



University of Maribor

Faculty of Electrical Engineering  
and Computer Science



European Commission

TEMPUS

*Enhancement of cyber educational system of Montenegro*

## TEMPUS – ECESM

### Minutes of the training course

### No.10

### Hardware security

**Teacher:**

**Prof.dr Nicola Sotira, Global Cyber Security Center, Rome, Italy**

**Date and time:**

**30/11/2016 from 9am to 2pm**

**Place:**

**University of Donja Gorica, Podgorica, Montenegro**

**Participants:**

**30/11/2016 – 18 participants**

(See attached list of participants)

**Course content:**

Hardware Security:



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Hardware Platform that execute cryptographic processes, algorithm and key management, are fundamental components in a security architecture and they should guarantee the same resilience of the other components.

Moreover, the distribution of the security functions at hardware layer is relevant because it offers a series of advantages instead of a software security solution. Working at hardware layer, it is possible to have higher security levels but also significant improvement in performance.

During the course, the hardware features that guarantee trusted environment for the execution of processes and software, will be illustrated, in order to allow to assess a hardware system to the students.

#### Topics overview:

- Introduction to IT-Security cryptography
- Functionalities of embedded security system
- Hardware of cryptography
- Noise generators
- Trusted Computing
- Secure Hardware tokens
- Secure Hardware extension
- Bus and interfaces
- Key generation and management
- Zeroisation
- Anti tampering
- COTS/MOTS/GOTS/NOTS
- Tempest shield

#### **Educational material:**

- Published on Moodle platform

#### **Assessment method and certification**

Participants completed surveys at the end of training, about topic actuality, their previous knowledge, teacher competences, gained new knowledge. Result of survey has summarised in the document *Survey results-training no10*.



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After completing all anticipated courses, the participants will get one certificate about successful attendance of training.



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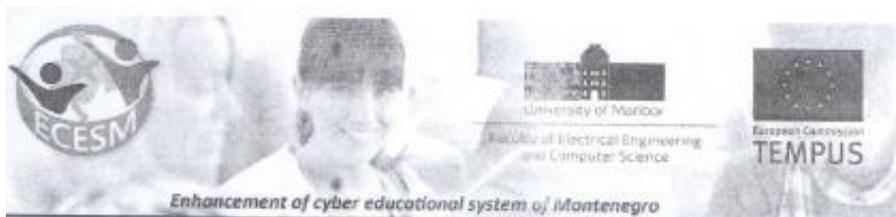


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## List of participants



### LIST OF PARTICIPANTS

Training: **HARDWARE SECURITY**

Trainer: Prof.dr Nicola Sotira

University Donja Gorica, Podgorica, Montenegro

Wednesday, 30th November 2016

Institution	Name	Signature
MOG / Navy	Igor Vopčić	
UDG / HS / MNB	Mirka Biskupović	
DRIT MONTENEGRO	Dejan Petrović	
EPCG HE "Perućica"	Grbović Ana	
ANB	Igor Bulić	
ANB	Dejan Jovanović	
UDG / HS / MNB	Iskra M. Pratić	
UD G	Veljko Šaban	
NAVIRA IT Solutions	Suzana Čukusan	
UDG	Uroš Oganjčević	
UDG	Roma Šardelj	
UDG	Dragana Jasković	
AG SOFT	Televa Anđelić	
AG SOFT	Igor Oganjčević	
UDG / HS / MNB	Lepa Đorđević	
UDG / HS / MNB	Ljilja Križević	
UDG	Aleksandar Anđić	





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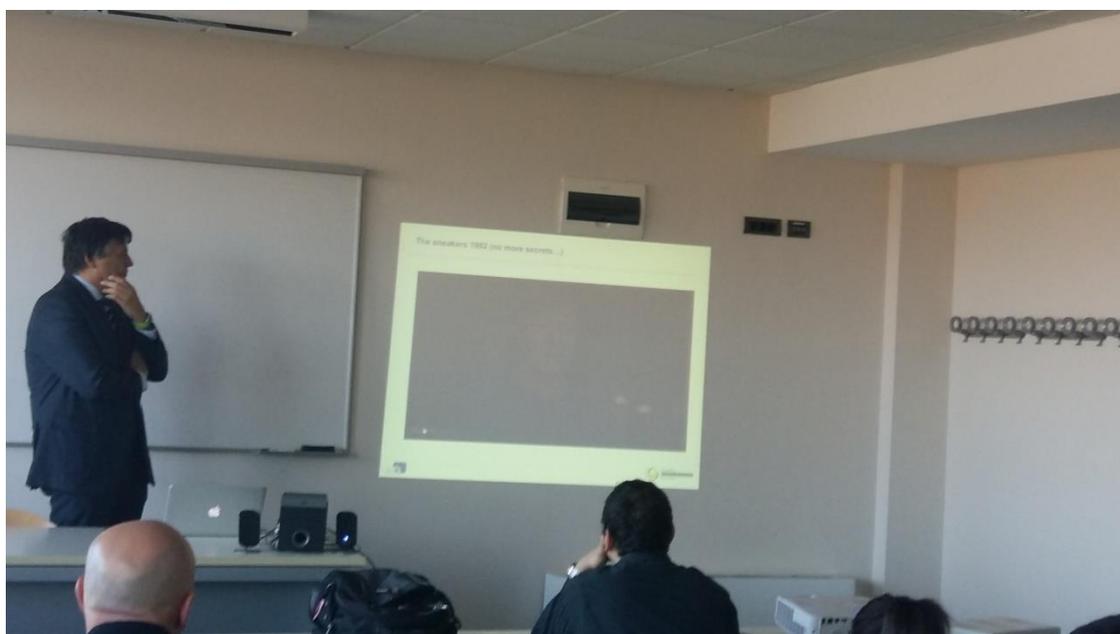


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## Photos



European Commission Tempus Project:  
544088-TEMPUS-1-2013-1-SI-TEMPUS-JPHES

This project has been funded with support from the European Commission.  
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