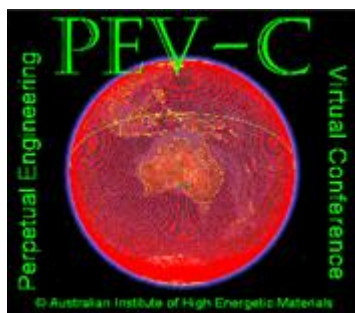


Scientific Program
and call for papers

**Perpetual Engineering V-Conference
(PEV-C)**

<http://www.ausihem.org>



Dr V. Stamatov
Director of the Australian Institute of High Energetic Materials
(Speech to academics from the Jawaharlal Nehru Technological University in Hyderabad, 2010)

First announcement:

The Perpetual Engineering V-Conference (PEV-C) opened on 06.12.2010.

The conference program covers a broad range of topics in Chemical, Mechanical and Materials Engineering. A special section is dedicated to High Energetic Materials.

Manuscripts can be submitted at any time. All manuscripts are peer reviewed. Accepted manuscripts are published in the Research Bulletin of the

Australian Institute of High Energetic Materials.

The Australian Institute of High Energetic Materials will sponsor the conference participation of full-time postgraduate students that are in financial hardship. These students can apply for free participation.

(N.B. Only manuscripts of high scientific merit will be awarded.)

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Foreword from the Conference Chairperson:

Dear Colleagues,

It is a great honour to announce the opening of the Perpetual Engineering V-Conference (PEV-C). The PEV-C is managed by members of the Scientific Monitoring and Advisory Committee to the Australian Institute of High Energetic Materials. This international conference covers a broad range of topics that are of interest to engineering professionals and researchers.

After having successfully tested in 2009 the concept of the virtual (online) engineering conferences, or as we prefer to call them - the V-Conferences, we have decided to go a step further and to utilise in full the advantages of the modern communication system. The PEV-C is a perpetual online conference that is **open for submission of manuscripts at any time**. All manuscripts are presented on a specially designed platform called ODDS (Online Direct Discussion Sessions) and are **peer reviewed**. All accepted manuscripts are then published in the next available issue of the Research Bulletin of the Australian Institute of High Energetic Materials.

Because of the simplicity of the concept and the **low participation fees**, all scientists, postgraduate students and engineers are able to participate - no matter how tight their time-schedule or budgeted is. We believe that this novel form of scientific communication will grow to be more and more popular over the years to come.

Special thanks go to our enthusiastic technical and administrative team – they put a lot of efforts to make the conference running smoothly. The support of the Deputy Chairmen - Prof. Anumakonda Jagadeesh and Dr Alexander Lukin, the Conference Secretary – Dr Abdul Mazid and the Web-Administrator - Mr Mohammad Samiul Islam is much appreciated.

Last but not least, I would like to express my gratitude to all participants of the conference – this event would be impossible without your hard work to prepare and to submit high quality manuscript to the editors of the conference.

THANK YOU AND WELCOME TO THE PEV-C!

Dr Venelin Stamatov



Dr Venelin Stamatov
Chairperson of the PEV-C

Topics:

General Engineering Topics (Chemical, Mechanical and Materials Engineering)

The classification of the General Engineering Topics of the PEV-C follows the general categorisation scheme adopted by the Australian Bureau of Statistics and the Australian Research Council. The topics are systematised in the following groups:

1. Chemical Engineering

This group covers chemical engineering topics. It includes: design, membrane and separation technologies, process control and simulation and water treatment. There are eleven general fields:

- Carbon Capture Engineering (excl. Sequestration);
- Catalytic Process Engineering;
- Chemical Engineering Design;
- Membrane and Separation Technologies;
- Non-automotive Combustion and Fuel Engineering (incl. Alternative/Renewable Fuels);
- Powder and Particle Technology;
- Process Control and Simulation;
- Rheology;
- Wastewater Treatment Processes;
- Water Treatment Processes;
- Chemical Engineering not elsewhere classified.

2. Mechanical Engineering

This group covers mechanical engineering topics. It includes acoustics, noise and vibration control, mechanical aspects of automation and control engineering, and energy generation, conversion and storage. There are ten general fields:

- Acoustics and Noise Control (excl. Architectural Acoustics);
- Automation and Control Engineering;
- Autonomous Vehicles;
- Dynamics, Vibration and Vibration Control;
- Energy Generation, Conversion and Storage Engineering;
- Microelectromechanical Systems (MEMS);
- Numerical Modelling and Mechanical Characterisation;
- Solid Mechanics;
- Tribology;
- Mechanical Engineering not elsewhere classified.

3. Materials Engineering

This group covers materials engineering topics. It includes ceramics science and ceramics engineering, polymer and textiles engineering, composite and hybrid materials, physical metallurgy and alloy materials, functional materials and semiconductor engineering. There are eleven general fields:

- Ceramics;
- Composite and Hybrid Materials;
- Compound Semiconductors;
- Elemental Semiconductors;
- Functional Materials;
- Glass;
- Metals and Alloy Materials;
- Organic Semiconductors;
- Polymers and Plastics;
- Timber, Pulp and Paper;
- Materials Engineering not elsewhere classified.

4. Interdisciplinary engineering

This group covers interdisciplinary engineering topics. It includes fluid mechanics

and computational fluid dynamics, heat and mass transfer, engineering practice, engineering associated with the development of nuclear power and the nuclear fuel cycle, engineering associated with the mitigation of risk from climate change and other environmental factors, and turbulent flows. There are nine general fields:

- Computational Fluid Dynamics;
- Computational Heat Transfer;
- Engineering Practice;
- Fluidisation and Fluid Mechanics;
- Heat and Mass Transfer Operations;
- Nuclear Engineering (incl. Fuel Enrichment and Waste Processing and Storage);
- Risk Engineering (excl. Earthquake Engineering);
- Turbulent Flows;
- Interdisciplinary Engineering not elsewhere classified.

5. Other relevant engineering topics

- Carbon sequestration science;
- Combustion and fuel engineering for automotive applications;
- Water resources and quality engineering;
- Biocatalysis;
- Materials physics;
- Materials chemistry, including the theory and design of materials;
- Engineering of materials for automotive applications;
- Biomaterials;
- Construction materials;
- Extractive metallurgy;
- Nanomaterials, molecular and organic electronics and nanotechnology;
- Environmental engineering.

Special Engineering Topics (High Energetic Materials and Dynamics of Ultrafast Reactive Systems)

The main topics include, but are not limited to:

- Combustion Mechanisms of the Energetic Materials;
- Combustion/Flow Visualisation;
- Internal Ballistics of Solid Motors and Guns;
- Ignition and Combustion of Propellants for Space and Rocket Propulsion;
- Theoretical Modelling and Numerical Simulation of Combustion Processes of Energetic Materials;
- Commercial Applications of Energetic Materials;
- Hybrid Rocket Propulsion for Future Space Launch;
- Nano-technology;
- Nano-particles in energetic materials;
- Synthesis and Characterisation;
- Formulation, Processing and Manufacturing;
- Insensitive Munitions;
- Performance of Propellants, Pyrotechnics and Explosives;
- Recycling, Disposal and Environmental Aspects;
- Test Methods and Diagnostics;
- Visualisation of the combustion processes of the energetic materials;
- Ignition and Initiation Processes;
- Thermobarics and Thermites;
- Combustion Instability Risks;
- Solid rocket combustion instability;
- Flame zone physicochemistry in solid rocket instability;
- Environmentally Friendly Energetic Materials;
- Internal structure of the burning wave.

Conference rules:

1. The PEV-C is a perpetual online conference that is open for submission of manuscripts at any time.
2. All manuscripts submitted to the PEV-C are peer reviewed.
3. All accepted manuscripts are published in the next available issue of the Research Bulletin of the Australian Institute of High Energetic Materials.
4. The Research Bulletins of the Australian Institute of High Energetic Materials are published bi-annually. Volume 1 of the Research Bulletin is published at the end of January and Volume 2 is published at the end of July.
5. Manuscripts submitted to the PEV-C between 01 May and 30 November and accepted for publication are published in Volume 1 of the Research Bulletin.
6. Manuscripts submitted to the PEV-C between 01 December and 30 April and accepted for publication are published in Volume 2 of the Research Bulletin.

Registration fees:

Participation Fees

(Effective from 15.11.2010)

Student Registration Fee: 29.95 Euros

Full Registration Fee: 49.95 Euros

The registration fees are used to support the technical maintenance of the conference (server support, consumables, computers soft- and hardware, telephone and facsimile expenses, cost of the broadband Internet connection, office rent and maintenance, technical assistance, paying government taxes), and paying salaries of the personnel involved (web masters, secretaries, technical assistants, legal advisers, etc).

1. All participants must pay registration fees*.
2. The participants must register online by filling in and submitting an Online Registration Form.
3. Registrations are not completed until all fees are paid in full and the Registration Form is received by the Secretariat.
4. Paying the V-Conference fee covers participation in the Online Direct Discussion Session of the conference and peer reviewing of the manuscripts, however it does not cover the editorial cost of the post-conference publication of the manuscripts.
5. All peer reviewed manuscripts are published in subsequent volumes of the Research Bulletin of the Australian Institute of High Energetic Materials. Selected manuscripts will be forwarded for publication in other scientific journals with no extra cost to the authors.

*Exceptions:

1. All Honorary Fellows and Research Associates of the Australian Institute of High Energetic Materials.
2. All other members of the Scientific Monitoring and Advisory Committee to the Australian Institute of High Energetic Materials.
3. Full-time postgraduate students that are in financial hardship (only manuscripts of high scientific merit will be awarded).

Contact details:

All correspondence should be emailed to the Secretariat of the PEV-C. The email address of the Secretariat is:

pev-c@ausihem.org

No submissions of manuscripts via ordinary mail are accepted.

Useful links:

Link to the Online Direct Discussion Sessions (ODDS)

http://www.ausihem.org/conf_papers/

Instruction for authors

http://www.ausihem.org/index.php?p=1_38

List of participants

http://www.ausihem.org/index.php?p=3_42

Online registration and submission of manuscripts

http://www.ausihem.org/index.php?p=3_43

Sponsorship, donations, advertising and promotion deals

http://www.ausihem.org/index.php?p=1_41

What are the V-Conferences and Symposia and how do they operate?

http://www.ausihem.org/index.php?p=1_33

Link to the Research Bulletin of the Australian Institute of High Energetic Materials

<http://bulletins.ausihem.org/>

How to become an Honorary Fellow/Research Associate

http://www.ausihem.org/index.php?p=1_9

Important announcement:

Teaching opportunities

We need more lecturers!

The Australian Institute of High Energetic Materials is in the final steps of preparing a new online educational system. It is an upgrade of an existing system for delivering Workshops for Intensive Professional Development to local and international participants. The new system will run using software that allows a dynamic communication between lecturers and students. Under the new system, the lecturers will be able to choose the topic and content of the teaching material, as well as the rate of their reward. As a general rule, the topic of the lectures must be original (not to be covered in details in any regular university programs), they must provide a level of knowledge that is above the average undergraduate university courses and they must be of interest to the engineering community.

Please, contact us if this offer is of interest to you or to your colleagues and feel free to suggest appropriate topics.

Dr V. Stamatov

Director of the Australian Institute of High Energetic Materials



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Deputy Chairperson
(General Engineering Topics)



Dr Alexander Lukin
Deputy Chairperson
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*The Scientific Monitoring and Advisory Committee to the Australian Institute of High Energetic Materials is a panel of experts that provides general supervision on the quality of the materials submitted to the Research Bulletins of the Institute, as well as on the quality of the papers submitted to the Conferences and Symposia that are organised by the Institute. The Committee consists on the Honorary Fellows of the Australian Institute of High Energetic Materials, a group of permanent members and a number of independent experts, specially invited for each occasion.

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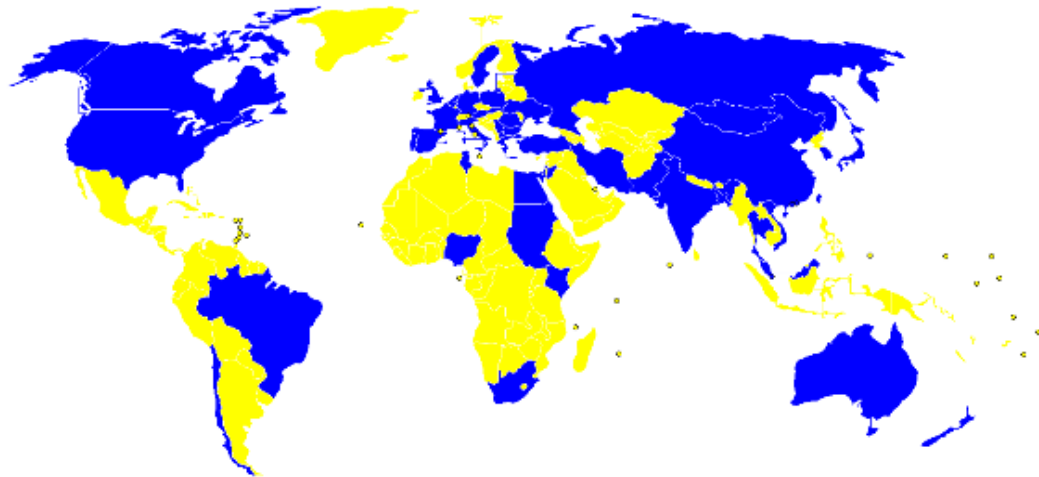
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Representation in the Australian Institute of High Energetic Materials by countries (marked in blue), March 2011.