**TUTORIALS INFORMATION**

**CLOUDES: Rethinking How We Learn, Build and Play with Simulations**

**Time Slot: 1515-1615**

**Speaker: Jose Padilla, Research Assistant Professor**

**Abstract**

Computer literacy and STEM (Science, Technology, Engineering, Math) Education are today at the forefront of educational efforts. They both have the potential of making people, young and old, participants of the ongoing technological revolution by opening the doors to entrepreneurship and well-remunerated jobs. Computer literacy is considered crucial as reflected by efforts such as those of code.org and scratch.org. . STEM, on the other hand, has been and will be the driving force behind ocean and space exploration, advanced manufacturing, robotics, biotechnology, and transportation to mention a few. One approach to getting that exposure to both is through modeling and simulation (M&S). M&S teaches students how to capture a real or imaginary system in a computer and ask questions about that system. M&S helps develop the ability to 1) meaningfully simplify a complex problem; 2) capture the problem in a model; 3) describe the model in a computer language, 4) collect meaningful input data; 5) execute the model over time; 6) obtain and analyze results and 7) make inferences about a potential solution to the problem. Further, models and simulations expose users to logic and statistics along of developing problem solving and analytical skills. In order to support the learning and the practicing of using and building simulations, VMASC developed CLOUDES. CLOUDES is an online environment where students can create, access, and share simulations. It is easy to use, accessible through mobile devices and no programming is needed.