

# Parinya Punpongsanon

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## EMPLOYMENT

### POSTDOCTORAL ASSOCIATE

(January 2017 – Present)

Massachusetts Institute of Technology, United State

HCI Engineering Group,

Computer Science and Artificial Intelligence Laboratory

Advisor: Prof. Stefanie Mueller

## EDUCATION

### PH.D. IN ENGINEERING

September 2016 – Osaka University, Japan

System Innovation, Graduate School of Engineering Science

Advisor: Prof. Kosuke Sato and Prof. Daisuke Iwai

### MASTER OF ENGINEERING

September 2013 – Osaka University, Japan

System Innovation, Graduate School of Engineering Science

Advisor: Prof. Kosuke Sato and Prof. Daisuke Iwai

### BACHELOR OF SCIENCE

April 2010 – King Mongkut's University of Technology

Thonburi, Thailand

Applied Computer Science and Multimedia,

Computer Science and Information Technology Department

Major GPA: 3.63/ 4.00 (1<sup>st</sup> Class Honor)

## EXPERIENCE

### VISITING SCHOLAR

(December 2013 – February 2014)

Telecom ParisTech (Université Paris Saclay), France

Computer Graphics Group (TSI-CNSR)

Project: Lazy 3D Navigation using Non-Critical Body Interaction

Advisor: Prof. Tamy Boubekeur

### EXCHANGE STUDENT

(October 2008 – September 2009)

University of Fukui, Japan

Human and Computational Intelligence System Laboratory

School of Engineering

Advisor: Prof. Yasuhiro Ogoshi

## RESEARCH FOCUS

Spatial Augmented Reality,

Human Perception,

Human-Computer Interaction,

Digital Fabrication

## ACADEMIC SERVICE

### ORGANIZATION COMMITTEE

- ACM UIST 2017 (Documentation Chair)
- ACM SUI 2016 (Documentation Chair)
- VRSJ 2016 (Design Chair)
- ICAT-EGVE 2015 (Design Chair)

### PEER-REVIEWER

- IEEE ISMAR (2017, 2016)
- ACM SIGGRAPH Asia (2017, 2016)
- ACM SUI (2017, 2016)
- ACM UIST (2017, 2016, 2015)
- ACM VRST (2016, 2015)
- ACM HRI (2016, 2015)

### STUDENT VOLUNTEER

- ACM UIST 2016
- ACM UbiComp 2015
- ACM SIGGRAPH Asia 2014
- ACM Multimedia 2012

## SKILLS

### PROGRAMMING

Java/JavaScript, MATLAB, Python, C/C++, CSS, PHP, PL/SQL, OpenGL, OpenCV, CUDA, SPSS

## CLASSES

### INTRODUCTION TO COMPUTER VISION

Teaching Assistant (Osaka University)

Class of undergraduate Students (30 participations)

### BASIC COMPUTER GRAPHICS

Teaching Assistant (Osaka University)

Class of undergraduate Students (30 participations)

### IAP: BUILD YOUR OWN MULTI-TOUCH PAD

Teaching Assistant (MIT CSAIL)



MIT Independent Activities Period (20 participations)

## SELECTED PUBLICATION

### JOURNALS

1. Parinya Punpongsanon, Emilie Guy, Daisuke Iwai, Kosuke Sato, Tamy Boubekur, “Extended LazyNav: Virtual 3D Ground Navigation for Large Displays and Head-Mounted Displays”. *IEEE Transactions on Visualization and Computer Graphics*, 2016. (In press)
2. Parinya Punpongsanon, Daisuke Iwai, Kosuke Sato, “SoftAR: Visually Manipulating Haptic Softness Perception in Spatial Augmented Reality”. *IEEE Transactions on Visualization and Computer Graphics*, vol.21(11), pp. 1279–1288, November, 2016.
3. Parinya Punpongsanon, Daisuke Iwai, Kosuke Sato, “Projection-based Visualization of Tangential Deformation of Nonrigid Surface by Deformation Estimation Using Infrared Texture”. *Springer: Virtual Reality*, vol.19(1), pp. 45–56, March, 2015.

### CONFERENCE PAPERS AND TECHNICAL NOTES

1.  Parinya Punpongsanon, Emilie Guy, Daisuke Iwai, Kosuke Sato, Tamy Boubekur. “LazyNav: 3D Ground Navigation with Non-critical Body Parts”. In Proceedings of *IEEE Symposium on 3D User Interfaces (3DUI)*, pp. 43–50, 2015. **[Best Paper]**
2. Parinya Punpongsanon, Emilie Guy, Tamy Boubekur, Daisuke Iwai, Kosuke Sato. “Ground Navigation in 3D Scene using Simple Body Motions”. In Proceedings of *International Conference on Artificial Reality and Telexistence and Eurographics Symposium on Virtual Environments (ICAT-EGVE)*, pp. 19–20, 2014.
3. Parinya Punpongsanon, Daisuke Iwai, Kosuke Sato, “SoftAR: Visually Manipulating Haptic Softness Perception in Spatial Augmented Reality”. In Proceedings of *IEEE Symposium on Mixed and Augmented Reality (ISMAR)*, pp. 1279–1288, 2016.
4. Parinya Punpongsanon, Daisuke Iwai, Kosuke Sato. “A Preliminary Study on Altering Surface Softness Perception using Augmented Color and Deformation”. In Proceedings of *IEEE Symposium on Mixed and Augmented Reality (ISMAR)*, pp. 301–302, 2014.
5. Parinya Punpongsanon, Daisuke Iwai, Kosuke Sato. “DeformMe: Projection-based Visualization of Deformable Surfaces using Invisible Textures”. In Proceedings of *ACM SIGGRAPH Asia (Emerging Technologies)*, Article 8, 2013.
6. Parinya Punpongsanon, Daisuke Iwai, Kosuke Sato. “Infrared-based Tangential Deformation Estimation Technique”. Presented in The 6<sup>th</sup> *Thailand-Japan International Academic Conference (TJIA)*, 2013.
7.  Parinya Punpongsanon, Daisuke Iwai, Kosuke Sato. “Projection-based Mixed Reality for Deformable Surfaces”. Presented in The 6<sup>th</sup> *Korea-Japan Workshop on Mixed Reality (KJMR)*, 2013. **[Best Presentation]**

### INVITED TALKS

1. Parinya Punpongsanon, “SoftAR: Visually Manipulating Haptic Softness Perception in Spatial Augmented Reality”. The 19<sup>th</sup> Meeting on Image Recognition and Understanding (MIRU 2016), Shizuoka, Japan.
2. Parinya Punpongsanon, “SoftAR: Visually Manipulating Haptic Softness Perception in Spatial Augmented Reality”. IEEE TVCG VR/AR Special Session, ACM SIGGRAPH 2016, Anaheim, USA.
3. Parinya Punpongsanon and Daisuke Iwai, “LazyNav: 3D Ground Navigation with Non-Critical Body Parts”. 3DUI Top Conference Presentation, The 18<sup>th</sup> Annual Meeting on Virtual Reality in Japan (VRSJ 2015), Tokyo, Japan.

### GRANTS AND AWARDS

2016	Best Student Volunteer	ACM UIST 2016
2016	Grants	JSPS Research Fellow (Apr. 2016 – Mar. 2018)
2015	Best Paper	IEEE 3DUI 2015
2014	Best Student Volunteer	ACM SIGGRAPH Asia 2014
2013	Best Presentation	Korea-Japan Workshop on Mixed Reality 2013
2011	Grant	MEXT Scholarship (Oct. 2011 – Sep. 2016)
2010	1 <sup>st</sup> Class Honor	King Mongkut’s University of Technology Thonburi

## REFERENCES

PROF. DAISUKE IWAI

M.Eng and Ph.D. Co-Advisor

Associate Professor, SENS Laboratory at Osaka University

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PROF. TAMY BOUBEKEUR

Visiting Scholar Research Advisor

Professor, Computer Graphics Group at Telecom ParisTech

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PROF. STEFANIE MUELLER

Postdoctoral Associate Advisor

Assistant Professor, HCI Engineering Group at MIT CSAIL

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