

## **Call for Contributions for**

### **Special Session: OE-PLM: Ontological Engineering of Product Lifecycle Management Systems**

#### **Chairs and Coordinators:**

Assoc Prof. Dr. Alena V. Fedotova, Bauman Moscow State Technical University (BMSTU), Russia

Prof. Dr. Valery B. Tarasov, Bauman Moscow State Technical University (BMSTU), Russia

Dr. Miroslav Blaško, Czech Technical University in Prague (CC' d), Czech.

Dr. Baurzhan S. Karabekov, Institute of Informational and Computational Technologies, Ministry of Education and Science of Kazakhstan, Kazakhstan

along with

### **INTELLI 2016, The Fifth International Conference on Intelligent Systems and Applications**

<http://www.iaia.org/conferences2016/INTELLI16.html>

November 13 - 17, 2016 - Barcelona, Spain

#### **Submissions deadlines**

Submission deadline: September 15

Acceptance deadline: September 25

Registration deadline: October 5

Camera-ready deadline: October 5

**Submission to: Alena V. Fedotova, Bauman Moscow State Technical University (BMSTU), Russia [afedotova.bmstu@gmail.com](mailto:afedotova.bmstu@gmail.com)**

#### **Contribution types**

Regular papers [in the proceedings, digital library]

Short papers (work in progress) [in the proceedings, digital library]

Posters: two pages [in the proceedings, digital library]

Posters: slide only [slide-deck posted on [www.iaia.org](http://www.iaia.org)]

Presentations: slide only [slide-deck posted on [www.iaia.org](http://www.iaia.org)]

Demos: two pages [posted on [www.iaia.org](http://www.iaia.org)]

#### **Paper Format**

See: <http://www.iaia.org/conferences2016/CfPINTELLI16.html>

Before submission, please check and comply with the editorial rules:

<http://www.iaia.org/editorialrules.html>

#### **Publications**

Extended versions of selected papers will be published in IARIA Journals:

<http://www.ariajournals.org>

Print proceedings will be available via Curran Associates, Inc.:

<http://www.proceedings.com/9769.html>

Articles will be archived in the free access ThinkMind Digital Library:

<http://www.thinkmind.org>

### **Registration**

Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.

Registration fees are available at <http://www.aria.org/registration.html>

### **Content**

The aim of the special session is to bring together the specialists in the subfield of knowledge engineering called ontological engineering and researchers in the area of product lifecycle management and product data management to construct and implement ontological systems for developing intelligent Product Lifecycle Management (PLM).

Ontological Engineering (OE) is a field which studies the methods and methodologies for building ontologies as formal representations of a set of concepts within a domain and the relationships between those concepts. It is an area of applied ontology. A large-scaled representation of abstract concepts, such as actions, time, space, resource, etc., are covered by foundational (upper) ontologies.

Ontology engineering opens the opportunity to solve the interoperability problems associated with semantic obstacles, i.e. the obstacles related to the definitions of domain terms and software classes.

In context of Product Lifecycle Management Ontological Engineering aims at making explicit the knowledge contained within software applications (PLM systems, PDM systems), using modern information/ communication infrastructure to design, simulate and integrate various stages of product lifecycle, and within enterprises and business procedures for product lifecycle management.

Its main goal is to construct an overall ontological vision of the product lifecycle by using modern modelling and simulation techniques and tools in the framework of virtual engineering.

The topic suggested by the track can be discussed in term of concepts, state of the art, research, standards, implementations, running experiments, applications, and industrial case studies. Authors are invited to submit complete unpublished papers, which are not under review in any other conference or journal in the following, but not limited to, topic areas.

- Ontological Engineering of PLM
- PLM Design Ontologies
- Top-Down vs Bottom-Up Design of Manufacturing Ontologies
- Meta-Ontologies

- Granular Ontologies and Granular Meta-Ontologies
- Upper Ontologies in PLM
- Lifecycle Ontologies
- Graphs, Multi-Graphs, Meta-Graphs, Hyper-Graphs in the Modeling of PLM Ontologies
- Logical Approaches to PLM Ontological Engineering: Descriptive Logics, P-Logics, etc. Algebras in PLM Ontological Modeling
- PLM Ontology Management: Ontology Mapping, Ontology Matching, Ontology Alignment, Ontology Merging
- Ontology for Decision Support in PLM systems
- Ontology-Based Product Data Access
- Ontological Approaches to Big Data Problems
- Ontological Modeling and Semantic Technologies in PLM
- Sensor Systems & Measurement Ontologies
- Virtual Enterprise Ontologies
- Ontological Modeling in Ambient Intelligence and Cyber-Physical Systems
- Internet of Things Ontologies / Industrial Internet of Things Ontologies
- Languages and Tools for Ontological Engineering in PLM

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