

Computer Science Seminar Series

National Capital Region

Back to the Future: How people construct new creative ideas from old knowledge, and how technology can help.

Speaker: Dr. Joel Chan
University of Maryland, College of Information Studies
Friday, April 27, 2018
1:00PM- 2:00PM, NVC T3

Abstract

Where do good ideas come from? One answer is that they come from prior knowledge: for example, Thomas Edison leveraged his knowledge of phonographs to “do for the eye what the phonograph does for the ear”. Yet, much research on human creativity demonstrates that prior knowledge often constrains creativity. How do people construct new creative ideas from old knowledge? And (how) can technology help?

In the first part of my talk, I will summarize empirical work I have done that advances theories of the conditions under which people successfully construct new creative ideas from prior knowledge. This empirical work shows that prior knowledge can inspire creativity when it is *analogically* related to the current problem. This insight informs the ongoing work I will discuss in the second part of my talk: developing information technologies that combine human and machine intelligence to more effectively support *analogical reasoning* over prior knowledge.

Biography



Joel Chan is an Assistant Professor in the University of Maryland’s College of Information Studies (iSchool), and Human-Computer Interaction Lab (HCIL). His research and teaching focus on the intersection of people, information, and creativity. He wants to know how they (can best) combine to enable us to design the future(s) we want to live in. His work has been recognized with a Best Paper Award at the ASME Design Theory and Methodology conference, the Design Studies Award 2015, and supported by an NSF Doctoral Dissertation Improvement Grant. Previously, he was a Postdoctoral Research Fellow and Project Scientist in the Human-Computer Interaction Institute at Carnegie Mellon University. He received his PhD in Cognitive Psychology at the University of Pittsburgh.