

NIRUPAM ROY

241 Coordinated Science Laboratory
1308 West Main Street
Urbana, IL 61801

nroy8@illinois.edu
necerooo@gmail.com
<http://nroy8.web.engr.illinois.edu>

EDUCATION

PhD Candidate, Electrical and Computer Engineering
University of Illinois at Urbana-Champaign
Research Interest: Mobile Computing and Wireless Systems
Advisor: Dr. Romit Roy Choudhury

Master of Science, Computer Science and Engineering, 2013
University of South Carolina
GPA: 4.0/4.0 (Outstanding Thesis Award)
Advisor: Dr. Srihari Nelakuditi

Bachelor of Engineering, Computer Science and Technology, 2007
IEST (formerly B.E.College), Shibpur
GPA: 3.9/4.0 (Best Thesis Award)
Advisor: Dr. Abhik Mukherjee

CONFERENCE PUBLICATIONS

Title: BackDoor: Making Microphones Hear Inaudible Sounds
Nirupam Roy, Haitham Hassanieh, Romit Roy Choudhury
Conference: ACM MobiSys, Jun, 2017

Title: Ripple II: Faster Communication through Physical Vibration
Nirupam Roy, Romit Roy Choudhury
Conference: NSDI, Mar, 2016

Title: Listening through a Vibration Motor
Nirupam Roy, Romit Roy Choudhury
Conference: ACM MobiSys, Jun, 2016

Title: Compressing Backoff in CSMA Networks
Mahanth Gowda, Nirupam Roy, Romit Roy Choudhury, Srihari Nelakuditi
Conference: IEEE ICNP, Nov, 2016

Title: Ripple: Communicating through Physical Vibrations
Nirupam Roy, Mahanth K Gowda, Romit Roy Choudhury
Conference: NSDI, May, 2015

Title: Infrastructure Mobility: A What-if Analysis
Mahanth K Gowda, Nirupam Roy, Romit Roy Choudhury
Conference: ACM HotNets, Oct, 2014

Title: Backing out of Linear Backoff in Wireless Networks
Mahanth K Gowda, Nirupam Roy, Romit Roy Choudhury, Srihari Nelakuditi
Conference: ACM HotWireless, Sep, 2014

Title: I am a Smartphone and I can Tell my User's Walking Direction
Nirupam Roy, He Wang, Romit Roy Choudhury
Conference: ACM MobiSys, Jun, 2014

Title: AccelPrint: Imperfections of Accelerometers Make Smartphones Trackable
Nirupam Roy, S. Dey (Co-primary author), W. Xu, R. Roy Choudhury, S. Nelakuditi
Conference: NDSS, Feb, 2014

JOURNAL PUBLICATIONS **Title:** Loop-Free Convergence with Unordered Updates
Glenn Robertson, Nirupam Roy, Phani K. Penumarthy, Srihari Nelakuditi, Jason O’Kane
Journal: IEEE Transaction on Network and Service Management, 2017

Title: RFID Enabled Navigation System of an Autonomous Robotic Guide
Journal: CSI Communications, Computer Society of India
Issue: Vol- 32, No- 8, November, 2008

SELECTED HONORS

- Best paper award at MobiSys, 2017
- Qualcomm Innovation Fellowship (QInF), 2016 finalist
- Joan and Lalit Bahl Fellowship, 2015-2017 in ECE, UIUC as outstanding graduate student.
- M. E. Van Valkenburg Graduate Research Award and Fellowship, 2015 in ECE, UIUC for outstanding research in the areas of circuits, systems, or computers
- Outstanding thesis award, 2013 for MS thesis at the University of South Carolina
- Best poster runner-up at HotMobile, 2013 for the poster titled ‘Leveraging Imperfections of Sensors for Fingerprinting Smartphones’
- Best undergraduate thesis award, 2007 at the IEST (formerly B.E.College), Shibpur
- 10th rank in Secondary Examination(2001) among around 700,000 examinees, according to the merit list published by ‘West Bengal Board of Secondary Education’

INVITED TALKS

Microsoft Student Summit on Mobility, Systems and Networking
Talk: Communicating through Physical Vibration
February 1-2, 2016
Petaluma, California, United States

Huawei University Day
Talk: Physical Vibration: A New Modality of Communication
August 6-7, 2015
Rolling Meadows, Illinois, United States

Feedback Friday in Computer Engineering, UIUC
Talk: Ripple: Communicating through Physical Vibration
March 20, 2015
Champaign, Illinois, United States

SELECTED POSTERS & DEMOS

ACM MobiSys 2017
Demo: Riding the Non-linearities to Record Ultrasound with Smartphones
Niagara Falls, New York, United States

ACM MobiCom 2016
Poster: Assessing Header Impacts in Soccer with Smartball
New York, United States

NSDI 2016

Poster: Vibration: A new mode of communication
Mountain View, California, United States

Google Faculty Mobile Summit 2015

Poster: Ripple: Communicating through Physical Vibration
Mountain View, California, United States

ACM MobiSys 2014

Demo: I am a Smartphone and I can Tell my User's Walking Direction
Bretton Woods, New Hampshire, United States

ACM HotMobile 2013

Poster: Leveraging Imperfections of Sensors for Fingerprinting Smartphones
Jekyll Island, Georgia, United States

PATENTS

Title: Communicating through physical vibration
Patent granted: US 9608848 B2

Title: Unsupervised Indoor Localization and Heading Direction Estimation
Patent pending: US 20150281910 A1

ACTIVITIES

- Technical Program Committee (TPC) member:
 - MobiSys PhD Forum 2017
 - ACM S3 Workshop 2017
- Invited reviewer:
 - UbiComp 2016 (ACM Conference on Pervasive and Ubiquitous Computing)
 - IEEE Transactions on Mobile Computing (TMC)
 - IEEE Transactions on Information, Forensics and Security
 - Elsevier Pervasive and Mobile Computing journal
- Judged the technical presentations of undergraduate students on the Discovery Day, 2012 at University of South Carolina
- Student president of the Computer Engineers' Society of Bengal Engineering College (CoEnSoBEC) from 2005 to 2007
- A cartoonist by hobby