





# **CCEAS 2015**

SCHOOL OF ENGINEERING - Università degli Studi di Pisa - Largo L.Lazzarino 1 – Pisa (Italy)

# **GENERAL INFORMATION**

### Foreword:

The conference is intended to be a forum of international level for information exchange, discussion, networking among players in these technologies. It is addressed to manufacturers, suppliers of components and systems, academia, public entities, decision makers engineers and scientists.

The Conference will assess the status and focus on the future of the Automotive industry, covering the following main areas:

✓ **INSIDE** the Vehicle: Embedded and control systems and infotainment

✓ **OUTSIDE** the Vehicle: A connected world

**Conference Venue:** 

School of Engineering - Università degli Studi di Pisa - Largo Lucio Lazzarino 1 – Pisa (Italy) Thursday 22 October

✓ 09.00 – 13.00 Opening Ceremony, First and Second Session "INSIDE the Vehicle"

✓ 14.00 – 17.00 Third Session "INSIDE the Vehicle" and First Session "OUTSIDE the Vehicle"

✓ After the closure of the Session, Conference Dinner and Social Event

#### Friday 23 October

✓ 09.00 – 13.00 Second and Third Session "OUTSIDE the Vehicle", Conference Closing

✓ Commemoration of Prof. Pierangelo Terreni and Proclamation of the PhD Award in memoriam

### **Registration & Cancellation Policy:**

You can register via email by compiling the attached Registration Form and sending it to <u>movet@pont-tech.it</u> or by compiling the on-line form at <u>www.pont-tech.it /cceas2015</u>

Refunds will be given to cancellations received in writing prior to 12 October 2015.

No refunds will be given after this deadline. Replacement delegates are welcome at any time. **Payment:** 

✓ by bank transfer to Pont-Tech - Banca di Pisa e Fornacette

- IBAN: IT20B0856271131000010725463 Swift code/BIC: BCCFIT33
- ✓ by cash at the reception desk

### **Other Information :**

#### **On-line proceedings**

All the contributions accepted and presented at the Conference will be available to view on-line. Their access will be limited to the participants, by using a password that will be provided by email a few days after the event.

#### Accommodation

For organizational reasons, we would suggest to Delegates to book their accommodation in Pisa.

#### Language & Presentations

Presentations will be written and presented in English.







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## **CONFERENCE PROGRAM**

### Thursday 22 October

#### WELCOME ADDRESS & INTRODUCTION (09.00 – 09.30)

#### INSIDE THE VEHICLE: Embedded and Control Systems and Infotainment

# Session In.1: Innovative electronics and mechatronics automotive components (09.30 – 10.30)

✓ ams AG. ♦ P. D'Abramo ♦ <u>Sensor solutions for smarter, safer</u>

and more eco-friendly vehicles - trends and challenges

✓ Magna ♦ M. Marlia ♦ <u>Smart Latch: Trends and Challenges</u>

✓ **Pierburg** ♦ A. Buccheri, R. Squarcini, A. Malvasi ♦ <u>EOP</u>

(Electrical Oil Pump): a Mechatronic Device for CO2 Reduction

#### **COFFEE BREAK**

# Session In.2: Model based design of embedded systems for vehicles (11.00 – 13.00)

 ✓ Magneti Marelli ◆ S. Armeni, W. Nesci ◆ <u>Vehicle Dynamic</u> <u>Supervisor, a MBD approach on IMU Management - A use case on</u> <u>Inertial Measurement Unit Management for development of</u> <u>Virtual Sensors</u>

✓ Pitom ◆ R. Mati ◆ From the early stage to the future of transportation

✓ Pure Power Control ♦ A. Balluchi ♦ Energy management system for off highway vehicles

✓ Scuola Superiore Sant'Anna ♦ M. di Natale ♦ <u>Challenges in the</u> model-based development of automotive systems

 ✓ Tecnalia ◆ A. Peña ◆ <u>Development of an embedded system</u> based on Zyng platform for an in-wheel motor vehicle

LUNCH

# Session In.3: Embedded software and Infotainment systems (14.00 – 15.00)

✓ **BRIT** ♦ R. Provedel, L. Alpago ♦ <u>Challenges for special vehicle</u> <u>Team: the HITV concept</u>

✓ Evidence ◆ P. Gai ◆ <u>Multi-OS: integrating control and</u> infotainment for automotive systems

 ✓ Politecnico di Torino ♦ M. Violante, P. Massimino (Magneti Marelli) ♦ <u>Multicore-based infotainment systems: opportunities</u> and challenges

#### **COFFEE BREAK**

#### **OUTSIDE THE VEHICLE: A Connected World**

#### Session Out.1: Safety & Security (15.30 – 17.00)

✓ Continental ◆ F. Fabre ◆ <u>Global Vehicle Cyber Security strategy</u>
@Continental in 2020

✓ Intecs ♦ J. Favaro ♦ Integration of Safety and Security in Automotive Electronic Systems

✓ Magneti Marelli ◆ C. Senni, W. Nesci ◆ <u>Automotive Cyber</u> <u>Security transition</u>

✓ **Yogitech** ♦ G. Sartori ♦ <u>ISO 26262: state of the standard and</u> <u>new implications for safety and security</u>

**CONFERENCE DINNER & SOCIAL EVENT** 

## Friday 23 October

#### OUTSIDE THE VEHICLE: A Connected World

#### Session Out.2: Smart Mobility & ITS (09.00 – 10.00)

✓ Consorzio Nazionale Interuniversitario per l'Informatica ♦ G.
Anastasi ♦ ICT services for smart mobility

✓ **Kiunsys** ◆ F. Formosa ◆ <u>Frictionless Driving</u>. Bringing on board the urban access regulations for a seamless driving experience

✓ Università di Firenze ♦ F. Paganelli ♦ <u>Vehicular Networks</u> <u>Evolution Driven by 5G Cellular Technologies and Novel Social</u> Networking Paradigms

#### **COFFEE BREAK**

Commemoration of Prof. Pierangelo Terreni Proclamation of the PhD Award in memoriam

#### Session Out.3: Green Vehicle (11.30 – 13.00)

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✓ Energica ◆ G. Gherardi ◆ <u>A Novel Electric Motorbyke Control</u> <u>System</u>

✓ Magneti Marelli ◆ A. Nepote, G. Greco ◆ <u>Vehicle Energy</u> <u>Harvesting – The regenerative shock absorber</u>

✓ Mecaprom ♦ M. Pennese ♦ Concept Design of an Enhanced Series Hybrid Architecture

✓ Università di Pisa ◆ R. Saletti ◆ <u>Electronic Management of Li-ion Battery-based Energy Storage Systems for Green Vehicles</u>
✓ VALEO ◆ P. Tisserand ◆ <u>Evolution of electrification in car for</u>
CO2 reduction with a focus on ICT/electronics

#### **CONFERENCE CLOSING**



Centro di Iniziativa su Motori, Veicoli e Tecnologie Center for Engines, Vehicles and related Technologies

#### www.movet.org

c/o CERFITT, Viale Rinaldo Piaggio 32 56025 Pontedera (PI) – ITALY tel. (+39) 0587 274811







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# Phd AWARD

Within the CCEAS2015, MOVET is asking all PhDs that have obtained their degree in the last 4 years (2011-2015) or that are currently pursuing a PhD course to submit:

- A. An electronic copy of 1 scientific publication (journal or conference or book or the PhD thesis) produced as result of the PhD activity
- B. An abstract summarizing the title of their PhD thesis or PhD subject, the PhD program name, the Institution organizing the PhD program, the names and addresses of the PhD supervisors, all details (name, address, email and telephone contacts) of the author, details of the submitted publication

The above two items should be submitted via email to the address: movet@pont-tech.it

Deadline for submission: 14 October 2015

The field of interests are those related to vehicles, mobility and transport systems including both theoretical or experimental studies, with reference to all engineering branches (Industrial, Information, and Civil engineering) and also to legal, economical, management, communications, and social aspects.

A committee of experts from industry and academia, selected by MOVET, will evaluate the contributions and will notify the winner within 19 October 2015.

The author of the best contribution will be invited for an oral presentation during the conference and will be awarded with a 1,000 Euro prize.

During the conference the MOVET community will commemorate Prof. Terreni, the last Dean of the Faculty of Engineering in Pisa.



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# CHALLENGES FOR CONNECTED AND EMBEDDED AUTOMOTIVE SYSTEMS

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# **CONFERENCE DINNER & SOCIAL EVENT**

### **Social Event:**

#### Visit of the exhibition Toulouse-Lautrec "Lights and shadows of Montmartre" (Palazzo Blu – Pisa)

Henri Marie Raymond de Toulouse-Lautrec-Monfa (24/11/1864 – 09/09/1901), also known as Henri de Toulouse-Lautrec was a French painter, printmaker, draughtsman and illustrator whose immersion in the colorful and theatrical life of Paris in the late 19th century yielded a collection of exciting, elegant and provocative images of the modern and sometimes decadent life of those times. Through its magnificent production of paintings, lithographs and posters, Toulouse-Lautrec has managed, more than anyone else, to describe and characterize a city, a life style, the colors of a whole generation and, more generally, the true lifestyle of late 19th century Paris, the Paris of the Moulin Rouge, Montmartre and the maisons fermee; that magnificent period between two centuries when the Ville Lumière was the undisputed world capital of art.

The Palazzo Blu exhibition is meant to represent the extraordinary human adventure and Lautrec art through the exhibition of paintings and drawings imported from relevant international private and public collections which consecrated the artist among the giants of European artists and paved the way towards modernity and towards the dissemination of advertising that, thanks to the french artist, becomes art. A great opportunity to admire the diversity and modernity of art by Henri de Toulouse-Lautrec.

#### Palazzo Blu (Pisa)

Palazzo Blu is a center for temporary exhibitions and cultural activities located in the Lungarno Gambacorti, in the heart of the historic center of Pisa, Italy. This museum is managed by the Fondazione Palazzo Blu, and is located in the Palazzo Giuli Rosselmini Gualandi, an ancient palace restored by the Fondazione Pisa. Its name comes from the blue color uncovered during an architectural recent restoration, and attributable to the taste of Russian owners who acquired the Palazzo in the eighteenth century.

The Palazzo Blu permanent exhibition is divided into three sections: the Foundation Pisa collection, on the second floor, and the stately apartments and Simoneschi Collection (numismatics and antiquities) on the first floor. Some artists from the collections (from 300 and Renaissance to 1800 d.C.): Cecco di Pietro, Taddeo di Bartolo, Benozzo Gozzoli, Vincenzo Foppa, Aurelio Lomi, il Cigoli, Orazio Gentileschi, Artemisia Gentileschi, Giovanni Battista Tempesti, Jean Baptiste Desmarais, Giuseppe Bezzuoli, Luigi Gioli. From the rich collection of the twentieth century: Umberto Vittorini, Mino Rosi, Ferruccio Pizzanelli and Fortunato Bellonzi. Annually Palazzo Blu hosts temporary and very important exhibitions.

### **Conference Dinner:**

Following the visit of the exhibition, the dinner will be at Lumière.

The Lumière rooted to the origins of cinema in Italy. It was officially opened in December 1905 under the name "Primario Cinematografo Lumière". The initial site was in the billiard room of the Caffè dell'Ussero Palazzo Agostini, on the Lungarno, where in 1899 began the first projections. At Lumiere, in 1906, the first experiment of sound films was made by Peter Pierini professor at the University of Pisa. Damaged during the Second World War, the club was closed in 1944 and reopened in 1946 under the name "Supercinema".

Palazzo Agostini, also known as Palazzo dell'Ussero or Red Palace is one of the most beautiful buildings of the Lungarni of Pisa and belongs to the family of the Counts Agostini Fantini Venerosi della Seta. The Lumière remains faithful to its vocation as a place of culture in the city's historic center and renews its tradition by its 50 square meters stage, equipped by a unique sound and lighting system, mixing performances and music events with love for good food.







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### **REGISTRATION FORM**

(Please return this form to movet@pont-tech.it )

### **Attendee Information :**

Surname		
Name		
Job Title		
Company		
Dept		
Address		
Post Code	/ City	/ Country
Phone	2.) Humania	
Mobile	n	
E-Mail:	SILLAT DE CARA	
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## **Conference registration :**

(fees include: on-line presentations, lunches, coffee, congress event and dinner and 22% VAT)

Please check the appropriate category:	開える、「「「開」」
Delegate	€ 180,00
Movet Member	€ 130,00
Student (undergraduate)	€ 30,00 (congress event and dinner not included)
Speaker	FREE
Media	FREE (congress event and dinner not included)
Additional ticket for congress event and dinner	€ 60,00
I will attend the congress social event and dinner on The Invoice Information :	hursday 22 October 🛛 YES 🖾 NO
Company	
Dept	AAT
Address Post Code / City	/ Country
VAT Number (Compulsory for Italian and EC Companie	
Codice Fiscale (only for Italian Companies)	
Account dept Phone Account dept E-Mail:	

In compliance with art. 7 of Italian law 196/2003, your personal data are used exclusively for processing the congress activies



25 October 2012 Museo Plaggio - Pontedera (PI), Italy

26 October 2012 Università di Pisa, Facoltà di Ingegneria Pisa (Italy)

#### **Movet Today**

In October 2013 Movet Founding Members decided to estabilish and setup a permanent non profit organization to cohordinate and increase the activities related to the promotion of innovation and research in the Automotive Industry and related Technologies in Tuscany.

#### **15 Industrial Partners**

CONTINENTAL AUTOMOTIVE ITALY DIFLECTRIK EDI PROGETTI E SVILUPPO EVIDENCE INTECS KIUNSYS MAGNA CLOSURES MITSUBA ITALIA PASSAPONTI METAL CLEANING TECHNOLOGY PIERBURG PUMP TECHNOLOGY ITALIA PONTLAB PURE POWER CONTROL SCHAEFFLER ITALIA TECNALIA ITALY VVN YANMAR R&D EUROPE



#### **Movet aims**

**To reward** and value the quality of scientific, technical and industrial capability and skills existing in Tuscany in the automotive sector

**To support** and enhance the innovation and the research in the Industry of Vehicles, Engines, Mobility Systems and related Technologies

**To create** a high level education system for the automotive sector

#### **Movet Today**

5 University Departments DIP TECNOLOGIE E PROCESSI UNIV. G. MARCONI DIP. ING CIVILE INDUSTRIALE UNIVERSITA' DI PISA DIP. ING. ENERGIA, SISTEMI, TERRITORIO E COSTRUZIONI UNIVERSITA' DI PISA DIP. ING. INDUSTRIALE UNIVERSITA' DI FIRENZE DIP. ECONOMIA E MANAGEMENT UNIVERSITA' DI PISA

### **3 R&D Centres**

COMPOLAB PONT-TECH PROMO DESIGN





#### www.movet.org

Join Movet!

Visit our website for affiliation requests no matter if you are a company or a private member we would like to have you with us!

#### **Movet Network**

SAE - Society of Automotive Engineering / SETC Committee ATA - Associazione Tecnica dell'Automobile ANFIA - Italian Association of the Automotive Industry PVF - Pole Vehicule du Futur Alsace -Franche-Comté EEO - European Electromobility Observatory HYER - Hydrogen Fuel Cells and Electro-mobility in European Regions EARPA - European Automotive Research Partner Association EGVIA - European Green Vehicle Initiative Association ERTRAC - European Road Transport Research Advisory Council

MOVET supported the Tuscany Region in a Industrial foresight Program aimed to make more effective the Structural European Funds (Smart Specialization Strategy)





2<sup>nd</sup> International Conference

