

# The 3rd International Workshop on Software Certification (WoSoCer)

November 5, 2013

**Workshop organizers:**

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- Welcome to the third edition of WoSoCer!
- Our goals are to
  - be a forum for discussing **innovative solutions** for software certification
  - foster **interactions** between industry and academic researchers

- This edition features 11 peer-reviewed research papers and 2 invited talks addressing major software certification challenges
  - the trustworthiness of **safety evidences** and **assurance cases**
  - the **reuse** of software
  - the adoption of traditional **assessment techniques** in software-intensive systems
  - ...

# Program

- Part 1 (11:00 am – 12:30 am)
  - Talk: “**How the Fundamental Assurance Question Pervades Certification**” (*M. Feather, JPL/Caltech*)
  - Research papers: “**Safety evidences and assurance cases**” (session chair: *Domenico Cotroneo*)
- Part 2 (1:30 pm – 3:00 pm)
  - Talk: “**Information Assurance Considerations for Software Supply Chains and 3rd Parties**” (*J .Voas, NIST*)
  - Research papers: “**Third-party software and component reuse**” (session chair: *Roberto Pietrantuono*)
- Part 3 (3:30 pm – 5:00 pm)
  - Research papers: “**Software certification practices**” (session chair: *Nuno Silva*)

# Acknowledgments

- This workshop is an achievement of several people:
  - the authors, the PC members, and the reviewers
  - the ISSRE organizers
  - the participants!
- This edition of WoSoCer is supported by the CECRIS project (CErtification of CRITICAL Systems)
  - <http://www.cecris-project.eu>

# CECRIS

## Certification of Critical Systems

<http://www.cecris-project.eu>



# List of Participants

<b>Beneficiary Number</b>	<b>Name</b>	<b>Beneficiary short name</b>	<b>Commercial Sector (Y/N)</b>	<b>SME (Y/N)</b>	<b>Country</b>
1 (Coordinator)	Consorzio Interuniversitario Nazionale per l'Informatica	CINI	N	N	Italy
2	Resiltech	RT	Y	Y	Italy
3	University of Coimbra	UC	N	N	Portugal
4		BME	N	N	Hungary
5		PROLAN	Y	Y	Hungary
6	Critical SoftWare	CSW	Y	N	Portugal

# Project Objectives

- The CECRIS project aims at taking a step forward in **development, verification and validation and certification of critical systems** by supporting the introduction of novel state-of-the-art methods with a special emphasis on **technology and human skill development at SMEs.**



# Challenges

- **New challenges for multiple aspects:**
  - Increasing *functionalities* embedded into critical systems in several domains
  - The *vulnerability of the society* to malfunctioning systems
  - The rapid development of *underlying technologies*
  - The need for an *uniform approach* to the development, validation and verification
  - The *dissemination* of the best industrial *practices* and appropriate *training*

## Scientific Objectives (1/2)

1. To study both the **scientific** and **industrial state of the art** methodologies for system development
2. To evaluate the **impact of the usage** of these methodologies on the verification and validation and certification of critical systems
3. To study and develop **strategies and techniques** supported by automatic or semi-automatic tools and methods for the verification and validation process of critical systems, **whose cost-quality achievements are measurable.**

## Scientific Objectives (2/2)

4. To study the interaction between **security** and **safety** in the context of complex networked service oriented systems, in domains characterized by certification needs.
5. To promote the **training and qualification of specialists** in order to prepare engineers to develop, validate, certify and maintain these critical systems.

# Business Objectives

- Develop **industrial strategies, processes, methods and marketable tools** for supporting the critical systems certification needs
- Develop appropriate **techniques/methodologies and tools** for supporting the certification tasks and **automating** some of the demands existing in industrial standards
- Develop a **training scheme** and an **oriented certification brand** for development, verification, validation, certification and maintenances of highly critical systems.