

# Mahanth Gowda

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RESEARCH INTERESTS	Wireless Networking, Mobile and Wearable Computing, Drones and Cyber Physical Systems, Internet of Things (IoT), Applications of Machine Learning
EDUCATION	<ul style="list-style-type: none"><li>• <b>University of Illinois at Urbana Champaign (UIUC)</b> <span style="float: right;"><i>GPA 4.0</i></span> Ph.D., Computer Science, 2013 - 2017 Advisor: Romit Roy Choudhury</li><li>• <b>Duke University,</b> <span style="float: right;"><i>GPA 4.0</i></span> M.S., Computer Science, 2011 - 2013</li><li>• <b>Indian Institute of Technology, (IIT) BHU,</b> <span style="float: right;"><i>Rank 2 in 40</i></span> B.Tech., Computer Science, 2006 - 2010</li></ul>
EXPERIENCE	<ul style="list-style-type: none"><li>• <b>Microsoft Research,</b> Bangalore, India <span style="float: right;">May - Aug 2012</span> MAC design for wide area wireless networks.</li><li>• <b>Microsoft Research,</b> Cambridge, UK <span style="float: right;">May - Aug 2013</span> Programming language for rapid wireless prototyping.</li><li>• <b>IBM T J. Watson Research Center,</b> Yorktown Heights, NY <span style="float: right;">May - Aug 2015</span> Differential GPS for drones.</li><li>• <b>Intel, New Devices Group,</b> Santa Clara, CA <span style="float: right;">May - Aug 2016</span> Wearable analytics for sports.</li></ul>
PUBLICATIONS	<ul style="list-style-type: none"><li>• Bringing IoT to Sports Analytics. <b>Mahanth Gowda,</b> Ashutosh Dhekne, Sheng Shen, Romit Roy Choudhury et al., <i>NSDI 2017</i> <i>Second highest rated submission</i> (among 255 papers)</li><li>• Tracking Drone Orientation with Multiple GPS Receivers. <b>Mahanth Gowda,</b> Justin Manweiler, Ashutosh Dhekne, Romit Roy Choudhury et al., <i>ACM MOBICOM 2016</i></li><li>• The Case for Robotic Wireless Networks. <b>Mahanth Gowda,</b> Ashutosh Dhekne, Romit Roy Choudhury. <i>WWW 2016</i></li><li>• Compressing Backoff in CSMA Networks. <b>Mahanth Gowda,</b> Nirupam Roy, Romit Roy Choudhury, Srihari Nelakuditi. <i>IEEE ICNP 2016</i></li><li>• Ripple: Communicating through Physical Vibrations. Nirupam Roy, <b>Mahanth Gowda,</b> Romit Roy Choudhury. <i>NSDI 2015</i></li><li>• Ziria: An optimizing compiler for wireless PHY programming. <b>Mahanth Gowda,</b> <b>Gordon Stewart</b> (Co-primary), Geoffrey Mainland et al., <i>ASPLOS 2015</i></li></ul>

- Cooperative Packet Recovery in Enterprise WLANs.  
**Mahanth Gowda**, Souvik Sen, Roy Choudhury and Sung-Ju Lee.  
*IEEE INFOCOM 2013*
- Extending Cell Tower Coverage through Drones.  
Ashutosh Dhekne, **Mahanth Gowda**, and Romit Roy Choudhury.  
*ACM HOTMOBILE 2017*
- Infrastructure Mobility: A What-if Analysis.  
**Mahanth Gowda**, Nirupam Roy, Romit Roy Choudhury.  
*ACM HOTNETS 2014*
- Backing out of Linear Backoff in Wireless Networks.  
**Mahanth Gowda**, Nirupam Roy, Romit Roy Choudhury, Srihari Nelakuditi.  
*ACM HOTWIRELESS 2014*
- The Case for Psychological Computing.  
Xuan Bao, **Mahanth Gowda**, Ratul Mahajan, Romit Roy Choudhury.  
*ACM HOTMOBILE 2013*

TECHNICAL  
REPORTS/OTHER  
PAPERS

- Integrating GLONASS with GPS for drone orientation tracking.  
**Mahanth Gowda**, Justin Manweiler, Ashutosh Dhekne, Romit Roy Choudhury et al.,  
*COMSNETS 2017* (Invited Paper)
- WiFi-XL: Extending WiFi to Wide Areas in White Spaces.  
Apurv Bhartia, **Mahanth Gowda**, Krishna Chintalapudi, Bozidar Radunovic et al.,  
*Technical Report*, 2014.
- 802.11a/g PHY implementation in Blink, domain-specific language for wireless programming  
Gordon Stewart, **Mahanth Gowda**, Geoffrey Mainland, Bozidar Radunovic et al.,  
*ACM SIGCOMM SRIF*, 2014.

SELECTED  
POSTERS

- Poster: Ziria Language for Rapid Prototyping of Wireless PHY.  
**Mahanth Gowda**, Gordon Stewart, Geoffrey Mainland, Bozidar Radunovic et al.,  
*MobiCom*, 2014.
- Poster: Cell Tower Extension through Drones.  
Ashutosh Dhekne, **Mahanth Gowda**, and Romit Roy Choudhury  
*MobiCom*, 2016.

AWARDS

- Travel grants: MobiCom 2012, 2014, 2016
- Runners Up, ACM Student Research Competition, MobiCom 2016
- IIT Varanasi medal for 1<sup>st</sup> place in B.Tech-IV exam 2010

INVITED TALK

- Bringing differential GPS to drones, HotWireless workshop, NYC, NY Oct 2016

PATENT

- Acceleration of real time computer vision processing on UAVs through GPS attitude estimation  
Patent pending. US 20170254906 A1
- Communicating through physical vibration  
Patent granted. US 20160119168 A1

TEACHING  
EXPERIENCE

- TA, CS 438, Communication Networks, UIUC Fall 2015
- TA, CS 498rc, Smartphone Computing and Applications, UIUC Spring 2015
- TA, CPS 215, Wireless Networking and Mobile Computing, Duke Spring 2012
- TA, CPS 230, Discrete Mathematics for Computer Science, Duke Fall 2012
- Guest Lecturer, CS 498rc, Smartphone Computing and Applications Fall 2016
- Guest Lecturer, ECE 598 HH, Wireless Networks and Mobile Systems Fall 2016
- Guest Lecturer, CPS 230, Discrete Mathematics for Computer Science Fall 2012
- Guest Lecturer, ECE 486, Wireless Communication Systems Fall 2012

SERVICE

- **Reviewer**  
IEEE Transactions on Mobile Computing  
ACM/IEEE Transactions on Networking  
ACM HotNets, 2014  
INFOCOM, 2015
- **TPC Member**  
ACM MobiCom S3, 2015  
ACM MobiCom mmNets, 2017