

HCI and Wellbeing at UC Santa Cruz

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The Human-Computer Interaction (HCI) faculty at UC Santa Cruz has identified a strategic thematic umbrella for the research we do, which would benefit from UR's assistance and amplification. Spread across two departments/divisions (Computational Media/Engineering and Psychology/Social Science), HCI@UCSantaCruz now comprises four core faculty who have united over the last year to hold regular seminars, and to work on joint research proposals as well as curriculum.

Over this year, we have identified a common theme of HCI and Wellbeing. By this we mean researching, designing, developing, and evaluating technologies that enhance everyday wellbeing. Most work on technology is values-neutral, presuming that market forces will lead to societal benefit. Our research foregrounds concerns of quality of life, bringing social contexts and values and considerations of moment-to-moment felt experience into the design, development and evaluation process. This leads to innovation in design spaces that may otherwise not be reached through pure market forces.

To illustrate, here are brief research examples from each faculty member:

Isbister. Currently investigating the design of wearable computing to better support in-person interaction. Has built a series of research prototypes challenging embedded assumptions in the current generation of quantified-self focused wearables, leading to improved quality of mutual attention between people and better interpersonal engagement. This work has been sponsored by Yahoo Research, Alcatel/Lucent Bell Labs, and most recently Intel. Director of Social Emotional Technology Lab at UCSC.

Kurniawan. Developed a series of games for physical, communication and cognitive well-being of people with developmental disabilities, stroke survivors, persons with dementia and other aging-related memory impairment, and children with corrected cleft. Developed a series of games to prepare parents for childbirth and labor, addressing homeless expecting parents. Most of these projects are in collaboration with non-profit, medical and healthcare institutions, including UC Davis Medical Center, UC San Francisco, Cabrillo College's stroke and disability learning center and Hope Services. This work has been sponsored by NSF, Microsoft, CITRIS, Disability Communication Fund, and others.

Takayama. Founding a new lab on campus, starting with a set of empirical investigations of loneliness and robotic agents in the home. Continuing to study human-robot interaction (HRI) issues of expectation setting, responsibility, help, trust, and forgiveness. Conducted longitudinal field research and lab experiments to improve upon the design of telepresence robot systems for supporting collaboration at a distance, which spun off into Suitable Technologies, Inc. This work was sponsored by NSF and Willow Garage.

Whittaker. Developed mobile applications that improve the quality of people's mental experiences by supporting reflection and emotion regulation. Novel software designs help users gain insights into their emotional behaviors and plan actions to regulate and moderate their emotions. Large scale deployments show that using our reflective applications promotes long term well-being, by helping people engage in more healthy activities. This work has been sponsored by NSF and Xerox.

Overall, the HCI core faculty team brings to bear a broad range of relevant skills, including (but not limited to) design and design research focusing on wellbeing applications and evaluation strategies, assistive tech, robotics, and ubiquitous computing. We also draw upon a robust ecosystem of UCSC faculty with complementary areas of expertise from the Computational Media and Psychology departments, as well as from other departments and programs such as Computer Science, Computer Engineering, and the DANM (Digital Arts and New Media) program.

How UR Can Help

HCI and Wellbeing is a theme that resonates with the UCSC tradition of social relevance and social good. We believe the UR team could help us to build strong communications to fund raise for our efforts. Our ultimate goal is a member-supported research center, where funds from participating companies go toward sponsoring student research. Like other such centers, we would hold an annual research forum, encouraging member organizations to hire students as interns and to suggest student projects of potential interest.

Though individual faculty have industry contacts, UR could help us systematically reach out to appropriate potential partner organizations, for example physical design companies such as Herman Miller or Steelcase, insurance companies, as well as local tech companies.

We propose the joint development of a communications package (website, social media strategy, perhaps also a print component) along with ongoing assistance in reaching out to potential partner organizations.