Prof. Larry Arnstein

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Biography

Larry Arnstein joined the University of Washington, Department of Computer Science & Engineering as an Assistant Research Professor in September of 1999 from the Stratos Product Development Group, LLC, a product design consulting firm in Seattle. Prior to Stratos, Larry had been the Director of Consulting Services for Cadence Design Systems in Japan where he lived with his wife for four years after Graduating with a PhD from Carnegie Mellon University, Department of Electrical and Computer Engineering in 1993. Larry's a research focus at the time was on design tools and methodologies for integrated circuits. Prior to his graduate work, Larry was an IC designer and then sales representative for the Hewlett-Packard Company. He earned his Bachelors degree in Computer Engineering from Case Western Reserve University in 1985. His current research focus is on the application of emerging ubiquitous computing technologies to problems in bioinformatics. Larry is a member of the ACM and IEEE Computer Society and is affiliated with the Cell Systems Initiative program within the department of Bioengineering.

Research Interests

The biology lab workbench is a place where information is both created and needed. Yet, due to the need for lab workers to remain focused on the task at hand rather than on interfacing with computer systems, the workbench remains a largely computer-free zone. Most biologists split their time between the physical lab environment and an often remote traditional office environment where information can be accessed and disseminated in a digital form. One result of this division is that the details of experimental procedures and outcomes are not adequately digitized, leading to inefficiency and lost opportunity. Our thesis is that any view of the laboratory of the future demands that digital and physical worlds become integrated. We start with the goal of capturing the details of experimental activity for use in a variety of important applications, while providing the ease-of-use, flexibility and extensibility needed to penetrate the laboratory research environment. This research program investigates the applications, programming tools, computing devices, and middleware technologies required for the lab of the future.

See *labscape.cs.washington.edu*

Recent Publications

Arnstein, L. F., Sigurdsson, S., Borriello, G., Labscape: *Experiment Capture in the Biology Laboratory*, Technical report

Arnstein, L. F., Sigurdsson, S.,, Franza, R., *Ubiquitous Computing in the Biology Laboratory*, Journal of Lab Automation (JALA). vol 6, no. 1, March 2001

Arnstein, L. F., Sigurdsson, S., *Position Paper for the HCI 2001 Workshop on Building the Ubiquitous Computing User Experience*

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