



Kolloquiums-Reihe des Instituts für Informatik

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<https://webconf.tu-clausthal.de/b/umu-2ey-ekt>

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Virtual Iron Bird - Using Digital Twin for Virtualizing Systems Integration Test Rigs

Airborne systems are becoming more and more complex, making it harder to meet volatile requirements, particularly based on emerging technologies, under the time to market pressure. At that point test benches are being used extensively for achieving rapid feedback loops. However, these infrastructures are expensive and have various operational limitations. Therefore, there is a growing interest about virtual testing and virtual test benches. Systems Integration Test Rigs, generically known as Iron Birds are special test benches that include hydraulic powered flight control computer and equipments. They are key infrastructures to test the safety critical flight control systems on the ground. As one of the largest test infrastructures in an aircraft program, they are the most expensive ones and hardest to operate. Their complexity makes it very effort intensive to develop physics-based models for all of their components with a required level of fidelity to be used in virtual testing. This presentation will discuss if Digital Twin approaches and underlying technologies can be used for developing virtual Iron Birds