



## Teaching at CMC: Excellence, Innovation, and Technology Summit

Friday, September 27, 2019

11:45 - 4:00

Founders Room, Bauer North

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11:45 - 1:30 **Lunch**

12:00 - 12:10 **Summit Opening Session: Introductory Words from Peter Uvin, Dean of the Faculty**

12:10 - 1:30 **Session 1: CMC Faculty Do Data Science**

**Moderator:** Dean Shana Levin

**Panelists:** Manfred Keil, Daniel Michon, and Findley Finseth

**Narrative:** Data science is an interdisciplinary subject drawing from statistics, computer science, and domain knowledge skills. CMC now offers a Data Science sequence that offers students a foundation in the principles and application of data science, deepening familiarity with the types of tools used for data science, and the capacity to use data to handle real-world problems. Currently, in addition to offering specific courses in Data Science, other participants in the program teach in the fields of Biology; Computer Science; Digital Humanities; Economics; Government; Math; Physics; and Psychology. In this session, Manfred Keil will provide an overview of the history of CMC's efforts to incorporate data analysis in our pedagogy across the College, and then discuss what Data Science is and is not. Dan Michon will share insights from the Humanities, and Findley Finseth will discuss data science in her research and teaching in genomics and biotechnology. The session will end with a discussion on how the College is preparing our students for the burgeoning field of Data Science across multiple disciplines.

1:40 - 2:40 **Session 2. Experiential Learning In and Beyond the Classroom**

**Moderator:** Dean Emily Wiley

**Panelists:** Zachary Courser, Emily Pears, and Heather Ferguson

**Narrative:** This panel will discuss the importance and benefits –and potential pitfalls – of asking students to learn through doing, that is, by experiential learning. Prof. Courser will discuss the Policy Lab (Govt 100), co-created with Professor Eric Helland. Enormously popular, Policy Lab provides a mix of classroom instruction with hands-on experiential learning. Civic Education in America is a course created by Prof. Pears via a Course Innovation Grant, offering a rare instance of incorporating experiential learning through community engagement. Students engage in questioning current forms of the Civics discipline as well as how to participate in politics despite partisanship and ideological polarization. Prof. Ferguson will speak about her courses that draw on a mix of innovative readings as well as thoughtfully prepared experiential assignments; these range from participating in class Twitter feeds to requiring students to create a podcastable presentation, all designed to help students understand the discipline of History and provide them with the experiences necessary to create their own "tool kit" of essential skills.

2:50 – 3:50 **Session 3. Innovative Teaching and Learning with Technology in the Classroom**

**Moderator:** Prof. Cynthia Humes

**Panelists:** Babak Sanii and Alison Harris

**Narrative:** Prof. Harris will begin this session with an explanation of significant outcomes resulting from the Spring 2019 CAC faculty survey, including important academic computing developments and the addition of substantial new faculty research resources. Prof. Harris will then discuss the creation of a Makerspace at the College to support innovation and creativity, which includes 3D printing resources and support. She will conclude by asking if faculty have what they need to become fluent in new technologies, and inviting faculty to share their perspectives. Prof. Sanii will then present on his latest interest—augmented reality in the classroom. Augmented Reality (AR) is a means of superimposing artificial 3D objects over the real-world via a mobile device. In a fun and interactive session, Prof. Sanii will describe three relatively non-technical methods to produce 3D AR objects for Chemistry courses. He will demonstrate their use as both quick in-lecture activities and as part of an extended laboratory. Prof. Sanii will also discuss how 3D biomolecules can be 3D printed to help us visualize them, and then share preliminary in-course student assessments of these innovations.

3:50 – 4:00 Summit Closing Session: Wrap up and Closing Words