Internet-scale Experimentation
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Abstract:

Internet-scale Experimentation is a seminar exploring the challenges of large-scale networked system experimentation and measurements. Over the last few decades, networked systems have become an integrated part of everyday life and a critical piece of our economic, educational, health and defense systems. This fact is normally brought up as evidence of the success and broader impact of our field of work.

The other, typically avoided, side of the story is the complications that this translates into for experimentalists. Today it is virtually impossible to run a randomized controlled experiment at even fractions of the scale of many of our systems. Despite this, as we explore new ideas in these uncharted territories we are reasonably asked to provide better evidence of the effects of interventions. In this course we will discuss recent and ongoing work on networked systems experimentation and their applications that address some of the key challenges.

What you will learn:
 - Challenges of networked systems experimentation
 - Current experimental approaches
 - Useful strategies and ethical considerations
- Experimental platforms, current and proposed, strengths and weaknesses
 - Examples uses