

9th Social Study of ICT Workshop

Innovating Experiential Computing

Youngjin Yoo
Temple University



Youngjin Yoo
Temple University
yxy23yoo@gmail.com

The rapid development of digital technology has brought computers and computing as a part of everyday activities through ordinary artifacts that have various embedded forms of computing capabilities. The penetration of computing into our everyday activities through these computerized artifacts can have potential transforming implications in the way we live. Yet, there is paucity in the IS literature on this important issue. I argue that such paucity is caused by the fundamental differences between traditional computing and this new type of computing. In order to adequately study this new emerging phenomenon, we need a new way to think about computing in everyday life.

In this paper, I suggest *experiential computing* as a new research stream for information systems (IS) community. Experiential computing involves *the embodied experience of computing in mundane activities through everyday artifacts that have embedded computing capabilities in radically convergent digital environments*. Experiential computing is enabled by the tight coalescence across *material, representational* and *imagined* realms of the world, which results in radically convergent digital environments. Connecting these three realms of world lead to six design principles – programmability, addressability, locatability, communicability, senseability, and associability of anything, anywhere and anytime – of radically convergent digital environments that serves as the basis of experiential computing. Drawing upon phenomenological understanding of human experiences, I suggest a conceptual framework of experiential computing that consists of time-space-actors-artifacts. From the analysis of basic principles of experiential computing, I suggest six research opportunities that the IS research community can explore. At the end, I propose the IS field to become new liberal arts of the 21st century that focuses on the inherent value of information technology

Biography

Youngjin Yoo is Associate Professor in Information Systems and Irwin L. Gross Research Fellow at the Fox School of Business and Management at Temple University. He is also a visiting professor member at Viktoria Institute in Sweden. He was a summer research fellow and a visiting research associate at NASA Glenn Research Center. Prior to joining Temple University, he was Lewis-Progressive Chair of Management at the Weatherhead School of Management at Case Western Reserve University. He was also a visiting faculty member at Hong Kong City University, Zollverein School of Design in Germany and Tokyo University of Science in Japan. He holds a Ph.D. in information systems from the University of Maryland. His research and teaching interests include integrating design approaches in managing innovations and information technology, knowledge management, virtual teams and ubiquitous computing. His work was published at leading academic journals including *Information Systems Research*, *MIS Quarterly*, *Organization Science*, *the Communications of the ACM*, and *the Academy of Management Journal*. He also edited three books on ubiquitous computing and organized several international research workshop and academic conferences in the area of ubiquitous computing. He is a senior editor of *Journal of Strategic Information Systems*, an associate editor of *Information Systems Research*, and on the editorial board of *Organization Science*, and *Information and Organization*. Previously, he served on the editorial board of *Management Science* and *the Journal of AIS*. He is also a co-guest editor of special issues of *Organization Science* and *the Journal of AIS*. He has received over a million dollars in research grants from National Science Foundation, NASA, Korea Science Foundation, IBM, and Samsung Electronics.