

ΠΡΟΔΙΑΓΡΑΦΕΣ ΣΥΝΕΔΡΙΟΥ ΣΤΑ ΑΓΓΛΙΚΑ

**3<sup>rd</sup> International Conference on  
Technology Trends and Scientific Applications  
in Artillery and other Military Science  
(TTSAAMS)**

**Hellenic Artillery School (Nea Peramos Attikis)**

**May 5 – 6 , 2015**

**Aim**

A wide spectrum of modern scientific research in various fields of Artillery and Military Science is based on technological and operational applications. In this direction, the Artillery Directorate of the Hellenic Army General Staff organises the third International Conference on Applications of Mathematics and Informatics in Artillery and other Military Science.

**Representative topics**

1. *Military Operations Research and Analysis.*
  - Mathematical combat modeling and simulation for regular and irregular warfare,
  - optimization theory and military applications,
  - artillery operations,
  - scientific computing and military applications,
  - statistical modeling and military applications,
  - modeling and simulation interoperability,
  - search & detection theory-radar surveillance,
  - game theory in military,
  - missile allocation strategies,
  - target coverage,
  - target acquisition and observed fires,
  - antitactical ballistic missile firings (ATBM) and modern Air Defence systems,
  - artillery survivability during the first strike,
  - performance measurement in military operations,




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- artillery readiness,
  - command & control,
  - military logistics modeling,
  - transportation and operations research,
  - portfolio of national defense and
  - military supply chain.
2. *Data-to-Decisions*. Reduction of the cycle time and manpower requirements for analysis and use of large data sets, including
    - systems of administration and control,
    - enhanced images,
    - temporal, and text analytics,
    - better software architectures,
    - improved algorithms for data fusion and
    - data fusion technologies of artillery systems.
  3. *Engineered Resilient Systems*. Protection against malicious compromise of weapon systems and development of agile manufacturing for trusted and assured defense systems, including
    - resilient artillery systems,
    - new systems analysis methods and tools to address a wide range of system architecture and design drivers,
    - early concept engineering techniques,
    - advanced architecture and design analysis techniques and tools for accelerated creation and assessment,
    - new approaches to analysis and testing, which interweave design processes with computational and physical testing and analysis,
    - methods and tools which foster more robust designs when unreliable components involved and
    - advanced algorithms.
  4. *Cyber Science and Technology*. Efficient and effective cyber capabilities across the spectrum of joint operations, including
    - cryptology and computational number theory,
    - cyber war/security,
    - science and technology tools for efficient,
    - network-centric artillery systems,
    - effective cyber capabilities across the spectrum of joint operations,
    - mission assurance and effectiveness,
    - operating securely in an insecure world and
    - reinventing cyber technology foundations.
  5. *Electronic Warfare/Electronic Protection*. Electronic protection measures of systems and extension of capabilities across the electromagnetic spectrum, including the broadening both of the spatial and spectral parameters and creation of integrated network-enabled electronic warfare systems that are both modular and software-driven




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6. *Countering Weapons of Mass Destruction (WMD)*. Advances in defense ability to locate, secure, monitor, tag, track, interdict, eliminate, and attribute WMD and materials, including
  - WMD's detectors based on nanotechnology,
  - chemical artillery shells,
  - persistent intelligence,
  - surveillance and reconnaissance,
  - data to decision tools and
  - global situational awareness.
7. *Autonomy*. Achievement of autonomous systems that reliably and safely accomplish complex tasks in all environments, including
  - robotics, automatic controls and intelligent systems,
  - artillery intelligence,
  - perception and situational awareness,
  - adaptation and learning,
  - dynamics of artillery complex system,
  - collection and processing of data,
  - mitigation of limits on the speed at which information can be absorbed and prepared for analysis,
  - systems that reason and mimic human cognitive capabilities,
  - systems that weigh different courses of actions based on knowledge and prediction,
  - human-in-the-loop systems,
  - integration of automation with human comprehension and
  - decision-making.
8. *Human Systems*. Enhancement of human - machine interfaces and increase of productivity and effectiveness across a broad range of missions, including
  - systems interfaces,
  - human factors evaluation of artillery systems,
  - protection and sustainment and
  - socio-cultural modeling.
9. *Geography of modern arming technologies*.
  - GPS guided artillery systems,
  - geopolitical consequences in military affairs,
  - new weapon technologies and their operational repercussions and
  - geography of military and ballistic programs and special operations.
10. *Multiplicative factors of force*.
  - Signal processing,
  - systems of monitoring (mobile artillery systems of monitoring, radar, UAV, etc),
  - scattering,
  - digital treatment of signal,
  - pattern recognition and
  - satellite remote sensing.



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**Conference Chairs**

- **Major General Menelaus Meimaris** (*Director of Artillery Directorate of Hellenic Army General Staff, Greece*)
- **Professor Dr. Nicholas J. Daras**, *Hellenic Army Academy, Greece*

**Conference Co-chairs**

- **Nikolaos Limnios**, *Université de Technologie de Compiègne, France*
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**International Scientific Committee**

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## Submission of paper abstracts and papers

### Procedure for submitting paper abstracts

Those interested in participating as speakers at the Conference are required to submit an abstract for their papers by February 20, 2015. The abstract must contain the following information (in English):

1. Paper title
2. Author name(s), postal and electronic address (es)
3. Aims, methodology, applications and main results of the paper.

Abstracts should be submitted via e-mail to the electronic addresses [njdaras@ilabsse.gr](mailto:njdaras@ilabsse.gr) and [spv-gep@army.gr](mailto:spv-gep@army.gr)

Subject heading: "T TSAAMS/abstract".

The abstracts will be included in the Conference website.

After accepting the abstracts in the Conference, the participant speakers should submit the slides of their presentations by April 14, 2015. Slides should be submitted in PDF or PPT via e-mail to the electronic addresses [njdaras@ilabsse.gr](mailto:njdaras@ilabsse.gr) and [spv-gep@army.gr](mailto:spv-gep@army.gr)

Subject heading: "T TSAAMS/presentation".

### Paper selection and review for publication








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## ARTILLERY DIRECTORATE OF THE HELLENIC ARMY GENERAL STAFF

Selected abstracts of papers accepted for presentation in the Conference will be published in a special volume/ journal issue.

Authors are invited to submit electronically the full version of their papers in English at the latest by August 30, 2015 to the electronic address [njdaras@ilabsse.gr](mailto:njdaras@ilabsse.gr)

Subject heading: "TTSAAMS /paper".

Each paper submitted for publication will be sent to two independent referees.

### Venue

The Conference will be held in the Campus of the Hellenic Artillery School, Nea Peramos, Attiki, Greece.

### Important dates

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| ❖ Abstract submission deadline                                | <b>February 20, 2015</b> |
| ❖ Presentation acceptance notification                        | <b>March 23, 2015</b>    |
| ❖ Abstracts' post to website of the Hellenic Artillery School | <b>April 06, 2015</b>    |
| ❖ Submission of presentation slides                           | <b>April 14, 2015</b>    |
| ❖ Full paper submission deadline                              | <b>August 30, 2015</b>   |
| ❖ Paper acceptance notification                               | <b>December 30, 2015</b> |
| ❖ Publication of Selected Conference Papers                   | <b>May, 2016</b>         |

### Registration & Transportation

There is no participation fee in the Conference.

A transportation mean will be available for those attendees who will need it.

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