

Why do we need embedded software resilience?

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When looking at embedded systems they are being used ever more in a plethora of different environments. Ranging from infotainment systems, over healthcare support systems, medical safety critical systems, autonomous vehicles and even systems going into space! Those embedded systems are gradually moving more and more to programmable systems. One challenge all these systems have in common is that they can be disturbed either by radiated or by conducted interference. On top of that, as their microcontrollers operate on lower voltages to spare battery time, these microcontrollers are becoming more vulnerable to soft-errors. In this talk professor Boydens from KU Leuven, will explain what these soft-errors are, why they are transient and hence difficult to simulate and how his group is already performing research in the past 10 years to cope with these types of soft-errors.