

## Failure Analysis in CPS Simulink Models Leonardo Mariani

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## **Abstract**

This talk discusses failure analysis and mutation testing in CPS Simulink models. Due to the data-flow oriented nature of the computations, test cases can easily exercise every element in a CPS Simulink model, on one hand complicating failure analysis, and on the other hand dramatically simplifying coverage of the injected faults. This talk discusses how to obtain and leverage information about the behavior of the components present in Simulink models to effectively determine the causes of failures. Further, it presents the notion of property-based mutation testing, as a better alternative to mutation testing in CPS Simulink models.

Camerino 10 July 2024 time 15:30

Polo Inforrmatico "Carla Lodovici", room AB1



