

Visiting Researcher

University of California, Riverside

July 3rd, 2008 - September 3rd, 2008

Research on Wireless Networking, especially network coding system design, GNU radio set-up.

Researcher in Wireless Networking

CERTH (Center for Research and Technology, Hellas)

January 15, 2008 - January 30 2009

Set-up and deployment of a large-scale wireless testbed. Research on wireless networking, especially network coding, social networking, channel allocation for mesh networks and testbed federations. Participation in EU projects: N-Crave, OPNEX, WIP, ONELAB2 (collaboration with Dr. L. Tassiulas).

Research Intern: Wireless Network Engineer

Intel Research, Cambridge, UK

July 3rd - December 1st, 2006

Set-up and deployment of a large-scale wireless testbed, Research on Self-organized Wireless Access Networks, Implementation and Measurements related to power control, frequency selection and user association. Participation in SWAN project (collaboration with Dr. K. Papagiannaki).

Research Intern: Software Engineer

Nokia R&D - Boston Wireless Platforms

June 13th - September 2nd, 2005

Performance evaluation of the Nokia S40 Mobile Phone Internet Browser (collaboration with S. Keller and K. Kalabokis).

Research Assistant

University of California Riverside

January 2004 – December 2007

Advisors: Dr. S. V. Krishnamurthy and Dr. M. Faloutsos

Teaching Assistant

University of California Riverside

Fall 2003

Teaching: CS164 - Computer Networks

Consultant for Internet Training and Company Support

Technical University of Crete, Greece

March 2003 – July 2003

Member of the “Go-online” action line of the operational programs “Information Society” and “Competitiveness”.

Research Assistant

Technical University of Crete, Greece

January 2002 – July 2003

Research on 802.11 WLANs: Efficient joint video-conference and data support techniques. Collaboration with Dr. M. Paterakis

Research Intern: Cellular Network Engineer

Cosmote SA, Athens, Greece

June 2001 – August 2001

Radio-Network Optimization, Network topology planning, Measurement Analysis, Frequency reuse, BTS set-up and maintenance.

PUBLICATIONS

Journals and Magazines

- I. Broustis, K. Pelechrinis, D. Syrivelis, S. V. Krishnamurthy and L. Tassiulas. *A Software Framework for Alleviating the Effects of MAC-aware Jamming Attacks in Wireless Mesh Networks*. Under submission.
- I. Broustis, A. Vlavianos, P. Krishnamurthy and S. V. Krishnamurthy. *MAC Layer Throughput Estimation in Impulse-Radio UWB Networks*. Under submission.
- G. Athanasiou, I. Broustis, T. Korakis and L. Tassiulas, *Load-Aware Channel Selection in 802.11 WLANs*, Under submission.

- I. Broustis, K. Papagiannaki, S. V. Krishnamurthy, M. Faloutsos and V. Mhatre. *Measurement Driven Guidelines for 802.11 WLAN Design*. IEEE/ACM Transactions on Networking (to appear).
- I. Broustis and M. Faloutsos. *Routing in Vehicular Networks: Feasibility, Modelling and Security*. International Journal of Vehicular Technology, Vol. 08, ID. 267513, March 2008.
- I. Broustis, S. V. Krishnamurthy, M. Faloutsos, M. Molle and J. Foerster. *Multi-band Media Access Control in Impulse-Based UWB Ad hoc Networks*. IEEE Transactions on Mobile Computing, Vol. 6, No. 4, pp. 351-366, April 2007.
- I. Broustis, M. Molle, S. V. Krishnamurthy, M. Faloutsos and J. Foerster. *A New Binary Conflict Resolution based MAC protocol for Impulse-Based UWB Ad hoc Networks*. Journal of Wireless Communications and Mobile Computing, Special Issue on Wireless Ad hoc Networks: Technologies and Challenges, Vol. 6, Issue 7, pp. 933-949, November 2006.

Conferences

- I. Broustis, K. Pelechrinis, S. Syrivelis, S. V. Krishnamurthy and L. Tassiulas. *Quantifying the Overhead due to Routing Probes in Multi-Rate WMNs*. Under submission.
- M. Arslan, K. Pelechrinis, I. Broustis, S. Krishnamurthy, P. Krishnamurthy and P. Mohapatra. *Route Magnet Detection in Wireless Networks*. Under submission.
- Z. Feng, J. Ning, I. Broustis, K. Pelechrinis, S. V. Krishnamurthy and M. Faloutsos. *A Lightweight Countermeasure for Packet Replay Based Denial of Service in Wireless Networks*. Under submission.
- T. S. Kim, S. Vural, I. Broustis, D. Syrivelis, S. V. Krishnamurthy and T. La Porta. *A Framework for Joint Network Coding and Transmission Rate Control in Wireless Networks*. Under submission.
- E. Gelal, K. Pelechrinis, I. Broustis, S. Krishnamurthy, S. Mohammed, A. Chockalingam and S. Kaser. *Capturing Performance Gains Due to Spatial Diversity: Measurements and Models*. Under submission.
- E. Gelal, K. Pelechrinis, T. S. Kim, I. Broustis, S. Krishnamurthy, B. Rao. *Topology Control for Effective Interference Cancellation in Multi-User MIMO Networks*. Under submission.
- K. Pelechrinis, I. Broustis, S. V. Krishnamurthy and C. Gkantsidis. *ARES: An Anti-jamming REinforcement System for 802.11 Networks*. ACM International Conference on Emerging Networking Experiments and Technologies, (CoNEXT), Rome, Italy, December 2009.
- K. Pelechrinis, I. Koutsopoulos, I. Broustis and S. V. Krishnamurthy. *Lightweight Jammer Localization in Wireless Networks: System Design and Implementation*. IEEE Global Communications Conference (GLOBECOM), Hawaii, USA, November 2009 .
- I. Broustis, K. Pelechrinis, D. Syrivelis, S. V. Krishnamurthy and L. Tassiulas. *FIJI: Fighting Implicit Jamming in 802.11 WLANs*. International Conference on Security and Privacy in Communication Networks (SECURECOMM), Athens, Greece, September 2009.
- G. Athanasiou, I. Broustis, T. Korakis and L. Tassiulas. *Routing-Aware Channel Selection in Multi-Radio Mesh Networks*. IEEE International Conference on Communications (ICC), Dresden, Germany, June 2009.
- K. Pelechrinis, I. Broustis, T. Salonidis, S. V. Krishnamurthy and P. Mohapatra. *Design and Deployment Considerations for High Performance MIMO Testbeds*. International Wireless Internet Conference (WICON), Invited, Hawaii, USA, November 2008.
- G. Athanasiou, I. Broustis, T. Korakis and L. Tassiulas. *LAC: A Load-Aware Channel Selection Scheme for 802.11 WLANs*. IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Invited, Cannes, France, September 2008.
- A. Vlavianos, E. Law, I. Broustis, S. V. Krishnamurthy, M. Faloutsos. *Assessing Link Quality in IEEE 802.11 Wireless Networks: Which is the Right Metric?*. IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Invited, Cannes, France, September 2008.

- I. Broustis, A. Vlavianos, P. Krishnamurthy and S. V. Krishnamurthy. *CTU: Capturing Throughput Dependencies in UWB Networks*. IEEE International Conference on Computer Communications (INFOCOM), Phoenix, AZ, USA, April 2008.
- I. Broustis, K. Papagiannaki, S. V. Krishnamurthy, M. Faloutsos and V. Mhatre. *MDG: Measurement Driven Guidelines for 802.11 WLAN Design*. ACM International Conference on Mobile Computing and Networking (MOBICOM), Montreal, Canada, September 2007.
- I. Broustis, J. Eriksson, S. V. Krishnamurthy and M. Faloutsos. *A Blueprint for a Manageable and Affordable Wireless Testbed: Design, Pitfalls and Lessons Learned*. IEEE International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities (TridentCom), Orlando, FL, USA, May 2007.
- I. Broustis, J. Eriksson, S. V. Krishnamurthy and M. Faloutsos. *Implications of Power Control in Wireless Networks: A Quantitative Study*. Passive and Active Measurement Conference (PAM), Louvain-la-neuve, Belgium, April 2007.
- I. Broustis, A. Vlavianos and S. V. Krishnamurthy. *On the MAC Layer Performance of Time-Hopped UWB Ad Hoc Networks*. IEEE International Conference on Computer Communications and Networks (ICCCN), Arlington, VA, USA, October 2006.
- I. Broustis, G. Jakllari, T. Repantis and M. Molle. *A Comprehensive Comparison of Routing Protocols for Large-Scale Wireless MANETs*. IEEE International Workshop on Wireless Ad Hoc and Sensor Networks (in conjunction with SECON), NY, USA, June 2006.
- I. Broustis, M. Faloutsos and S. V. Krishnamurthy. *Overcoming the Challenge of Security in a Mobile Environment*. IEEE International Performance, Computing, and Communications Conference (IPCCC), Phoenix, AZ, USA, April 2006.
- I. Broustis, S. V. Krishnamurthy, M. Faloutsos, M. Molle and J. Foerster. *A Multiband MAC Protocol for Impulse-Based UWB Ad Hoc Networks*. IEEE Communications Society Conference on Sensor and Ad Hoc Communications and Networks (SECON), Santa Clara, CA, USA, September 2005 (**Best paper runner up**).
- G. Jakllari, I. Broustis, T. Korakis, S. V. Krishnamurthy and L. Tassiulas. *Handling Asymmetry in Gain, in Directional Antenna Equipped Ad Hoc Networks*. IEEE Personal Indoor and Mobile Radio Communications (PIMRC), Berlin, Germany, September 2005.
- I. Broustis and M. Paterakis. *On the Feasibility of Integrated MPEG Teleconference and Data Transmission over IEEE 802.11 WLANs*. IFIP-TC6 Networking Conference, Athens, Greece, May 2004.

Technical Reports

- K. Pelechrinis, I. Broustis, S. V. Krishnamurthy and C. Gkantsidis. *A Measurement Driven 802.11 Anti-Jamming System*. Technical Report, arXiv No. 0906.3038, June 2009.
- I. Broustis and M. Faloutsos. *Routing in Vehicular Networks: Feasibility, Security and Modeling Issues*. Technical Report No. UCR-CS-2006-05219, Department of Computer Science and Engineering, University of California, Riverside, 2006.
- I. Broustis and M. Faloutsos. *Overcoming the Challenge of Security in a Mobile Environment*. Technical Report No. UCR-CS-2004-12001, Department of Computer Science and Engineering, University of California, Riverside, December 2004.
- I. Broustis, G. Jakllari, T. Repantis and M. Molle. *A Performance Comparison of Routing Protocols for Large-Scale Wireless Mobile Ad Hoc Networks*. Technical Report No. UCR-CS-2003-12001, Department of Computer Science and Engineering, University of California, Riverside, December 2003.

PROFESSIONAL
ACTIVITIES

1. TPC member
IEEE WoWMom 2010, ACM Mobicom 2009 Demos, IEEE ICC 2010 CISS, ICST SecureComm/SEWCN 2009, IEEE Globecom/CCNS 2009, IEEE Percom/IQ2S 2009, IEEE Globecom/CISS 2009
2. Paper Reviewing
Journals: IEEE Transactions on Mobile Computing, IEEE Transactions on Vehicular Technology, Springer Wireless Networks, ACM Computer And Communications Review, Elsevier Performance Evaluation, IEEE Network Magazine, ACM Mobile Computing and Communications Review, CEE.
Conferences/Workshops: ACM SIGCOMM, IEEE INFOCOM, ACM MOBICOM, IEEE SECON, IEEE PERCOM, IEEE Broadnets, IEEE PIMRC, IEEE ICCCN, IEEE GLOBECOM, PAM, IEEE WCNC, IEEE WoWMoM, IEEE VTC, IEEE ICT
3. IEEE member since September 2005

COMPUTER -
RELATED SKILLS

- Operating systems
Linux, MAC OS, Windows
- Programming
C, C++, Kernel space development, Network scripting, Android development
- Network Simulators
Scalable Networks QualNet Simulator

SCHOLARSHIPS

- Gerondelis Foundation Scholarship, 2007
- Dean's Fellowship, University of California, Riverside, 2003

PHD THESIS

Cross-Layer Interference Alleviation in Wireless Networks: Measurements, Models and Protocols.
(April 2004 – December 2007)

MSC THESIS

Achieving Efficient Spectrum Usage in Ultra Wide Band Ad Hoc Networks: The Case for a Multiband Approach.
(April 2004 – May 2005)

DIPLOMA
THESIS

Design and Performance Evaluation of a Mechanism, for the Distributed Transmission of MPEG Videoconference Information and Computer Data over IEEE 802.11 WLANs.
(July 2002 – May 2003)

LANGUAGES

English (fluent), Greek (fluent)

REFERENCES

- Srikanth V. Krishnamurthy
Prof. Department of Computer Science and Engineering
University of California, Riverside, CA 92521
Tel: +1 951-827-2348
Web: www.cs.ucr.edu/~krish
E-mail: krish AT cs.ucr.edu
- Michalis Faloutsos
Prof. Department of Computer Science and Engineering
University of California, Riverside, CA 92521
Tel: +1 951-827-2480
Web: www.cs.ucr.edu/~michalis
E-mail: michalis AT cs.ucr.edu

- Leandros Tassiulas
Prof. Department of Computer and Communications Engineering
University of Thessaly, Greece 38221
Tel: +30-24210-74980
Web: www.inf.uth.gr/~leandros
E-mail: leandros AT uth.gr
- Konstantinos Kalabokis
Senior Engineering Manager, Nokia, TP Wireless Platforms
5 Wayside Road, Burlington, MA 01803-4614
Tel: +1 781-993-3938
E-mail: konstantinos.kalabokis AT nokia.com
- Walid Najjar
Prof. Department of Computer Science and Engineering
University of California, Riverside, CA 92521
Tel: +1 951-827-5639
Web: www.cs.ucr.edu/~najjar
E-mail: najjar AT cs.ucr.edu