**Invited Paper Proposal for JMM 2020**

**Title:** Modernizing the Introductory Statistics Course

**Sponsor:** SIGMAA Stat Ed

**Organizers:** Alana Unfried, California State University, Monterey Bay, [aunfried@csumb.edu](mailto:aunfried@csumb.edu)

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**Speakers:**

Beverly Wood, Embry-Riddle Aeronautical University

Patti Frazer Lock, St. Lawrence University

Albert Kim, Smith College

Danny Kaplan, Macalester College

Kari Lock Morgan, Penn State University

Beth Chance, California Polytechnic State University, and Nathan Tintle, Dordt College

As we move further into the 21st century, many introductory statistics courses have not kept up with changes in the discipline. Further, current innovations seem to point in many different directions. Simulation-based inference continues to gain momentum, and the use of the statistical programming language R in introductory statistics is also growing, sometimes in conjunction with simulation-based inference, but often not. The rise of data science is impacting the choice of topics within the introductory statistics classroom as well. Lastly, the recently-updated GAISE report discusses a broad framework for implementing a modern introductory statistics course. These sometimes competing, sometimes synergistic frameworks can leave a professor wondering which direction is most appropriate. In this invited paper session, statistics education experts will discuss the future of the introductory statistics course, presenting research-based evidence for the directions they see the course heading in terms of content, pedagogy, and technology. Speakers will discuss when certain ideas are implemented in isolation and when used in conjunction with one another. Attendees will leave understanding the future direction of the introductory course, along with pros and cons of possible approaches.