Sylvain Bruni  
Senior Human Systems Engineer, Aptima

**Title:** Perennial M&S Challenges: Learning from the Past and Looking Toward the Future

**Abstract:** In this presentation, we identify several recurring M&S challenges, and provide ideas for the medical M&S community to avoid the traps that have plagued researchers and practitioners in other high-risk industries. Topics to be discussed include: the fool’s errand of attempting to identify a single, “optimal” level of simulation fidelity; avoiding functional fixedness by taking familiar topics and turning them on their head; identifying and leveraging (non-obvious) sources of human performance data for use in M&S efforts; and the importance of daring to “dream small” when everyone else is “dreaming big.” Examples from the military, medical, and aviation industries will be provided to illustrate key points.