



16th - NEWSLETTER MOTORSPORT EXPOTECH 8th of October 2009

<http://www.motorsportexpotech.com/>

*Iscriviti all'unica Community professionale per
incontrarsi e confrontarsi sul Motorsport*

UP-DATED LIST OF EXHIBITORS

The list of exhibitors is constantly updated and published on the home-page of the official site of the exhibition at www.motorsportexpotech.it

CONFERENCES PROGRAMME UP-DATED

Wednesday, 14th October

HALL 1

HIGH-PERFORMANCE ENGINES AND CARS: A CHALLENGE FOR RESEARCH AND INNOVATION

In collaboration with Modena and Reggio Emilia University, Faculty of Mechanical Engineering of Modena - Coordinator: Prof. Giuseppe Cantore

h. 9.30 am – 1.30 pm

h. 9 am Registration of participants

Design of engines with high specific functional threshold power in FTP – **Angelo Rosetti**, Fiat Power Train Technologies

Turbocharging and Ferrari Engines – Materazzi, Ferrari Auto

Study of high performance engines through thermo-structural simulation – **Marco Mantovani, Gianluca Pivetti**, Ferrari Auto

Modelling of the structural performance of engine components for sports motorbikes – **Gianluca Calli, Gianluca Vignaroli**, Ducati Corse

Optimisation with a view to reducing the chassis weight of sport cars – **Massimo Pettazzoni**, Ferrari Auto

h. 11.20– 11.40 am Coffee Break

High-performance motorbike chassis design at Ducati – **Francesco Rigo, Simone Di Piazza**, Ducati Motori

Aprilia RSV4 Factory/Superbike: peculiarities of the project/development of the high-performance narrow V engine – **Claudio Lombardi, Romano Albesiano**, Aprilia

2-stroke competition engine machined from the solid – **Giampiero Testoni**, CRP Racing

Effect of heat treatment on the mechanical properties of Al-Si-Mg foundry alloys - **B. Casadei, L. Ceschini, Alessandro Morri, Andrea Morri**, Smetec Department University of Bologna – **Gianluca Pivetti**, Ferrari Auto

Correlations between the microstructure and the mechanical properties in castings for Al-Si-Mg alloy engine components - **L. Ceschini, Alessandro Morri, Andrea Morri**, Department Smetec University of Bologna – **S. Messieri**, Ducati Corse – **Gianluca Pivetti**, Ferrari Auto

Simultaneous translation

HALL 1

RACING FUELS AND LUBRICANTS

Cured by AGIP - Coordinator: **Vittorio Massimo Clarke**

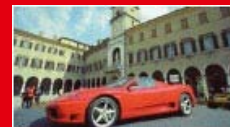
h. 3 - 5 pm

h. 2.30 pm: Registration of participants

The topic of fuels and lubricants for standard and high-performances engines will be discussed. Differences, features and modes of use will be analysed. Environmental impact will also be covered.

Speakers include Ing. **Carlo Gommellini** and Dr. **Luca Baldini** of AGIP

Hospitality in Modena



Evento collaterale



MIA Member



HALL 2

MAGNESIUM AND MOTORSPORT

In collaboration with SINERGITEC CONSORTIUM - Technological Synergies

h. 10 am – 1 pm

h. 9.30 am: Registration of participants

Magnesium and its alloys: a material for the XXI century engineering industry - **Gualtiero Valeri**, Valeri Consulenza Industriale

Thixomolding: state of the art and future prospects - **Maurizio Nordio**, Consorzio Sinergitec

Magnesium in safety components ... - **Luca Meneghetti**, Seido De

MIM - Metal Injection Molding ... a new era for powders? - **Matteo Perina**, Mimest Spa

Special Magnesium alloys... a new frontier - **Gualtiero Valeri**, Valeri Consulenza Industriale
Simultaneous translation

HALL 2

RESEARCH OUTLINES AT THE INTERMECH REGIONAL LABORATORY INTO ADVANCED ENGINEERING AND THE AUTOMOTIVE SECTOR

In collaboration with the University of Modena and Reggio Emilia, Faculty of Engineering
Modena Coordinator: Prof. Angelo Oreste Andrisano

h. 2.30 – 6 pm

h. 2 pm: Registration of participants

Presentation of the INTERMECH Laboratory – Prof. **Angelo Oreste Andrisano**, Lab. Simech
Measurement and analysis of the motor-valve in high performance motor-bike and car engines – **Alessandro Rivola**, **Giorgio Dalpiaz**, **Gianluca D'Elia**, Lab. LAV

Virtual prototyping of a robot-controlled bonding line on a car chassis – Prof. **A. O. Andrisano**, **Francesco Leali**, **Marcello Pellicciari**, Lab. Simech

Simulation of hydraulic components for mobile applications – **Massimo Milani**, Lab. Mectron
The MECTRON car simulator for the study and design of automotive components – **Mauro Dell'Amico**, Lab. Mectron

Design criteria for low-noise gear transmissions – Prof. **A. O. Andrisano**, **Prof. Pellicano**, Lab. Simech

Problems relating to maintenance management of mechatronic systems – **Bianca Rimini**, Lab. Mectron

Characterisation of porous materials and SEA modelling of soundproofing systems in the automotive industry – **Francesco Pompoli**, **Paolo Bonfiglio**, Lab. LAV, MateriAcusticA srl - **Maurizio Tarello**, **Massimiliano Tiengo**, Adler Evo srl, Lab. LAV

Surface coatings to improve the performance of ferrous materials – **Sergio Valeri**, **Antonio Ballestrazzi**, **Luca Marzani**, Lab. Super&man

Surface texturing of mechanical components for friction and wear control – **Enrico Gualtieri**, **Alberto Rota**, **Sergio Valeri**, Lab. Super&man

Simultaneous translation

Thursday, 15th October

HALL 1

Materials, surface treatments/finishing - coatings in the automotive and high performance sector

In collaboration with Modena and Reggio Emilia University - Faculty of Materials Engineering and the Environment, with the support of A.I.M. and A.I.F.M. - Coordinators: **Prof. Tiziano Manfredini** and **Dott.ssa Flavia Gili**

h. 9.30 am - 1 pm / 2,30 - 6 pm

h. 9 am: Registration of participants

Innovative coatings for cylinder liner surfaces in high performance engines materials, processing, surface characterization and field test results – Prof. **R. Gadow**, University of Stuttgart

Innovative Materials and Surface Treatments for Premium Cars – **Gunter H. Dienzer**, AUDI

PVD-CVD coating and surface engineering techniques applied to racing and high-performance components – **C. Carini**, **A. Farinotti**, Lafer Rivestimenti PVD-CVD Spa

Engineering applications of mechatronic materials – Department of Science and Engineering Methods, University of Modena and Reggio Emilia

h. 11.20 – 11.40 am Coffee Break

Shot Peening in high performance components - **Michele Bandini**, Peen Service
Metal matrix composite materials for hard-wearing applications in the automotive sector -
Paula Cojocar, **Luca Magagnin**, Milan Polytechnic University, "G.Natta" Department of
Chemistry, Materials and Chemical Engineering
Matching materials and technologies in the construction of a F1 racing car – **Livia Cevolini**,
CRP Technology

h. 1 – 2,30 pm Lunch

AM60B magnesium alloy anodic oxidation in electrolytic bath containing titania nanoparticles -
A. Da Forno, Liu Ke, Milan Polytechnic University, "G.Natta" Department of Chemistry,
Materials and Chemical Engineering - **M. Bestetti**, Italian Metallurgy Association

High Technologies for new performances of Metals: Hot Isostatic Pressing (HIP) for Aluminum
alloys and Kolsterising for Stainless Steels – **Vittorio Bordiga**, Bodycote
Nano-crystalline galvanic structural coatings to improve the performance of metal and polymer
materials – **Nicola Belli**, MaTech – PST Galileo
Comparison between the residual tensions induced by super-finishing, vibro-finishing and
keramo-finishing cycles – **G. Paolo Marconi**, Rosler Italiana srl
Ucif and associations: commitment, tenacity and passion to stay competitive – **Alessandro
Maggioni**, UCIF
Simultaneous translation

HALL 2

Engine, driveline and vehicle: the contribution of Electronics

In collaboration with Bologna University - DIEM – Coordinator: Prof. **Davide Moro**

9.30 am - 1 pm

h. 9 am : Registration of participants

Individual Cylinder Combustion Control based on real-time processing of Ion Current Signal –
Luca Poggio, Ferrari Automobili – **Nicolo' Cavina**, University of Bologna DIEM
Non Contact Torque and Force Sensing in Motorsport Applications – **L. May**, **J. Gie ibl**,
NCTEngineering GmbH
HW and SW architecture in MultiAir engine management system - **Gabriele Serra**, **Stefano
Sgatti**, Magneti Marelli PowerTrain
Methodologies for the development of "real-time" models for the simulation of automotive
turbochargers – **A. Gambarotta**, **G. Lucchetti**, **M. Taburri**, **I. Vaja**, University of Parma
A statistical approach to Spark advance mapping - Davide Bartoccini, Ducati – **Enrico Corti**,
Alma Automotive

h. 11.20 – 11.40 am Coffee Break

Engine development in Motorsports. A process between handicraft work and scientific
challenge - M.
Chiodi, M. Bargende, FKFS and IVK University of Stuttgart - **D. Wichelhaus**, Volkswagen
Motorsport
Road technology for motorsport: Cylinder pressure based control? On Board Diagnostics? P.
Fussey, **Filippo Zanetti**, **Ricardo**
Application in X-by-Wire Technology: MECTRON Steer-by-Wire - **A. Bertacchini**, Intermech,
Lab. Mectron
Calculation and Optimization of a V8 Crankshaft of a Racing Engine – **C. Cevik**, VKA, RWTH
Aachen University – **M.Rebbert**, FEV, Aachen
Simultaneous translation

HALL 2

AERODYNAMICS AT MOTORSPORT EXPOTECH

Round table, in collaboration with Assomotoracing - Coordinator: Ing. **Marco Giachi**

h. 4 – 6 pm

h. 3.30 pm: Registration of participants

Discussion will highlight "downforce" not only with specialist designers but also with track
engineers who exploit it to "set" vehicles and, lastly, with the drivers who "have to cope with it".
Round Table participants:
Dialma Zinelli – Dallara
Lucia Sclafani – Cd-adapco

Giovanni Lombardi – University of Pisa
Thomas Biagi, Gianmaria Gabbiani – drivers
Joseph Katz – University of San Diego

HALL 3

The use of structural adhesives and locking systems in engineering design

Cured by CRIT

h. 2.30 – 6 pm

h. 2: Registration of participants

h. 2.30: Introduction - CRIT

h. 2.40: Structural adhesives and locking products: a resource for motorsport , Dr. **Piero Mauri**, HENKEL

h. 3.20: Remarks on principles and methods for design of bonded joints and tools and methods for assisted design, Prof. **Alessandro Pirondi**, SPRInT - UNIPR Group

h. 4: Bonding techniques and technologies , HENKEL

h. 4.30: Successful cases and debate

h. 5 : End of session

COMPOSITES WORKSHOPS PROGRAMME

Wednesday 14th October 2009

INNOVATIVE MANUFACTURING TECHNOLOGIES AND PROCESSES IN THE MARINE INDUSTRY

In collaboration with OCTIMA - Chairman: Ing. **Giuseppe Coccia**

H. 9.30 am -1 pm

h. 9 Participants registration

h. 9.30 Manufacturing processes and technologies in the fiberglass industry – **Giuseppe Coccia**, 3F TECHNOLOGIES

h. 9.50 Recycling technologies for thermoset composite materials – **Cosimo Carfagna**, ICTP-CNR

h. 10.10 A working experience at Cantieri di Baia – Infusion of the Baia 50' boat – **Laura Fabi**, RESINTEX

h. 10.30 Racing Yachts advanced composite construction – **Sebastiano Morassutti**, TRIMARINE

h. 10.50 Coffee Break

h. 11.10 CE Marking: obligation and opportunity– **Antonello Venticinquè**, ANCCP

h. 11.30 Sailing with lighter boats. Pantec, a new family of structural, ecological and light panels – **Gigi Creonti**, STRUCTURA

h. 11.50 Polyester, vinylester or epoxy? A structural engineer's comparison of the most widely used resins systems in the marine business – **Paolo Dassi**, GURIT – SP SYSTEMS

h. 12.10 The enforcement of ATEX directives in the shipyards air filtration issues – **Andrea Doardo**, ICAM

h. 12.30 Dosing equipments integrated on manufacturing and paint processes of composite materials - **Alessandro Soba**, VERIND

h. 12.50 Discussion and end of works

Simultaneous translation

INNOVATIVE MANUFACTURING TECHNOLOGIES AND PROCESSES IN THE AEROSPACE INDUSTRY

In collaboration with OCTIMA – Chairman: Ing. **Orazio Manni**

H. 2 – 6 pm

h. 1.30 pm Participants registration

h. 2: 3D digital model validation and revision comparison for the aerospace industry – **Luca Cariglia**, KUBOTEK EUROPE

h. 2.20 An out look for the Italian Aerospace Industry: the role played by the Distretto Aerospaziale Pugliese – **Orazio Manni**, CETMA

h. 2. 40 The use of CAE in the design of composite structures: benefits, problems and potentiality - **Laura Ferrero**, AMET

h. 3 Structural composites with enhanced multifunctional properties by in corporation of Carbon Nano Tubes (CNT) - **Luca Mezzo**, NANO-CYL

h. 3. 20 Coffee break

h. 3.40 The way from design to the composite part for aviation industry – **Holger Giese**, SIKA

h.4 Topological optimization of composite layers lay-up for aeronautical applications – **Luca**

Fattore, EXEMPLAR

- h. 4.20 Autoclave control system for production of aeronautical structural parts – **Oscar Cacciamatta, TERRUZZI FERCALX**
 - h. 4.40 SMA hybrid composites (Shape Memory Alloys) for structural applications in the aerospace sector – **Orazio Manni, CETMA**
 - h. 5. Recycling composite materials, end of service tooling wastes based on carbon fibres – **Stefano Corianò, Karborek-Enea**
 - h. 5.20 Discussion and end of works
- Simultaneous translation

Thursday 15th October 2009

INNOVATIVE MANUFACTURING TECHNOLOGIES AND PROCESSES IN THE AUTOMOTIVE INDUSTRY

In collaboration with OCTIMA

H. 9 am – 1 pm

h. 9 Participants registration

h. 9.20 Crash simulation of full-scale models with composite parts: the description of the material behaviour – **Laura Ferrero, AMET**

h. 9.40 Integrated manufacturing process of profiled parts for lamination – **Fausto Silva, LECTRA ITALIA**

h. 10 Skintech the new best high tech thermoplast composite laminate for competitive structural automotive components - **Gigi Creonti, STRUCTURA**

h. 10.20 The Italian most efficient vehicle: the prototype build by Politecnico di Milano students for the Shell Eco Marathon. Design and manufacture of a highly efficient vehicle with a monocoque CFRP chassis – **Gianmarco Galmarini, POLITECNICO DI MILANO**

h. 10.40 "One Shot" System for mould – **Giuseppe Silvestri, LEDA**

h. 11 Coffee Break

h. 11.20 Flow medium and spacer for moulding processes – **Ronald Tukker, COLBOND and HARPO**

h. 11.40 DORMER/TOOLS Carbide & PCD, for processes of MILLING and DRILLING on Composite materials CFRP's with carbon fibres for automotive industry – **Nereo Santin, DORMER ITALIA**

h. 12 Thermoplastic composites and related conversion technologies in the automotive sector - **Orazio Manni, CETMA**

h. 12.20 Topological optimization of composite layers lay-up for automotive applications – **Mauro Parodi, EXEMPLAR**

h. 12.40 Recycling composite materials, end of service tooling wastes based on carbon fibres – **Stefano Corianò, Karborek – Enea**

h. 1 pm Discussion and end of works

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