SAENA Workshop | November 22-23, 2018

Sponsored by Kohler

ICE hybridization for automotive and off-road applications

November 22, 2018 | Thursday

12:00 - 12:40 Registration

12:40 - 13:40 Lunch at Kohler Corporate Canteen

13:40 - 13:50 Welcome speech by *Nino De Giglio - Kohler (Italy)*

13:50 - 14:00 Welcome speech by *Cesare Pianese - SAENA President (Italy)*

14:00 - 14:30 Keynote: **Evolution of off-road technology - the role of Hybrid Power Module**
Speaker: *Nicola Scinicariello - Kohler (Italy)*
Chairman: *Cesare Pianese - SAENA President and University of Salerno (Italy)*

14:30 - 15:30 Technical session I (20 minutes each)

1. Hybridization: dismantling and reassembling power architectures in off-road machinery
Massimo Martelli - IMAMOTER - CNR (Italy)

2. 48v Hybridisation – the next trend for off-highway vehicles?
Andrew Roddham - Ricardo (United Kingdom)

3. Comprehensive 48V diesel mild hybrid vehicle model for energy management control system calibration and validation
Alessandro Zanelli - Politecnico di Torino (Italy)

15:30 - 16:00 Coffee Break

16:00 - 17:40 Technical session II (20 minutes each)

4. Hybrid architecture powertrains toward Stage 5 emission level: a turn key proposal across different off-highway vehicle platforms
Paolo Patroncini - 4e-consulting (Italy)

5. The way to electrification: the Bosch Approach
Federico Brivio - Bosch (Italy)

6. Energy management of hybrid powertrain via ADAS technologies
Ivan Arsie - Università di Salerno (Italy)

7. Energy saving on off-road vehicles: new opportunities from holistic integration of electrified hydraulic components and hybridized ICE
Cesare Dolcin - Walvoil (Italy)

8. Development of a generic Energy Management Strategy to support the simulation of Hybrid Electric Vehicles for potential regulatory applications
Alessandro Tansini - Joint Research Centre (Italy)

19:00 - 22:00 Dinner offered by Kohler

November 23, 2018 | Friday

08:30 - 09:00 Keynote: **Future perspectives of xEV automotive powertrain**
Speaker: *Luca Poggio - Ferrari (Italy)*
Chairman: *Luigi Arnone - Kohler (Italy)*

09:00 - 10:20 Technical session III (20 minutes each)

1. Modelling and simulation of Hybrid Electric Vehicles with Simulink/Simscape
Francesco Alderisio - MathWorks (Italy)

2. Benefits of predicting future operating conditions: application to HEVs
Nicolò Cavina - Università di Bologna (Italy)

3. Predictive operating strategy: application to HV battery thermal management in a Phev or BEV
Michele Caggiano - FEV (Germany)

4. Technology Overview of Future Powertrains for Passenger Cars
Matteo De Cesare - Magneti Marelli (Italy)

10:20 - 10:50 Coffee break

10:50 - 12:30 Technical session IV (20 minutes each)

5. A new European player perspective on Li-ion cell production: the “E-Lithium” project
Carlo Novarese e Matteo Destro - Faam Research Center (Italy)

6. Electrification for downsizing: application to a Kohler diesel engine
Enrico Mattarelli - Unimore (Italy)

7. Propulsion and power transmission at Dolomitech, systems and applications
Paolo Delzanno - Dolomitech (Italy)

8. The key challenges in commercial vehicle e-powertrain development
Francesco Mastrandrea - AVL (Italy)

9. Minimum-lap-time Strategies and Control of the Formula 1 Hybrid Electric Powertrain
Camillo Balerna - ETH (Switzerland)

12:30 - 13:00 Closing remarks
Vincenzo Perrone - Kohler Diesel Engines President (Italy)

13:00 - 14:00 Lunch at Kohler Corporate Canteen

14:00 - 15:00 Kohler factory tour