

**30TH SCIENTIFIC-PROFESSIONAL MEETING
WITH INTERNATIONAL PARTICIPATION -
HIPNEF 2006**

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The 30th scientific-professional meeting with international participation - HIPNEF 2006 was held from 24th to 26th May 2006, in Vrnjačka Banja. This traditional meeting of experts in oil hydraulics, pneumatics, automatic control and other related areas was organized by the Association of Mechanical and Electrical Engineers and Technicians of Serbia (SMEITS) from Belgrade. The general sponsor of the meeting was the firm FESTO from Belgrade.

The meeting was greeted by Professor Dragutin Debeljković, President of the Organizing Committee, Colonel Jevtić, manager of the Breza Hotel, Professor Donchev from Bulgaria, Professor Miodrag Stojiljković, President of Section for automation of the SMEITS and Mr Erdoglič, Deputy President of the Municipality of Vrnjačka Banja as a host town.

The meeting was opened by Professor Milivoje Sekulic, first President of the Section for automation formed by the SMEITS as early as in 1969.

After the opening of the meeting, meritorious members of the SMEITS, which have given significant contribution to the work and recognition of the HIPNEF, have been awarded the first diplomas. The diplomas have been awarded to Professors: Svetislav Zarić, Milivoje Sekulić and Dragutin Knežević. The diplomas have also been awarded to working organizations: the firm FESTO, Mechanical Faculty of Nis and the firm INFORMATICA from Belgrade, which for many years supported the HIPNEF financially or in some other way.

Of the five introductory lectures, proposed and announced by the Organizer, just four have been presented as following:

1. HISTORY OF THE HIPNEF SCIENTIFIC-PROFESSIONAL MEETINGS

Milivoje Sekulić, SMEITS

2. OBSERVER DRIVEN OPTIMAL STRATEGIES FOR A CONFLICT LINEAR-QUADRATIC DIFFERENTIAL GAME

Zoran Gajić, Rutgers University, Piscataway, NJ 08854, USA

Dobriša Skatarić, Mechanical Faculty, Belgrade

3. ON THE RATIONAL PLACEMENT OF ACTUATORS FOR LINEAR-QUADRATIC OPTIMAL CONTROLLERS

Verica Radisavljević-Gajić, Lafayette College, Easton, Pennsylvania 18042

4. NIKOLA TESLA

Milivoje Sekulić, SMEITS

After the plenary session, the meeting continued in two separate parallel sections. The papers were classified into the eight thematic areas:

- A) HYDRAULICS (15 papers)
- B) PNEUMATICS (9 papers)
- C) ELECTRICAL ENGINEERING AND ELECTRONICS (9 papers)
- D) FLUIDS (7 papers)
- E) FLEXIBLE CONTROL SYSTEMS (12 papers)
- F) FLEXIBLE AUTOMATION (6 papers)
- G) EXPLOITATION AND MAINTENANCE (6 papers)
- H) MILITARY ENGINEERING (9 papers)

For the first time a special session was organized as part of the HIPNEF, namely the MILITARY ENGINEERING one, thanks to contributions from the Military Technical Institute. During this session, the authors presented notable contributions to various research fields such as experimental aerodynamics, performed in wind tunnels, uniform in our country. Apart from this session, two additional papers were presented by experts from the Military Technical Institute. One paper was presented in the FLUID session and the other paper was presented in the EXPLOITATION AND MAINTENANCE session. Therefore, the Military Technical Institute presented 9 scientific-professional and high quality papers. Hence it was the institution with the greatest number of presented papers at the conference. This was with great pleasure noted on the program committee session, held before the meeting, in which author of this report took part.

It should be noticed that apart from four introductory lectures from abroad, 7 papers were from Bulgaria and one paper from Ukraine, written in English. Furthermore, the meeting papers also included those from former Yugoslavia, namely, from Bosnia and Herzegovina (from Serbian Sarajevo), Slovenia and Montenegro.

In the proceedings, all the reviewed papers are published on 587 pages, regardless of whether they were reported on at the conference or not. Five introductory papers are followed with 73 published papers, classified in 8 thematic areas in the same way as they were presented on the meeting.

The presentation of the firm FESTO, as general sponsor, was especially interesting. The FESTO has 10.500 employees in 78 firms around the world and has in its production program about 78.000 components. From 2.5 billion euros of GNP per year, the FESTO gives 10% for development. Financial pays go, especially, to education of the employed and generation of new staff which will be engaged in developing new components.

CONCLUSION

The 30th, jubilee, scientific-professional meeting HIPNEF 2006 has met experts from areas of oil hydraulics, pneumatics, automatic control and other related disciplines with very interesting papers in research domain, development, design, technology, testing and maintenance of hydraulic, pneumatic, electric and electronic components and systems. It was a good occasion for intimacy and information exchange among experts from universities, scientific-research institutes, and colleges, private and social firms, domestic and from abroad. The presented papers were very substantial and had a very high scientific-professional level. Well prepared and organized meeting merits a high evaluation. Although the meeting took place at the time when our country was undergoing the transition process, a generally held opinion is that the traditional conference was a success and that it accomplished the organizers' expectations.