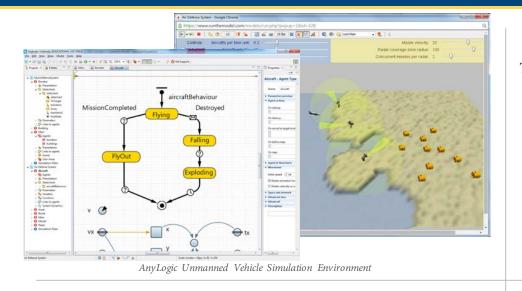
Agent Modeling of Unmanned Systems Course Module





The project will do the following activities:

- Develop training plan
- Create videos
- · Create Sakai website to host materials
- Pilot the educational materials



- Agent-based modeling is most suitable representation for analysis of the behavior of system-of-systems (SoS) architectures including manned and unmanned vehicles
 - Execution of SoS architecture to study emergent behaviors
 - Modeling fidelity appropriate for engagement-level models
- Use of state-charts, other modeling tools, and a NPS-built agent library to rapidly build quality simulation models of unmanned systems

- Many NPS capstone projects and student thesis involve unmanned vehicles, and in order to test proposed system architectures, the students need to use simulation
- The AnyLogic Modeling platform has brought agent-based modeling to the mainstream. However, even with the framework, modelers still need to understand and program in Java. The majority of NPS students in the systems engineering and systems engineering analysis programs (as well as other programs) have weak programming skills. → Need training to learn how to employ the agent libraries to develop simulation models.



Ronald Giachetti, Ph.D. Professor Department of Systems Engineering