185-206, June 2002.

[41] Chadi Barakat, Eitan Altman, "Bandwidth tradeoff between TCP and link-level FEC", in Elsevier Computer Networks Journal, vol. 39, no. 2, pp. 133-150, June 2002.

[42] Chadi Barakat, "TCP modeling and validation", in IEEE Network Journal, vol. 15, no. 3, pp. 38-47, May 2001.

[43] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, "TCP in presence of bursty losses", in Elsevier Performance Evaluation Journal, vol. 42, no. 2-3, pp. 129-147, October 2000.

[44] Chadi Barakat, Eitan Altman, Walid Dabbous, "On TCP Performance in a Heterogeneous Network : A Survey", in IEEE Communication Magazine, vol. 38, no. 1, pp. 40-46, January 2000. A more detailed version: INRIA Research Report RR-3737, July 1999.

Refereed Conference and Workshop Papers

[45] Naomi Kirimi, Chadi Barakat, Yassine Hadjadj-Aoul, "Passive network monitoring and troubleshooting from within the browser: a data-driven approach", in proceedings of the 20th International Wireless Communications & Mobile Computing Conference (IWCMC), Multimedia Symposium, Cyprus, May 2024.

[46] Bernard Tamba Sandouno, Chadi Barakat, Thierry Turletti, Walid Dabbous, "Optimizing Ray Tracing Techniques for Generating Large-Scale 3D Radio Frequency Maps", in proceedings of the 25th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), Perth, Australia, June 2024.

[47] Raza Ul Mustafa, Chadi Barakat, Christian Esteve Rothenberg, "YouTube goes 5G: QoE Benchmarking and ML-based Stall Prediction", in proceedings of the IEEE Wireless Communications and Networking Conference (WCNC), Dubai, UAE, April 2024.

[48] Houssam ElBouanani, Chadi Barakat, Walid Dabbous, Thierry Turletti, "Troubleshooting Distributed Network Emulation", in proceedings of the 26th Conference on Innovation in Clouds, Internet and Networks (ICIN), Paris, France, March 2023.

[49] Houssam ElBouanani, Chadi Barakat, Walid Dabbous, Thierry Turletti, "Delay-based Fidelity Monitoring of Distributed Network Emulation", in proceedings of IEEE COMSNETS Workshop on Testbeds for Advanced Systems Implementation and Research (TASIR), Bangalore, India, January 2023.

[50] Bernard Tamba Sandouno, Yamen Alsaba, Chadi Barakat, Walid Dabbous, Thierry Turletti, "A novel approach to mobile outdoor QoS map generation", in proceedings of the IEEE Wireless Communications and Networking Conference (WCNC), Glasgow, Scotland, UK, March 2023.

[51] Bernard Tamba Sandouno, Yamen Alsaba, Chadi Barakat, Walid Dabbous, Thierry Turletti, "Site-specific ray generation for accurate estimation of signal power", in proceedings of the 25th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM), Montreal, Canada, October 2022.

[52] Imane Taibi, Yassine Hadjadj-Aoul, Chadi Barakat, "Leveraging Web browsing performance data for Network monitoring: A data-driven approach", in proceedings of IEEE Globecom, Rio, Brazil, December 2022.

[53] Othmane Belmoukadam, Chadi Barakat, "QoE-Driven Cache Placement for Adaptive Video Streaming: Minding the Viewport", in proceedings of the IEEE International Mediterranean Conference on Communications and Networking (MeditCom), Athens, Greece, September 2021.

[54] Houssam ElBouanani, Chadi Barakat, Walid Dabbous, Thierry Turletti, "Passive Delay Measurement for Fidelity Monitoring of Distributed Network Emulation", in proceedings of the 19th Mediterranean Communication and Computer Networking Conference (MedComNet), Online Conference, June 2021.

[55] Giulio Grassi, Renata Teixeira, Chadi Barakat, Mark Crovella, "Leveraging Website Popularity Differences to Identify Performance Anomalies", in proceedings of IEEE INFOCOM, May 2021.

[56] Othmane Belmoukadam, Chadi Barakat, "From Encrypted Video Traces to Viewport Classification", in proceedings of the 16th International Conference on Network and Service Management (CNSM), Virtual Conference, November 2020. **Best paper.**

[57] Othmane Belmoukadam, Muhammad Jawad Khokhar, Chadi Barakat, "On excess bandwidth usage of video streaming: when video resolution mismatches browser viewport", in proceedings of the 11th IEEE International Conference on Networks of the Future (NoF 2020), Bordeaux, France, October 2020.

[58] Imane Taibi, Yassine Hadjadj-Aoul, Chadi Barakat, "Data Driven Network Performance Inference From Within The Browser", in proceedings of the 12th IEEE Workshop on Performance Evaluation of Communications in Distributed Systems and Web based Service Architectures (PEDISWESA), Rennes, July 2020.

[59] Imane Taibi, Yassine Hadjadj-Aoul, Chadi Barakat, "When Deep Learning meets Web Measurements to infer Network Performance", in proceedings of the IEEE 17th Annual Consumer Communications & Networking Conference (CCNC), Las Vegas, January 2020.

[60] Othmane Belmoukadam, Muhammad Jawad Khokhar, Chadi Barakat, "On Accounting for Screen Resolution in Adaptive Video Streaming: A QoE-Driven Bandwidth Sharing Framework", in proceedings of the 15th International Conference on Network and Service Management (CNSM), Halifax, Canada, October 2019.

[61] Muhammad Jawad Khokhar, Thibaut Ehlinger, Chadi Barakat, "From Network Traffic Measurements to QoE for Internet Video", in proceedings of IFIP Networking, Warsaw, Poland, May 2019.

[62] Othmane Belmoukadam, Thierry Spetebroot, Chadi Barakat, "ACQUA: A user friendly platform for lightweight network monitoring and QoE forecasting", in proceedings of the 3rd International Workshop on QoE Management, Paris, February 2019.

[63] Karyna Gogunska, Chadi Barakat, Guillaume Urvoy-Keller, Dino Lopez Pacheco, "On the Cost of Measuring Traffic in a Virtualized Environment", in proceedings of IEEE CloudNet, Tokyo, October 2018. **Best student paper.**

[64] Muhammad Khokhar, Thierry Spetebroot, Chadi Barakat, "A Methodology for Performance Benchmarking of Mobile Networks for Internet Video Streaming", in proceedings of the 21st ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM), Montreal, Canada, October 2018.

[65] Luigi Vigneri, Thrasyvoulos Spyropoulos, Chadi Barakat, "A Two-Step Chunk-Based Algorithm for Offloading Streaming Traffic through a Vehicular Cloud", in proceedings of the

IEEE 19th International Workshop on Signal Processing Advances in Wireless Communications (SPAWC), Greece, June 2018.

[66] Muhammad Jawad Khokhar, Thierry Spetebroot, Chadi Barakat, "An Online Sampling Approach for Controlled Experimentation and QoE Modeling", in proceedings of IEEE ICC, Kansas City, May 2018.

[67] Luigi Vigneri, Thrasyvoulos Spyropoulos, Chadi Barakat, "Quality of Experience-Aware Mobile Edge Caching through a Vehicular Cloud", in proceedings of the 20th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM), Miami, USA, November 2017.

[68] Luigi Vigneri, Salvatore Pecoraro, Thrasyvoulos Spyropoulos, Chadi Barakat, "Per-Chunk Caching for Video Streaming from a Vehicular Cloud", in proceedings of ACM MobiCom Workshop on Challenged Networks (CHANTS), Utah, USA, October 2017.

[69] Muhammad Jawad Khokhar, Nawfal Abbasi Saber, Thierry Spetebroot, Chadi Barakat, "On active sampling of controlled experiments for QoE modeling", in proceedings of ACM SIGCOMM Workshop on QoE-based Analysis and Management of Data Communication Networks (Internet-QoE), Los Angeles, August 2017.

[70] Luigi Vigneri, Thrasyvoulos Spyropoulos, Chadi Barakat, "Streaming Content from a Vehicular Cloud", in proceedings of ACM MobiCom Workshop on Challenged Networks (CHANTS), New York, October 2016.

[71] Riccardo Ravaioli, Guillaume Urvoy-Keller, Chadi Barakat, "Testing for Traffic Differentiation with ChkDiff: The Downstream Case", in proceedings of ITC-28, Wurzburg, Germany, September 2016.

[72] Luigi Vigneri, Thrasyvoulos Spyropoulos, Chadi Barakat, "Storage on Wheels: Offloading Popular Contents Through a Vehicular Cloud", in proceedings of the IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), Coimbra, Portugal, June 2016.

[73] Thierry Spetebroot, Salim Afra, Nicolas Aguilera, Damien Saucez, Chadi Barakat, "From network-level measurements to expected Quality of Experience: the Skype use case", in proceedings of the IEEE International Workshop on Measurement and Networking (M&N), Coimbra, Portugal, October 2015.

[74] Riccardo Ravaioli, Guillaume Urvoy-Keller, Chadi Barakat, "Towards a General Solution for Detecting Traffic Differentiation At the Internet Access", in proceedings of ITC-27, Ghent, Belgium, September 2015.

[75] Mahoumd El Chamie, Chadi Barakat, Giovanni Neglia, "Geographically Fair In-Network Caching for Mobile Data Offloading", in proceedings of IFIP Networking conference, Toulouse, May 2015.

[76] Riccardo Ravaioli, Guillaume Urvoy-Keller, Chadi Barakat, "Characterizing ICMP Rate Limitation on Routers", in proceedings of IEEE ICC, London, June 2015.

[77] Xuan-Nam Nguyen, Damien Saucez, Chadi Barakat, Thierry Turletti, "OFFICER: A general Optimization Framework for OpenFlow Rule Allocation and Endpoint Policy Enforcement", in proceedings of IEEE INFOCOM, Hong Kong, April 2015.

[78] Xuan-Nam Nguyen, Damien Saucez, Chadi Barakat, Thierry Turletti, "Optimizing rules placement in OpenFlow networks: trading routing for better efficiency", in proceedings of ACM SIGCOMM HotSDN Workshop, Chicago, August 2014.

[79] Damien Saucez, Ilaria Cianci, Luigi Alfredo Grieco, Chadi Barakat, "When AIMD meets ICN: a bandwidth sharing perspective", in proceedings of IFIP Networking, Norway, June 2014.

[80] Francisco Neves dos Santos, Benjamin Ertl, Chadi Barakat, Thrasyvoulos Spyropoulos, Thierry Turletti, "CEDO: Content-Centric Dissemination Algorithm for Delay-Tolerant Networks", in proceedings of the 16th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM), Barcelona, November 2013.

[81] Damien Saucez, Luigi Alfredo Grieco, Chadi Barakat, "AIMD and CCN: past and novel acronyms working together in the Future Internet", in proceedings of ACM CoNEXT Capacity Sharing Workshop (CSWS), Nice, December 2012.

[82] Mohamad Jaber, Roberto Cascella, Chadi Barakat, "Using host profiling to refine statistical application identification", in proceedings of IEEE INFOCOM Mini-Conference, Orlando, FL, March 2012.

[83] Ashwin Rao, Yeon-sup Lim, Chadi Barakat, Arnaud Legout, Don Towsley, Walid Dabbous, "Network Characteristics of Video Streaming Traffic", in proceedings of ACM CoNext, Tokyo, Japan, December 2011.

[84] Amir Krifa, Chadi Barakat, Thrasyvoulos Spyropoulos, "MobiTrade: Trading Content in Disruption Tolerant Networks", in proceedings of ACM Mobicom Workshop on Challenged Networks (CHANTS), Las Vegas, September 2011.

[85] Imed Lassoued, Chadi Barakat, "A Multi-task Adaptive Monitoring System Combining Different Sampling Primitives", in proceedings of the 23rd International Teletraffic Congress (ITC), San Francisco, September 2011.

[86] Rosa Vilardi, Luigi Alfredo Grieco, Gennaro Boggia, Chadi Barakat, "Adaptation of Real-time Temporal Resolution for Bitrate Estimates in IPFIX Systems", in proceedings of the 2nd International Workshop on TRaffic Analysis and Classification TRAC 2011, Istanbul, July 2011.

[87] Mohamad Jaber, Roberto Cascella, Chadi Barakat, "'Can we trust the inter-packet time for traffic classification?", in proceedings of IEEE International Conference on Communications (ICC), Kyoto, Japan, June 2011.

[88] Imed Lassoued, Amir Krifa, Chadi Barakat, Konstantin Avrachenkov, "Network-wide monitoring through self-configuring adaptive system", in proceedings of IEEE INFOCOM, Shanghai, China, April 2011.

[89] Imed Lassoued, Chadi Barakat, "Adaptive Multi-Task Monitoring System Based on Overhead Prediction", in proceedings of the ACM CoNext Workshop on Programmable Routers for Extensible Services of Tomorrow (PRESTO), Philadelphia (PA), November 2010.

[90] Roberto Cascella, Chadi Barakat, "Estimating the access link quality by active measurements", in proceedings of the 22nd International Teletraffic Congress (ITC 22), Amsterdam, Netherlands, September 2010.

[91] Amir Krifa, Imed Lassoued, Chadi Barakat, "Emulation Platform for Network Wide Traffic Sampling and Monitoring", in proceedings of the 1st International Workshop on TRaffic Analysis and Classification (TRAC), Caen, France, June 2010.

[92] Mohamad Jaber, Cao-Cuong Ngo, Chadi Barakat, "A view from inside a distributed Internet coordinate system", in proceedings of the Global Internet Symposium at IEEE Infocom, San Diego, March 2010.

[93] Karim Sbai, Emna Salhi, Chadi Barakat, "P2P content sharing in spontaneous multi-hop wireless networks", in proceedings of the IEEE COMSNETS conference, Bengalore, January 2010.

[94] Luigi Alfredo Grieco, Chadi Barakat, "A Frequency Domain Model to Predict the Estimation Accuracy of Packet Sampling", in proceedings of the IEEE Infocom MiniConference, San Diego, CA, March 2010.

[95] Karim SBAI, Chadi Barakat, "Revisiting content sharing in wireless ad hoc networks", in proceedings of the fourth workshop on self-organizing systems (IWSOS), Zurich, December 2009.

[96] Karim Sbai, Emna Salhi, Chadi Barakat, "A membership management protocol for mobile P2P networks", in proceedings of the ACM Mobility Conference, Nice, September 2009.

[97] Luigi Alfredo Grieco, Chadi Barakat, "An Analysis of Packet Sampling in the Frequency Domain", in proceedings of the ACM Internet Measurement Conference (IMC), Chicago, November 2009.

[98] Mohamed Ali Kaafar, Laurent Mathy, Chadi Barakat, Kave Salamatian, Thierry Turletti, Walid Dabbous, "Certified Internet Coordinates", in proceedings of IEEE ICCCN conference, San Francisco, August 2009.

[99] Anwar Al-Hamra, Nikitas Liogkas, Arnaud Legout, Chadi Barakat, "Swarming Overlay Construction Strategies", in proceedings of IEEE ICCCN conference, San Francisco, August 2009.

[100] Emna Salhi, Karim Sbai, Chadi Barakat, "Neighborhood selection in mobile P2P networks", in proceedings of the 11th Algotel conference, Carry-Le-Rouet, France, June 2009.

[101] Mohamad Jaber, Chadi Barakat, "Enhancing Application Identification By Means Of Sequential Testing", in proceedings of IFIP/TC6 Networking Conference, Aechan, Germany, May 2009.

[102] Karim Sbai, Chadi Barakat, Jaeyoung Choi, Anwar Al Hamra, Thierry Turletti, "Adapting BitTorrent to wireless ad hoc networks", in proceedings of the AdHoc-Now Networks and Wireless conference, Sophia Antipolis, September 2008.

[103] Amir Krifa, Chadi Barakat, Thrasyvoulos Spyropoulos, "An Optimal Joint Scheduling and Drop Policy for Delay Tolerant Networks", in proceedings of the WoWMoM Workshop on Autonomic and Opportunistic Communications, Newport Beach (CA), June 2008.

[104] Amir Krifa, Chadi Barakat, Thrasyvoulos Spyropoulos, "Optimal Buffer Management Policies for Delay Tolerant Networks", in proceedings of the 5th IEEE Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON 2008), San Francisco, June 2008. **Best paper.**

[105] Mohamed Ali Kaafar, Laurent Mathy, Chadi Barakat, Kave Salamatian, Thierry Turletti, Walid Dabbous, "Securing Internet Coordinate Embedding Systems", in proceedings of ACM SIGCOMM, Kyoto, Japan, August 2007.

[106] Niels Moller, Chadi Barakat, Konstantin Avrachenkov, Eitan Altman, "Inter-protocol fairness between TCP New Reno and TCP Westwood+", in proceedings of NGI 2007 (Conference on Next Generation Internet Networks), Trondheim, Norway, May 2007.

[107] Karim Sbai, Chadi Barakat, "Transport Information Collection Protocol with clustering of information sources", in proceedings of NTMS 2007 (Conference on New Technologies, Mobility and Security), Paris, May 2007.

[108] G. Boggia, P. Camarda, A. D'Alconzo, L.A. Grieco, S. Mascolo, E. Altman, C. Barakat, "Modeling the AIADD Paradigm in Networks with Variable Delays", in proceedings of CoNext, Lisboa, Portugal, December 2006.

[109] Gion Reto Cantieni, Gianluca Iannaccone, Chadi Barakat, Christophe Diot, Patrick Thiran, "Reformulating the monitor placement problem: Optimal Network-wide Sampling", in proceedings of CoNext, Lisboa, Portugal, December 2006.

[110] Marc Liberatore, Brian Levine, Chadi Barakat, "Maximizing Transfer Opportunities in DTN", in proceedings of CoNext, Lisboa, Portugal, December 2006.

[111] Anwar Al Hamra, Chadi Barakat, Thierry Turletti, "Network Coding for Wireless Mesh Networks: A Case Study", in proceedings of the IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), Buffalo-NY, June 2006.

[112] E. Altman, C. Barakat, S. Mascolo, N. Moller, J. Sun, "Analysis of TCP Westwood+ in high speed networks", in proceedings of PFLDnet'06: workshop on Protocols for Fast Long-Distance networks, Nara, Japan, February 2006.

[113] Mohammad Malli, Chadi Barakat, Walid Dabbous, "Application-level versus Network-level Proximity", in proceedings of the AINTEC conference, Bangkok, December 2005.

[114] Chadi Barakat, Gianluca Iannacconne, Christophe Diot, "Ranking flows from sampled traffic", in proceedings of CoNEXT, Toulouse, October 2005.

[115] Hossein Manshaei, Gion Reto Cantieni, Chadi Barakat, Thierry Turletti, "Performance Analysis of the IEEE 802.11 MAC and Physical Layer Protocol", in proceedings of the IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), Taormina, June 2005.

[116] Imad Aad, Qiang Ni, Chadi Barakat, Thierry Turletti, "Enhancing IEEE 802.11 MAC in Congested Environments", in proceedings of the Applications and Services in Wireless Networks workshop (AWSN), Boston, August 2004.

[117] Sara Alouf, Eitan Altman, Chadi Barakat, Philippe Nain, "On the dynamic estimation of multicast group sizes", in proceedings of the International Symposium on Mathematical Theory of Networks and Systems (MTNS), Leuven, Belgium, July 2004.

[118] Fatma Louati, Chadi Barakat, Walid Dabbous, "Adaptive Class-based Queuing for handling Two-Way traffic in Asymmetric Networks", in proceedings of the conference on High Speed Networks and Multimedia Communications (HSNMC), Toulouse, France, July 2004.

[119] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, Arzad-Alam Kherani, Balakrishna Prabhu, "Analysis of Scalable TCP", in proceedings of the conference on High Speed Networks and Multimedia Communications (HSNMC), Toulouse, France, July 2004.

[120] Mohammad Malli, Qiang Ni, Thierry Turletti, Chadi Barakat, "Adaptive Fair Channel Allocation for QoS Enhancement in IEEE 802.11 Wireless LANs", in proceedings of IEEE ICC, Paris, June 2004.

[121] Raja Abdelmoumen, Chadi Barakat, "Analysis of TCP latency over wireless links supporting FEC/ARQ-SR for error recovery", in proceedings of IEEE International Conference on Communications (ICC), Paris, June 2004.

[122] Hung Nguyen, Patrick Thiran, Chadi Barakat, "On the correlation of TCP traffic in backbone networks", in proceedings of the IEEE International Symposium on Circuits and Systems (ISCAS), Vancouver, Canada, May 2004.

[123] Eitan Altman, Chadi Barakat, Victor M. Ramos R., "Analysis of AIMD protocols over paths with variable delay", in proceedings of IEEE INFOCOM, Hong Kong, March 2004.

[124] Qiang Ni, Imad Aad, Chadi Barakat, Thierry Turletti, "Modeling and Analysis of Slow CW Decrease for IEEE 802.11 WLAN", in proceedings of the International Symposium on Personnel, Indoor and Mobile Radio Communications (PIMRC), Beijing, China, September 2003.

[125] Urtzi Ayesta, Kostya Avranchenkov, Eitan Altman, Chadi Barakat, Parijat Dube, "Multi-level Approach for Modeling Short TCP Sessions", in proceedings of ITC-18, Berlin, September 2003.

[126] Victor Ramos, Chadi Barakat, Eitan Altman, "A Moving Average Predictor for Playout Delay Control in VoIP", in proceedings of the Eleventh International Workshop on Quality of Service (IWQoS 2003), Monterey, CA, June 2003.

[127] Sara Alouf, Eitan Altman, Chadi Barakat, Philippe Nain, "Estimating Membership in a Multicast Session", in proceedings of ACM SIGMETRICS, San Diego, CA, June 2003.

[128] Alaeddine Al Fawal, Chadi Barakat, "Simulation-based study of link-level hybrid FEC/ARQ-SR for wireless links and long-lived TCP traffic", in proceedings of WiOpt'03: Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks, Sophia Antipolis, France, March 2003.

[129] Rares Serban, Chadi Barakat, Walid Dabbous, "Enhancing CBQ with a Dynamic Bandwidth Allocation Module", in proceedings of Setit 2003, Tunisia, March 2003.

[130] Urtzi Ayesta, Kostya Avranchenkov, Eitan Altman, Chadi Barakat, Parijat Dube, "Multi-level Approach for Modeling TCP/IP", in proceedings of PFLDnet'03: workshop on Protocols for Fast Long-Distance networks, CERN-Geneva, Switzerland, February 2003.

[131] Rares Serban, Chadi Barakat, Walid Dabbous, "Dynamic Resource Allocation in Core Routers of a Diffserv Network", in proceedings of the Asian Computing Science Conference (ASIAN), Hanoi, Vietnam, December 2002.

[132] Chadi Barakat, Patrick Thiran, Gianluca Iannaccone, Christophe Diot, Philippe Owezarski, "A flow-based model for Internet backbone traffic", in proceedings of ACM SIGCOMM Internet Measurement Workshop, Marseille, France, November 2002.

[133] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, "TCP network calculus: The case of large bandwidth-delay product", in proceedings of IEEE INFOCOM, NY, June 2002.

[134] Kostya Avratchenkov, Urtzi Ayesta , Eitan Altman, Philippe Nain, Chadi Barakat, "The effect of router buffer size on the TCP performance", in proceedings of LONIIS workshop on Telecommunication Networks and Teletraffic Theory, St. Petersburg, Russia, January 2002.

[135] Eitan Altman, Chadi Barakat, Victor Ramos, "On the utility of FEC mechanisms for audio applications", in proceedings of the international workshop on Quality of future Internet Services (QofIS), Coimbra, Portugal, September 2001.

[136] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, Rudesindo Nunez Queija, "TCP modeling in the presence of nonlinear window growth", in proceedings of ITC-17, Salvador da Bahia, Brazil, September 2001.

[137] Chadi Barakat, Eitan Altman, "Bandwidth Tradeoff between TCP and Link-Level FEC", in proceedings of IEEE International Conference on Networking, Colmar, France, July 2001.

[138] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, Rudesindo Nunez Queija, "State-dependent M/G/1 Type Queueing Analysis for Congestion Control in Data Networks", in proceedings of IEEE INFOCOM, Anchorage, Alaska, April 2001. A more detailed version: CWI report PNA-R0005, July 2000.

[139] Eitan Altman, Chadi Barakat, Victor Ramos, "Queueing Analysis of Simple FEC Schemes for IP Telephony", in proceedings of IEEE INFOCOM, Anchorage, Alaska, April 2001.

[140] Eitan Altman, Chadi Barakat, Emanuel Laborde, Patrick Brown, Denis Collange, "Fairness Analysis of TCP/IP", in proceedings of IEEE Conference on Decision and Control, Sydney, Australia, December 2000.

[141] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, Parijat Dube, "TCP over a Multi-State Markovian Path", in proceedings of the international conference on the Performance and QoS of Next Generation Networking (P&QNet), Nagoya, Japan, November 2000.

[142] Chadi Barakat, Eitan Altman, "On ACK Filtering on a Slow Reverse Channel", in proceedings of the first international workshop on Quality of future Internet services, Berlin, Germany, September 2000. **Best PhD Student Paper.**

[143] Chadi Barakat, Eitan Altman, "A Markovian Model for TCP Analysis in a Differentiated Services Network", in proceedings of the first international workshop on Quality of future Internet services, Berlin, Germany, September 2000.

[144] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, "A Stochastic Model of TCP/IP with Stationary Random Losses", in proceedings of ACM SIGCOMM, Stockholm, Sweden, August 2000.

[145] Eitan Altman, Kostya Avrachenkov, Chadi Barakat, " TCP in presence of bursty losses", in proceedings of ACM SIGMETRICS, Santa Clara, California, June 2000.

[146] Chadi Barakat, Eitan Altman, "Performance of Short TCP Transfers", in proceedings of Networking 2000 (Performance of Communication Networks), Paris, May 2000.

[147] Chadi Barakat, Eitan Altman, "Impact of Network Buffers on TCP Start-Up", in proceedings of IEEE Middle East Workshop on Networking, Beirut, Lebanon, November 1999.

[148] Chadi Barakat, Eitan Altman, "Analysis of TCP with Several Bottleneck Nodes", in proceedings of IEEE GLOBECOM (Global Internet Symposium), Rio, Brazil, December 1999. A more detailed version: INRIA Research Report RR-3620, February 1999.

[149] Chadi Barakat, Nesrine Chaher, Walid Dabbous, Eitan Altman, "Improving TCP/IP over Geostationary Satellite Links", in proceedings of IEEE GLOBECOM (General Conference), Rio, Brazil, December 1999. A more detailed version: INRIA Research Report RR-3573, December 1998.

[150] Chadi Barakat, Jean-Louis Rougier, "Optimization of Hierarchical Multicast Trees in ATM Networks", in proceedings of IFIP ATM'98, Ilkley, UK, July 1998.

Extended Abstracts, Posters, Demos and Invited Papers

[151] Raza UI Mustafa, Chadi Barakat, Christian Esteve Rothenberg, "YouTube goes 5G: Benchmarking YouTube in 4G vs 5G Through Open Datasets", demo, in proceedings of IEEE Globecom, Rio, Brazil, December 2022.

[152] Houssam ElBouanani, Chadi Barakat, Guillaume Urvoy-Keller, Dino Lopez-Pacheco, "Collaborative Traffic Measurement in Virtualized Data Center Networks", short paper, in proceedings of IEEE International Conference on Cloud Networking (CloudNet 2019), Coimbra, Portugal, November 2019.

[153] Karyna Gogunska, Chadi Barakat, Guillaume Urvoy-Keller, "Tuning optimal traffic measurement parameters in virtual networks with machine learning", short paper, in proceedings of IEEE International Conference on Cloud Networking (CloudNet 2019), Coimbra, Portugal, November 2019.

[154] Luigi Vigneri, Thrasyvoulos Spyropoulos, Chadi Barakat, "Offloading Mobile Traffic Using a Vehicular Cloud", invited to the ACM Sigmetrics Workshop on Future challenges in User-Centric Networks, Juan Les Pins, France, June 2016.

[155] Chadi Barakat, Anshuman Kalla, Damien Saucez, Thierry Turletti, "Minimizing Bandwidth on Peering Links with Deflection in Named Data Networking", invited to the International Conference on Communications and Information Technology (ICCIT), Beirut, June 2013.

[156] Riccardo Ravaioli, Chadi Barakat, Guillaume Urvoy-Keller, "Checking Traffic Differentiation at Internet Access", short paper, in proceedings of ACM CoNEXT Student Workshop, Nice, December 2012.

[157] Amir Krifa, Marc Mendonca, Rao Naveed Bin Rais, Chadi Barakat, Thierry Turletti, Katia Obraczka, "Efficient Content Dissemination in Heterogeneous Networks Prone to Episodic Connectivity", demo, in proceedings of ACM SIGCOMM, Toronto, Canada, August 2011.

[158] Mohamad Jaber, Roberto Cascella, Chadi Barakat, "Boosting statistical application identification by flow correlation", invited to EuroNF-TCCFI (International Workshop on Traffic and Congestion Control for the Future Internet), Greece, April 2011.

[159] Amir Krifa, Karim Sbai, Chadi Barakat, Thierry Turletti, "A standalone content sharing application for spontaneous communities of mobile handhelds", demo, in proceedings of the ACM SIGCOMM MobiHeld Workshop, Barcelona, Aug 2009.

[160] Amir Krifa, Karim Sbai, Chadi Barakat, Thierry Turletti, "BitHoc: A content sharing application for Wireless Ad hoc Networks", demo, in proceedings of the IEEE Percom conference, Galveston, Texas, March 2009.

[161] Eitan Altman, Konstantin Avrachenkov, Chadi Barakat, Kartikeya Chandrayana, "Multilevel approach for the modeling of large TCP/IP networks", invited to the Symposium on Recent Advances for Modeling and Simulation Tools for Communications Networks and Services, organized by COST 285 in Surrey, UK, 2007.

[162] Gion Reto Cantieni, Gianluca Iannaccone, Chadi Barakat, Christophe Diot, Patrick Thiran, "Reformulating the monitor placement problem: Optimal Network-wide Sampling", invited to the Conference on Information Science (CISS), Princeton NJ, March 2006.

[163] Chadi Barakat, Gion Reto Cantieni, "A distance-aware model of 802.11 MAC layer", extended abstract, in proceedings of WiOpt workshop: Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks, Cambridge (UK), March 2004.

[164] Chadi Barakat, Patrick Thiran, Gianluca Iannaccone, Christophe Diot, "On Internet backbone traffic modeling", extended abstract, in proceedings of ACM SIGMETRICS, Marina Del Rey, CA, June 2002.

[165] Chadi Barakat, Eitan Altman, "Analysis of the Phenomenon of Several Slow Start Phases in TCP", extended abstract, in proceedings of ACM SIGMETRICS, Santa Clara, California, June 2000. A more detailed version: INRIA Research Report RR-3574, December 1998.

Thesis

[166] Chadi Barakat, "Solutions efficaces pour la métrologie de l'Internet", Habilitation à Diriger des Recherches en Informatique, University of Nice - Sophia Antipolis, January 2009.

[167] Chadi Barakat, "Performance Evaluation of TCP Congestion Control", PhD thesis, University of Nice - Sophia Antipolis, France, April 2001.

[168] Chadi Barakat, "Le Routage Multicast Hiérarchique", DEA Thesis, ESSI, University of Nice Sophia-Antipolis, France, June 1998.

[169] Chadi Barakat, Rani Makki, Hayan Mahfouz, "Design and Implementation of a Video Tracker", Electrical and Electronics Engineering Degree, Lebanese University, Beirut, Lebanon, July 1997.

Patents

[170] Takatani Yukihiro, Nonaka Naomichi, Barakat Chadi, "Information Collecting Protocol", Application Number EP20030290255, Publication Number EP1443704 (A1), Publication Date 2004-08-04.