

RAJINDER SODHI

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EDUCATION

- University of Illinois at Urbana Champaign, Urbana, IL
Ph.D. in Computer Science **2010 - 2014**
Adviser: Professor David Forsyth, Brian Bailey
- University of Illinois at Urbana Champaign, Urbana, IL
Master of Science in Computer Science **2008 - 2010**
Adviser: Professor Roy Campbell
GPA: 4.0/4.0
- University of Illinois at Urbana Champaign, Urbana, IL
Bachelor of Science in Computer Science with Honors **2003 - 2008**
GPA: 3.7/4.0

RESEARCH INTERESTS

Human Computer Interaction, Computer Vision, Projection Mapping, Projector Camera Systems, Tactile Interfaces, Real-Time Recognition and Tracking.

PROFESSIONAL EXPERIENCE

- Luminous Co., Urbana IL** **2014 - Present**
President/CPO, Co-Founder
Revolutionizing projection mapping, in advertising, events and entertainment.
- University of Illinois at Urbana Champaign** **2010 - Present**
Researcher, Computer Vision Group
Working on novel projection mapping techniques.
- Microsoft Research, Redmond** **Summer 2013**
Research Intern
Prototyped a multi-projector system for living room gaming.
- Research Intern** **Summer 2011**
Prototyped a system that projects visual hints on a user's body.
- Walt Disney Imagineering** **Summer 2012**
Disney Research
Created a haptic projector system allowing users to feel projected images.
- Imagineering Research Associate** **2009, 2010**
Prototyped an interactive projection mapping system, multi-projector camera system with real-time tracking for use in theme parks.

PUBLICATIONS

- Jones, B., **Sodhi, R.**, Benko., H., Wilson., A., et al. RoomAlive: Magical Experiences Enabled by Scalable, Adaptive Projector Camera Units. *Proc. Of UIST, 2014.* **2014**
- Sodhi, R.**, Glisson, M., Poupyrev, I. AIREAL: Interactive Tactile Experiences in Free Air. *Proc. of SIGGRAPH, 2013.* **2013**
- Sodhi, R.**, B. Jones, D Forsyth, B. Bailey, G. Maccioci. BeThere: 3D Mobile Collaboration with Spatial Input. *Proc. of SIGCHI, 2013.* **2013**
- Sodhi, R.**, Benko H., Wilson A. Projected Visualizations for Hand Movement Guidance. *Proc. of SIGCHI, 2012.* **Honorable Mention** **2012**
- Jones, B., **Sodhi, R.**, Forsyth, D., Bailey, B. Mobile Free-space Interactions for Multi-Scale Navigation. *Proc. of SIGCHI, 2012.* **2012**
- Jones, B., **Sodhi, R.**, Campbell R., Garnett, G., Bailey, B. Build Your World and Play in It. *Proc. of ISMAR, 2010.* **Best Paper Award.** **2010**
- Venkataswamy, A., **Sodhi, R.**, Y. Abdildin, and B.P. Bailey. Groupware for Design: An Interactive System to Create Processes in Team Design Work. *Proc. of HICCS, 2009.* **2009**

DEMOS

- Sodhi, R.**, Glisson, M., Poupyrev, I. AIREAL: Tactile Gaming Experiences in Free Air. *Proc. of SIGGRAPH E-Tech, (2013).* **2014**

THESIS

- Sodhi, R.**, Magical Experiences Beyond the Screen. PhD Thesis, University of Illinois at Urbana-Champaign, 2014. **2014**
- Sodhi, R.**, Interactive Surface Particles on Complex Everyday Surfaces. Master's Thesis, University of Illinois at Urbana-Champaign, 2010. **2010**

PATENT PENDING

- Sodhi, R.**, Glisson, M., Poupyrev, I., Augmenting Reality Using Vortices that Provide Tactile Sensations Corresponding to a Visual Presentation. U.S. Patent Pending, filed April 2013. **2013**
- Sodhi, R.**, Benko H., Wilson A. Projected Visualizations for Guiding Physical Movement, U.S. Patent Pending, filed April 2012. **2012**

AWARDS

- Cozad Business Competition **2014**
- Illinois Innovation Award **2013**
- Qualcomm Innovation Fellowship **2011 – 2012**
- Siebel Scholar Fellowship **2009 – 2010**
- UIUC CS Grad Student Expo, Best Research Presentation **2010**
- Millennium Scholarship **2003 – 2005**
- Barringere Cello Music Scholarship **2003 – 2005**

SELECTED WORK APPEARING IN

Web and Blogs:

Wired (2013). "Augmenting Reality: Disney Areal Haptic Device"

BBC Technology (2013). "Areal: Disney Shows off Tactile Air Device."

Fast Company (2013). "Disney's Crazy Invention Lets You Feel Phantom Objects Floating in Air."

The Verge (2012). "Kinect-powered LightGuide prototype trains your muscle movements with projected light."

Hack A Day (2010). "Projector Introduces Augmented Reality to Reality." Nov. 19th.

EDream (2010). "Feature: Augmented Reality." Nov 19th.

Korea IT Times (2010). "Better Than Real." Oct 19th.

Create Digital Motion (2009). "Begone, Flat Screens! A New Projection Mapping, Augmented Reality Toolkit." Mar. 3.

TEACHING EXPERIENCE

Teaching Assistant, Computer Science 101 (Fall 2008)

(On the List of Teachers Ranked as Excellent by their Students)

Fall 2008

ACTIVITIES

CHI Program Committee

2014

CHI Student Volunteer

2011

Volunteer, Provena Medical Center (Cardiology)

2008-2010