

GREENBELT News Review

An Independent Newspaper

VOL. 77, No. 18

15 Crescent Rd., Suite 100, Greenbelt, MD 20770-1887

MARCH 27, 2014

Catherine Plaisant Alters Human-Computer Interaction

by Marat Moore

Catherine Plaisant's research has international impact, but is as personal as how you move your finger across a screen to unlock your cell phone or view your pictures on a tablet. This French-born Greenbelter is a research leader in the field of Human-Computer Interaction (HCI).



Catherine Plaisant

For more than 27 years, she has worked at the HCI Laboratory at the University of Maryland with a pioneer in the field, Ben Shneiderman. They collaborate on research and work with multidisciplinary teams to design and evaluate new interface technologies.

In 1991 – for computers, the Neolithic era – she worked on development of the “touch-screen slider,” a technique later patented by Apple. Now the process is intuitive for millions of users.

“We always ask: Who are the users? What are their goals?” she said. “And later in the development process our questions are: Is this design useful? Is it useable? And sometimes, is it fun? That might be a goal.”

In 1998 Plaisant led the effort to develop the first version of “LifeLines,” a novel visual interface to summarize all the data from a patient’s medical record in a single screen. “It showed all the patient’s treatments, medications and flagged anything abnormal or severe, etc. The physician could quickly zoom in on the important details.”

“It was too early for its time,”

she said. It took 10 years for electronic records to become common and LifeLines now is considered a landmark achievement in research on information visualization strategies. Her work has helped physicians to better analyze patients’ health records and has inspired a generation of designers of medical

and other applications dealing with temporal histories.

The Paris of Prince George’s?

Given Plaisant’s professional stature, my surprise in meeting her was that she is so down-to-earth. She enjoys biking, hiking in the forest and together with her partner, hosts a popular pumpkin-carving party for their GHI neighbors for Halloween even though they just moved to Greenbelt two years ago.

It’s part of a balanced life that Plaisant enjoys in Greenbelt.

“Greenbelt is fantastic!” she said. “As a French person, it feels like home. You can walk everywhere and ride your bike. Going to the Co-op makes shopping fun.”

She looked around their attractive one-bedroom GHI unit.

“My Parisian friends come to visit and say, ‘This isn’t small!’ And they comment on my big backyard. For anyone who has lived in Paris or New York, the size of this unit is completely normal,” she said, laughing.

“I was surprised at how

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liberated I felt living in a small unit,” she said. “It’s a tiny carbon footprint and is extremely comfortable. My financial anxieties about retirement have evaporated, and you can clean up everything in 30 minutes – with a partner.”

Creative Collaboration

This stellar scientist traveled an interesting path to Greenbelt and the HCI Lab. In her education in France and transatlantic career, Plaisant has adhered to a personal principle that has paid off in career satisfaction.

“I always chose the direction that offered more options, that opened the most doors,” she said. In high school, she was good at science and math but said she had “had no clue” about a career. She loved the outdoors and considered architecture and surveying “because the work was outside and had math involved.”

In Lille and Paris as a university student, she studied engineering – only one percent were women – and graduated early. She pursued a PhD in industrial engineering. Her thesis? Designing a voice recognition system to allow quadriplegic users to turn pages on mechanical book readers, turn lights off and on and do other tasks.

Her PhD in hand, she worked for a few years in a French research center, where she met the American who would become her husband and moved with him to the United States.

“I never thought I’d stay in the U.S. for more than a few years. I was just looking for a job,” she said, laughing, since it’s been nearly 30 years. But the opportunity to work with Shneiderman at the HCI Lab has kept her here and fully engaged.

Creative collaboration is the key to good designing of new ways for people to interact with technologies. “HCI draws from computer science, information science, psychology and others, depending on the project, like physicians or sociologists,” she said. “Working with doctoral students, we begin by building small, then discuss the design and run evaluations with users.” The goal is to build an “inspirational prototype” – which will act as a catalyst and inspire new ways to use technology.

After meeting Catherine Plaisant, I think: Forget the prototype. She’s pure inspiration.