

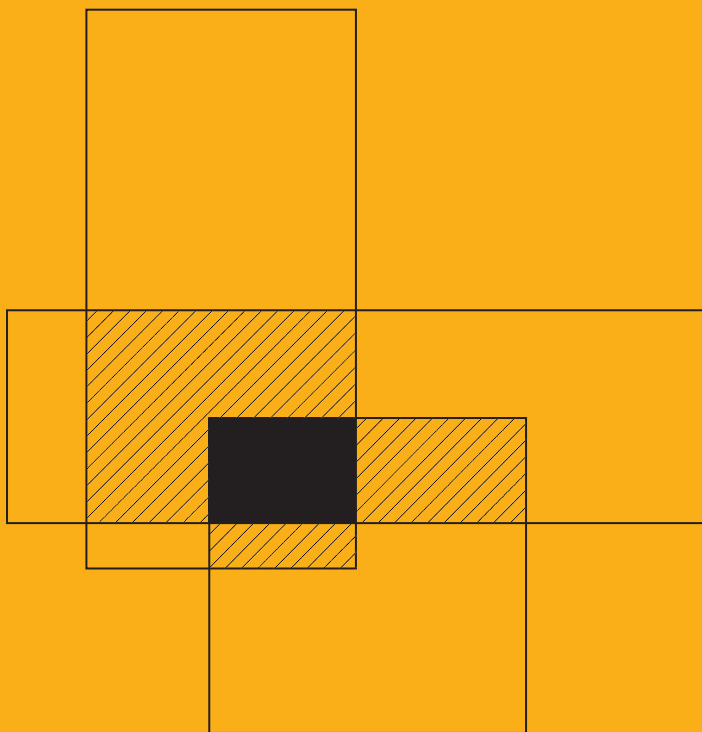
16/09/2020

9:00 - 16:45

JOINT NETWORK EVENT



HIFI-ELEMENTS
High Fidelity Electric Modelling and Testing



OPENING

09:00 - 09:10

WELCOME MESSAGE, OPENING

09:10 - 09:25

DR. MARINA KOUSOULIDOU

**PROJECT OFFICER - H2020 GREEN VEHICLES & AVIA-
TION RESEARCH**

09:25 - 10:00

OPENING KEYNOTE

Challenges in e-vehicle development.

DI MATTHIAS BRENDL

Vice President Business Field Electrifi-
cation, AVL

PROJECT INTRODUCTION



10:00 - 10:25

DI Horst Pfügl

Responsible for the Global Research Program Management within AVL ITS (Instrumentation & Test Systems) and as such Project Coordinator of OBELICS.



HIFI-ELEMENTS
High Fidelity Electric Modeling and Testing

10:25 - 10:50

Dr.-Ing. Jens Ewald

Senior Project Manager at FEV Europe GmbH in Aachen, Germany and Project Coordinator of HIFI-ELEMENTS.



DEMOBASE

10:50 - 11:15

PhD Philippe Desprez

Senior Battery Expert. Simulation Expert for Saft Solid State Battery Program. Project Coordinator of DEMOBASE.

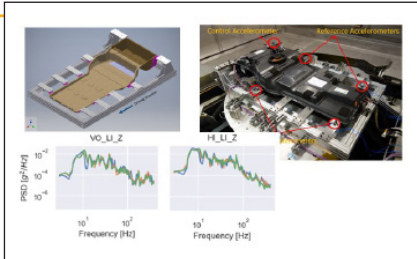
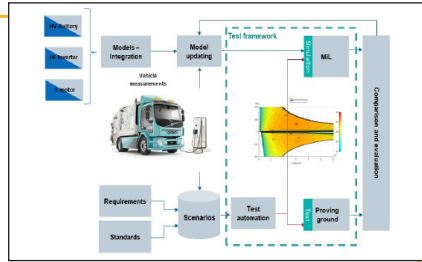


Booth A

NEXT GENERATION E-VEHICLE DESIGN

Modelling, design and optimization of new electric vehicle concepts, powertrains thermal management and auxiliaries.

Speakers: David Delichristov, VIF, Nicola Tobia, CRF & Mathieu Sarrazin, Siemens



Booth D

SAFETY CONCEPTS FOR BATTERIES

Probabilistic FMEA concepts and test methods for reliable batteries regarding mechanical and electrical loads.

Speaker: Benjamin Zillmann, BOSCH

Booth G

INVERTER & E-MOTOR DESIGN AND TESTING

Control strategies and testing concepts for power electronic components, inverters and e-motors.

Speakers: Raul Estrada Vazquez & Aida Preda, FH JOANNEUM, Thorsten Fischer, AVL & Damian Miljavec, Ljubljana University



FORD OTOSAN



Università di Udine



Booth C

ADVANCED SIMULATION TOOLS AND THEIR USE FOR EV BATTERY DESIGN

Demonstration of thermal runaway simulation at module level and the new browser based Modelica platform.

Speakers: Martin Petit, IFPEN & Thomas Fikenscher, Modelon



Booth F

IMPROVEMENT OF EV BATTERY SAFETY THROUGH SIMULATIONS, TESTS AND ADVANCED COMPONENTS

Making safer batteries by using advanced BMS components and a 3D CFD model to predict accidental behaviour.

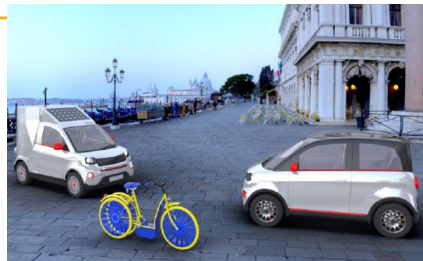
Speakers: Benjamin Truchot, INERIS & Wilhelm Maurer, IFAG

Booth I

TOWARDS LOW INVESTMENT EV CAR PRODUCTION

Urban 2 and 4 wheels electric vehicle with an ultralight modular body frame based on Advanced High Strength Steels.

Speakers: Jean Lamontanara, MA & Pietro Perlo, IFEVS



CLOSING

15:30 - 16:30

ROUND TABLE DISCUSSION

The automotive market is undergoing drastic changes, shifting towards large-scale launches of electric vehicles (EVs). Where it already was challenging for OEMs to make EV's profitable, the COVID-19 pandemic only added to the urgency of reducing costs and speeding up the development. What role does modeling play in reducing development costs? Which challenges have remained unsolved until yet? Where are the biggest gains to be obtained? What are the critical next steps in e-vehicle modelling & testing? And how do we get the new modeling abilities integrated in the development chain as soon as possible?

AVL

DI Matthias Brendel

Vice President Business Field Electrification

EU

Dr. Maurizio Maggiore

Directorate General for Research and Innovation

RICARDO

Dr. Simon Edwards

Global Director

AVL

DI Horst Pflügl

Global Research Program Management

FEV

Dr.-Ing. Jens Ewald

Senior Project Manager

SAFT

PhD Philippe Desprez

Senior Battery and Simulation Expert

16:30 - 16:45

SUMMARY AND CLOSURE

TIMETABLE

OPENING

- 09:00 - 09:10** Welcome Message, Opening
- 09:10 - 09:25** Dr. Marina Kousoulidou
- 09:25 - 10:00** DI Matthias Brendel

PROJECT INTRODUCTION

- 10:00 - 10:25** **OBELICS** // DI Horst Pflügl, AVL
- 10:25 - 10:50** **HIFI Elements** // Dr.-Ing. Jens Ewald, FEV
- 10:50 - 11:15** **DEMOBASE** // PhD Philippe Desprez, SAFTBATTERIES

11:15 - 11:45 Coffee Break

MEET THE PROJECT I

11:45 - 13:00

- A** Next generation e-vehicle design // OBELICS
- B** Simulation Toolchain and Proposal for Simulation Standard // HIFI ELEMENTS
- C** Advanced simulation tools and their use for EV battery design // DEMOBASE
- D** Safety Concepts for batteries // OBELICS
- E** From MiL to HiL // HIFI ELEMENTS

13:00 - 14:00 Lunch Break

MEET THE PROJECT II

14:00 - 15:00

- F** Improvement of EV battery safety through simulations, tests and advanced components // DEMOBASE
- G** Inverter & E-Motor Design and Testing // OBELICS
- H** Simulation for optimal BEV concept and operation strategies // HIFI ELEMENTS
- I** Towards low investment EV car production // DEMOBASE

15:00 - 15:30 Coffee Break

CLOSING

- 15:30 - 16:30** Round table discussion – Future needs in Research for Electrified vehicles
- 16:30 - 16:45** Summary and Closure