

= Security Summer School =

## **From „Voodoo“ to „You Do“ via hex and fun.**

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### **Period**

23rd of June - 10th of August 2014

### **Links**

\* [Wiki](#) \* [Facebook page](#) \* [Google Plus page](#) \* [E-mail contact address](#)

### **Summary**

The first edition of a new Security Summer School focused on Practical Software Exploitation will take place between June 23rd and August 10th 2014, at the Faculty of Automatic Control and Computers, University POLITEHNICA of Bucharest. Students will go through an in-depth tour of what it means to discover, successfully exploit and patch a software vulnerability and develop the necessary skills and insights needed to embark on such an endeavor.

Activities will take place during two intensive training sessions per week as well as two Capture the Flag (CTF) contests that will be held mid-term and at the end of the summer school. The final CTF contest will be the highlight of the summer school and students will be able to showcase the skills they have learned and be awarded prizes offered by Ixia.

### **Application**

The selection is done based on a practical systems programming test as well as a submitted CVs & letter of intent in case of ties.

The internships are available on <http://stagiipebune.ro>. Please use this platform to submit your CV & letter of intent.

### **Location & Schedule**

Computer Science & Engineering Department, Faculty of Automatic Control and Computers, University POLITEHNICA of Bucharest, Room EG106, First Floor, EG Wing

Activities will take place twice a week:

- Monday, 4pm-8pm
- Thursday, 9am-1pm

The 9th-10th of August week-end is reserved for the final CTF contest and awards ceremony.

## Syllabus

# Introduction to the world of software exploitation ## Dissecting a real-life exploit ## Assembly Language Refresher ## Operating Systems Concepts Refresher ## Types of Security Exploits ## Vulnerability databases # Vulnerability Assessment ## Introduction to debugging on Windows (Immunity Debugger) (dynamic analysis) ## Introduction to disassemblers (IDA) (static analysis) # Vulnerability Discovery ## Fuzzing Methods ## Fuzzing Frameworks ## Fuzzing Examples # Weaponizing the vulnerability ## Exploit protection mechanisms & getting past them ## Shellcode ## Methods of inserting and calling the shellcode # Preventing vulnerabilities in your own code ## Code auditing ## Secure programming standards

## Team

\* Adrian Șendroi \* Dan Gioga \* Dragoș Comănesci \* Radu Caragea \* Răzvan Crainea \* Răzvan Deaconescu \* Silviu Popescu \* Tudor Azoitei

## Supporting members

\* Irina Preșa \* Lucian Cojocar \* Vlad Dumitrescu

From:

<https://wiki.cs.pub.ro/> - **Wiki-ul Departamentului de Calculatoare**

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<https://wiki.cs.pub.ro/studenti/summer-schools/security?rev=1399741284>

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