Shyamnath Gollakota

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32 Vassar St, G934
Cambridge, MA 02139

Research Interests

Computer Networks, particularly wireless networks, networked systems, wireless communications, and network security

Education

Massachusetts Institute of Technology, Cambridge, Massachusetts

2008–2012 Ph.D., Electrical Engineering and Computer Science
Thesis: A Cross-Layer Approach for Improving the Performance and Security of Wireless Networks
Advisor: Dina Katabi

2006–2008 M.S., Electrical Engineering and Computer Science
Thesis: ZigZag Decoding: Combating Hidden Terminals in Wireless Networks
Advisor: Dina Katabi

Indian Institute of Technology, Madras, India

2002–2006 B.Tech., Computer Science and Engineering
Thesis: Modeling TCP Behavior for Multi-Hop Wireless Networks
Advisor: Siva Ram Murthy

Awards

2011	AT&T Best Applied Security Paper Award, Second Place
2011	SIGCOMM Best Paper Award
2008	SIGCOMM Best Paper Award
2008	William A. Martin SM Thesis Award
2006	MIT Presidential Fellowship
2006	IIT Institute Award for Highest GPA in Computer Science
2006	Infosys Award for Best Student at IIT Madras
2003–2006	IIT Institute Merit Prize for Best Academic Performance

Professional Experience

2009–2011	Research Assistant, Advisor: Dina Katabi
2008	Teaching Assistant, 6.02 – Introduction to EECS II
2006–2008	Research Assistant, Advisor: Dina Katabi
2005	Summer Intern, Bell Labs Research, Advisor: Juan Garay

Publications

Conference Publications

2011 Shyamnath Gollakota, Haitham Hassaneih, Ben Ransford, Dina Katabi, and Kevin Fu
They can Hear your Heartbeats: Non-Invasive Security for Implanted Medical Devices
ACM SIGCOMM 2011 **(Best Paper Award)**

2011 Shyamnath Gollakota, Fadel Adib, Dina Katabi, and Srinivasan Seshan
Clearing the RF Smog: Making 802.11 Robust to Cross-Technology Interference
ACM SIGCOMM 2011

2011 Kate Lin, Shyamnath Gollakota, and Dina Katabi
Random Access Heterogeneous MIMO Networks
ACM SIGCOMM 2011

2011 Shyamnath Gollakota, Nabeel Ahmed, Nickolai Zeldovich, and Dina Katabi
Secure In-Band Wireless Pairing
USENIX Security 2011 **(AT&T Best Applied Paper Award, Second Place)**

2011 Shyamnath Gollakota and Dina Katabi
Physical Layer Wireless Security Made Fast and Channel Independent
IEEE INFOCOM 2011

2009 Shyamnath Gollakota, Samuel Perli, and Dina Katabi
Interference Alignment and Cancellation
ACM SIGCOMM 2009

2008 Shyamnath Gollakota and Dina Katabi
ZigZag Decoding: Combating Hidden Terminals in Wireless Networks
ACM SIGCOMM 2008 **(Best Paper Award)**

2007 Sachin Katti, Shyamnath Gollakota, and Dina Katabi
Embracing Wireless Interference: Analog Network Coding
ACM SIGCOMM 2007

2006 Matthias Fitzi, Juan Garay, Shyamnath Gollakota, Pandu Rangan, and Kannan Srinathan
Round-Optimal and Efficient Verifiable Secret Sharing
TCC 2006

2006 Shyamnath Gollakota, Venkata Ramana, and Siva Ram Murthy
Modeling TCP over Ad-Hoc Wireless Networks using Multi-Dimensional Markov Chains
BROADNETS 2006

Invited Papers

2011 Kate Lin, Shyamnath Gollakota, and Dina Katabi
Random Access Heterogeneous MIMO Networks
Allerton 2011

Patents

2011 Shyamnath Gollakota, Kate Lin, and Dina Katabi
Random Access Heterogeneous MIMO Networks, 61/513640 (pending)

2011 Shyamnath Gollakota, Fadel Adib, Dina Katabi, and Srinivasan Seshan
Cross Technology Interference Cancellation, 61/513641 (pending)

Funding

Co-authored the following NSF proposals:

2011 Award # 1116864, Encryption in the Air: Non-Invasive Security for Wireless Medical Devices
$400,000

2011 Award # 1117194, Random Access Heterogeneous MIMO Networks
$300,000

Selected Talks

2011 They can Hear your Heartbeats: Non-Invasive Security for Implanted Medical Devices
ACM SIGCOMM 2011, Toronto

2011 Clearing the RF Smog: Making 802.11 Robust to Cross-Technology Interference
ACM SIGCOMM 2011, Toronto

2011 Secure In-Band Wireless Pairing
USENIX Security 2011, San Francisco

2011 Physical Layer Security Made Fast and Channel-Independent
IEEE INFOCOM 2011, Shanghai

2009 Interference Alignment and Cancellation
ACM SIGCOMM 2009, Barcelona

2008 ZigZag Decoding: Combating Hidden Terminals in Wireless Networks
ACM SIGCOMM 2008, Seattle

Professional Activities

External Reviews 2011: MOBICOM, NSDI, MILCOM
2010: MOBICOM
2009: SIGCOMM, MOBICOM
2008: NSDI, SIGCOMM, MOBICOM

Journal Reviews Transactions on Wireless Communications, Transactions on Communications,
Transactions on Mobile Computing, Transactions on Vehicular Technology,
Journal on Selected Areas in Communications, PHYCOM: Physical Communication