

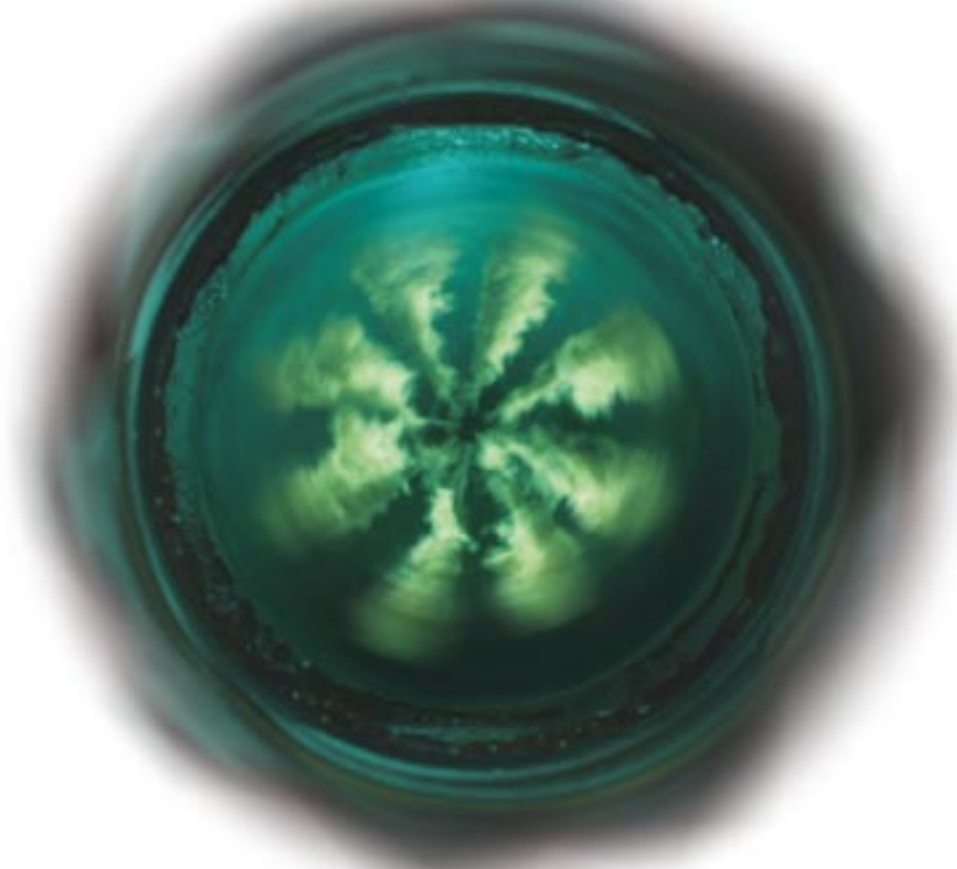
THIESEL 2008

Final Programme

Conference on:

Thermo-and fluid dynamic processes in Diesel Engines

September 9th - 12th **2008**
VALENCIA (SPAIN)





Bienvenida a THIESEL 2008

En nombre de la Universidad Politécnica de Valencia, y en el mío propio, quiero expresarle mi más sincera bienvenida a esta 5ª Conferencia THIESEL sobre procesos termofluidodinámicos en motores Diesel. Desde su primera edición en Septiembre de 2000, esta Conferencia representa un foro enriquecedor de intercambio de ideas innovadoras y avances tecnológicos en este campo, en el cual participan a partes iguales tanto empresas del mundo de la automoción como organizaciones de investigación internacionalmente prestigiosas. La Conferencia se ha convertido definitivamente en una cita inexcusable para todos aquellos que trabajan en este campo tan cambiante y puntero.

Nos enorgullece decir que nuestra Universidad cumple este año 40 años, años fructíferos durante los cuales ha establecido una apuesta clara y permanente por la investigación aplicada. Con ilusión y convencimiento, nuestros profesores e investigadores se han implicado para dar respuesta a las necesidades de la sociedad en cada momento histórico. Entre ellos, los que forman el instituto de investigación CMT-Motores Térmicos, que despunta por sus colaboraciones internacionales en el campo de la automoción.

Consideramos un verdadero honor ser una vez más los anfitriones de la Conferencia THIESEL 2008 y esperamos que el interés de los temas que aborda estimule las discusiones entre sus participantes y ello lleve a las innovaciones tan necesarias al desarrollo sostenible basado en el respeto al medio-ambiente.

Welcome to THIESEL 2008

On behalf of the Universidad Politécnica de Valencia and in my own name, I wish to express my warmest welcome to the fifth THIESEL conference on Thermo- and Fluid Dynamic Processes in Diesel Engines. Ever since its first edition, this Conference has been an enriching forum of exchange for innovative ideas and for the most up-to-date technological advances within this field, to which enterprises of the automotive sector as well as internationally prestigious research organisations participate equally. The Conference has definitely become a “must” for all people working in this ever changing high tech leading field.

We are proud to say that our University is celebrating its 40th Anniversary this year, 40 fruitful years of a clear and permanent vocation for applied research. Our professors and researchers have dedicated their enthusiasm and spirit to provide answers to constantly evolving societal needs; among them, the people who form the research institute CMT-Motores Térmicos, who has an outstanding record in international collaborations in the automotive field.

We feel highly honoured to be the hosts of the THIESEL 2008 Conference once again, and we hope that the interest of the topics presented will stimulate the discussions between its participants and that these will lead to innovation, as this is so important for a sustainable development respectful of our environment.

Prof. Juan Juliá ■

Rector de la Universidad Politécnica de Valencia

Objectives

The THIESEL Conference on 'Thermo- and Fluid Dynamic Processes in Diesel Engines' has achieved a remarkable position as a meeting point between industry, research institutions and academia involved in the Diesel automotive sector. The international attendance has grown steadily since its first edition in 2000, thus indicating that there is a real need for such a gathering. Even though considerable efforts are being devoted to the development of new solutions, based on hydrogen and fuel cell technologies, it is likely that the internal combustion engine will remain the main propulsion system for vehicles in the next 20 to 30 years and beyond. Therefore, research oriented at reducing pollutant emissions from internal combustion engines, and especially from Diesel engines, is necessary if compliance with the strict current and future regulations regarding emission levels is to be achieved. A combination of new

technology and new fuels is needed to reach the near zero emission level targets aimed at. New generation engines will have to consume less, and be significantly more efficient and silent. The development of advanced control strategies should provide the flexibility required to make the most of modern multiple injection systems, so that the combustion process may be optimised. In addition, the application of the homogeneous charge compression ignition (HCCI) concept should represent a step towards significant reduction of NOx emissions in the part load range. To further reduce emissions and fuel consumption, variable control systems for the exhaust gas recirculation (EGR) and the turbo-charging will have to be developed. Considerable effort is being put in understanding the combustion noise, so that it may be reduced especially at critical operating conditions. 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 the academic researchers become more conscious of the automotive industrial needs and if the automotive industry is willing to invest in basic research leading to long-term solutions. THIESEL 2008, the fifth edition of this two-yearly conference, aims at gathering good quality papers describing the most recent developments and latest innovations relative to thermo- and fluid dynamic processes in Diesel engines. And, just as important is its philosophy to bring together ideas from both Industry and Academia, because the success of a clean and silent Diesel engine clearly depends on the close co-operation between the automotive industry and its University partners.

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Conference overview

The conference will be held over three and a half days. On the first day, in the afternoon of Tuesday 9th 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 10th of September and will conclude on Friday the 12th of September in the afternoon. 40 papers are scheduled, including 6 keynote addresses by prestigious names of the Diesel automotive area. 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 12th of September to close the conference on a happy relaxed note.

About UPV CMT-Motores Térmicos

The **Universidad Politécnica de Valencia** is one of the three Technical Universities in Spain, and is celebrating this year its 40th Anniversary. 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 2.000. CMT-Motores Térmicos is a University Department and a University Research Institute at the same time. Founded in 1979 CMT-Motores Térmicos 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, thermal management, 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 requests.

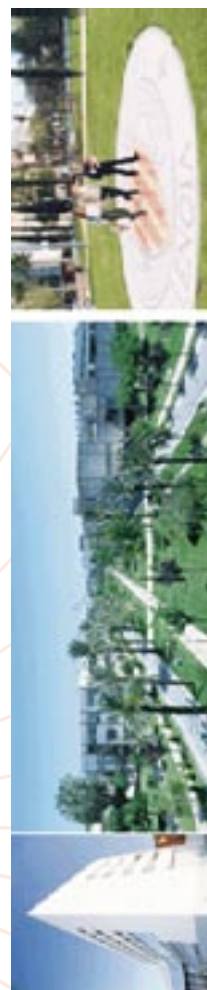
Universidad Politécnica de Valencia



- 1 Paraninfo - Conference Building
- 2 CMT - Motores Térmicos
- 3 C.M. Galileo Galilei

SESSION MATRIX

	Tuesday, September 9 th	Wednesday, September 10 th	Thursday, September 11 th	Friday, September 12 th
		CONFERENCE REGISTRATION		
7:30/8:30				
8:30/10:30		SESSION A.1. INJECTION & SPRAYS (I)	SESSION C.1. COMBUSTION (I)	SESSION E.1. AIR MANAGEMENT AND TURBOCHARGING (I)
10:30/11:00			<i>coffee break</i>	
11:00/13:00		SESSION A.2. INJECTION & SPRAYS (II)	SESSION C.2. COMBUSTION (II)	SESSION E.2. AIR MANAGEMENT AND TURBOCHARGING (II)
13:00/15:30			<i>lunch</i>	
15:30/17:30		SESSION B.1. ENGINE MODELLING (I)	SESSION D.1. EMISSIONS (I)	SESSION F.1. ENGINE OPTIMISATION (I)
17:30/18:00	CONFERENCE REGISTRATION		<i>coffee break</i>	
18:00/19:30		SESSION B.2. ENGINE MODELLING (II)	SESSION D.2. EMISSIONS (II)	SESSION F.2. ENGINE OPTIMISATION (II)
19:30/20:00	WELCOME ADDRESS			CLOSURE ADDRESS
20:00/22:00	WELCOME COCKTAIL			
21:00/24:00				GALA DINNER



CONFERENCE REGISTRATION

7:30/8:30

SESSION A.1. INJECTION & SPRAYS (I)

8:30/10:30

Chairperson: G. Coma. **RENAULT (FRANCE)**

Keynote address:

C. ARCOUMANIS

"CAVITATION STRUCTURES IN DIESEL INJECTOR NOZZLES"

C. Arcoumanis. CITY UNIVERSITY (UK)

"DEVELOPMENT OF THE NEW DELPHI DIESEL DIRECT ACTING PIEZO INJECTOR (DFI3) USING SIMULATION"

M. Winterbourn, D. Hopley, C. Soteriou and S. Zuelch. DELPHI DIESEL SYSTEMS (UK)

"EVALUATION OF INJECTION STRATEGIES FOR PASSENGER CAR DIESEL ENGINES TO MEET EURO 6 LEGISLATION LIMITS"

O. Kastner, F. Atzler, R. Rotondi, A. Weigand. CONTINENTAL AUTOMOTIVE AG (GERMANY)

"COLD START PHYSICAL PHENOMENA IN DIESEL ENGINES"

C. Vergnes, B. Barbeau, B. Jeanne, L. Thobois. PSA PEUGEOT CITROËN (FRANCE)

F. Foucher, C. Mounaim-Rousselle. INSTITUT PRISME/LME (FRANCE)

COFFEE BREAK

10:30/11:00

SESSION A.2. INJECTION & SPRAYS (II)

11:00/13:00

Chairperson **C. Soteriou. DELPHI DIESEL SYSTEMS (UK)**

"VISUALIZATION OF THE DIESEL SPRAY PATTERN AND MEASUREMENT OF ITS CHARACTERISTICS FOR DIFFERENT TYPES OF NOZZLE GEOMETRY"

M. Hennequin, D. Passerel. RENAULT (FRANCE)

J-C. Sacadura, B. Nicolas. CERTAM (FRANCE)

"COMPARISON OF CAVITATION FORMATION AND DEVELOPMENT IN DIESEL VCO NOZZLES WITH CYLINDRICAL AND CONVERGING TAPERED HOLES"

M. Gavaises, D. Papoulias, E. Giannadakis, A. Andriotis, N. Mitroglou. CITY UNIVERSITY LONDON (UK)

A. Theodorakakos. FLUID RESEARCH CO. (GREECE)

"A STUDY OF HOLE PROPERTIES IN DIESEL FUEL INJECTION NOZZLES AND ITS INFLUENCE ON SMOKE EMISSIONS"

M. Lindström. SCANIA CV (SWEDEN)

H-E. Angström. ROYAL INSTITUTE OF TECHNOLOGY (SWEDEN)

"EFFECT OF WEBER NUMBER ON DISINTEGRATION OF DROPLETS IN DENSE REGION OF DIESEL FUEL SPRAY"

H. Ueki, M. Ishida, D. Sakaguchi, O. Amida. NAGASAKI UNIVERSITY (JAPAN)

LUNCH

13:00/15:30

SESSION B.1. ENGINE MODELLING (I)

15:30/17:00

Chairperson: **M. Gavaises. CITY UNIVERSITY (UK)**

Keynote address:

G. CIPOLLA

"AUTOMOTIVE DIESEL ENGINE NEW CHALLENGES IN A GLOBAL ENVIRONMENT & MARKET PERSPECTIVE"

G. Cipolla. GENERAL MOTORS POWERTRAIN EUROPE (ITALY)

"VORTEX MOTION AND UNSTEADY TURBULENT JET PENETRATION"

N. Abani, J.B. Ghandhi, R.D. Reitz. UNIVERSITY OF WISCONSIN-MADISON (USA)

"MODELING OF DIESEL SPRAY ATOMIZATION LINKED WITH INTERNAL NOZZLE FLOW"

M. Nagaoka, R. Ueda, R. Masuda. TOYOTA CENTRAL R&D LABS. (JAPAN)

E. von Berg, R. Tatschl. AVL LIST (AUSTRIA)

COFFEE BREAK

17:00/17:30

SESSION B.2. ENGINE MODELLING (II)

17:30/19:00

Chairperson: **Ch. Krueger. DAIMLER (GERMANY)**

"MODELING OF DIESEL SPRAY COMBUSTION WITH LARGE EDDY SIMULATION USING KIVA-LES"

T. Hori, H. Tanaka, J. Senda, H. Fujimoto. DOSHISHA UNIVERSITY (JAPAN)

"SYSTEMATIC REDUCTION OF AN INTERACTIVELY COUPLED CFD-MULTI-ZONE-APPROACH TOWARDS A "STAND-ALONE" MULTI-ZONE MODEL FOR PCCI COMBUSTION"

C. Felsch, A. Vanegas, B. Kerschgens, N. Peters, K. Hoffmann, P. Drews, D. Abel. RWTH AACHEN (GERMANY). H. Barths. GENERAL MOTORS POWERTRAIN (USA)

"FUNDAMENTAL AND APPLIED STUDIES OF DETAILED CHEMISTRY BASED MODELS FOR DIESEL COMBUSTION"

G. D'Errico, T. Lucchini, G. Montenegro, A. Onorati, D. Ettore. POLITECNICO DI MILANO (ITALY)

**SESSION C.1.****COMBUSTION (I)**

8:30/10:30

Chairperson: H. Fujimoto. DOSHISHA UNIVERSITY (JAPAN)

Keynote address:
M. MUSCULUS

"IN-CYLINDER PROCESSES OF HIGH-EGR LOW-LOAD DIESEL COMBUSTION"
M. Musculus. SANDIA NATIONAL LABORATORIES (USA)

"IN-CYLINDER PIV MEASUREMENTS IN AN OPTICAL LIGHT-DUTY DIESEL AT LTC CONDITIONS"
W. Colban, I. Ekoto, P. Miles. SANDIA NATIONAL LABORATORIES (USA)
D. Kim. KOOKMIN UNIVERSITY (KOREA)

"DEVELOPMENT OF A DEDICATED DIESEL COMBUSTION SYSTEM
UTILIZING LOW-NO_x COMBUSTION MODES"
T. Nitsche, C. Conée, J. Stief, F. Wunderlich, W. Willems. FORD RESEARCH CENTER AACHEN (GERMANY)

"MIXED-MODE HCCI-DI COMBUSTION ON COMMON RAIL DIESEL ENGINES:
EXPERIMENTAL CHARACTERIZATION AND DETAILED KINETIC MODELING"
M. Canova, F. Chiara, G. Rizzoni. THE OHIO STATE UNIVERSITY (USA)
G. D'Errico, T. Lucchini, A. Onorati. POLITECNICO DI MILANO (ITALY)

COFFEE BREAK

10:30/11:00

SESSION C.2.**COMBUSTION (II)**

11:00/13:00

Chairperson: K. Mokaddem. PSA Peugeot-Citroën (FRANCE)

"DUAL-MODE ENGINE FOR EURO VI HEAVY-DUTY APPLICATIONS: PRESENTATION OF THE CONCEPT"
N. Dronniou, B. Lombard. VOLVO POWERTRAIN (FRANCE)
T. Colliou, R. Tilagone, B. Réveillé. IFP (FRANCE)

"EFFECTS OF JET-BOWL AND JET-JET INTERACTIONS ON LATE-INJECTION
LOW-TEMPERATURE HEAVY-DUTY DIESEL COMBUSTION"
C.L. Genzale, R.D. Reitz. UNIVERSITY OF WISCONSIN-MADISON (USA)
M.P.B. Musculus. SANDIA NATIONAL LABORATORIES (USA)

"TAILORED COMBUSTION SYSTEM LAYOUT BY INTERLINKING OF CAE AND EXPERIMENT"
P. Adomeit, K. Wix. RWTH AACHEN (GERMANY)
H. Busch, M. Lamping, T. Körfer, H. Rohs. FEV MOTORENTECHNIK (GERMANY)
H. Sono, M. Shibata. HONDA R&D CO. (JAPAN)

"CHHC: A NOVEL HEAVY DUTY DIESEL ENGINE COMBUSTION APPROACH"
H. Oelschlegel, G. Koenig, A. Raab. DAIMLER (GERMANY)

LUNCH

13:00/15:30

SESSION D.1.**EMISSIONS (I)**

15:30/17:00

Chairperson: B. Vaglieco. ISTITUTO MOTORI (ITALY)

Keynote address:
Z.G. LIU

"OPPORTUNITIES AND CHALLENGES IN AFTERTREATMENT RESEARCH"
Z.G. Liu. CUMMINS EMISSION SOLUTIONS (USA)

"PREDICTIONS AND MEASUREMENTS OF TRANSIENT NO EMISSIONS FOR
A TWO-STAGE TURBOCHARGED HD DIESEL ENGINE WITH EGR"
A. Westlund, N. Winkler, F. Diotallevi, H.E. Angström.
KTH CICERO - ROYAL INSTITUTE OF TECHNOLOGY (SWEDEN)

"PARTICLE SIZE DISTRIBUTION IN DI DIESEL ENGINE OPERATING
WITH CONVENTIONAL AND ADVANCED STRATEGIES"
E. Mancaruso, B.M. Vaglieco. ISTITUTO MOTORI - CNR (ITALY). S. Di Iorio. UNIVERSITY OF SALERNO (ITALY)

COFFEE BREAK

17:00/17:30

SESSION D.2.**EMISSIONS (II)**

17:30/19:00

Chairperson: A. Pfeifer. CONTINENTAL AUTOMOTIVE (GERMANY)

"ASSESSMENT OF JP-8 AND DIESEL IN DIRECT INJECTION DIESEL ENGINE"
J. Lee, J. Park, J. Jeon, Ch. Bae. KAIST (KOREA)
B. Kim. DOOSAN INFRACORE CO. (KOREA)
I. Hwang. AGENCY FOR DEFENSE DEVELOPMENT (KOREA)

"NEWLY DEVELOPED CATALYTIC HONEYCOMB SUBSTRATE
FOR REDUCING FUTURE DIESEL EMISSIONS"
T. Ido, M. Kunieda, K. Yoshimura, S. Goto, K. Ohno. IBIDEN (JAPAN)

"REAL TIME MODELLING OF AIR SYSTEM IN A 4 CYLINDER DIESEL COMBUSTION ENGINE IN HIL TEST
BENCH FOR THE VALIDATION OF EU5 PERSONAL CAR WITH DIESEL PARTICULATE FILTER"
J-B. Millet. B2i AUTOMOTIVE (FRANCE)
F. Aubertin. ROBERT BOSCH FRANCE (FRANCE)
M. Lehr. ROBERT BOSCH GERMANY (GERMANY)

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

8:30/10:30

Chairperson: Y. Aoyagi. NEW A.C.E. INSTITUTE (JAPAN)

Keynote address:
O. SALVAT"DIESEL ENGINE FOR PASSENGER CARS: NEW CHALLENGES"
O. Salvat. PSA-PEUGEOT CITROËN (FRANCE)"EXPERIMENTAL STUDY OF THE COMPRESSOR SURGE OF A DIESEL HIGH PERFORMANCE ENGINE"
M. Boudfar. ADEME (FRANCE). A. Ammar, S. Guilain, H. Lahjaily. RENAULT SAS (FRANCE).
M. Toussaint, G. Descombes. CNAM (FRANCE)"LOCAL AND GLOBAL MEASURING IN SMALL TURBOCHARGER CENTRIFUGAL COMPRESSOR
USING LASER DOPPLER ANEMOMETRY AND PARTICLE IMAGE VELOCIMETRY"
A. Yammine, P. Chesse, D. Chalet, H. Mohtar. ECOLE CENTRALE DE NANTES (FRANCE)
F. Vidal. PSA PEUGEOT CITROËN (FRANCE)"CFD OPTIMIZATION OF VT2 TURBINE VALVE FOR SERIAL SEQUENTIAL
TURBO TO REDUCE THE PRESSURE LOSS"
J. Yin, P. Yuan, P. Renaud. HONEYWELL TURBO TECHNOLOGIES (UK)**COFFEE BREAK**

10:30/11:00

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

11:00/13:00

Chairperson: T. Kamimoto. TOKAI UNIVERSITY (JAPAN)

"EFFECT OF LOW PRESSURE EGR ON GAS EXCHANGE PROCESSES
AND TURBOCHARGING OF A HSDI ENGINE"
S. Moroz, G. Bourgoïn. VALÉO ENGINE COOLING (FRANCE)
J.M. Luján, B. Pla. UNIVERSIDAD POLITÉCNICA DE VALENCIA (SPAIN)"ADVANCED AIR AND EGR TECHNOLOGY FOR ULTRA LOW DIESEL PASSENGER CAR EMISSIONS"
B. Cooper, N. Winder, A. Truscott, M. Beasley, I. Penny. RICARDO UK (UK)"INTAKE AIR MANAGEMENT WITH AIR PULSE VALVE - NEW DEGREES OF FREEDOM FOR DI-DIESEL-ENGINES"
A. Broda, P. Eilts. TECHNISCHE UNIVERSITÄT BRAUNSCHWEIG (GERMANY)
A. Elsäßer, P. Genieser. MAHLE INTERNATIONAL (GERMANY)"IMPROVEMENTS FOR VOLUMETRIC EFFICIENCY AND EMISSIONS USING
DIGITAL HYDRAULIC VVA IN A HIGH BOOSTING DIESEL ENGINE"
T. Yamaguchi, Y. Aoyagi, H. Osada. NEW ACE INSTITUTE CO. (JAPAN)
E. Sturman, E. Drummond. STURMAN INDUSTRIES (USA)**LUNCH**

13:00/15:30

SESSION F.1.**ENGINE OPTIMISATION (I)**

15:30/17:30

Chairperson: Ch. Bollig. FEV Motorentechnik (GERMANY)

Keynote address:
K. NAKAKITA"RECENT RESEARCHES ON DIESEL COMBUSTION SYSTEMS"
K. Nakakita. TOYOTA CENTRAL RESEARCH (JAPAN)"OPTIMISATION OF A LOW NOx EMISSION HCCI DIESEL PROTOTYPE ENGINE"
S. Magand, E. Watel, O. Grondin, D. Soleri, M. Castagné. IFP (FRANCE)
S. Devismes. FAURECIA EXHAUST SYSTEMS (FRANCE)
S. Moroz. VALÉO ENGINE COOLING (FRANCE)"GLOBAL AND LOCAL OPTIMIZATION OF TRANSIENT DIESEL ENGINE
OPERATIONS BY COMBINED ONE AND THREE DIMENSIONAL SIMULATIONS"
J. Macek, O. Vitek, M. Polásek, M. Valásek, Z. Sika. CZECH TECHNICAL UNIVERSITY IN
PRAGUE (CZECH REPUBLIC). S. Srinivasan. UNIVERSITY OF WISCONSIN-MADISON (USA)
F. X. Tanner. MICHIGAN TECHNOLOGICAL UNIVERSITY (USA)**COFFEE BREAK**

17:00/17:30

SESSION F.2.**ENGINE OPTIMISATION (II)**

17:30/18:30

Chairperson: B. Lombard. VOLVO POWERTRAIN FRANCE (FRANCE)

"STUDY OF COMPRESSION RATIO INFLUENCE ON THE PERFORMANCE OF AN ADVANCED
AUTOMOTIVE DIESEL ENGINE OPERATING IN CONVENTIONAL AND PCCI COMBUSTION MODE"
C. Beatrice, C. Guido, N. Del Giacomo, C. Bertoli. ISTITUTO MOTORI - CNR (ITALY)"OPTIMIZATION OF INTAKE AND EXHAUST VALVE TIMING AND LIFT CURVES
APPLIED MULTI-OBJECTIVE OPTIMIZATION APPROACH"
A. Fukagawa, M. Endo, S. Osafune, K. Tanaka. MITSUBISHI HEAVY INDUSTRIES (JAPAN)**CLOSURE ADDRESS**

18:30/19:00

GALA DINNER

21:00/24:00

POSTERS SESSION THIESEL 2008

POSTER SESSION

The following poster session is planned to enable the presentation of interesting work that could not be included in the Conference presentations. Abstracts of these works will be included in the Conference Proceedings. Conference participants will be invited to visit the poster session and discuss the issues with their authors.

LIST OF POSTERS

DIESEL ENGINE IN-CYLINDER CALCULATIONS WITH OPENFOAM

E. Adorean, G.-A. Radu. TRANSYLVANIA UNIVERSITY OF BRASOV (ROMANIA)

THE INFLUENCE OF INJECTOR NEEDLE DISPLACEMENT IN A COMMON RAIL SYSTEM ON FUEL SPRAYING

M. Idzior, J. Merksiz, P. Lijewski, P. Fuc, W. Karpiuk, POZNAN UNIVERSITY OF TECHNOLOGY (POLAND)

SIMULATION OF UREA/WATER INJECTION AND EVAPORATION IN AUTOMOTIVE SCR SYSTEMS USING AVL FIRE

D. Suzzi. THE VIRTUAL VEHICLE COMPETENCE CENTER (AUSTRIA)

B. Breitschädel, R. Tatschl. AVL LIST (AUSTRIA)

G. Brenn. GRAZ UNIVERSITY OF TECHNOLOGY (AUSTRIA)

ANALYSIS OF SMOKELESS SPRAY COMBUSTION IN A HEAVY-DUTY DIESEL ENGINE BY COMBINED SIMULTANEOUS OPTICAL DIAGNOSTICS

C. Chartier, U. Aronsson, Ö. Andersson, R. Egnell, R. Collin, H. Seyfried, M. Richter and M. Aldén. LUND UNIVERSITY (SWEDEN)

CONFERENCE EXHIBITION

There will be an exhibition with a limited number of stands in the entrance hall of the conference room. A few prestigious international companies related to the Diesel engine research and development, have agreed to participate to the conference by exhibiting a stand.

Conference participants will be encouraged to visit this exhibition in the afternoon of 9th September and throughout the conference, during the coffee and lunch breaks.

AIR LIQUIDE

Moroder, 1. Pol. Ind. Moncada III. 46113 Valencia (Spain)

Tel. +34 96 139 91 00 / 609876059

Fax +34 96 139 9101

e-mail: Mariaangeles.jaime@airliquide.com

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Tel. +34 91 502 95 29

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Web site: <http://www.airliquide.com>

HORIBA AUTOMOTIVE TEST SYSTEMS GMBH

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Web site: <http://www.ats.horiba.com>

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Tel. +39 011 562 2194

Fax +39 011 540 580

e-mail: info@it.cd-adapco.com

Web site: <http://www.cd-adapco.com>

PRACTICAL INFORMATION

■ CONFERENCE LOCATION AND DATE

The conference will take place in the Conference Building of the Universidad Politécnica de Valencia known as 'Paraninfo' on September 9th - 12th, 2008.

■ SCHEDULE

Final paper to be submitted by: 15th July 2008

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.

■ 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>

■ SOCIAL PROGRAMME

A social programme for participants will be arranged including a welcome reception on Tuesday evening 9th September 2008 and a closure gala dinner at a local place of interest on Friday evening 12th September. Accompanying persons are warmly welcome to these events (gala dinner price for accompanying persons: 90 €).

For interested participants, the Conference Organisation will prepare a visit to the CMT-Motores Térmicos Laboratories on Tuesday afternoon 9th September and at various other times during the Conference. If possible, please acknowledge your interest by sending an e-mail to the Conference Secretariat.

■ REGISTRATION FEES

The registration fee is 600 € for early registration and 750 € for late registration received after 11th July 2008.

The fee will include:

- Attendance to the Conference sessions
- Conference Proceedings
- 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, 6^o, 13-14
46005 Valencia, Spain
Tel. +34 96 352 81 61
Fax. +34 96 394 11 58
e-mail: ccortina@uex.es ; magarciaconde@uex.es

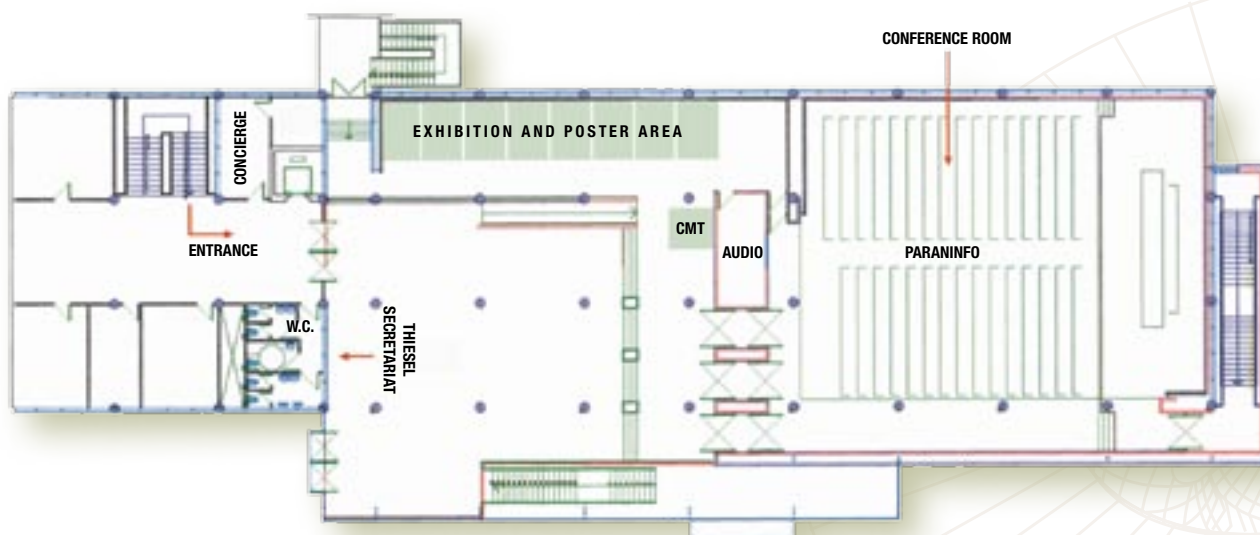
The Conference Organisation has reserved a limited number of rooms at a preferential rate for participants in the following hotels:

■ **HOTEL HOLIDAY INN VALENCIA ******

Paseo de la Alameda, 38, 46023 Valencia
Single room: 108 €
Double room: 119 €

■ **HOTEL BEATRIZ REY DON JAIME ******

Avda. Baleares, 2, 46023 Valencia
Single room: 108 €
Double room: 108 €





■ HOTEL NH CIUDAD DE VALENCIA ***

Avenida del Puerto, 214, 46023 Valencia
Single room: 90 €
Double room: 101 €

■ HOTEL RENASA ***

Avenida de Cataluña, 5, 46010 Valencia
Single room: 69 €
Double room: 93 €

■ C. M. GALILEO GALILEI

Hall of Residence on the University Campus
Avenida de los Naranjos s/n, 46022 Valencia
Single room: 51 €
Double room: 79 €

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 28th, 2008.

If you intend to bring an accompanying person, please indicate so in the registration form. This would help us plan a few tourist activities for accompanying persons.

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

■ 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 train station of Valencia, located in the heart of the city. In addition, the new metro line links the airport to all major city points in Valencia.
- 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 Catalonia 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 A-3 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.

■ ABOUT VALENCIA

Valencia is a cosmopolitan and lively city on the East Coast of Spain, within 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, with a characteristic blend of historical tradition—with interesting examples of Middle Age and Renaissance architecture—and modern architecture—the City of Arts and Science. It has a varied cultural offer (Oceanographic museum, museum of Modern Arts,...) and an exciting nightlife, excellent weather and world—renowned festivals and regional cuisine. Taste some of the typical 'tapas' in one of the numerous restaurants outside tables and the traditional 'Paella Valenciana' or one of the dozen rice dishes that Valencian people have invented.

Valencia's beach is an ideal place to spend time sunbathing and swimming. You may also enjoy a nice walk in the shadow of the palm trees of the 'Paseo Marítimo' that lines the sea, or along the new harbour, built for the 32nd America's Cup, and further improved to respond to the high technical demands made by the new Formula 1 urban circuit of the world championship.

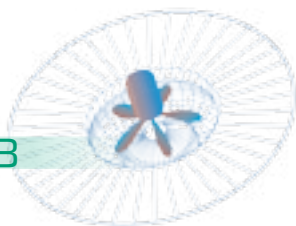
We hope that you will enjoy your stay in this Mediterranean city.



How to reach Valencia



THIESEL 2008



Conference on:

Thermo-and fluid dynamic processes in Diesel Engines

September 9th - 12th 2008
VALENCIA (SPAIN)



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