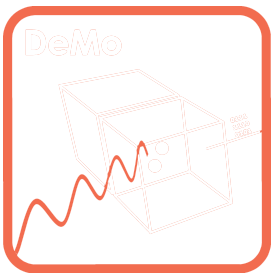

Contribution ID: **7** Type: **Standard Talk**

Introducing X-DECIMO, a Python package for detector simulation emphasizing 2D X-ray detectors

Tuesday 15 June 2021 13:00 (25 minutes)

The X-DECIMO tool is being used and further developed at ESRF to model and simulate the full detection and signal processing chain of current and future X-ray detectors for synchrotron radiation applications. This tool is a modular Python package in which the specific detectors are modeled and built by plugging and connecting together individual components. The generation of X-rays as well as the core and first part of the simulation is based on Monte Carlo techniques. The detection chain is completed when needed with additional modules for further processing of the Monte Carlo results to include, for instance, detector calibration corrections or to proceed on-the-fly with the analysis of the simulation results.
The presentation will introduce briefly the purpose, overall concept and implementation of X-DECIMO and and some technical choices that could be potentially interesting for the audience. It will also briefly present examples of how this tool is being used to evaluate in advance and support the development at ESRF of a new generation of 2D X-ray detectors.

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