



**A Report on
IEEE CASS Outreach Initiative 2017
Workshop on
“Design Test Verification and EDA (DTVEDA)”**



**Date
6th – 7th July 2017
at
Domotel Xenia, Volos, Greece**

**Organized by
Fotis Plessas & Thanos Kakarountas**

IEEE CASS Outreach Initiative 2017 - Report

- 1. Title:** Design, Test, Verification and EDA Workshop (DTVEDA) 2017
- 2. Name of the proposer:** Fotis Plessas, Assistant Professor, University of Thessaly, Greece, Dept. of Electrical and Computer Engineering
- 3. Date:** July 6 to 7, 2017
- 4. Place:** Domotel Xenia, Volos, Greece
- 5. Participants:** 65 (mostly young researchers)
- 6. Brief description of the activity:**

The Design, Test, Verification and EDA Workshop was held at Domotel Xenia hotel, Volos, Greece, between July 6-7. The event included short courses and lectures from international and local university professors, professionals and entrepreneurs. We created banners, fliers, posters and a website (<http://dtveda.e-ce.uth.gr/>) to advertise the event. Fig. 1 presents some of this material.

Technical program was rich and comprised of 3 keynote speeches and 10 invited talks addressing emerging technologies and latest research and development in all areas of design, test verification and EDA, with a focus on the theme of “IoT and security projects and applications” aiming to bring academia and industry closer.

Three prestigious keynote speakers gave lively, interactive talks, followed by an outdoor student poster session, the Technical sessions, the Business Start-Up session, and the Demo (Exhibition) session. Technical demonstrations were provided together with numerous opportunities for informal networking.

Keynote speaker Dr. Nikos Zervas, CEO Cast Inc., started the workshop with a talk on “Ultra-Low Latency Video Streaming”. He focused on the design techniques for ultra-low latency streaming in real-life applications, revealing design methodologies, techniques and presenting the challenges in the field.

David Kidd, Senior Director of Technology at Qualcomm, gave the next keynote talk entitled “An Industry View of EDA.” He talked about the technology needs for EDA, EDA challenges for architecture, EDA for implementation, machine learning and EDA.

The final keynote speaker was Romano Hoofman, Director of EURO PRACTICE whose talk “An overview and recent highlights of more than 20 years Europractice IC service” focused on some recent examples of state-of-the-art IC designs.

Additionally, 8 Technical sessions covered a range of topics related to the event's theme.

A business start-up session was organized where prospective business operators were encouraged to properly research their idea and to prepare thoroughly before they take the plunge. They were informed about business paradigms that have performed well and why. They also learned about the benefits of networking and the importance of taking a close look at their own aspirations and skills.

The workshop also had a poster session where 9 students presented their works.

Best student thesis awards for 2017, were presented to:

1. Eleni Isa, for her thesis entitled, "On the Detection of Hardware Trojans, in Hardware Security" and,
2. Christos Davilas, for his work entitled "Design and development of navigation system for robots in indoor environments"

The event attendance was approximately 65 people per day including undergraduate and graduate students, professors and engineers from local companies. The feedback given by some participants was that they enjoyed an interesting event with varied lectures and very engaged attendants. The goals for the future, is that, on the next given opportunity, we will organize and advertise timely the event to reach a wider audience and attract more international lecturers.

The workshop was sponsored by the IEEE Circuits and Systems Society through the IEEE CASS Outreach Funds.




2017

Design Test Verification and EDA workshop

DTVEDA

Financially sponsored by the 2017 Outreach Initiative of the IEEE Circuits and Systems Society

July 6th and 7th, 2017
09.00 - 18.00
Domotel Xenia, Volos
Greece

Organizers and Workshop Chairs:

Fotis Plessas,
 University of Thessaly, Greece
Thanos Kakarountas,
 University of Thessaly, Greece

No Fees

For details please visit:
dtveda.e-ce.uth.gr

Important Dates

Registration deadline:
 June 30th, 2017
Poster abstract submission deadline:
 June 15th, 2017 at 11:59PM (EEST)
Thesis submission deadline:
 June 24th, 2017 at 11:59PM (EEST)

DTVEDA 2017 is initiated to provide a common forum for academic and industry researchers for meeting and exploring new avenues of research. The workshop will not only provide the opportunity for face-to-face interaction among researchers, scientists, and development professionals, but also aims to attract outstanding international speakers.

The program will include 3 invited keynote speeches (international participation), whereas a number of about 10 talks will be given, with participation from industry as well as academia, ranging from premier local academic institutes of Greece to international independents.

Technical Areas

- Analog, Digital, Mixed Signal, and RF Design
- Circuit and system techniques for energy harvesting/delivery/management
- EDA
- Verification
- Embedded systems
- FPGAs & HDLs
- Testing
- System-on-chip design and verification methodologies

This year, emphasis will be given to IoT and security projects and applications.



Fig. 1. Workshop promotional material.

7. Program

Thursday, July 6th

TIME	SESSION / TITLE	SPEAKER
09:00	Registration	DTVEDA 2017
09:30	Workshop opening	DTVEDA 2017
10:00	Morning keynote session: Ultra-Low Latency Video Streaming	N. Zervas
11:00	Coffee break / networking	
11:30	Greece IEEE Section. Challenges in Circuits and Systems Society in Greece	T. Kakarountas
12:00	Technical Sessions: Power integrity – Voltage drop analysis	G. Stamoulis
12:30	Technical Sessions: Large-scale circuit simulation	N. Evmorfopoulos
13:00	Lunch break	
14:00	Business Start-Up Session: “Dos and Don’ts” for Technology Start-Ups	N. Zervas
14:45	Technical Sessions: Reliability and Energy-efficiency optimizations using Significance-Based Computing	N. Bellas
15:15	Technical Sessions: IoT and AgTech: technology will feed the world	S. Bantas
15:45	Coffee break / networking	
16:15	Demos (Exhibition) Session	Centaur, TALOS ed-UTH-robotix
17:00	Afternoon keynote session: An Industry View of EDA	D. Kidd
20:00	Social Event/Dinner	



Fig. 2. Dr. Zervas during his lecture about ultra-Low Latency Video Streaming

Friday, July 7th

TIME	SESSION / TITLE	SPEAKER
09:00	Registration	DTVEDA2017
09:30	Morning keynote session: An overview and recent highlights of more than 20 years Europractice IC service	R. Hoofman
10:30	Technical Sessions: NITOS IoT Testbed and Applications	T. Korakis
11:15	Coffee break / networking	
11:45	Business Start-Up Session: From Engineers to Entrepreneurs: How We Discovered We Could Start a Business	G. Varvarelis – D. Evangelopoulos
12:15	Poster Session ¹	DTVEDA 2017
13:00	Lunch break	
14:00	Technical Sessions: Current mode integrated circuit design with application to sensor signal conditioning	S. Siskos
14:45	Technical Sessions: Hardware Trojan Detection Techniques	P. Kitsos
15:15	Coffee break / networking	
15:45	Technical Sessions: Design and Implementation of Integrated Circuits in Trusted Environments	N. Sklavos
16:30	Award Session	
17:00	Workshop Closing	
17:15	Social Event/Visit to The Rooftile and Brickworks Museum N. & S. Tsalapatas	

¹ Papers accepted for poster presentation:

3. Manos Antodiadis et al., “Reliable Computing Using the RISC-V Open Architecture”
4. Vasileios Chioktour, Athanasios Kakarountas, “1D Cellular Automata- based Systolic Constant-Delay Radix-2 Counter”
5. Christos Davilas, “Design and development of navigation system for robots in indoor environments”
6. Eleni Isa, Nicolas Sklavos, “On the Detection of Hardware Trojans in Hardware Security”
7. Giannis Kazdaridis et al., “Energy Consumption Evaluation in Underwater Acoustic Modems”
8. Giannis Kazdaridis et al., “Low-Power Wake-up Radio for Wireless Sensing Systems”
9. Nikolaos Sketopoulos, Christos Sotiriou, “Fast, Standard-Cell Legalizer supporting Blockages and multiple Displacement”
10. Panagiotis Skrimponis et al., “Enabling mobile experimentation in NITOS indoor testbed”
11. Vassilis Vassiliadis et al., “SCoRPiO: Significance based Computing for Reliability and Power Optimization”

8. Financial Report

The expenses generated by the event were to support speakers traveling and local hospitality, transportation, workshop material, lunch (all the participants) & dinner (speakers/committee), and also for promotion services.

8a. Income

Source	Amount
Grant from Outreach Initiative	2775 € (\$ 3200)
Grant from Netscope Solutions	251 €
Grant from ECE department UTH	340 €
Grant from SKYTALE Group	60 €
Grant from EPSA	60 €
Grant from NanoZeta Technologies	1458 €

8b Expenses

Item	Expense
Speakers traveling and local hospitality	959 €
Conference facilities, light lunch and 2 x coffee breaks on Day 1 and Day 2	2232 €
Dinner on Day 1	340 €
Registration material distributed to all participants	935 €
Banners, publicity, Keynote speakers' honorarium, best student thesis award	398 €
Best student thesis award	80 €



Fig. 3. General co-chair Thanos Kakarountas delivering the best student thesis award (1of2) to Christos Davilas, and general co-chair Fotis Plessas presenting a memento to keynote speaker Romano Hoofman

9. Additional event photos



Fig. 4. Audience during Prof. Korakis' lecture about NITOS IoT Testbed and Applications



Fig. 5. Poster Session



Fig. 6. Social Event/Visit to “The Rooftile and Brickworks Museum N. & S. Tsalapata”



Fig. 7. Registration desk



Fig. 8. Prof. Bellas during his lecture about Reliability and Energy-efficiency optimizations using Significance-Based Computing



Fig. 9. Coffee break / networking



Fig. 10. Social Event/workshop dinner



Fig. 11. Workshop material