Franklin & Marshall College
and
Millersville University

Joint Colloquium in Mathematics

Thursday, January 30th, 2020
4:00 – 5:00PM, Stager Hall 215 Franklin & Marshall

Vince Perry F&M '16, Army Research Laboratory (Aberdeen, MD)

Supercomputing at the Army Research Laboratory:
The Vital Role of Data Analysis and Assessment

Abstract: As the Army continues its modernization efforts to forge the battlefield of the future, many new challenges and opportunities arise that are taken on by researchers at the Army Research Laboratory to address. Backed by hundreds of thousands of cores and billions of processor hours per year, the Army leverages the Department of Defense's most powerful supercomputing resources to provide solutions to the Army's toughest problems. As artificial intelligence and machine learning continue to pave the way for technology of the future, the Army continues to integrate these ideas into concepts for the future force. Only through algorithm development, modeling, simulation, testing, and evaluation can the Army make informed decisions with which to best equip its warfighters. While every solution stems from a collection of data, there are a multitude of ways to analyze that data. From hybrid visualization frameworks to immersive environments, processing and analyzing that data is a necessity for the Army of tomorrow. Every solution requires analysis of data in some form or another, which is why the Army Research Laboratory's Department of Defense Supercomputing Resource Center has immense impact in solving the Army's toughest data problems.

Bio: Vincent Perry received Bachelor's of Arts Degrees in both Mathematics and Computer Science from Franklin and Marshall College in 2016. Since graduation, he has worked for the Army Research Laboratory's Department of Defense Supercomputing Resource Center (DSRC), first as a contractor and most recently as a civilian. In his current role, he works as a member of the Data Analysis and Assessment Center team to assist DSRC users in their data analysis efforts. This involves developing applications and visualizations of user data, as well as conducting research in fields of next generation visualization technology. His main areas of research include emerging AR/VR technology, reconfigurable visual computing architectures, and hybrid visualization ecosystems. Additionally, Mr. Perry has supported STEM outreach efforts including the Army Education and Outreach Program for the past 4 years, teaching Unity and virtual reality development coßurses to high school students. He has also hosted tours and demonstrated the visualization capabilities of the ARL DSRC to both middle and high school students each of those 4 summers. Further, he has mentored and co-mentored a total of 9 student interns over the past 3 summers, and was once a summer intern himself with ARL in the summer of 2015. He has co-authored 15 accepted conference papers and 3 published journal articles, while claiming first-authorship of a conference paper and an ARL Technical Report. He is also expecting a Master's of Science in Computer Science from Johns Hopkins University in May, 2020.

After the talk, students are welcome to stay to chat informally with Mr. Perry about his path since leaving F&M. His team is also accepting applications for a summer internship in computer science and data science, open to US citizens who are students or May 2020 graduates.

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