CATSR Airport and Airspace Simulation Group

National Airspace System (NAS) Airspace Dynamics Analysis & Partitioning Tool (NAS-ADAPT)

- Developed as a research software tool under contract to the FAA - Advanced Facilities & Operational Concepts program
- Assisted in designing NAS airspace layout with reduced number of ATC Centers
- Currently used in support of several FAA offices (ATO Strategy, Integration Planning, System Command Center)
- Helps track NAS performance on a daily or seasonal basis vis-à-vis inclement weather impacts and traffic demand - both in operational environment and for future-NAS planning

Airport Simulation and Operations Analysis

- Using state-of-the-art simulation modeling tools such as Total Airport & Airspace Modeler (TAAM) and Passenger & Baggage Flow Simulation Tool (PaxSim) developed by Preston Aviation Solutions (a Boeing subsidiary)
- Conducted analysis of New York LaGuardia Airport capacity study for the FAA Policy Office and the Port Authority of New York & New Jersey
- Conducted preliminary analysis of departure screening at Dulles International Airport (with Metropolitan Washington Airports Authority)
- Ability to conduct complex airport analyses, including impact on flights, passengers, revenues, safety & efficiency

- Data fusion from multiple airport related weather, air traffic, and delay databases
- Emphasis on stochastic simulation to account for uncertainty and a range of system responses under different conditions