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## 2<sup>ND</sup> INTERNATIONAL WORKSHOP ON MILS: ARCHITECTURE AND ASSURANCE FOR SECURE SYSTEMS

19 January 2016

Prague, Czech Republic

Co-located with the HiPEAC Conference 2016

# CALL FOR PAPERS

**Paper submission deadline extended until 15 November 2015.**

### Workshop description:

MILS\* is a high-assurance security architecture based on the concepts of separation and controlled information flow. The MILS architectural approach is all about decomposition of a system design into well-understood components and their interactions with the goal to achieve composable architecture and composable assurance for the designed system.

The composability of architecture and assurance for secure systems is a grand challenge, which we undertake to meet using the MILS architectural approach.

Architecture composition defines a secure system from trustworthy components and system architecture. The MILS framework for composable architecture is based on a separation kernel (which has overlapping functionality with a hypervisor) that creates partitions to separate different security domains. Such a separation kernel often needs to support real-time because there are many use-cases in embedded systems.

Assurance composition targets creating an assurance argument for the overall system from arguments of its components and the system's security architecture. The workshop also welcomes contributions on the industrial application of the MILS architecture, assurance and certification frameworks, attack methods and templates for MILS systems, as well as presenting the MILS community.

### Workshop topics:

The workshop topics are but not limited to:

- MILS architectural approach for security and safety
- MILS components and eco-system
- MILS systems and their relation to MILS systems
- MILS use-cases, e.g. from avionics, automotive, communications, industrial automation, medical, railway, consumer and similar domains.
- Real-time separation kernels
- MILS evaluation and certification
- MILS testing and vulnerability analysis of MILS systems
- Application of novel and existing information flow models/policies
- Cross-European/world-wide high-assurance security
- Formal methods for MILS systems as a basis for high assurance



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## Paper/Presentation submission:

Submissions do not need to be full papers: this is a workshop and we are looking for interesting experience, work, and ideas (possibly preliminary and exploratory) that will stimulate discussion and thought around MILS concepts and challenges.

Submissions should be in PDF format between 3-12 pages.

We recommend the guidelines for ACM SIG Proceedings.

## Electronic submissions:

The submissions page at EasyChair is open:  
<https://easychair.org/conferences/?conf=mils16>

## Important dates:

Position papers due:	15 November, 2015
Reviews/decisions:	15 December, 2015
Camera ready versions:	10 January, 2016
MILS Workshop:	19 January, 2016

## Workshop committee:

**Cristina Simache**, Altran Sud Ouest, France  
**Reinhard Schwarz**, Fraunhofer SIT, Germany  
**Pavel Dyakin**, Kaspersky Lab, Russia  
**Igor Furgel**, T-Systems, Germany  
**Kevin Müller**, Airbus Group Innovations, Germany  
**Bertrand Leconte**, Airbus Operations, France  
**Paul Chen**, Wind River, USA  
**Michael Paulitsch**, Thales, Austria  
**Christoph Krauß**, Fraunhofer SIT, Germany  
**Sascha Wessel**, Fraunhofer AISEC, Germany  
**Rance DeLong**, The Open Group, UK  
**Harald Rueß**, Fortiss, Germany  
**Andreas Lindinger**, Continental, Germany  
**Lionel Robin**, SAGEM, France  
**Holger Blasum**, SYSGO, Germany  
**Sergey Tverdyshev**, SYSGO, Germany

## Organiser:

Sergey Tverdyshev, SYSGO AG, Germany  
[sergey.tverdyshev@sysgo.com](mailto:sergey.tverdyshev@sysgo.com)

FP7 EURO-MILS project  
<http://www.euromils.eu>

MILS workshop web page

<http://mils-workshop-2016.euromils.eu/>

*\* Historically MILS stands for "Multiple Independent Levels of Security" and today is considered as a proper noun.*