

# Thomas Sermpinis

## Automotive Penetration Testing Lead

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[cr0wsplace.com](https://cr0wsplace.com)



### Education

Master's Degree on Informatics and Management 2016 - 2018

Aristotle University of Thessaloniki (AUTH)

- Thesis: *PKI Decentralization Using Blockchain Technologies* (Grade: 10/10)
- Final Grade: 9,25/10

Bachelor's Degree on Administration and Economics 2011 - 2016

University of Applied Sciences of Central Macedonia

- Major: *Supply Chain Management*
- Thesis: *Integration of Near Field Communication technology into Warehouse Management Systems* (Grade: 10/10)
- Final Grade: 7,47/10

Lyceum Leaving Certificate of General Education 2008 - 2011  
17th High School of Thessaloniki

- Final Grade: 14,6/20

### Work Experience

Automotive Penetration Testing Lead July 2022 - Now  
Auxilium Cyber Security s.r.o.

- Leading and successful delivery management of all the Automotive related penetration testing project for Auxilium Cyber Security s.r.o. with global OEMs and Tier 1 suppliers

Senior Cyber Security Consultant Dec 2020 - July 2022  
Auxilium Cyber Security s.r.o.

Related Projects:

- Security Research (mainly in automotive and embedded systems) with several discovered 0days
- Automotive Security, research and consulting with global automotive Tier 1 suppliers and OEMs
- EV, ADAS, powertrain, OBC and FSD Security and research experience with global automotive Tier 1 suppliers and OEMs
- Penetration Testing (embedded systems, automotive, hardware, android and others)

Cyber Security Consultant

Jan 2020 -

### Technology Summary

**Security Experience:** Automotive Security, Embedded Security, Automotive research, IoT Security, Low Level security research, 0day hunting, Security research

**Automotive Security Experience:** Android Automotive, Embedded Linux, x86 and ARM architectures, RTOS, OBC, V2G, UDS, DoIP, CAN, microcontroller testing, FSD, ADAS, EV testing, BMS

**Programming/Languages:** C#, Solidity, Go, Python, C, HTML, CSS, Javascript, Node.js, VBA

**Blockchain Technologies:** Hyperledger Fabric, Ethereum, Bitcoin, Namecoin

### Interests

**Music:** Acoustic and Electric Guitar, Alto Saxophone, Philharmonic Orchestra of Ampelokipoi - Menemeni playing Alto Saxophone

**Sports:** Greek Champion in Track and Field (4x400m) with Iraklis Track and Field Team of Thessaloniki, 200m, 400m, Gymnastics

Auxilium Cyber Security s.r.o. Dec 2020

- Cyber security consultant responsibilities including:  
Automotive security (security architecture, risk management, hardware security, security evaluation) at large German car manufacturers
- Several Penetration Testing projects including embedded and army equipment
- Security Risk Management

Security Researcher Nov 2019 -  
Independent - Freelancer Now

Related projects:

- 0day discovery
- Embedded and automotive security research (including software and hardware)
- Vulnerability assessments for web and mobile, for bug bounty programs
- Public speaking and conference participation

Cyber Security Analyst Mar 2019 -  
Auxilium Cyber Security s.r.o. Dec 2019

- Cyber security analyst with responsibilities including:  
Automotive security (security architecture, risk management, hardware security, security evaluation) at large German car manufacturers
- Several Penetration Testing projects
- Security Risk Management

Blockchain Researcher Jan 2018 -  
Aristotle University of Thessaloniki (AUTH) Jan 2019  
- OSwinds Lab

Blockchain Researcher at the OSwinds Laboratory (Aristotle University of Thessaloniki) of the PTwist open platform funded by the European Union's Horizon 2020 Research and Innovation programme. Working mainly with Hyperledger, Ethereum Smart Contracts and other decentralized technologies.

Workshop Instructor Jan 2015 -  
HAKIN9 MEDIA SP. Feb 2019

Presenting workshops in the field of network security and penetration testing, in PenTest Magazine, eForensics Magazine and Hakin9 Magazine.

Personal workshops:

- Penetration Testing with Android Devices
- Penetration Testing with Kali 2.0
- Android Malware Analysis
- Web Application Hacking: Advanced SQL Injection and Data Store Attacks
- Bypassing Web Application Firewalls
- Attack and Defense in Blockchain Technologies

IT Assistant May 2017 -  
Thessaloniki International Film March 2018  
Festival - TIFF

- Input 2017: Work as a network expert for administration, maintenance and risk management of a Cisco technology network, build for the international conference Input 2017. (May 2017)
- 58th Thessaloniki International Film Festival: Work as an IT assistant for the preparation, maintenance and risk management of the IT infrastructure of the 58th Thessaloniki International Film Festival. (Oct-Nov 2017)
- 20th Thessaloniki International Documentary Festival: Work as an IT assistant for the preparation, maintenance and risk management of the IT infrastructure of the 20th Thessaloniki International Documentary Festival. (February-March 2018)

Producer Jul 2014 -  
Dec 2016  
AdRev (AudioMicro, Inc.)

Producing tutorial videos for the personal website Cr0w's Place, relating to network security and penetration testing.

Intern Oct 2015 -  
Apr 2016  
Kleemann Hellas S.A.

Six month internship program at Kleemann Hellas SA, in addition to the demand of completing an internship program for my education. Basic task of the internship, is to learn and use the Adonis BPM tool and the Infor ERP, used by Kleemann S.A. and other big companies in this field.

Magazine Editor Aug 2014 -  
May 2015  
Parabing Creations

Article writing in DeltaHacker magazine in the fields of network security and penetration testing. (a.k.a. Cr0wTom).

*"Termination of cooperation due to financial problems of the company"*

Professional Track and Field Athlete Oct 2008 -  
Dec 2015  
Iraklis Gymnastic Club Thessaloniki

Professional Track and Field Athlete in the Greek team of Iraklis Gymnastics Club of Thessaloniki under the supervision of coach **(Dr.) Theodora Ountzoudi**. Some of my greatest discriminations, during my career, was:

- Greek Champion 4x400m Relay 2013
- Greek Champion Under 22 4x400m Relay 2013
- 2nd Greek Champion Under 22 4x400m Relay 2014
- Greek Army Champion 4x100m Relay 2014 (Hellenic Air Force).

## Honors & Awards

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- **Scholarship - TROOPERS 18**  
I received a scholarship covering the ticket to the TROOPERS 2018 information security conference in Heidelberg. (March 2018 - ERNW Insight GmbH)
- **Scholarship - Black Hat Europe 2017**  
I received a scholarship covering the Academic Pass to Black Hat Europe 2017 in London. (December 2017 - UBM, Inc)
- **Scholarship - Black Hat Asia 2017**  
I received a scholarship covering the Academic Pass to Black Hat Asia

2017 in Singapore. (March 2017 - UBM, Inc)

- **Scholarship - TROOPERS 17**

I received a scholarship covering the ticket to the TROOPERS 2017 information security conference in Heidelberg. (March 2017 - ERNW Insight GmbH)

- **Scholarship - Black Hat Europe 2016**

I received a scholarship covering the Academic Pass to Black Hat Europe 2016 in London. (November 2016 - UBM, Inc)

- **Honorary selection for reduced military service**

I received a reduction in my military services from the Armed Forces Supreme Council of Sports, due to my nationwide victories in track and field.

## Certifications

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- **OSCE - Offensive Security Certified Expert**

*Offensive Security - September 2020*

- **OSCP - Offensive Security Certified Professional**

*Offensive Security - November 2019*

- **Foundations of Purple Teaming**

*AttackIQ - September 2020*

- **Foundations of Operationalizing MITRE ATT&CK**

*AttackIQ - September 2020*

- **CS50x Introduction to Computer Science**

*HarvardX - EdX - December 2015*

"Harvard University's introduction to the intellectual enterprises of computer science and the art of programming. Topics Covered: C, PHP, JavaScript, SQL, CSS, and HTML, with demanding problem sets." Held by Harvard University, in the edx platform.

- **CTL.SC1x Supply Chain and Logistics Fundamentals**

*MITx - EdX - December 2014*

"This course is a survey of the fundamental analytic tools, approaches, and techniques used in the design and operation of logistics systems and integrated supply chains." Held by Massachusetts Institute of Technology, in the edx platform.

- **Computer Hacking Forensics Investigation**

*EH Academy - July 2015*

- **Certificate of Competency in English**

*The University of Michigan - May 2007*

## Publications

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- ***UDS Fuzzing and the Path to Game Over***

*1 June 2022*

[Troopers Conference](#)

- ***[CVE-2021-29507] Improper Input Validation leads to buffer overflow in dlt-daemon***

*12 May 2021*

[Oday Vulnerability in dlt-daemon](#)

- ***[CVE-2020-26800] Stack based buffer overflow while parsing JSON file in Aleth C++ Ethereum client***

*11 January 2021*

[Oday Vulnerability in Ethereum Aleth C++ Client](#)

- ***[CVE-2020-24807] File Type Restriction Bypassin Socket.io-file NPM module***

*6 October 2020*

[Oday Vulnerability in Socket.io-file](#)

- ***DeTRACT: a decentralized, transparent, immutable and open PKI certificate***

## **framework**

28 August 2020

[International Journal of Information Security - Springer](#)

- **Traceability Decentralization in Supply Chain Management Using Blockchain Technologies**

14-15 September 2018

Presentation and paper proceeding in the 4th Olympus International Conference on Supply Chains. Co-author Christos Sermpinis.

- **[CVE-2020-15779] Path Traversal in Socket.io-file NPM module**

7 July 2020

[Oday Vulnerability in Socket.io-file](#)

## **Volunteering**

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- **European Cyber Security Challenge 2021 - IT Crew and Judge**  
Juging and supporting a challenge created by me  
29-30 September 2021
- **FIRST LEGO League Jr. Greece 2018 - Reviewer**  
2 June 2018
- **TEDx Thessaloniki 2018 - Production Team Audiovisual Manager**  
March - April 2018
- **FIRST LEGO League Greece 2018- Referee of Robot Game**  
3-4 March 2018
- **FIRST LEGO League Jr. Greece 2017 - Reviewer**  
21 May 2017
- **International Marathon Alexander The Great - Start Point Support**  
02 April 2017
- **TEDx Thessaloniki 2017 - Registration and General Assistance**  
April 2017
- **FIRST LEGO League Greece 2017 - Referee of Robot Game**  
10-12 March 2017
- **57th Thessaloniki International Film Festival - IT Department**  
19 October - 13 November 2016
- **18th Thessaloniki International Documentary Festival 2016 - IT Department**  
03-22 March 2016
- **FIRST LEGO League Greece 2016 - Preparation and Support for Jr. FLL**  
04 February - 05 March 2016
- **56th Thessaloniki International Film Festival - IT Department**  
06-15 November 2015
- **17th Thessaloniki International Documentary Festival 2015 - IT Department**  
13-22 March 2015
- **1st Street Relay Racing of Thessaloniki - Stavros Mpaltidis**  
4 May 2014

## **Seminar Certificates**

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- **Music Seminar for Philharmonic Orchestra Members**  
Participation in a three day seminar conducted by **Douglas Bostock**, playing Baritone Saxophone, with the Philharmonic Orchestra of Ampelokipoi (14 - 16 October 2016).
- **Music Seminar for Philharmonic Orchestra Members**  
Participation in a seminar conducted by **Denis Laile**, playing Alto Saxophone, with the Philharmonic Orchestra of Kalavrita and Ampelokipoi (July 2015).
- **Music Seminar for Philharmonic Orchestra Members**

Participation in a seminar conducted by **George Hadjinikos**, playing Alto Saxophone, with the Philharmonic Orchestra of Ampelokipoi - Menemeni (July 2010).

- **Green Business: Opportunities and Prospects - Certificate of Participation**  
Alexander Technological Educational Institute of Thessaloniki (May 2012).
- **Maritime safety and Modern Piracy - Certificate of Participation**  
Alexander Technological Educational Institute of Thessaloniki - Logistics Department (October 2012).

## Projects

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- ***Introduction to Bitcoin and Blockchain Technologies***  
*25 May 2018*  
Presentation at the "Bitcoin and Machine Learning joint meetup" taking place at Thessaloniki.
- ***Consensus Algorithms***  
*22 October 2018*  
Presentation at the Blockchain meetup of Thessaloniki, in the topic "Consensus Algorithms".
- ***Integration of Augmented Reality technology into Warehouse Management Systems***  
*14th May 2015*  
Presentation in the "12th Student Conference on Management, Science and Technology" taking place in Athens on 14th of May 2015. The subject was my innovative idea on the "Integration of Augmented Reality technology into Warehouse Management Systems" based on my paper made in the context of my studies in the University of Applied Sciences of Central Macedonia.
- ***Integration of Near Field Communication technology into Warehouse Management Systems***  
*14th May 2015*  
Presentation in the "12th Student Conference on Management, Science and Technology" taking place in Athens on 14th of May 2015. The subject was my innovative idea on the "Integration of Near Field Communication technology into Warehouse Management Systems" based on my paper made in the context of my studies in the University of Applied Sciences of Central Macedonia.
- ***Penetration Testing with Android Devices***  
*October 2014*  
Presentation on the subject "Penetration Testing with Android Devices" part of the "Google Developers Conference of Thessaloniki 2014"

## Other Occupations

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- Participation in the Philharmonic Orchestra of Ampelokoipoi-Menemeni, playing Alto Saxophone with international appearances. 2006 until now.
- Participation in Scouts of Thessaloniki 2000-2004
- Participation in the Photographic Club of Architecture School of AUTH (FLAS). 2016 until now.

## Other Information

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- Fulfillment of Greek military duties. 2014-2015 on the Hellenic Air Force.
- Holder of Greek car and motorcycle driving license (A2, B).

