

Welcome to ISOTDAQ2013 @ Thessaloniki

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(with help from Ioannis
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Dept. of Physics,
Division of Nuclear &
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ISOTDAQ2013: 4th International School of Trigger and Data Acquisition

1-8 February 2013,
Thessaloniki, Greece

Registration until: December 1, 2012
mail: isotdaq2013@physics.auth.gr
web: isotdaq2013.physics.auth.gr

Target audience: Physics and Engineering M.Sc and Ph.D students
and practising scientists with an interest in Trigger and Data Acquisition

Topics

Trigger

NIM Electronics
Front-end Electronics
FPGA Programming

Data Acquisition

ADC, TDC, Detector Readout
Event & Buffer Management
DAQ Control Software
Storage Technologies
Lab View
Micro Controllers

Data Transfer Technologies

VMEbus, xTCA
PCI, PCIe
Data Networks

Review Talks

LHC Experiments
ATLAS TDAQ Architecture
CMS TDAQ Architecture

Advisory Committee

Markus Joos (CERN)
Krzysztof Korcyl (IFJ PAN, CUT)
Kostas Kordas (AUTH)
Livio Mapelli (CERN)
Niko Neufeld (CERN)
Enrico Pasqualucci (INFN Roma)
Hannes Sakulin (CERN)
Dan Savu (Polytechnic Univ. Bucharest)
Christoph Schwick (CERN)
Gokhan Unel (UCI)
Chara Petridou (AUTH)
Dimos Sampsonidis (AUTH)
Ioannis Nomidis (AUTH)
Dimitris Iliadis (AUTH)



isotdaq.web.cern.ch

The 4th edition of the ISOTDAQ school

- ISOTDAQ: an idea of Gokhan Unel, took off in winter 2010 with lots of work by him, Joergen Peterson, Markus Joos, et al.
- Ankara (2010), Rome (2011), Cracow (2012)
- And here you are in Thessaloniki - 2013

[Home](#) [2010](#) [2011](#) [2012](#) [2013](#)

[the international school of trigger and data acquisition]

Important links

[ISOTDAQ 2010](#)

[ISOTDAQ 2011](#)

[ISOTDAQ 2012](#)

[ISOTDAQ 2013](#)

About the School

This is a 7 days school on Trigger and Data Acquisition systems. The school is to be held in English with a maximum of 50 students and it contains 50% lectures and 50% laboratory exercises.

The target audience is the engineering (EE, CmpE, IT) and physics (accelerator, particle, medical) MS and PHD students with a professional interest in trigger and data acquisition.

The basics of DAQ programming concepts (e.g. threaded programming, data storage, networking, IO programming) Hardware bus systems (VMEbus, PCI) Trigger logic and Hardware (NIM), PC based readout systems and trigger design will be covered together with reviews of modern TDAQ systems from LHC and fixed target experiments.

This School is an extraordinary joint effort between different people, institutes and industry. Each stakeholder contributes to the success of ISOTDAQ through its expertise, know-how, financial support and, last but not least, a contagious enthusiasm!

News and Announcements

ISOTDAQ 2012 is over and was a big success.

A permanent lab at CERN is being setup.

ISOTDAQ 2013 web page is ready, the applications have started.

Thessaloniki

Founded in 315 BC. by Cassander, king of Macedonia, named after his wife, a half-sister of Alexander the Great.

Always an important city, under any rule (Greek, Roman, Byzantine, Ottoman)

Freed from the Ottoman rule exactly 100 years ago: 1912 in the Balkan wars.



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Mt. Olympos

On a clear day

- You look towards the sea and see Mt. Olympus



The school is happening thanks to...

- You, the students
 - We accepted 54 students this year, 51 of you here.
- Markus Joos and the rest of the tutors and lecturers
- The local organisers
 - **AUTH:** myself, Chara Petridou, Dimos Sampsonidis, Ioannis Nomidis, Dimitris Iliadis, Rania Sidiropoulou
 - **nbEvents:** Niki Mpai, Christina Grimotsi, Dimitris Ganitis, and Lefteris Zormpas



- And our **sponsors:**



Wireless

- Connect to: **AUTh web connect**
Passphrase: **auth-net**
- Then **open any web page**, and you'll be prompted to enter the **username** and **password** already given to you.
 - We need to associate the usernames with real names.
 - **So, we need that you provide your passport or identity-card number to the secretariat desk.**

Aristotle University of Thessaloniki

- **AUTH:**

- ~80k students

- (8k graduate)

- 2.2k faculty

- All disciplines (w/ Engineering and Medicine)



- **Physics:** 90 faculty.

- Nuclear and Particle, Electronics, Solid state and Nano, Environment and Applications

- In Particle Physics we are in ATLAS. Built ~10% of the “small” inner barrel muons chambers. K. Kordas in ATLAS TDAQ since 2004. Now we are in Micromegas muon system upgrade, and we start a collaboration with U. Pisa et. all in a trigger project (the Fast Tracker upgrade) via an EU programme starting today.

Lunches, coffee brakes

- **Coffee brakes, here:**
 - Only for today at the basement,
 - from tomorrow on, at the mezzanine.



- **Lunches: Just 30 meters down.**

Menu: a single choice. Some days there is two options: go to the correct queue (choice #2 is vegetarian. Thursday, both choices are meat. Ask to have a plate without it).

Menu in Greek:

http://www.auth.gr/units/596/club_menu



Our venue – get here (on foot)

- Our venue:
 - KEDEA building (commonly known as "Kokkino Ktirio / Red Building") on "Tritis Septembriou / 3rd September" str., above Egnatia
- Get here from your hotels on foot (30-40 min walk).
Some paths:
 - through the city market: <http://goo.gl/maps/25nel>
 - by the sea, towards the White Tower:
<http://goo.gl/maps/gVSRF=15>
 - through the remains of the ancient city and through University campus:
<http://goo.gl/maps/1gmb2>

Our venue – get here (Bus)

- By taking a short bus ride from any stop on the city's main street (called Egnatia, 5' walk from the hotels) which will leave you right in front of the building. The most convenient
 - bus lines for this are 17, 24, 37 and the bus route is very simple:
 - <http://goo.gl/maps/ahbFp>

Our venue - get here (taxi)

- Another choice is the taxi, it shouldn't cost more than 3.50-4 euros (strongly depends on the traffic). Note that a taxi ride can take up to 4 persons which can share the cost. A short ride like this usually costs as much as 4 ticket fairs. It is not such a bad idea to organize is groups of 4 people and share the cost.
- Notice that there is a big taxi stand on Mitropoleos street, when you walk towards "plateia Aristotelous" (Aristotle square), on your left hand side with the sea on your right hand side. You say that you go to the "3rd September Street, at the Kokkino ktirio (KEDEA), above Egnatia street, just above the Fitiki Leschi".

A lot of work and hopefully lots of fun these days

- You came from as far as Japan, the States, India and many European countries
- To spend most of your time and all but one of your days, here in this building.
- The schedule is tight, but the outcome rewarding!
- **Today (Friday):**
 - Lectures all day, till 18.00. Lunch at 12.30
 - 18:00-19:00 Welcome cocktail.
- **Tomorrow and rest of days:** Start at 09:00. Labs start:
 - Lectures till ~lunch,
 - Labs in the afternoon.

Students: Exercises per group and day - your sudoku

- You have it. Have to read the 2nd page as well to understand it.
- Also posted on the panel close to the amphitheatre door, and on the wall towards the toilet.
- The student groups are also posted there.
 - Note: 3 groups have 5 students. The rest 9 have 4 students.

Lecturers: speak to the microphone,
we take a video of the lectures

Sunday: The day off; departing from the Hotels

Sunday: the 3rd day of the school is the day off. We go to the royal tombs of the Macedonian kings at Vergina. Among them Philippe II (Alexander's father)

Then, lunch and wine tasting at Nousa, Dalamara's winery.



Time to go around the city is limited

- Here is a set of links to some points of interest:
 - The White Tower
 - The Archeological Museum
 - The Byzantine Museum
 - Upper town walking tour
 - The public hop on - hop off bus (connecting points of interest, you go their brochure)
- And a visual tour in the slides which follow

Welcome to Thessaloniki!

Enjoy the school and the city!