

**Invited session on “PLM: future research challenge in a digital world”
for IFAC MIM 2019**

Invited session identification code : xxxx
IFAC MIM 2019, August 28-30, 2019, Berlin, Germany

<https://ifac.papercept.net/>

Session Chairs:

Dr David Tchoffa, IUT de Montreuil, Laboratoire Quartz

Dr. Nicolas Figay, Airbus

The traditional context where the Product Life cycle Management industrial was initially created is currently changing very quickly, due to different emerging trends and vision, such as Virtual Manufacturing or Circular Economy, supported by emerging technologies enabling Digital Twins and Digital Threads, blockchain, AI, etc. The new products are coming more and more with embedded software and communication technologies, allowing to capture their state and behavior which can be exploited relying on Big Data and Analytics technologies, or making them autonomous cyber physical systems interacting with their environment, bringing a new level of complexity for the produced systems and their design, production, maintenance and usage environments. The traditional V cycle is not anymore sufficient for defining the different phases of the lifecycle,. It is the case in particular because the products can no have several lives, in particular when considering circular economy for more sustainability, It is also the case due the fact that some products can have a very long life (Boats, Submarines, Buildings, etc.) but will have to be updated with some of their equipments having a quite shorter duration of life, in particular those related to communication, in a way that will have to minimized the costs and the time when the product will not be operational. The PLM solutions will become more and more numerous, having to be more interconnect and robust, and supporting new processes. Standards for robust interoperable solutions will be key, within a context of continuous evolution and reconfiguration. Finally, evolution of Information and Communication technologies (IoT, BlockChain, AI, Cloud, Data Analytics, Big Data, No SQL Data) and methods (Agile at Scale, Model Based Development) will also highly impact the capability of the future PLM solutions.

Session Topics:

The session chairs invite researchers and decision-makers from academia, industry, and government to contribute theoretical and applied research papers in areas including but not limited to the following topics: New configuration management models for composite products with building blocks having each their own configuration management model, New process for developing set of PLM interoperability standards which can be tested and validated early in advance, New models considering the usage of digital twins and digital threads, Secured and trustable Product and Process data exchange between partners by mean of blockchain, Automated processing of huge amount of product data for all the phases of the life cycle, New value creation related to digital twins, Agile process engineering for PLM with usage of composite models of composite systems.

Submission

Authors interested in submitting their research, refer to www.ifac.control.org. All papers should be two column format as per IFAC manuscript style. The full length draft paper must be submitted by (December 15, 2018?). All submitted papers will be peer reviewed by IPC members. The corresponding author submits the paper on line as an invited paper session with code xxxxxx.

Important dates:

Deadline for submission (January 15, 2018) , Notification of acceptance/rejection (February 20, 2019) Deadline for final submission (March 15, 2019)

CONFIDENTIAL. Limited circulation. For review only.