

# Ramik Sadana

CS PhD, Georgia Institute of Technology

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I will receive my Ph.D. in Computer Science, with a specialization in HCI, from Georgia Tech in May 2017. I have acquired experience in researching and building systems in the areas of data visualization, natural-user interfaces, and ubiquitous computing. I'm deeply interested in helping design the future of human-computer interaction.

I am currently seeking research and development roles focused on adapting new technologies for human-centered experiences.

## Education

- 2012–2017      Ph.D. CS – Human-Computer Interaction  
Georgia Tech, Atlanta, Georgia  
*Advisor: John Stasko*  
*Thesis: Data Visualization on Tablet Devices*  
My research focuses on the intersection of *data visualization* and *natural user interfaces*. I design and build interaction methods for touch devices that support knowledge discovery with data.
- 2010 – 2012      M.S. Human-Computer Interaction  
Georgia Tech, Atlanta, Georgia
- 2005 – 2010      M.S. (Integrated) Economics  
Indian Institute of Technology, Kanpur, India

## Experience

- May – Aug 2015      Tableau Research, Palo Alto, CA  
*Research Intern, Mentor: Vidya Setlur*  
Designed and prototyped an interactive workflow for data cleaning and preparation within tablet-based business intelligence tools.
- May – Dec 2014      Google Research, Mountain View, CA  
*Research Intern, Mentor: Yang Li*  
Developed a tool for designers to rapidly test multi-touch interactions with video mockups of sample application behavior.
- May – Aug 2013      Adobe Research, San Jose, CA  
*Research Intern, Mentor: Bongwon Suh, Eunyee Koh*  
Created a system to generate visual summaries of large collections of tweets to answer questions such as '*How has the conversation changed over time?*'

- May – Aug 2012      Microsoft Research, Redmond, WA  
*Research Intern, Mentor: Danyel Fisher, Steven Drucker*  
 Designed and prototyped a gesture-based and a WIMP-based interface for data-visualization on tablets, and conducted a comparative evaluation.
- May – Jul 2010      University of Calabria, Italy  
 Helped design, build and deploy a mixed media application comprising of 2D and 3D graphical models to enhance the engagement of the public in sites of historical, cultural or archeological significance.
- Jul 2009 – Apr 2010      Technology Lead, Product Development Project,  
 Helsinki University of Technology, Finland  
 'The Future of Magazines' [[sensemag.dy.fi](http://sensemag.dy.fi)]  
 Defined the future global expectations from the print and digital magazines. Identified, designed and developed alternative solutions based on new media.

## Publications

### Papers

- 2016      [R. Sadana](#), J. Stasko, "*Expanding Selection for Information Visualization Systems on Tablet Devices*", *ISS'16*, Niagara Falls, Canada, Nov. 2016
- 2016      [R. Sadana](#), V. Setlur, E. Koh, "*Redefining a Contribution for Immersive Visualization Research*", *ISS'16*, Niagara Falls, Canada, Nov. 2016
- 2016      A. Parnami, A. Gupta, G. Reyes, [R. Sadana](#), Y. Li, G. Abowd, "*Mogeste: mobile tool for in-situ motion gesture design*", *UbiComp'16 Adjunct*, Heidelberg, Germany, Sep. 2016
- 2016      [R. Sadana](#) and Y. Li, "*Gesture Morpher: Video-based Retargeting of Multi-touch Interactions*", *MobileHCI'16*, Florence, Italy, Sep. 2016
- 2016      [R. Sadana](#) and J. Stasko, "*Designing Multiple Coordinated Visualizations for Tablets*", *Eurovis'16*, Groningen, Netherlands, June 2016
- 2014      [R. Sadana](#), T. Major, A. Dove, J. Stasko, "*OnSet: A Visualization Technique for Large-scale Binary Set Data*", *VIS'14*, Paris, France, Nov. 2014
- 2014      [R. Sadana](#), Y. Kim, B. Suh, E. Koh, "*A Visual Analytics Approach to Summarizing Tweets*", *SIGIR'14 Industry Track*, Gold Coast, Australia, July 2014
- 2014      [R. Sadana](#) and J. Stasko, "*Designing and Implementing an Interactive Scatterplot Visualization for a Tablet Computer*", *AVI'14*, Como, Italy, June 2014
- 2013      Drucker S., D. Fisher, [R. Sadana](#), J. Herron, m. c. schraefel  
 "*TouchViz: A case study comparing two interfaces for Data Analytics on Tablets*", *CHI'13*, Paris, France, May 2013

2013 Toth, C., W. Suh, V. Elango, R. Sadana, A. Guin, M. Hunter, and R. Guensler "Tablet-Based Traffic Counting Application Designed to Minimize Human Error." Transportation Research Record. National Academy of Sciences. Washington, DC. 2013.

#### Posters

2013 A. Dai, R. Sadana C. Stolper, J. Stasko, "Hands-On, Large Display Visual Data Exploration", VIS'15, Chicago, IL, Oct. 2015

2013 R. Sadana, A. Dove, J. Stasko, "Whale Sharks, Boolean Set Operations, and Direct Manipulation", VIS'13, Atlanta, GA, Oct. 2013

2013 R. Sadana and J. Stasko, "Interacting with Data Visualizations on Tablets and Phones: Developing Effective Touch-based Gestures and Operations", VIS'13, Atlanta, GA, Oct. 2013

2013 J. Stasko, J. Choo, Y. Han, M. Hu, H. Pileggi, R. Sadana, C. Stolper, "CiteVis: Exploring Conference Paper Citation Data Visually", VIS'13, Atlanta, GA, Oct. 2013

## Invited Talks

2015 'A Bit About Touch' at OpenVIS 2015, Boston, MA, April 2015  
[ramiksadana.com/openvis]

2015 'Visualization on Touch Devices' at McGraw Hill Educational Data Meetup, Boston, MA, April 2015

2013 'Data + Touch: Explorations and Opportunities' at workshop on 'Mobile and Breaking News: New Challenges for News Information Visualizations', VIS'13, Atlanta, GA, Oct. 2013

## Other Projects

2016 TouchUndo, Mentors: John Stasko, Gregory Abowd  
Research, design and prototyping to identify a standardized shortcut for *undo* and *redo* on touch-devices. [ramiksadana.com/undo]

2014 ARubi, Mentors: Gregory Abowd, Thad Starner  
Designed a AR+Multitouch environment for in-air cross-device programming.

2012 Objects with Memories, Mentor: Gregory Abowd  
Used NFC to support digital archiving and retrieval of memories associated with physical artifacts, leveraging and augmenting vision, audition and olfaction.

2011 The Third Eye, Mentors: Melody Jackson, Bruce Walker  
Created a desktop tool for low-vision computer users that provides quick access to the accessibility features using multi-finger gestures on the touchpads.

## Awards

2015	Google Faculty Research Award (with advisor John Stasko)
2013 – 2014	Adobe Student Research Grant
2013	Microsoft Research Alumni Travel Grant
2012	Georgia Aquarium Student Grant

## Students Mentored

### Graduate

2015 - 2017	Meeshu Agnihotri, MS HCI <i>'Designing and Conducting User Evaluations for a Data-Visualization System on Tablets'</i>
2015 - 2017	Aakanksha Mirdha, MS HCI <i>'Expanding Vocabulary of Pressure-based Gestures on Handheld Mobile Devices.'</i>
2013	Timothy Major, MS HCI <i>'Web-based Implementation of the OnSet Visualization System'</i>

### Undergraduate

2014 - 2016	Andrew Dai, BS CS (Co-supervised with Chad Stolper) <i>'Large-display, Multitouch Dust &amp; Magnet'</i> (VIS'15 poster)
2015	Se Yeon Kim, BS CS <i>'Web-based Food-Maps for Continental United States.'</i>
2014	Vivek Srinivasan, BS CS <i>'Large-display, Multitouch Visualization System'</i>

## Academic Service

2015, 2013	Teaching Assistant – CS7450 Information Visualization
2011 – 2017	Reviewer – CHI, VIS, EuroVis and UIST
2014	Program Committee – ISVC 2014
2014	Student Volunteer – Eyeo Festival
2008 – 2009	General Secretary, Media Council, IIT Kanpur
2006 – 2008	Undergraduate Student Mentor, IIT Kanpur

## Guest Lectures

2016	CS6452 – Prototyping Interactive Systems <ul style="list-style-type: none"><li>• Introduction to Processing</li><li>• Overview of Mobile Interface Prototyping and Development</li></ul>
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2015, 2013

CS7450 – Information Visualization

- Introduction to Processing
- Introduction to D3

## References

John Stasko, Professor, Georgia Tech

Steven Drucker, Principal Researcher, Microsoft Research

Vidya Setlur, Researcher, Tableau Research

Gregory Abowd, Professor, Georgia Tech