AVL AST ユーザーカンファレンス 2018
講演アブストラクト

2018年11月21日(水)開催予定

午前 / 共通セッション		
10:30-11:10	株式会社本田技術研究所 四輪R&Dセンター 高橋　伸一　様	**CAEにおける計測データ＆材料データとの連携の重要性 （ディーゼル用シリンダーヘッドの熱疲労予測技術手法を例に）** ”ディーゼル用シリンダーヘッドの熱疲労予測技術手法”を基に、CAE解析を進めるうえでの計測データ＆材料データの連携の重要性を定性的に述べる。
11:10-11:35	AVL List GmbH. Oliver Knaus	**Advanced Simulation Solutions for Powertrain Electrification** Overview about the simulation tasks along the development process of an electrified powertrain and the corresponding simulation tools. The applications start from vehicle powertrain concept analysis, over sub-system layout and detailed 3D component analysis until system integration.
	AVL List GmbH. Wolfgang Puntigam	**AVL's answer to model-based development – Mastering complexity and speed with the Integrated and Open Development Platform** Car manufacturers are facing the challenge of having to develop a growing number of variants with increasing complexity, within shorter and shorter periods. Those requirements and the need to speed up the time to market demand new processes, methods, roles, skills, and responsibilities within the powertrain and the vehicle development process. Additionally, development and production costs must be reduced, which goes hand in hand with the need to increase efficiency and productivity along the process. To overcome these challenges in the future massive frontloading activities must be started. A shift to upfront testing is essential, where development tasks which are today performed on the road using full vehicle prototypes are addressed much earlier in the development process. Such an early functional integration starts with the integration of simulation models, includes the integration of simulation models and hardware components and ends with full hardware integration. This means that simulation models from various sources need to be linked to each other and, with increasing importance, to real components by using testbeds. Thereby, the overall vehicle functionality can be demonstrated and tested at all times and in every step of the development process.

AVL AST ユーザーカンファレンス 2018

講演アブストラクト

2018年11月21日(水)開催予定

午前 / 共通セッション		
11:35-12:00		To achieve this goal, new consistent and dynamic model-based testing methods, tools and tool-networks are key. Only then we can enable the successful development of strongly interdependent and cross-linked functions and improve agility, efficiency and robustness. By combining real and virtual test environments via an Integrated Open Development Platform (IODP) we can enable the implementation of the virtual integration process gradually on a full vehicle level. Each component of the vehicle, whether virtual or real, can be integrated and tested in model, software, hardware-in-the-loop environments or on the different test bed environments. Such an Integrated Open Development Platform can bring full vehicle functionality to an engine test bed, powertrain test bed or chassis dyno in a very robust way. Thus, a new, dynamic way of development is rendered possible, which for instance, can help to solve the conflicting targets between emissions and drivability already at a very early development stage. By using an central Test Life Cycle Management (TLCM) virtual and real tests can be monitored and controlled. A TLCM consistently administers and documents the results and facilitates easy data access to ensure comparability of results over the development process. A truly interdisciplinary approach - especially in the early phases of vehicle devlopment - is the only way to master the extremely complex challenges arising today and in the future An Integrated Open Developemnt Platform must be able to maximmize utilization of the existing development infrastructure by providing open interfaces to various simualtion and test systems, to provide new means of increasing efficiency and productivity, and to face the challenge of early and consistent functional integration along the whole vehicle development process.