

The theme of SRTL-5 is:

**Reasoning about Statistical Inference:  
Innovative Ways of Connecting Chance and Data.**

The Forum's focus will be on informal ideas of inference rather than on formal methods of estimation and tests of significance. This topic is emerging from the presentations and discussions at SRTL-3 and 4 and is a topic of current interest to many researchers as well as teachers of statistics. As new courses and curricula are developed, a greater role for informal types of statistical inference is anticipated, introduced early, revisited often, and developed through use of simulation and technological tools. We encourage research papers that address reasoning about statistical inference at all levels of education including the professional development of elementary and secondary teachers.

We encourage submission of research papers that address questions such as the following:

- What are the simplest forms of statistical inference that students can understand?
- How does reasoning about statistical inference develop from the simplest forms (informal) to the more complex ones (formal)?
- How can instructional tasks and technological tools be used to promote the understanding of statistical inference?
- What are sequences of activities that can help student develop a conceptual understanding of statistical inference?
- What types of misconceptions are found in students' reasoning about statistical inference?
- What types of foundational knowledge and reasoning are needed for students to understand and reason about statistical inference?
- How do students develop an understanding of the language used in describing statistical inference (e.g., significance, confidence)?
- How does an understanding of statistical inference connect and effect understanding of other statistical concepts?
- What are useful items and questions to use to assess understanding of statistical inference?