**STATEMENT OF PURPOSE**/Chiao-Yin HSIAO

My interest in *Human-Computer Interaction* (HCI), especially the *Social Computing* aspect,was motivated by my own life experience. For around ten years, I have been studied and worked far away from my hometown. Online communication and social network sites stepped in my life, playing the role of bridge between me and my family. I have been greatly fascinated by computer-mediated human-human interaction and the value that HCI design in this space may bring to people. Modern computer-mediated communication tools are no more “just mere communication channels”. In the age of intelligent computing, computers may also process information for communication participants, and actively participate in the interaction. With these emerging technologies, *how should we apply social science theories to improve social interactions and stimulate the collective power of people?* Pursuing PhD provides me more opportunities and resources to concentrate on my research interest, particularly, topics of *computer-mediated communication*, *cross-cultural online interaction,* and *crowdsourcing*. Ultimately, I aim to continue my academic research and to contribute to education in HCI and social computing in a post doctoral setting, and I have had necessary preparation and experience for pursuing the line of research.

I have keen interest in how people interact and how resulting relationships can be harnessed for good. My belief is that social relationships can be an excellent source of motivation to mobilize people in quality crowd-based work. Currently, I am working on friendsourcing with Prof. Hao-Chuan Wang of National Tsing-Hua University, who establishes the first lab for social computing in Taiwan. In an initial study, we found that requesters willingly pay over the odds for work done through friendsourcing, which is counter-intuitive as crowdsourcing researchers and practitioners tend to consider friends’ help to be free. This primitive finding is going to be submitted to *ACM CHI ’15* as a Work-in-Progress. We are now working on a hybrid crowd-powered document editing system, which combines regular crowdsourcing and friendsourcing in order to direct microtasks of different properties and requirements. For example, grammar checking requires only language skills while editing of personal content may work better when social relations exist. A system that carefully blends and leverages regular crowdsourcing and friendsourcing is likely to generate value that each of them cannot generate independently. Furthermore, we plan to test the social-driven editing system with users from different countries, to see how culture impacts on behavior toward friends and strangers (i.e., crowds) and demonstrate the flexibility of the system in editing multi-language documents.

I have worked in my master’s degree program on crafting intelligent machines to interpret human behavior, focusing on Social Signal Processing in face-to-face conversational engagement. The traditional approach of social signal analysis used sophisticated mathematical models to model and interpret social behavior. I proposed a more flexible framework to involve human intelligence for assessing face-to-face conversational engagement. The work was accepted by *AAAI-12 Activity Context Representation Workshop*, and was developed into my master’s thesis eventually. In addition I had the opportunity to visit Carnegie Mellon University (CMU) Silicon Valley for collaborative research between National Taiwan University and CMU. I joined a project led by Prof. Ted Selker on Auditory Presented Social Information. We aimed to understand how audio channel presents three pieces of social information - speaker identity, presence, and entry/exit - in an intelligent teleconference system. I carefully designed the icons according to syntax (sound and placement) and semantic (relationship to the conversational channel). The work proved that information from audio channel can improve users’ sensory experience in the interaction. The paper was accepted by *INTERACT ’13.*

In addition to expertise on technology development, I realized that computing machines alone are not enough to satisfactorily realize a computer-mediated communication experience to the users. These computer-based communication channels need elegant design to better integrate them with the communication processes. When working on Reminiscence-Aiding Interface project, I and my colleagues explored the effects of soundscape in aiding reminiscence, i.e. recalling and telling past stories. We aimed to see how sound, the always-unfinished digital artifact, can help users record their life. Interestingly, we found that reminiscence not only helps people recall their stories, but even motivates them to be more sensitive to what is happening around them in the present. The unique personal meaning carried by sound can be extended to enhance media communication. The series on the soundscape project were accepted as posters in *ACM DIS ’12* and *ACM CHI ’13*, and as a full paper in *IASDR ’13*.

I believe that an outstanding academic is not only excellent at research, but also is devoted to the betterment of the research community. I have TAed “Introduction to Computer Science”, an introductory course for CS freshman, and “User-Oriented Innovative Design”, an interdisciplinary course for engineering and design graduate students. Additionally, I served as the program chair for OpenHCI Workshop ’13 (http://www.openhci.com/2013), the biggest annual student-organized HCI event held in Taiwan. I led more than 20 graduate students from more than three different universities to complete the work and deliver the event very successfully. All these experiences provide me with the foundation on which to build my professional competence.

As an Asian, it is my inherent responsibility to bridge the cross-cultural gap. I have long been wondering if cultural difference has anything to do with the state of the art of Social Computing. Thus, an environment with high interdisciplinary and sensitivity to multiculture is necessary for me to earn cross-domain knowledge of technology, social science, and design. Northwestern University is a top comprehensive school, providing abundant resources for students to cultivate an universal view of research. PhD in Technology and Social Behaviors (TSB) is a unique program that is able to provide training of two different discipline. With its emphasis on the insights from diverse domains, the TSB program provides an outstanding cradle for researchers with diverse background. Based on my research interest, Professor *Liz Gerber*, Professor *Haoqi Zhang*, and Professor *Darren Gergle* will be the best supports to my research.