## From the Editors

This issue of Thermal Science scientific journal is again dedicated to the research in the field of energy efficiency in transportation sector with special emphasis on thermal processes of internal combustion engines as the main factor in vehicle fuel consumption. According to the opinions of our reviewers (the list of reviewers participating in this issue is given at next page) we have chosen 33 papers for this issue from a large number (about 80) of submitted manuscripts on internal combustion engine and transport energy efficiency problems. Unfortunately, some submitted papers are still under revision and a number of papers have not been accepted for publication because of their lack of scientific level, since they mainly have presented obtained experimental results without any original or new insights.

This issue discusses two main problems of current transportation: high pollution caused by toxic engine exhaust emissions and high consumption of fossil fuels. Presented papers suggest that these problems can be solved by further improvement of internal combustion engines, by application of alternative fuels and by introduction of alternative power drive systems. To find optimal solutions for the current world energetic situation, global warming and air pollution, the intensive research in the transportation sector is necessary. Therefore, certain results of these researches are presented in the papers of this issue.

The papers in this issue range from fundamental research of engine's thermal processes up to the effects of transport conditions on energy consumption and air pollution. Internal combustion engine processes research involves two extremes: on the one side, computational methods of engine process simulation models, and, on the other hand, experimental studies of engine flow processes, combustion process, injection system and the effects of different interventions on exhaust emissions. Considerable part of this issue is devoted to the actual utilization of various alternative fuels (natural gas, biofuel, ethanol, hydrogen, etc.) as well as their properties and their effects on engine performances and emissions. Several papers discuss also the problems of different alternative drive systems and real driving emissions and fuel consumption of vehicle fleet. In any case, the problems of energy efficiency and engine emissions dominate this issue.

Finally, I would like to express my gratitude to all the authors (originating not only from Serbia but also from India, Turkey, China, Romania, Netherland, Poland, Ethiopia, Mexico and Brazil) on their desire and interest to publish their research results in our journal. Owing to them the quality of our magazine is growing, which is reflected in its SCI factor. Also, in my own name and on behalf of all authors, I have to pay special appreciation to the reviewers (from eminent international institutions from Serbia, Turkey, China, Italy, Poland, Romania, Hungary, France, United Kingdom, Slovenia, Austria, Montenegro, Russia, USA, Iran and Bosnia) for their cordial and qualitative comments and opinions, which have strongly improved the level of this issue, but also essentially have helped the authors to improve the quality of their papers. The Editorial Board would like to express the gratitude to all reviewers for their effort and help. The list of reviewers involved in the choice of papers for this issue follows.

**Editors** 

Prof. Stojan Petrović, Ph.D., Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia Prof. Nenad Miljić, Ph.D., Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia

## List of reviewers involved in the choice of papers for this issue

Adrian Irimescu, CNR Instituto Motori, Napoli, Italy Akos Berczky, University of Technology, Budapest, Hungary Aleksandar Manojlovic, Faculty of Transport Technology, University of Belgrade, Beograd, Serbia

Aleš Hribernik, Faculty of Mechanical Engineering, University of Maribor, Maribor, Slovenija

Alexandru Cernat, Faculty of Mechanical Engineering and Mechatronics, Politehnica of Bucharest, Bucharest, Romania

Arkadiusz Jamrozik, Czestochowa University of Technology, Czestochowa, Poland

Attila Meggyes, Department of Energy Engineering, Budapest University of Technology, Budapest, Hungary

Breda Kegl, Faculty of Mechanical Engineering, University of Maribor, Maribor, Slovenia

Bolan Liu, School of Mechanical Engineering, Beijing Institute of Technology, Beijing, China

Boran Pikula, Faculty of Mechanical Engineering, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

Bruno Dalla Chiara, Transport Engineering, Politecnico di Torino, Torino, Italy

Damir Djakovic, Faculty of Technical Sciences, University of Novi Sad, Novi Sad, Serbia

Darko Kozarac, Faculty of Mechanical Engineering and Naval Arch., University of Zagreb, Zagreb, Croatia

Davor Vujanic, Faculty of Transport Technology, University of Belgrade, Beograd, Serbia

Dobrivoje Ninkovic, ABB, Baden, Swiss

Dusan Gruden, Porsche Gmbh, Stuttgart, Germany

Dzevad Bibic, Faculty of Mechanical Engineering, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

Dragan Knežević, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia

Fagila Maroteaux, Universite de Versailles Saint Quentin en Yvelines, Velizy, France

Forin Mariasiu, Technical University of Cluj-Napoca, Automotive Engineering Department, Cluj-Napoca, Romania

Gilles Vaitilingom, CIRAD, Unite de Recherche Biomasse-Energie, Montpellier, France

Goran Petrovic, Faculty of Mechanical Engineering, University of Nis, Nis, Serbia

Imdat Taymaz, Faculty of Engineering, University of Sakarya, Adapazari, Turkey

Ivan Filipovic, Faculty of Mechanical Engineering, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

Jan Kidracki, Faculty of Power and Aeronautical Engineering, Warsaw University of Technology, Warsaw, Poland

Jerzy Merkisz, Division of IC Engines, University of Technology, Poznan, Poland

Jovan Dorić, Faculty of Technical Sciences, University of Novi Sad, Novi Sad, Serbia

Karol Grab-Rogalinski, Czestochowa University of Technology, Czestochowa, Poland

Konstantin Volkov, Faculty of Science, Engineering and Comput., Kingstone University London, UK

Levent Yuksek, Departament of Mechanical Engineering, Technical University of Yildiz, Istanbul, Turkey

Lingen Chen, Naval University of Engineering, Wuhan, China Luca Andreassi, Dipartament di Ingegneria Meccanica, Universita di Roma Tor Vergata, Roma, Italy Milan Gojak, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia

Milan Tomić, Faculty of Technical Sciences, University of Novi Sad, Novi Sad, Serbia

Miroljub Tomić, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia

Miroslaw Kozak, Division of IC Engines, Poznan University of Technology, Poznan, Poland

Mladen Tomic, College of Applied Technical Sciences, University of Nis, Nis, Serbia

Moldovanu Dan, Technology University of Cluj-Napoca, Automotive Engineering Department, Cluj-Napoca, Romania

Muammer Ozcan, Mechanical Engineering Department, Yildiz Technical University, Istambul, Turkey

Murat Ciniviz, Selcuk University, Konya, Turkey

Nenad Miljić, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia

Nicolae Burnete, Technical University of Cluj-Napoca, Automotive Eng. Department, Cluj-Napoca, Romania

Orkun Ozener, Mechanical Engineering Department, Technical University of Yildiz, Istanbul, Turkey

Pavel Bulat, Saint Petersburg National Research University of Information Technical, Mechanics and Optics, Russia

Petar Kleut, AVL List GmbH, Graz, Austria

Qian Wang, School of Energy and Power Engineering, Jiangsu University, Zhenjiang, Jiangsu, China

Radivoje Pešić, Faculty of Engineering, University of Kragujevac, Kragujevac, Serbia

Radoje Vujadinovic, Faculty of Mechanical Engineering, University of Montenegro, Podgorica, Montenegro

Robert Mason, Institute of Logistics and Operations Management. Cardiff University, Cardiff, UK

Sehmus Altun, Department of Autom. Teaching, Technical Faculty, Batman, Turkey

Faculty, Batman, Turkey
Seman Aydin, Batman University, Batman, Turkey
Semih Olcmen, Aerospace Eng. and Mechanical Department,

University of Alabama, Tuscaloosa, Ala., USA Simona Merola, CNR Instituto Motori, Napoli, Italy

Slobodan Popović, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia

Snežana Petković, University of Banja Luka, Republic Srpska, Bosnia and Herzegovina

Stanislaw Szwaja, University of Technology, Czestochowa, Poland

Valeria Nagy, Szeged University, Szeged, Hungary Velimir Petrović, Institute IMR, Belgrade, Serbia

Vladimir Jovanović, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia

Vladimir Momčilović, Faculty of Transport Technology, University of Belgrade, Belgrade, Serbia

Wojciech Tutak, University of Technology, Czestochowa, Poland Zafer Dulger, Faculty of Mechanical Engineering, Kocaeli

University, Kocaeli, Turkey Zabihollah Najafian Ashrafi, School of Mechanical

Engineering, University of Tehran, Tehran, Iran
Zhi-xia He, School of Energy and Power Engineering, Xi`an

Jiaotong University, Xi`an, China Zuo Hua Huang, School of Energy and Power Engineering, Xi`an Jiaotong University, Xi`an, China

The Editorial Board would like to express their gratitude to all reviewers for their effort and help.