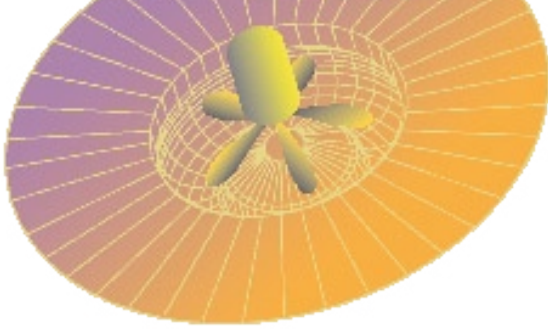


THIESEL 2004



Final Programme

CONFERENCE ON:

Thermo-and fluid dynamic processes in Diesel Engines



September 7th - 10th, 2004
Valencia (Spain)



UNIVERSIDAD
POLITECNICA
DE VALENCIA



ORGANISED BY:

CMT - motores térmicos

UNIVERSIDAD POLITÉCNICA DE VALENCIA, SPAIN



Bienvenida a THIESEL 2004

En mi propio nombre y el de la Universidad Politécnica de Valencia, quiero expresarle mi más sincera bienvenida a esta 3ª Conferencia THIESEL sobre procesos termofluidodinámicos en motores Diesel. Estoy plenamente convencido de que su participación en estas jornadas no sólo representa un valor añadido para las mismas, sino que es en definitiva lo que, en buena medida, las justifica. En la primera edición, THIESEL 2000, fuimos partícipes de un enriquecedor intercambio de ideas innovadoras y avances tecnológicos en este campo, y ello nos alentó a seguir adelante. La segunda edición, THIESEL 2002, representó la consolidación de los vínculos creados y de la Conferencia como un referente a escala mundial. La celebración de la tercera edición, THIESEL 2004, implica que la Conferencia se ha convertido definitivamente en una cita inexcusable para todos aquellos que trabajan en este campo que ya ha superado el siglo de vida.

Nuestra Universidad tiene establecida una apuesta clara y permanente por la investigación aplicada. Estamos convencidos de que una de nuestras primeras obligaciones es dar respuesta a las necesidades de la sociedad en cada momento histórico. Sin embargo, no basta el convencimiento, sino que hay que implicarse de corazón en esa carrera para obtener las respuestas adecuadas. Esto lo saben muy bien los que investigan y desarrollan tecnología en este campo. Quizá se deba a ello la jovialidad de espíritu y la ilusión que ponen en sus trabajos los que a esto se dedican.

Por ello nos resulta especialmente estimulante que se celebre en estos días la tercera (o, si se prefiere, la primera de las muchas que aún han de celebrarse) edición de este congreso de alto nivel, tanto en lo que se refiere a sus participantes como al interés de los temas que aborda. Consideramos un verdadero honor ser sus anfitriones una vez más. Agradecemos la dedicación de todos los que han hecho posible que THIESEL 2004 tenga lugar en la Universidad Politécnica de Valencia, y les deseamos que esté a la altura de sus expectativas.

Welcome to THIESEL 2004

In my own name and on behalf of the Universidad Politécnica de Valencia, I wish to express my warmest welcome to the third THIESEL conference on Thermo- and Fluid Dynamic Processes in Diesel engines. I am fully convinced that your participation in this conference not only adds extra value to the event, but is the final justification for its celebration. The THIESEL 2000 conference brought about an exchange of innovative ideas and the most up-to-date technological advances within this field, and this encouraged us to continue our efforts, strengthening the bonds established at the time. This goal was successfully achieved in the second edition, THIESEL 2002, which represented the definitive consolidation of the Conference as a worldwide reference. The celebration of this third edition implies that the conference has become a "must" for all people working in this field, in which the limits of science and technology have been pushed for more than a century.

Our University has a clear and permanent vocation for applied research. We are convinced that one of our main duties is to provide answers to constantly evolving societal needs. However, this conviction is not enough. We must take these needs to heart and fully dedicate ourselves to finding their solutions. This is well known by all those carrying out research and development in this field, and it is perhaps for this reason that they put so much spirit and enthusiasm into their work.

This is why we find the prospect of this third (or, if you prefer, the first of many editions to be held in the future) high level Conference so exciting, especially considering the prestige of the participants and the relevance of the topics under discussion. We feel highly honoured to be your hosts once again. We wish to acknowledge the dedication of all those who have made it possible to celebrate the THIESEL 2004 Conference at the Universidad Politécnica de Valencia, and to express our hope that it will live up to all your expectations.

Prof. JUSTO NIETO

RECTOR DE LA UNIVERSIDAD POLITÉCNICA DE VALENCIA



PARANINFO. Conference Building

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CONFERENCE COORDINATOR

- Dr. **X. MARGOT** / CMT. U. Polit cnica de Valencia - SPAIN

Conference Objectives This is the third edition of the THIESEL Conference on 'Thermo-and Fluid Dynamic Processes in Diesel Engines' and, we hope, a definite milestone in its consolidation as a two-yearly event. The first conference held in 2000 in Valencia began as a small, mostly European gathering of Diesel engine specialists from Industry and Academia. It has since experienced an increase in worldwide appeal.

The task of complying with the strict current and future regulations regarding emission levels is indeed an international challenge. At the same time, key factors such as low fuel consumption, high specific power, noise reduction, driveability, and comfort greatly concern automotive industrialists. Promising innovative technological solutions in the fields of fuel injection and combustion, air management and exhaust after-treatment have been developed in recent years and new techniques are currently being investigated. The research in these areas benefits from the most recent advances in experimental diagnosis tools and electronic control units, as well as from the continuing effort to improve CFD predictions. The clean and silent Diesel engine technology has real potential. However, it can only succeed if there is close co-operation between the automotive industry and its University partners.

The aim of the THIESEL 2004 Conference is to gather and bring together ideas from both Industry and Academia and to review the state of the art in all aspects related to thermo-and fluid dynamic processes in Diesel engines. Papers to be presented will include basic studies aimed at providing a better understanding of the physical processes underlying Diesel engine operation, as well as real-life day-to-day problems associated with Diesel engine development.

Conference Overview The conference will be held over three and a half days. On the first day, in the afternoon of Tuesday 7th of September, there will be the official opening including a welcome address and a welcome cocktail. Registration will be open from Tuesday afternoon and participants are encouraged to register as early as possible. The technical sessions will start on Wednesday morning the 8th of September and will conclude on Friday the 10th of September in the afternoon. 45 papers are scheduled, including 6 keynote addresses by prestigious names of the Diesel automotive area. In particular, two specific sessions on new combustion concepts are planned, organised in close link with the European Network of Excellence "Energy Conversion in Engines (ECO-Engines)" funded by the European Commission within the 6th Framework Programme.

Speakers will be given 30 min. for their presentation comprising a brief discussion with other participants. A gala dinner will be offered to participants on the 10th of September to close the conference on a happy relaxed note.

About UPV / CMT - Motores Térmicos

The Universidad Politécnica de Valencia is a Technical University and was founded in 1971. The University has seven Superior Schools (5 annual courses) and eight Technical Schools (3 annual courses), with about 35.000 students and a teaching staff of 2200.

CMT-Motores Térmicos is a University Department and a University Research Institute at the same time. Founded in 1979 CMT-Motores Térmicos celebrates this year its 25th anniversary. It is nowadays composed by about 100 members including professors, researchers, laboratory technicians and administrative staff.

Well-known for its research activities centred on thermo-and fluid dynamic processes in internal combustion engines, with a focus on Diesel automotive engines, CMT-Motores Térmicos is a very active group involved in many R&D projects supported by private companies as well as by public funds, including several European research programs. Research areas include air management and turbo-charging, fuel injection and combustion, pollutant formation and control, noise control, as well as development and application of experimental techniques for engine research. The research philosophy of the group combines theoretical, modelling and experimental work to improve knowledge on the basic processes, while providing solutions for the European automotive industry demands.

The laboratory of CMT - Motores Térmicos is equipped with state-of-the-art experimental facilities and test benches for Diesel engines that allow close control of all experimental variables even at sub-zero ambient temperature. The laboratory also has very modern visualisation, image processing and laser based techniques (including LDA / PDA, LII, PIV and LIF) as well as injection rate and spray momentum measurement capabilities.



- 1 Paraninfo - Conference Building
- 2 CMT - Motores Térmicos
- 3 C.M. Galileo Galilei
- 4 Restaurant "La Vella"

UNIVERSIDAD POLITÉCNICA DE VALENCIA

SESSION MATRIX

	Tuesday, September 7 th	Wednesday, September 8 th	Thursday, September 9 th	Friday, September 10 th
7:30/8:30		CONFERENCE REGISTRATION		
8:30/10:30		SESSION A.1. "INJECTION & SPRAYS (I)"	SESSION C.1. "COMBUSTION & EMISSIONS (I)"	SESSION E.1. "NEW COMBUSTION CONCEPTS (I)"
10:30/11:00		COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
11:00/13:00		SESSION A.2. "INJECTION & SPRAYS (II)"	SESSION C.2. "COMBUSTION & EMISSIONS (II)"	SESSION E.2. "NEW COMBUSTION CONCEPTS (II)"
13:00/15:30		LUNCH	LUNCH	LUNCH
15:30/17:30		SESSION B.1. "AIR MANAGEMENT & TURBOCHARGING (I)"	SESSION D.1. "COMBUSTION & EMISSIONS (III)"	SESSION F.1. "ENGINE OPTIMISATION"
17:30/18:00	CONFERENCE REGISTRATION	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
18:00/19:30		SESSION B.2. "AIR MANAGEMENT & TURBOCHARGING (II)"	SESSION D.2. "EXPERIMENTAL TECHNIQUES"	SESSION F.2. "NOISE CONTROL"
19:30/20:00	WELCOME ADDRESS			CLOSURE ADDRESS
20:00/22:00	WELCOME COCKTAIL			
22:00/24:00				GALA DINNER

CONFERENCE REGISTRATION

7:30/8:30

SESSION A.1.**INJECTION & SPRAYS (I)**

8:30/10:30

Chairman: W. Knecht. IVECO MOTORENFORSCHUNG (SWITZERLAND)

Keynote address:
C. SOTERIOU"FROM CONCEPT TO END PRODUCT - PREDICTION AND EXPERIMENT IN DIESEL INJECTION SYSTEMS"
C. Soteriou. DELPHI DIESEL SYSTEMS (UK)

"CORRELATION OF SPRAY SYMMETRY WITH MASS AND MOMENTUM DISTRIBUTION OF MULTIHOLE DIESEL NOZZLES"

E. Kull and G. Krüger. SIEMENS VDO AUTOMOTIVE (GERMANY)

"NOZZLE HOLE GEOMETRY-A POWERFUL INSTRUMENT FOR ADVANCED SPRAY DESIGN"

J. Winter, B. Dittus, A. Kerst, O. Muck, B. Stuke, and A. Vogel. ROBERT BOSCH (GERMANY)

"ANALYSIS OF THE INFLUENCE OF THE INJECTION STRATEGY ON CAVITATING NOZZLE FLOW, SPRAY FORMATION AND COMBUSTION IN A HEAVY DUTY TRUCK ENGINE. EFFECTS ON SPRAY AND MIXTURE FORMATION"

U. Michels, C. Krüger, G. König, M. Blessing, V. Schwarz and. DAIMLERCHRYSLER (GERMANY)
G. Merker. UNIVERSITÄT HANNOVER (GERMANY)

COFFEE BREAK

10:30/11:00

SESSION A.2.**INJECTION & SPRAYS (II)**

11:00/13:00

Chairman: V. Padilla. NISSAN TECHNICAL CENTER EUROPE (SPAIN)

"CAVITATION MODELLING IN SINGLE-HOLE DIESEL INJECTOR BASED ON EULERIAN-LAGRANGIAN APPROACH"

E. Giannadakis and H. Roth. IMPERIAL COLLEGE, LONDON (UK)

M. Gavaises and C. Arcoumanis. CITY UNIVERSITY (UK)

"INFLUENCE OF THE NOZZLE GEOMETRY ON DIESEL INJECTOR INTERNAL FLOW: A COMPUTATIONAL APPROACH"

B. Argueyrolles, D. Maligne and D. Passerel. RENAULT (FRANCE)

"EXPERIMENTAL AND NUMERICAL INVESTIGATION OF TRANSIENT SPRAYS FORMATION"

C. Méndez, B. Giménez, F. Castro and F. Tinaut. UNIVERSIDAD DE VALLADOLID (SPAIN)

"PREDICTION OF DIESEL SPRAY PENETRATION WITH SHORT INJECTIONS IN LOW DENSITY GAS"

L. Araneo. POLITECNICO DI MILANO (ITALY)

LUNCH

13:00/15:30

SESSION B.1.**AIR MANAGEMENT & TURBOCHARGING (I)**

15:30/17:30

Chairman: D. Ivaldi. CENTRO RICERCA FIAT (ITALY)

Keynote address:
H. TENNANT

"THE EVOLUTION OF TURBOCHARGING IN DIESEL ENGINES"

H. Tennant. HOLSET TURBOCHARGERS (UK)

"INFLUENCE OF VARIOUS COMPRESSOR INLET DESIGNS ON COMPRESSOR PERFORMANCE"

H. Schulte, N. Schorn and H. Kindl. FORD AACHEN (GERMANY)

J. R. Serrano, X. Margot, C. Donayre. UNIVERSIDAD POLITÉCNICA DE VALENCIA (SPAIN)

"SIMULATION AND ANALYSIS OF THE TRANSIENT BEHAVIOUR OF A TURBOCHARGED COMMON RAIL DIESEL ENGINE"

S. Breuer. PSA PEUGEOT CITROËN (FRANCE)

"TURBOCHARGER COMPRESSOR FLOW RANGE IMPROVEMENT FOR FUTURE HEAVY DUTY DIESEL ENGINES"

B. Nikpour. HOLSET TURBOCHARGERS (UK)

COFFEE BREAK

17:30/18:00

SESSION B.2.**AIR MANAGEMENT & TURBOCHARGING(II)**

18:00 / 20:00

Chairman: X. Boncompte. IVECO PEGASO (SPAIN)

"1D COMPUTATIONAL MODEL FOR THE PREDICTION OF THE THERMO-FLUID DYNAMIC BEHAVIOUR OF DIESEL PARTICULATE FILTERS"

G. Montenegro, G. Ferrari, A. Onorati. POLITECNICO DI MILANO (ITALY)

"A NOVEL COMPUTATIONAL APPROACH FOR SIMULATION OF PARTICLE DEPOSITION IN FOAM FILTERS"

W. Brandstätter and B. F. Gschaider. UNIVERSITY OF LEOBEN (AUSTRIA)

C. Wassermayr. VEITSCH-RADEX & CO. (AUSTRIA)

"IN-CYLINDER FLOW CHARACTERIZATION OF MODERN HSDI DIESEL ENGINES - NUMERICAL AND EXPERIMENTAL EVALUATION OF CURRENT PRACTICES"

B. van den Heuvel, W. Willems, E. Karvounis and H. Schulte. FORD AACHEN (GERMANY)

"TURBOCHARGER TURBINE UNSTEADY COMPUTATIONAL STUDY"

D. Palfreyman and R. Martínez-Botas. IMPERIAL COLLEGE, LONDON (UK)

SESSION C.1. COMBUSTION & EMISSIONS (I)

8:30/10:30

Chairman: A. Coghe. POLITECNICO DI MILANO (ITALY)

Keynote address:
D. SIEBERS

“ASPECTS OF SOOT FORMATION IN DIESEL FUEL JETS”
D. Siebers and M. Pickett. SANDIA NATIONAL LABORATORIES (USA)

“INVESTIGATION OF EARLY SOOT FORMATION PROCESS IN A TRANSIENT SPRAY FLAME VIA SPECTRAL MEASUREMENTS OF LASER-INDUCED EMISSION”
T. Aizawa, H. Kosaka and Y. Matsui. TOKYO INSTITUTE OF TECHNOLOGY (JAPAN)

“MODELLING OF SOOT CONCENTRATION AND MORPHOLOGY FROM SMOKE OPACITY MEASUREMENTS”
M. Lapuerta, O. Armas, R. Ballesteros. UNIVERSIDAD DE CASTILLA-LA MANCHA (SPAIN)
F. J. Martos. UNIVERSIDAD DE MÁLAGA (SPAIN)

“COMBINATION OF HIGH INJECTION PRESSURE AND EGR TO CONTROL NITRIC OXIDE AND SOOT IN DI DIESEL ENGINES”
D. Hountalas and E. G. Pariotis. NATIONAL TECHNICAL UNIVERSITY OF ATHENS (GREECE)
J. Benajes and C. A. González. UNIVERSIDAD POLITÉCNICA DE VALENCIA (SPAIN)

COFFEE BREAK

10:30/11:00

SESSION C.2. COMBUSTION & EMISSIONS (II)

11:00/13:00

Chairman: R. Krieger. GENERAL MOTORS CORP. (USA)

“PREDICTION OF TURBULENCE CONTROLLED COMBUSTION IN DIESEL ENGINES”
F. Chmela, M. Engelmayer, G. Pirker and A. Wimmer. LARGE ENGINES COMPETENCE CENTER (AUSTRIA)

“ISOTOPIC TRACING POTENTIAL FOR POLLUTANT FORMATION INVESTIGATION ON ENGINES”
K. Lombaert, L. Le Moyne and P. Guibert. UNIVERSITÉ PIERRE ET MARIE CURIE (FRANCE)
J. Amouroux. ENSCP (FRANCE)

“COMBUSTION DIAGNOSTICS OF A DIESEL ENGINE WITH MULTIPLE INJECTION”
F. E. Corcione, S. Di Iorio, S. Merola and B. Vaglieco. ISTITUTO MOTORI (ITALY)
E. Mancaruso. UNIVERSITÀ DI NAPOLI FEDERICO II (ITALY)

“MODELLING OF A SIX-MODE DIESEL TEST CYCLE USING THE CFD CODE FLUENT”
U. Schmidt, W. Seibert and M. Ehlen. FLUENT (GERMANY)
X. Hu. FLUENT INC. (USA)

LUNCH

13:00/15:30

SESSION D.1. COMBUSTION & EMISSIONS (III)

15:30/17:30

Chairman: C. Angelberger. INSTITUT FRANÇAIS DU PÉTROLE (FRANCE)

Keynote address:
S. EL TAHRY

“THE FUTURE OF HIGH SPEED COMPRESSION IGNITION (DIESEL) ENGINES”
S. El Tahry. GENERAL MOTORS (USA)

“ADVANCED COMBUSTION SYSTEM DESIGN: CONTROL AND OPTIMISATION TO MEET THE REQUIREMENTS OF FUTURE EUROPEAN PASSENGER CARS”
B. Cooper, N. Jackson, I. Penny, D. Rawlins, A. Truscott and J. Seabrook. RICARDO CONSULTING ENGINEERS (UK)

“LASER OPTICAL DIAGNOSTICS AND NUMERICAL ANALYSIS OF HSDI COMBUSTION SYSTEMS”
P. Adomeit. FEV MOTORENTECHNIK (GERMANY)
S. Pischinger, M. Becker and H. Rohs. VKA, RWTH AACHEN (GERMANY)
A. Greis. LTFD (GERMANY)

“DIAGNOSIS OF COMBUSTION WITH WATER INJECTION USING HIGH-SPEED VISUALIZATION AND CFDs”
H. Tajima, K. Takasaki, A. Strom and R. Masuda. KYUSHU UNIVERSITY (JAPAN)
L. Goldsworthy. AUSTRALIAN MARITIM COLLEGE (AUSTRALIA)
T. Takishi. MITSUBISHI HEAVY INDUSTRIES (JAPAN)

COFFEE BREAK

17:30/18:00

SESSION D.2. EXPERIMENTAL TECHNIQUES

18:00/19:30

Chairman: T. Kamimoto. TOKAI UNIVERSITY (JAPAN)

“APPLICATION OF PIV TECHNIQUE AND USE OF FLUORESCENT TRACERS TO DIRECT MEASUREMENTS OF AIR ENTRAINMENT IN DIESEL SPRAYS”
A. Arbeau, R. Bazile and G. Charnay. INSTITUT DE MÉCANIQUE DES FLUIDES DE TOULOUSE (FRANCE)
L. Ben. CEMAGREF (FRANCE)
P. Gastaldi. RENAULT (FRANCE)

“SIMULTANEOUS MEASUREMENTS OF VELOCITY AND SIZE OF DIESEL FUEL DROPLET NEAR NOZZLE ORIFICE BY LASER 2-FOCUS VELOCIMETER WITH MICRO-SCALE PROBE VOLUME”
H. Ueki, M. Ishida, D. Sakaguchi and M. Naganuma. NAGASAKI UNIVERSITY (JAPAN)

“SPRAY STRUCTURE OF MULTI-COMPONENT FUELS ON EVAPORATING TRANSIENT DIESEL SPRAYS”
K. Myong, H. Suzuki, J. Senda and H. Fujimoto. DOSHISHA UNIVERSITY (JAPAN)

SESSION E.1**NEW COMBUSTION CONCEPTS (I)**

8:30/10:30

Chairman: J.-P. Fayolle. VOLVO POWERTRAIN - RENAULT DIVISION (FRANCE)

Keynote address:
P. PINCHON

"NEW CONCEPTS FOR DIESEL COMBUSTION"

P. Pinchon, B. Walter, B. Réveillé and M. Miche. INSTITUT FRANÇAIS DU PÉTROLE (FRANCE)

"DEVELOPMENT AND APPLICATION OF DETAILED CHEMISTRY-BASED CFD MODELS FOR DIESEL PCCI ENGINE SIMULATIONS"

S-C. Kong, A. Patel, R. D. Reitz. UNIVERSITY OF WISCONSIN-MADISON (USA)

"RATE-LIMITING PROCESSES IN LATE-INJECTION, LOW-TEMPERATURE DIESEL COMBUSTION REGIMES"

P. C. Miles, D. Choi and L. M. Pickett. SANDIA NATIONAL LABORATORIES (USA)

I. P. Singh and N. Henein. WAYNE STATE UNIVERSITY (USA)

B. A. RempelEwert, H. Yun and R. D. Reitz. UNIVERSITY OF WISCONSIN-MADISON (USA)

"INVESTIGATIONS ON METHODS TO CONTROL THE RATE OF HEAT RELEASE OF HCCI COMBUSTION IN DIESEL ENGINES BY NUMERICAL SIMULATION USING REDUCED CHEMICAL KINETICS OF N-HEPTANE WITH A MULTIDIMENSIONAL CFD CODE"

F. Maroteaux and L. Noël. UNIVERSITÉ PIERRE ET MARIE CURIE (FRANCE)

A. Ahmed and E. Briec. RENAULT (FRANCE)

COFFEE BREAK

10:30/11:00

SESSION E.2.**NEW COMBUSTION CONCEPTS (II)**

11:00/13:00

Chairman: I. Magnusson. VOLVO TECHNOLOGICAL DEV. CORP. (SWEDEN)

"NEW DEVELOPMENTS OF THE NADITM CONCEPT TO IMPROVE OPERATING RANGE, EXHAUST EMISSIONS AND NOISE"

A. Ranini, S. Potteau and B. Gatellier. INSTITUT FRANÇAIS DU PÉTROLE (FRANCE)

"A COMPUTATIONAL STUDY OF THE IMPACT OF MIXING ON HOMOGENEOUS CHARGE COMPRESSION IGNITION"

R. Jhavar and C. J. Rutland. UNIVERSITY OF WISCONSIN-MADISON (USA)

"HOMOGENEOUS CHARGE COMPRESSION IGNITION ENGINE WITH TWO-STAGE DIESEL FUEL INJECTION"

S. Kook, J. Kong and C. Bae. KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KOREA)

K. Min. SEOUL NATIONAL UNIVERSITY (KOREA)

"ENHANCEMENT OF THE PRE-MIXED COMBUSTION IN A HD DIESEL ENGINES BY ADJUSTING INJECTION CONDITIONS"

J. Benajes, A.S. Molina, J.M. Riesco and R. Novella. UNIVERSIDAD POLITÉCNICA DE VALENCIA (SPAIN)

LUNCH

13:00/15:30

SESSION F.1.**ENGINE OPTIMISATION**

15:30/17:30

Chairman: P. Marez. PSA PEUGEOT-CITROËN (FRANCE)

Keynote address:
G. WIRMARK

"THE EVOLUTION OF HEAVY DUTY ENGINES AND STRATEGIES FOR COMPLIANCE TO THE EMISSION LEGISLATION"

G. Wirmark. VOLVO (SWEDEN)

"COMPUTER-AIDED OPTIMISATION OF ENGINE CONTROL UNIT TRANSIENT MAPS"

I. Balloul and M. Lejeune. RENAULT V. I. (FRANCE)

"AN EXPERIMENTAL VALIDATION OF A GENETIC ALGORITHM COUPLED WITH A CFD CODE FOR COMBUSTION CHAMBER DESIGN"

C. Choi, R. M. McDavid, S. S. Still and C. R. Gherke. CATERPILLAR (USA)

P. K. Senecal. CONVERGENT THINKING LLC (USA)

"AN EVOLUTIONARY METHODOLOGY FOR THE DESIGN OF A D.I. COMBUSTION CHAMBER FOR DIESEL ENGINES"

A. De Risi, T. Donato, D. Laforgia, G. Aloisio, E. Blasi and S. Mocavero. UNIVERSITY OF LECCE (ITALY)

COFFEE BREAK

17:30/18:00

SESSION F.2.**NOISE CONTROL**

18:00/19:00

Chairman: A. Torregrosa. UNIVERSIDAD POLITÉCNICA DE VALENCIA (SPAIN)

"ACOUSTIC SOURCE CHARACTERISATION FOR DIESEL ENGINE EXHAUST SYSTEMS"

H. Bodén. KTH - ROYAL INSTITUTE OF TECHNOLOGY (SWEDEN)

"IDLE NOISE REDUCTION OF LIGHT, MEDIUM AND HEAVY DUTY DIESEL ENGINES"

P. Scarth. IVECO MOTORENFORSCHUNG (SWITZERLAND)

D. Ortiz. IVECO PEGASO (SPAIN)

CLOSURE ADDRESS

19:30/20:00

GALA DINNER

22:00/24:00

CONFERENCE LOCATION AND DATE

- The conference will take place in the Conference Building of the Universidad Politécnica de Valencia known as 'Paraninfo' on September 7th - 10th, 2004.

SCHEDULE

- Final paper to be submitted by:** **15th June 2004**

Final papers should be sent to the Conference Secretariat in an electronic format (Word and pdf). The Conference Organisation will do the appropriate edition of the complete Conference Proceedings manuscript, which will be published on paper as well as on a CD-Rom.

CONFERENCE SECRETARIAT

- CMT - Motores Térmicos**
UNIVERSIDAD POLITÉCNICA DE VALENCIA
CAMINO DE VERA S/N
46022 Valencia, Spain
Tel: +34 96 387 76 50
Fax: +34 96 387 76 59
e-mail: secrecon@mot.upv.es

For updated information on the organisation of the conference please visit the web page:

<http://www.cmt.upv.es>

REGISTRATION FEES

- The registration fee is 500 € for early registration and 650 € for late registration received after 10th July 2004.

The fee will include:

- Attendance to the Conference sessions
- Conference Proceedings book and CD
- Coffee breaks and lunches during the Conference
- Welcome reception and closure gala dinner
- Transfer by bus to and from Conference hotels to Conference site.

Would-be participants are encouraged to fill in the on-line registration form which may be found on the Conference website **www.cmt.upv.es** and submit it on-line or send it together with the payment form by post, fax or e-mail to the Congress Office Ultramar Express (address given below).

ACCOMMODATION

- Accommodation may be arranged with the special on-line reservation facility offered on the Conference website (**www.cmt.upv.es**) or through:

ULTRAMAR EXPRESS - CONGRESS OFFICE

Gran Vía Marqués del Turia, 49, 7^o, 3^a
46005 Valencia, Spain
Tel. +34 96 352 81 61 • Fax. +34 96 394 11 58
e-mail: ccortina@uex.es
mtortajada@es.tui.com

The Conference Organisation has reserved a limited number of rooms at a preferential rate for participants in the following hotels:

- HOTEL HOLIDAY INN VALENCIA ******
Paseo de la Alameda, 38 • 46023 Valencia
Single room: 90 €
Double room: 90 €
- HOTEL MELIÁ TRYP OCEÁNIC ******
C/ Pintor Maella, 35 • 46023 Valencia
Single room: 86,67 €
Double room: 94,16 €
- HOTEL NH CIUDAD DE VALENCIA *****
Avenida del Puerto, 214 • 46023 Valencia
Single room: 78,11 €
Double room: 87,74 €
- HOTEL RENASA *****
Avenida de Cataluña, 5 • 46010 Valencia
Single room: 61,10 €
Double room: 83,60 €
- C. M. GALILEO GALILEI**
Hall of Residence on the University Campus
Avenida de los Naranjos s/n • 46022 Valencia
Single room: 47,74 €
Double room: 73,70 €

Prices are per room and night and include breakfast and taxes. Early booking is recommended to ensure availability of a room in the hotel of your choice. Due to accommodation problems in the city of Valencia where many events and fairs take place, no room will be guaranteed after July 15th, 2004.

If you intend to bring an accompanying person, please indicate so in the registration form. The Congress Office Ultramar Express has planned a few tourist activities for accompanying persons. See the 'Excursions programme' section below.

For more information about hotels and planned social activities, consult the Conference website.



SOCIAL PROGRAMME

- A social programme for participants will be arranged including a welcome reception on Tuesday evening 7th September 2004 and a closure gala dinner at the Monastery of Santa María de El Puig (13th century) with a traditional music entertainment on Friday evening 10th September. Accompanying persons are warmly welcome to these events (gala dinner price for accompanying persons: 80 €).

In addition, the Conference Organisation will prepare a visit to the CMT-Motores Térmicos Laboratories on Tuesday afternoon 7th September and on Saturday morning 11th September for interested participants. If possible, please acknowledge your interest by sending an e-mail to the Conference Secretariat.

• City of Arts and Sciences (on Thursday 12th September)

Visit of Principe Felipe Museum of Science and Hemispheric at the heart of the beautiful and modern City of Arts and Sciences. It will be combined with a tour of the Oceanographic Park, a spectacular exhibition centre for marine life in its most varied facets and the largest in Europe.

(minimum 20 persons)

Information may be found on the Conference website:

www.cmt.upv.es

and on enquiry directly with Ultramar Express. Since a minimum number of persons is required for these excursions to take place, advance booking with the on-line facility is encouraged.

EXCURSIONS PROGRAMME

- A special tourist programme of excursions to nearby places of interest will be organised for accompanying persons. The following tours are planned:

• City of Valencia (on Wednesday 11th September)

Sightseeing along the Turia former river bed (now, the Turia gardens), Contemporary Art Museum (IVAM), Serrano Towers, Turia bridges, San Pio V Museum, Puerta del Mar, Hall of Music and City of Arts and Sciences.

The tour continues towards the old town of Valencia, past the bullring, rail station, City Hall square. In the old city centre, la Lonja building (UNESCO 1996), Central Market, Plaza Redonda, Cathedral, San Vicente Crypt, Plaza de la Virgen and Basilica de la Virgen de los Desamparados.

(minimum 20 persons)

ABOUT VALENCIA

- Valencia is a cosmopolitan city on the East Coast of Spain, with easy access to some splendid holiday resorts such as those on the Costa Blanca and Costa de Azahar, and not far from the Balearic Islands. Valencia itself is a fascinating place, which has a characteristic blend of historical tradition –with interesting examples of Middle Age and Renaissance architecture–, exciting nightlife, excellent weather and world –renowned festivals and regional cuisine. For the shopping sprees enthusiasts, there are several shopping centres within easy access of the city centre.

Valencia's beach is an ideal place to spend time sunbathing and swimming. You may also enjoy a nice walk under the palm trees shadow of the 'Paseo Marítimo' that lines the sea and taste some of the typical aperitifs in one of the numerous restaurants outside tables there. We will be happy to recommend some restaurants where you can taste the traditional 'Paella Valenciana' or one of the dozen rice dishes that Valencian people have invented.

We hope that you will enjoy your stay in this Mediterranean city.



HOW TO REACH VALENCIA

- By plane: Valencia has an international airport, Manises, located at approximately 4 kms. from the city centre. There are regular scheduled national and international flights from several European airlines. A regular bus line links the airport to the Central Bus Station of Valencia, located not far from the city centre.
- By road: The city of Valencia also offers excellent communication by road. The A-7 Mediterranean Motorway that runs north to south provides easy connection to Cataluña and France in the north and to Alicante, Murcia and Andalucía in the south. There are also good road connections to the rest of Spain, in particular the N-III dual motorway to Madrid.
- By rail: Valencia has also very good train connections. The high speed train Euromed links several times a day Barcelona to Valencia in approximately 3 hours. The journey between Madrid and Valencia by the regular high speed link Alaris takes little over 3 hours and 30 min.

ECO-ENGINES EUROPEAN NETWORK

- Two specific sessions on new combustion concepts on Friday have been organised in close link with the European Network of Excellence "Energy Conversion in Engines (ECO-Engines)" funded by the European Commission within the 6th Framework Programme. The keynote lecture for these sessions will be made by Mr. P. Pinchon from the Institut Français du Pétrole, which is the organisation responsible for the Network Coordination. Other partners of the Network will also present several of the papers included in the two sessions.

The main objective of ECO-Engines is to create a Virtual Research Centre (VRC) of excellence on advanced engine combustion modes for road transport, with special emphasis on optimised alternative and renewable fuels. This VRC should be the result of the durable integration of the related research activities carried out by major European institutions in the domain, and will include dedicated actions towards formation and dissemination. The ambition is to be recognised as a world-wide leader in research on advanced engine combustion modes. There are 24 partners in the Network, including the Universidad Politécnica de Valencia, the Conference organiser, and all are European experts active in different fields related to research on engines and alternative combustion concepts. THIESEL 2004 is to be used this year as a platform for the diffusion of the ECO-Engines objectives and results.

CONFERENCE EXHIBITION

- There will be an exhibition with a limited number of stands in the entrance hall of the conference room. Several prestigious international companies related to Diesel engine research and development have agreed to participate in the conference by exhibiting a stand. Conference participants will be encouraged to visit this exhibition on the afternoon of 7th September and during the coffee and lunch breaks.

LIST OF EXHIBITORS

CD - ADAPCO Group

Turin Office • Corso Re Umberto, 8
10 121 Torino (Italy)
Tel. +39 - 011 562 2194 • Fax +39 - 011 540 580
E-mail: info@it.cd-adapco.com
Web site: <http://www.cd-adapco.com>

FLUENT France

Immeuble Central Gare • 1 place Charles de Gaulle
78180 Montigny Le Bretonneux (France)
Tel: +33 1 30 60 98 97 • Fax: +33 1 30 64 98 43
E-mail: info@fluent.fr • Web site: <http://www.fluent.com>

HOLSET TURBOCHARGERS

St. Andrews Road • HD1 6RA Huddersfield
West Yorkshire (United Kingdom)
Tel: + 44 1484 422244 • Fax: + 44 1484 511680
E-mail: turbos@holset.co.uk • Web site: <http://www.holset.co.uk>

IAV

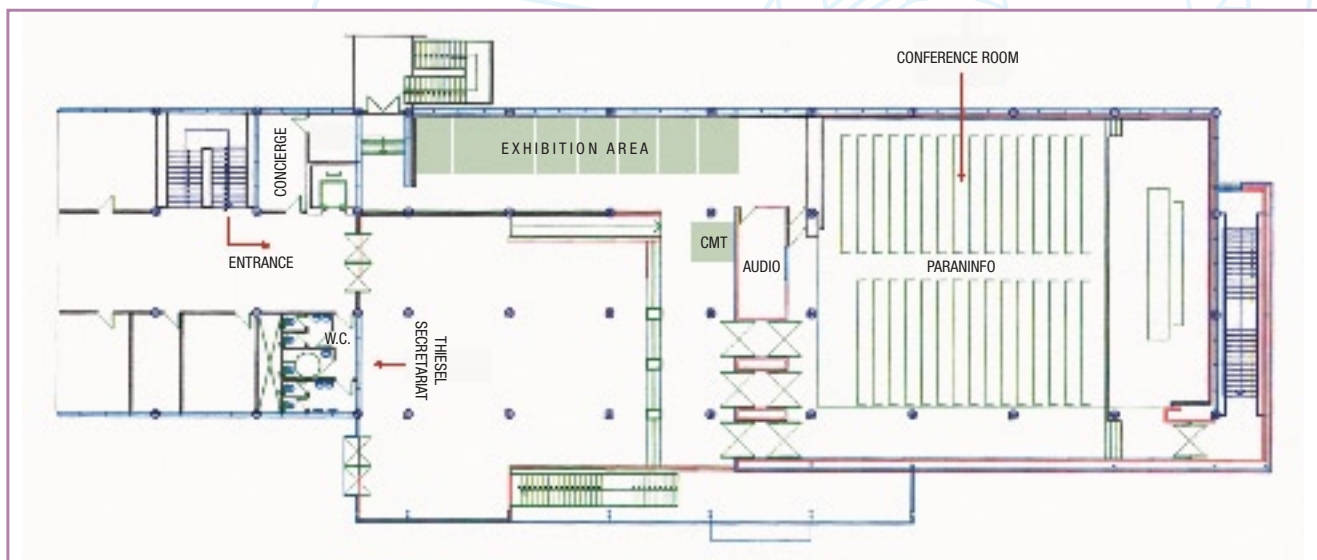
Carnotstrasse 1
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E-mail: contact@iav.de • Web site: <http://www.iav.de>

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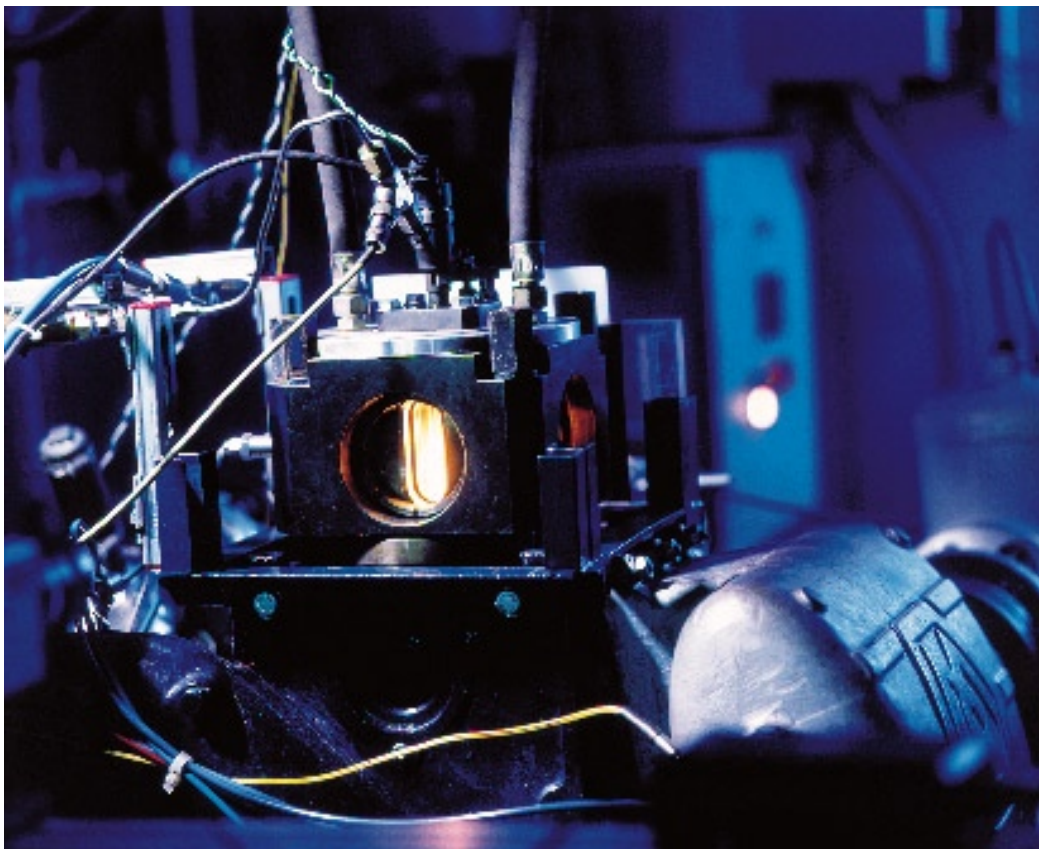
SCHENCK - PEGASUS

Landwehrstraße 55
64293 Darmstadt (Germany)
Tel: +49 61 51 32 0 • Fax: +49 61 51 32 11 00
E-mail: schenck@schenck.net
Web site : <http://www.schenk-dts.com>





September 7th - 10th, 2004



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POLITÉCNICA
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COLABORATION:



CMT-MOTORES TÉRMICOS

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For updated information on the organisation of the Conference please visit the web site:

[http:// www.cmt.upv.es](http://www.cmt.upv.es)

