

## **SAENA Workshop 2018**

sponsored by KOHLER

## ICE HYBRIDIZATION FOR AUTOMOTIVE AND OFF-ROAD APPLICATIONS

November 22-23, 2018

Conference venue: Kohler | Via Cav. del Lav. A. Lombardini, 2 - 42124 Reggio Emilia Registration, please contact: saena@im.cnr.it www.sae-na.it









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## ICE hybridization for automotive and off-road applications

In the global quest to move toward cleaner and more fuel-efficient energy and propulsion systems for automotive and off-road application, hybridization plays a fundamental role. In fact, most novel technologies/solutions in the field of automotive and off-road propulsion as well as construction machines operation, involve the integration of internal combustion engines with other power systems.

While these alternative energy conversion systems offer many new opportunities, they also present new developmental challenges. Due to the many variants and possible combinations, development issues, such as the definition of powertrain concepts, the design of the optimization of operating strategies as well as system integration and the interaction of control units, are becoming more and more important.

Bearing in mind this strong interplay, this workshop will explore new trends in hybridization of conventional power units based on internal combustion engines, focusing on technologies and components' design, experimental testing, modeling and control for hybrid vehicles, construction machines and other ground vehicles. The aim is to bring researchers and practitioners from the worlds of industry and academia together to present and discuss the latest research developments relating to these topics, as well as industrial experience in deploying "real-world" applications.

Topics of interest are, but not limited to:

- Perspectives of hybridization for ground vehicles and industrial machines
- Impact of hybridization on fuel saving and emissions reduction
- Hybrid powertrains structures and configurations
- Batteries and power electronics technology trends
- Electric machines
- System modeling, and simulation and control of hybrid vehicles and off-road
- Intelligent technologies to vehicle powertrains for supervision, energy management
- Fuel cells

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