

Inseok Hwang

Research Staff Member, IBM Research Austin

- CONTACT INFORMATION** IBM Research – Austin
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<http://researcher.ibm.com/researcher/view.php?person=us-ihwang>
- RESEARCH INTERESTS** I have been exploring diverse issues around socio-physical computing - creating new mobile/ubiquitous computing systems for socially-aware interdisciplinary services based on inter-personal sensory technologies. To list up my research interest:
- **Human-centric Mobile and Ubiquitous Computing:** Sensor-rich Social Applications; Life-immersive Healthcare; Sensor-enriched Education; Pervasive Gaming
 - **Future Mobile Systems and Platforms:** Mobile Sensing for Social Groups; Energy-aware Mobile Systems; Platform Support for Sensing Applications
 - **Sensing and Rich Interactivity:** Multi-sensor Fusion; Mobile Gesture Interaction
- EMPLOYMENT** **Research Staff Member, IBM Research Austin**, Austin, TX, USA, from July 2014 to present.
Research Assistant Professor, Center for Mobile Software Platform, KAIST, Daejeon, Korea, from February 2013 to July 2014.
Graduate Researcher, Computer Science, KAIST, Daejeon, Korea, from September 2002 to February 2013
- EDUCATION** **Ph.D., Computer Science, KAIST** (Daejeon, South Korea), February 2013
Dissertation: “*Relativistic Perspective in Socio-Physical Monitoring: Study on Children Behavior in Educational Group Settings*”
Advisor: Dr. Junehwa Song
- M.S., Electrical Engineering, KAIST** (Daejeon, South Korea), August 2002
Thesis: “*Disk Management Scheme for Web Caches based on Multiple-size Blocks*”
- B.S., Electrical Engineering, KAIST** (Daejeon, South Korea), February 2001
Summa cum laude, GPA 4.08/4.3
- Hansung Science High School** (Seoul, South Korea), February 1997
Best Graduation Award
- AWARDS AND HONORS**
- **Best Paper Award**, ACM CSCW 2014
 - **Honorable Mention**, ACM CHI 2014.
 - **Qualcomm Fellowship Award**, 2013.
 - **Best Demo Award**, ACM HotMobile 2013.
 - **Best Demo Award**, ACM MobiSys 2012.
 - **Best Demo Award**, IEEE SECON 2012.
 - **Honorable Mention**, IEEE SECON 2012.
 - **Best Teaching Assistant Award**, Computer Science, KAIST, 2003.

PUBLICATIONS **Regular Publications** (Conferences, Journals, Magazines, and Workshops)
(PEER-REVIEWED)

- [C.17] Chulhong Min, Youngki Lee, Chungkuk Yoo, Seungwoo Kang, Sangwon Choi, Pillsoon Park, **Inseok Hwang**, Younghyun Ju, Seungpyo Choi, Junehwa Song.
“*PowerForecaster: Predicting Smartphone Power Impact of Continuous Sensing Applications at Pre-installation Time*”
ACM *SenSys 2015* (ACM Conference on Embedded Networked Sensor Systems), Seoul, South Korea, November 2015. [[ACM DL](#)]
- [J.02] Youngki Lee, Seungwoo Kang, Chulhong Min, Younghyun Ju, **Inseok Hwang**, Junehwa Song.
“*CoMon+: A Cooperative Context Monitoring System for Multi-Device Personal Sensing Environments*”
To appear in *IEEE Transaction on Mobile Computing*.
- [C.16] Chulhong Min, Chungkuk Yoo, **Inseok Hwang**, Seungwoo Kang, Youngki Lee, Seungchul Lee, Pillsoon Park, Changhun Lee, Seungpyo Choi, Junehwa Song.
“*Sandra Helps You Learn: the More You Walk, the More Battery Your Phone Drains*”
ACM *UbiComp 2015* (ACM International Joint Conference on Pervasive and Ubiquitous Computing), Osaka, Japan, September 2015. (acceptance rate: 30.5%) [[ACM DL](#)]
- [C.15] Bumsoo Kang, Sujin Lee, Alice Oh, Seungwoo Kang, **Inseok Hwang**, Junehwa Song
“*Towards Understanding Relational Orientation: Attachment Theory and Facebook Activities*”
ACM *CSCW 2015* (ACM Conference on Computer Supported Cooperative Work and Social Computing), pp. 1404-1415, Vancouver, BC, Canada, March 2015. (acceptance rate: 28.0%) [[ACM DL](#)]
- [C.14] Woohyeok Choi, Jeungmin Oh, Taiwoo Park, Sungjun Kang, Miri Moon, Uichin Lee, **Inseok Hwang**, Junehwa Song.
“*MobyDick: An Interactive Multi-swimmer Exergame*”
ACM *SenSys 2014* (ACM Conference on Embedded Networked Sensor Systems), pp. 76-90, Memphis, TN, USA, November 2014. (acceptance rate: 17.9%) [[ACM DL](#)]
- [C.13] Yuhwan Kim, Seungchul Lee, **Inseok Hwang**, Hyunho Ro, Youngki Lee, Miri Moon, Junehwa Song.
“*High5: Promoting Interpersonal Hand-to-Hand Touch for Vibrant Workplace with Electrodermal Sensor Watches*”
ACM *UbiComp 2014* (ACM International Joint Conference on Pervasive and Ubiquitous Computing), pp. 15-19, Seattle, WA, USA, September 2014. (acceptance rate: 20.7%) [[ACM DL](#)]
- [W.04] Chulhong Min, Saumay Pushp, Seungchul Lee, **Inseok Hwang**, Youngki Lee, Seungwoo Kang, Junehwa Song
“*Unveiling Embarrassing Moments in In-situ Exposure of Incoming Mobile Messages*”
ACM *MCSS 2014* (ACM International Workshop on Mobile Systems for Computational Social Science), pp. 1045-1054, Seattle, WA, USA, September 2014. [[ACM DL](#)]
- [C.12] Taiwoo Park, Uichin Lee, Scott MacKenzie, Miri Moon, **Inseok Hwang**, Junehwa Song.
“*Human Factors of Speed-based Exergame Controllers*”
ACM *CHI 2014* (ACM Conference on Human Factors in Computing Systems), pp. 1865-1874, Toronto, ON, Canada, April, 2014. (acceptance rate: 22.8%) [[ACM DL](#)]
[**Honorable Mention Award**]
- [W.03] Uichin Lee, Miri Moon, Taiwoo Park, **Inseok Hwang**, Woohyuk Choi, Sungjune Kang, Junehwa Song.
“*HCI in the Pool: A Case for Swimming*”
In *CHI Workshop: HCI and Sports*, Toronto, ON, Canada, April, 2014.

- [C.11] **Inseok Hwang**, Chungkuk Yoo, Chanyou Hwang, Dongsun Yim, Youngki Lee, Chulhong Min, John Kim, Junehwa Song.
 “TalkBetter: Family-driven Mobile Intervention Care for Children with Language Delay”
 ACM CSCW 2014 (ACM Conference on Computer Supported Cooperative Work and Social Computing), pp. 1283-1296, Baltimore, MD, USA, February, 2014. (acceptance rate: 27.0%) [[ACM DL](#)]
[Best Paper Award]
 Media Coverage: *NewScientist*, Feb. 1. 2014.
- [C.10] Youngki Lee, Chulhong Min, Chanyou Hwang, Jaeung Lee, **Inseok Hwang**, Younghyun Ju, Chungkuk Yoo, Miri Moon, Uichin Lee, Junehwa Song.
 “SocioPhone: Everyday Face-To-Face Interaction Monitoring Platform Using Multi-Phone Sensor Fusion”
 ACM MobiSys 2013 (ACM International Conference on Mobile Systems, Applications and Services), pp. 375-388, Taipei, Taiwan, June, 2013. (acceptance rate: 15.7%) [[ACM DL](#)]
- [C.09] Hyukjae Jang, Sungwon Peter Choe, **Inseok Hwang**, Chanyou Hwang, Lama Nachman, Junehwa Song.
 “RubberBand: Augmenting Teacher’s Awareness of Spatially Isolated Children on Kindergarten Field Trips”
 ACM UbiComp 2012 (ACM International Conference on Ubiquitous Computing), pp. 236-239, Pittsburg, PA, USA, September, 2012. (acceptance rate: 19.3%) [[ACM DL](#)]
 Media Coverage: *NewScientist*, Aug. 24. 2012.
- [W.02] **Inseok Hwang**, Youngki Lee, Taiwoo Park, Junehwa Song.
 “Toward a Mobile Platform for Pervasive Games”
 ACM MobiGames 2012 (ACM SIGCOMM Workshop on Mobile Gaming), pp. 19-24, Helsinki, Finland, August 2012. [[ACM DL](#)]
- [C.08] **Inseok Hwang**, Hyukjae Jang, Taiwoo Park, Aram Choi, Youngki Lee, Chanyou Hwang, Yangui Choi, Lama Nachman, Junehwa Song.
 “Leveraging Children’s Behavioral Distribution and Singularities in New Interactive Environments: Study in Kindergarten Field Trips”
 Pervasive 2012 (International Conference on Pervasive Computing), pp. 39-56, Newcastle, UK, June 2012. (acceptance rate: 20.3%) [[Springer](#)]
- [C.07] Taiwoo Park, **Inseok Hwang**, Uichin Lee, Sunghoon I. Lee, Chungkuk Yoo, Youngki Lee, Hyukjae Jang, Peter Sungwon Choe, Souneil Park, Junehwa Song.
 “ExerLink: Enabling Pervasive Social Exergames with Heterogeneous Exercise Devices”
 ACM MobiSys 2012 (ACM International Conference on Mobile Systems, Applications and Services), pp. 15-28, Lake District, UK, June 2012. (acceptance rate: 17.6%) [[ACM DL](#)]
[Best Demo Award] for the accompanying demonstration [D.05]
- [C.06] Youngki Lee, Younghyun Ju, Chulhong Min, Seungwoo Kang, **Inseok Hwang**, Junehwa Song.
 “CoMon: Cooperative Ambience Monitoring Platform with Continuity and Benefit Awareness”
 ACM MobiSys 2012 (ACM International Conference on Mobile Systems, Applications and Services), pp. 43-56, Lake District, UK, June 2012. (acceptance rate: 17.6%) [[ACM DL](#)]
- [C.05] Taiwoo Park, Jinwon Lee, **Inseok Hwang**, Chungkuk Yoo, Lama Nachman, Junehwa Song.
 “E-Gesture: A Collaborative Architecture for Energy-efficient Gesture Recognition with Hand-worn Sensor and Mobile Devices”
 ACM SenSys 2011 (ACM Conference on Embedded Networked Sensor Systems), pp. 260-273, Seattle, WA, USA, November, 2011. (acceptance rate: 19.5%) [[ACM DL](#)]
- [J.01] Byoungjip Kim, SangJeong Lee, Youngki Lee, **Inseok Hwang**, Yunseok Rhee, Junehwa Song.
 “Mobiscape: Middleware Support for Scalable Mobility Pattern Monitoring of Moving Objects in a Large-Scale City”
Journal of Systems and Software, Volume 84, Issue 11, pp. 1852-1870, 2011. [[Science Direct](#)]

- [C.04] **Inseok Hwang**, Hyukjae Jang, Lama Nachman, Junehwa Song.
 “Exploring Inter-child Behavioral Relativity in a Shared Social Environment: A Field Study in a Kindergarten”
 ACM UbiComp 2010 (ACM International Conference on Ubiquitous Computing), pp. 271-280, Copenhagen, Denmark, September, 2010. (acceptance rate: 19.3%) [[ACM DL](#)]
- [C.03] Miru Ahn, Sungjun Kwon, Byunglim Park, Kyungmin Cho, Sungwon Peter Choe, **Inseok Hwang**, Hyukjae Jang, Jaesang Park, Yunseok Rhee, Junehwa Song.
 “Running or Gaming”
 ACM ACE 2009 (ACM International Conference on Advances in Computer Entertainment Technology), pp. 345-348, Athene, Greece, October, 2009. [[ACM DL](#)]
- [M.01] Kyungmin Cho, **Inseok Hwang**, Seungwoo Kang, Byoungjip Kim, Jinwon Lee, SangJeong Lee, Souneil Park, Yunseok Rhee, Junehwa Song.
 “HiCon: A Hierarchical Context Monitoring and Composition Framework for Next Generation Context-aware Services”
 IEEE Network, Vol. 22, No. 4, pp. 34-42, July 2008. [[IEEEExplore](#)]
- [W.01] **Inseok Hwang**, Qi Han, Archan Misra.
 “MASTAQ: Middleware Architecture for Sensor Applications with Statistical Quality Constraints”
 PerSeNS 2005 (IEEE PerCom 2005 Workshop on Sensor Networks and Systems for Pervasive Computing), Kauai Island, HA, USA, March 2005.
- [C.02] Su Myeon Kim, Kyungmin Cho, **Inseok Hwang**, Seungwoo Kang, Heung-Kyu Lee, Junehwa Song.
 “CIGMA: aCtive Inventory service in Global e-Market based on efficient catalog management”
 ACM SAC 2003 (ACM Symposium of Applied Computing), pp. 653-658, Melbourne, FL, USA, March 2003. [[ACM DL](#)]
- [C.01] Seungwoo Kang, Su Myeon Kim, Kyungmin Cho, **Inseok Hwang**, Junehwa Song
 “CIGMA: aCtive Inventory service in Global e-Market for ordinary online customers based on a real time update scheme”,
 ICEC 2002 (4th International Conference on Electronic Commerce), Hong Kong, October 2002.

Adjunct Publications (Posters, Demos, Videos, etc.; lightly peer-reviewed.)

- [D.08] Chulhong Min, Chungkuk Yoo, Sangwon Choi, Pillsoon Park, Seungchul Lee, Changhun Lee, Seungpyo Choi, Seungwoo Kang, Youngki Lee, **Inseok Hwang**, Younghyun Ju, Junehwa Song.
 “Demo: User Support for Power Management of Continuous Sensing Applications”
 ACM SenSys 2015 Demo (ACM Conference on Embedded Networked Sensor Systems), Seoul, South Korea, November, 2015. [[ACM DL](#)]
- [V.03] **Inseok Hwang**, Chungkuk Yoo, Chanyou Hwang, Dongsun Yim, Youngki Lee, Chulhong Min, John Kim, Junehwa Song.
 “TalkBetter: Smartphone-supported Intervention in Family Conversation for Children with Language Delay”
 ACM CSCW 2014 Video (ACM Conference on Computer Supported Cooperative Work and Social Computing), Baltimore, MD, USA, February 2014.
- [V.02] Haechan Lee, Miri Moon, Taiwoo Park, **Inseok Hwang**, Uichin Lee, Junehwa Song.
 “Dungeons and Swimmers: Designing an Interactive Exergame for Swimming”
 ACM UbiComp 2013 Video / Poster (ACM International Joint Conference on Pervasive and Ubiquitous Computing), pp. 287-290, Zurich, Switzerland, September 2013. [[ACM DL](#)]

- [P.03] Chungkuk Yoo, Jaemyung Shin, **Inseok Hwang**, Junehwa Song.
 “FaceLog: Capturing User’s Everyday Face Using Mobile Devices”
 ACM UbiComp 2013 Poster (ACM International Joint Conference on Pervasive and Ubiquitous Computing), pp. 163-166, Zurich, Switzerland, September 2013. [[ACM DL](#)]
- [D.07] Youngki Lee, Chulhong Min, Chanyou Hwang, Jaeung Lee, **Inseok Hwang**, Younghyun Ju, Chungkuk Yoo, Miri Moon, Uichin Lee, Junehwa Song.
 “SocioPhone: Everyday Face-To-Face Interaction Monitoring Platform Using Multi-Phone Sensor Fusion”
 ACM MobiSys 2013 Demo (ACM International Conference on Mobile Systems, Applications and Services), pp. 499-500, Taipei, Taiwan, June 2013. [[ACM DL](#)]
- [D.06] Chulhong Min, **Inseok Hwang**, Jaeung Lee, Chanyou Hwang, Chungkuk Yoo, Miri Moon, Taiwoo Park, Changhoon Lee, Haechan Lee, Yuhwan Kim, Younghyun Ju, Youngki Lee, Uichin Lee, Junehwa Song.
 “ACM HotMobile 2013 Demo: Bringing In-situ Awareness to Mobile Systems: Everyday Interaction Monitoring and Its Applications”
 ACM Mobile Computing and Communication Review, vol. 17, no. 3, pp. 9-10. (2013) [[ACM DL](#)]
 ACM HotMobile 2013 Demo (ACM International Workshop on Mobile Computing Systems and Applications), Jekyll Island, GA, USA, February 2013.
[Best Demo Award]
- [P.02] Chulhong Min, Wookhyun Han, **Inseok Hwang**, SangJeong Lee, Youngki Lee, Insik Shin, Junehwa Song.
 “Towards Mobile GPU-Accelerated Context Processing for Continuous Sensing Applications on Smartphones”
 ACM MobiSys 2012 Poster (ACM International Conference on Mobile Systems, Applications and Services), pp. 505-506, Lake District, UK, June 2012. [[ACM DL](#)]
- [D.05] Taiwoo Park, **Inseok Hwang**, Uichin Lee, Sunghoon Ivan Lee, Chungkuk Yoo, Youngki Lee, Hyukjae Jang, Sungwon Peter Choe, Souneil Park, Junehwa Song.
 “ExerLink – Enabling Pervasive Social Exergames with Heterogeneous Exercise Devices”
 ACM MobiSys 2012 Demo (ACM International Conference on Mobile Systems, Applications and Services), pp.449-450, Lake District, UK, June 2012. [[ACM DL](#)]
[Best Demo Award]
- [D.04] Youngki Lee, Younghyun Ju, Chulhong Min, Seungwoo Kang, **Inseok Hwang**, Junehwa Song.
 “SenseTogether – Cooperative Ambience Monitoring Platform with Continuity and Benefit Awareness”
 ACM MobiSys 2012 Demo (ACM International Conference on Mobile Systems, Applications and Services), Lake District, UK, June 2012.
- [D.03] Taiwoo Park, **Inseok Hwang**, Uichin Lee, Sunghoon Ivan Lee, Chungkuk Yoo, Youngki Lee, Hyukjae Jang, Sungwon Peter Choe, Souneil Park, Bupjae Lee, Junehwa Song.
 “ExerLink – Enabling Social Exergames with Heterogeneous Exercise Devices”
 IEEE SECON 2012 Demo (IEEE International Conference on Sensing, Communication, and Networking), Seoul, Korea, June 2012.
[Honorable Mention Award]
- [D.02] Taiwoo Park, Jinwon Lee, **Inseok Hwang**, Chungkuk Yoo, Lama Nachman, Junehwa Song.
 “E-Gesture – A Collaborative Architecture for Energy-efficient Gesture Recognition with Hand-worn Sensor and Mobile Devices”
 IEEE SECON 2012 Demo (IEEE International Conference on Sensing, Communication, and Networking), pp.453-454 Seoul, Korea, June 2012. [[ACM DL](#)]
[Best Demo Award]

- [P.01] **Inseok Hwang**, Hyukjae Jang, Taiwoo Park, Aram Choi, Chanyou Hwang, Yanggui Choi, Lama Nachman, Junehwa Song.
 “*Toward Delegated Observation of Kindergarten Children’s Exploratory Behaviors in Field Trips*”
 ACM UbiComp 2011 Poster (ACM International Conference on Ubiquitous Computing), pp. 555-556, Beijing, China. [\[ACM DL\]](#)
- [D.01] Taiwoo Park, Jinwon Lee, **Inseok Hwang**, Chungkuk Yoo, Lama Nachman, Junehwa Song.
 “*Demo: E-Gesture – A Collaborative Architecture for Energy-efficient Gesture Recognition with Hand-worn Sensor and Mobile Devices*”
 ACM MobiSys 2011 Demo (ACM International Conference on Mobile Systems, Applications and Services), pp. 359-360, Bethesda, MD, USA, June, 2011. [\[ACM DL\]](#)
- [V.01] Miru Ahn, Sungjun Kwon, Byunglim Park, Kyungmin Cho, Sungwon Peter Choe, Soho Cho, **Inseok Hwang**, Hyukjae jang, Taiwoo Park, Jaesang Park, Yunseok Rhee, Junehwa Song.
 “*Exertainer: An Interactive Entertainment System for Pervasive Running Applications*”
 ACM UbiComp 2009 Video (ACM International Conference on Ubiquitous Computing), Orlando, FL, USA, October 2009.

Book Chapters

- [B.01] Junehwa Song et al.
 “*Introduction to Telematics (2nd ed.)*”
 Hongreung Press, 2007. ISBN 978-89-72836056.

PATENTS

Granted Patents

- [US.02] “*System and Method for Monitoring Behavior of Students in Field Trips*”
 [KR.05] U.S. Patent No. 9218749. Issue Date: Dec. 22, 2015. (Application No. 13/919034. Application Date: Jun. 17, 2013)
 Korea Patent No. 10-1436235. Issue Date: Aug. 25, 2014. (Application Date: Feb. 5, 2013)
- [KR.09] “*Method and System for Real-time Detection of Personalization Swimming Type*”
 Korea Patent No. 10-1579380. Issue Date: Dec. 15, 2015. (Application No. 10-2014-0081998. Application Date: Jul. 1, 2014)
- [KR.08] “*Everyday Face-to-Face Interaction Monitoring Platform*”
 Korea Patent No. 10-1559364. Issue Date: Oct. 05, 2015. (Application Date: Apr. 17, 2014)
- [KR.07] “*System and Method for Sensing Interpersonal Touch Using Electrical Properties of Skin*”
 Korea Patent No. 10-1551572. Issue Date: Sep. 2, 2015. (Application Date: Apr. 30, 2014)
- [KR.06] “*Language Delay Treatment System and Control Method for the Same*”
 Korea Patent No. 10-1478459. Issue Date: Dec. 24, 2014. (Application Date: Sep. 5, 2013)
- [US.01] “*Adaptively Modifying the Observed Collective Behavior of Individual Sensor Nodes Based on Broadcasting of Parameters*”
 U.S. Patent No. 8898284. Issue Date: Nov. 25, 2014. (Application Date: Aug. 5, 2010)
 U.S. Patent No. 7822852. Issue Date: Oct. 26, 2010. (Application Date: Apr. 2, 2008)
- [KR.04] “*System and Method for Perceiving Spatially-isolated Person from Group on Field Trips*”
 Korea Patent No. 10-1429222. Issue Date: Aug. 5, 2014. (Application Date: Nov. 28, 2012)
- [KR.03] “*System and Method for Perceiving Outcast in Group*”
 Korea Patent No. 10-1428227. Issue Date: Aug. 1, 2014. (Application Date: Nov. 28, 2012)

- [KR.02] *“Mobile Apparatus Supporting Cooperative Context Monitoring, Method of Cooperative Context Monitoring using the Same and Cooperative Context Monitoring System including the Same”*
Korea Patent No. 10-1394966. Issue Date: May. 08, 2014. (Application Date: Sep. 24, 2012)
- [KR.01] *“Apparatus for Vicarious Service using a Wide-area Situational Awareness, Service System using the Same and Method therefor”*
Korea Patent No. 10-0927823. Issue Date: Nov. 13, 2009. (Application Date: Mar. 13, 2008)

Pending Patents

- [us.14] *“Imagined Grid Fingertip Input Editor on Wearable Device”*
U.S. Patent Pending. Application No. 14/986641. (Application Date: Jan. 1, 2016)
- [us.13] *“Tracking of Objects using Pre-touch Localization on a Reflective Surface”*
U.S. Patent Pending. Application No. 14/947048. (Application Date: Nov. 20, 2015)
- [us.12] *“Dynamic Image Compensation for Pre-touch Localization on a Reflective Surface”*
U.S. Patent Pending. Application No. 14/947011. (Application Date: Nov. 20, 2015)
- [us.11] *“Pre-touch Localization on a Reflective Surface”*
U.S. Patent Pending. Application No. 14/946994. (Application Date: Nov. 20, 2015)
- [us.10] *“Wifi-fingerprint based Indoor Localization Map”*
U.S. Patent Pending. Application No. 14/934324. (Application Date: Nov. 6, 2015)
- [us.09] *“A Cognitive Music Engine using Unsupervised Learning”*
U.S. Patent Pending. Application No. 14/880372. (Application Date: Oct. 12, 2015).
- [us.08] *“Adaptively Position Objects through Mobile Signals Sources”*
U.S. Patent Pending. Application No. 14/860425. (Application Date: Sep. 21, 2015)
- [us.07] *“Attribute Energy Consumption through Power Sensing and User Localizations”*
U.S. Patent Pending. Application No. 14/860304. (Application Date: Sep. 21, 2015)
- [kr.10] *“Mobile Apparatus and Method for Dynamically Screening of Mobile Contents based on Users’ Situational Contexts”*
Korea Patent Pending. Application No. 10-2015-0129261. (Application Date: Sep. 11, 2015)
- [us.06] *“System and Method for Sensing Interpersonal Touch Using Electrical Properties of Skin”*
U.S. Patent Pending. Application No. 14/666339. (Application Date: Mar. 24, 2015)
- [us.05] *“Mobile Devices Executing Face-to-Face Interaction Monitoring, Method of Monitoring Face-to-Face Interaction Using the Same, and Interaction Monitoring System Including the Same, and Mobile Interaction Monitoring Application Executed on the Same”*
U.S. Patent Pending. Application No. 14/302440. (Application Date: Jun. 12, 2014)
- [us.04] *“Language Delay Treatment System and Control Method for the Same”*
U.S. Patent Pending. Application No. 14/047177. (Application Date: Oct. 7, 2013)
- [us.02] *“System and Method for Perceiving Outcast in Group”*
U.S. Patent Pending. Application No. 13/919039. (Application Date: Jun. 17, 2013)
- [pct.01] *“Mobile Apparatus Supporting Cooperative Context Monitoring, Method of Cooperative Context Monitoring using the Same and Cooperative Context Monitoring System including the Same”*
PCT Patent Pending. Application No. PCT/KR2013/004335. (Application Date: May. 16, 2013)

- PROFESSIONAL EXPERIENCES**
- Visiting Student Researcher, IBM T. J. Watson Research Center**, Hawthorne, NY, USA, from January 2004 to September 2004.
 ✓ Researches on distributed sensor networks and intelligent energy-efficient large-scale monitoring
- Teaching Assistant, Computer Science, KAIST**, Daejeon, Korea, from March 2001 to December 2003
- Summer Intern, Hanaro Telecom Internet Data Center**, Seoul, Korea, from July 2000 to Aug. 2000.
 ✓ Large-scale maintenance and monitoring of server clusters
- Research Trainee, Advanced Technology Training Institute, Samsung Electronics**, Suwon, Korea, August 1999.
 ✓ Development of a portable gaming device with FPGA technology
- President of Students, Electrical Engineering, KAIST**, from March 2000 to February 2001.
 ✓ Services as the representative of undergraduates in the department of electrical engineering, KAIST.
- Summer Student, University of California at Berkeley**, California, U.S.A., from June 1998 to August 1998.
 ✓ With a full scholarship funded by KAIST
- INVITED TALKS (NOT INCLUDING CONFERENCE PRESENTATIONS)**
- Michigan State University**: “*Mobile Opportunities to Enrich Social Wellbeing and Health: Life Immersive Social Boosters Augmenting Microscopic Interpersonal Interaction*”, March 2015, East Lansing, MI, USA.
- University of Tokyo**: “*Mobile Opportunities to Enrich Real-world Social Life by Leveraging Microscopic Interpersonal Interventions*”, December 2014, Tokyo, Japan.
- IBM Research Austin**: “*Socially Leveraged Sensing to Advance Life-Immersive Mobile Applications*”, November 2013, Austin, TX, USA.
- Alcatel-Lucent Bell Labs**: “*A Step towards Socio-Physical Computing: Social Facilitation Systems in People-centric Smart Space*”, November 2013, Dublin, Ireland.
- NTU (Nanyang Technological University)**: “*Collaborative In-situ Interaction Monitoring to Reinforce Everyday Clinical Training for People with Language Delay*”, September 2013, Singapore.
- SMU (Singapore Management University)**: “*Mobile Social-interaction Sensing Initiative toward Everyday Clinical Support for Language Delay*”, September 2013, Singapore.
- Google Zürich**: “*Group-wide Behavior Monitoring in Kindergarten: Field Studies on the Behavioral Relativeness of Young Children in Shared Social Situations*”, August 2012, Zürich, Switzerland.
- Dept. of Industrial Design, KAIST**: “*Leveraging Children’s Behavioral Distribution and Singularities in New Interactive Environments: Study in Kindergarten Field Trips*”, June 2012, Daejeon, KAIST.
- MEDIA COVERAGE**
- NewScientist** “*Conversation app helps parents boost child’s language*”, February 1. 2014.
- NewScientist** “*Smartphone app keeps children from getting lost*”, August 24. 2012.
- SCHOLARLY SERVICES**
- Program Committee**
- **IEEE INFOCOM 2016** (IEEE Conference on Computer Communications)
 - **Quantified Workplace 2016** in conjunction with **ACM CSCW 2016**
 - **ACM CHI 2015** (ACM Conference on Human Factors in Computing Systems)
 - **SocialSens 2015** (International Workshop on Social Sensing) in conjunction with IEEE MASS 2015
 - **ACM Multimedia 2014** (ACM International Conference on *Multimedia*)
 - **ACM UbiComp 2014** (ACM International Joint Conference on *Pervasive and Ubiquitous Computing*)
 - **AAAI ICWSM 2014** (AAAI International Conference on *Weblogs and Social Media*)

- **ACM MCSS 2014** (ACM Workshop on *Mobile Systems for Computational Social Science*) in conjunction with **ACM UbiComp 2014**
- **ACM MCSS 2013** (ACM Workshop on *Mobile Systems for Computational Social Science*) in conjunction with **ACM UbiComp 2013**

Organizing Committee

- Web Co-Chair, **ACM MobiSys 2016** (ACM *International Conference on Mobile Systems, Applications, and Services*)
- Poster/Demo Co-Chair, **ACM SenSys 2015** (ACM *Conference on Embedded Networked Sensor Systems*)
- Program Co-Chair, **ACM MCSS 2015** (ACM *Workshop on Mobile Systems for Computational Social Science*) in conjunction with **ACM UbiComp 2015**
- Publication Chair, **ACM MCSS 2014** (ACM *Workshop on Mobile Systems for Computational Social Science*) in conjunction with **ACM UbiComp 2014**

External Reviewer

- **ACM Transactions on Sensor Networks**
- **IEEE Transactions on Mobile Computing**
- **Elsevier Journal on Pervasive and Mobile Computing**
- **Journal of Sensors**
- **ACM MobiSys** (ACM *International Conference on Mobile Systems, Applications, and Services*): 2013, 2016
- **ACM CHI** (ACM *Conference on Human Factors in Computing Systems*): 2014, 2016
- **ACM CSCW** (ACM *Conference on Computer-Supported Cooperative Work and Social Computing*): 2014, 2015, 2016
- **ACM UbiComp** (ACM *International Conference on Ubiquitous Computing*): 2012, 2015
- **ACM IDC** (ACM *SIGCHI Interaction Design and Children*): 2015
- **ACM Urb-IoT** (ACM *International Conference on IoT in Urban Space*): 2014
- **ACM SenSys** (ACM *Conference on Embedded Networked Sensor Systems*): 2013
- **IEEE PerCom** (IEEE *International Conference on Pervasive Computing and Communications*): 2013
- **ACM MobiGames** (ACM *SIGCOMM Workshop on Mobile Gaming*): 2012
- **ACM HotMobile** (ACM *International Workshop on Mobile Computing Systems and Applications*): 2011
- **Mobiquitous** (International *ICST Conference on Mobile and Ubiquitous Systems*): 2010
- **Journal of Korea Information and Communications Society**

INTERN
MENTORING

Chungkuk Yoo

Research Intern at IBM Research – Austin (July 2015 – December 2015); Ph.D. student in School of Computing, KAIST, at the time of internship.

- Publications: Under submission; to be announced.
- U.S. patents pending: [us.11], [us.12], [us.13].

TECHNICAL
TRANSLATIONS

“*The Art of Unit Testing with Examples in .NET*”. Insight Press, 2010. ISBN 978-89-91268852. (originally authored by Roy Osherove)

“*Pro JavaScript Techniques*”. Insight Press, 2008. ISBN 978-89-91268432. (originally authored by John Resig)

“*JavaScript: The Definitive Guide*”. Insight Press, 2008. ISBN 978-89-91268418. (originally authored by David Flanagan)

“*Pragmatic Ajax: A Web 2.0 Primer*”. Insight Press, 2006. ISBN 978-89-91268142. (originally authored by Justin Gehrtland, Ben Galbraith, Dion Almaer)

TECHNICAL
SKILLS

- Programming Languages: Java, Javascript, Python, PHP, C, C++, Swift
- Mobile and Sensor Platforms: Android, TinyOS, Arduino
- Machine Learning Platforms: WEKA, Theano
- Mathematical Platforms: MATLAB
- Web and Rich UX: HTML5, CSS, AJAX
- DBMS: MySQL, SQLite
- Firm foundation in Electrical Engineering, Physics, and Mathematics, e.g., Signal Processing, Motion Analysis, Electromagnetics, Statistics, etc.

PERSONAL

Marathon Records: I love running for everyday exercises. I have completed multiple official marathon races, holding one full record (42.195 km) and six half records (21.0975 km).

Cycling Record: I love road cycling for occasional recreation. I hold a certificate of Korean Cross Country completion (633 km).

Mountaineering: Mountains are my favorite destinations to indulge in Mother Nature. I climbed to the summits of a dozen of mountains over 1000 meters high, including Mt. Fuji in Japan (3776 meters) and Mt. Jiri in Korea (1915 meters).