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## **Recent Advances in Fluid Mechanics and Thermal Engineering**

- *Proceedings of the 13<sup>th</sup> International Conference on Fluid Mechanics & Aerodynamics (FMA '15)*
- *Proceedings of the 13<sup>th</sup> International Conference on Heat Transfer, Thermal Engineering and Environment (HTE '15)*

*Salerno, Italy, June 27-29, 2015*

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**Preface**

This year the 13th International Conference on Fluid Mechanics & Aerodynamics (FMA '15) and the 13th International Conference on Heat Transfer, Thermal Engineering and Environment (HTE '15) were held in Salerno, Italy, June 27-29, 2015. The conferences provided a platform to discuss mathematical modeling in fluid mechanics, multiphase flow, fluid structure interaction, hydrotechnology, hydrodynamics, air pollution problems, aerodynamics, quantum hydrodynamics, automotive aerodynamics, aviation, steam generators, heat storage, energy applications etc. with participants from all over the world, both from academia and from industry.

Their success is reflected in the papers received, with participants coming from several countries, allowing a real multinational multicultural exchange of experiences and ideas.

The accepted papers of these conferences are published in this Book that will be sent to international indexes. They will be also available in the E-Library of the WSEAS. Extended versions of the best papers will be promoted to many Journals for further evaluation.

Conferences such as these can only succeed as a team effort, so the Editors want to thank the International Scientific Committee and the Reviewers for their excellent work in reviewing the papers as well as their invaluable input and advice.

The Editors





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## Plenary Lecture 1

### The Spark Plug Gap Influence on Gasoline Engine Used LPG and CNG as Fuel



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**Abstract:** The present work examines the spark plug gap variation in order to determine the influence of spark plug gap, in gasoline engine performance and gas emissions, using as fuel: Gasoline, LPG and CNG. For this aim was used four-stroke gasoline engine, exhaust gas analyzers and special software for the gas emissions record, when the engine functioned under load condition.

For every fuel (gasoline, LPG and CNG) were used different spark plug gaps. The results give answer, in which spark plug gaps the engine has better operation for every fuel used.

**Brief Biography of the Speaker:** Dr Charalampos Arapatsakos is a Greek citizen, who has been born in Athens. He has studied Mechanical Engineering and PhD. He is Professor on Democritus University of Thrace in Greece. Prof C. Arapatsakos has participated in many research programs about renewable sources of energy, gas emissions and antipollution technology. His research domains are mainly on biofuels and their use in internal combustion engines, the power variation from the use of biofuels, the gas emissions, mechanical damages, internal combustion engines, antipollution technology, renewable sources of energy, gas emissions, vehicle design, elements of machines, resistance of materials, technical mechanics, heat transmission.