



International Conference and Exhibition

14 - 15 OCTOBER 2020

AUTOMOTIVE NVH COMFORT LE MANS 2020

 PALAIS DES CONGRÈS DU MANS, FRANCE



PROGRAMME

Day 1 morning



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| 08:30 | Welcome Desk |
| | Plenary Session |
| 09:00 | Welcome / Intro Opening words: <i>Hervé GROS (SIA), Hervé PICHON (CTTM), Léon GAVRIC (CE NVH)</i> |
| 09:10 | Keynote CAERI : Peiran LI , Executive Deputy Director- Automotive NVH Tech <i>The trend of electric drive system (EDS) NVH subjective and objective evaluation methods</i> |
| 09:30 | Keynote Michelin: Pierre Fraisse, Vice President Technical Operations Passenger Car and Light Truck Tires. |
| 09:50 | Keynote Bruitparif : Carlos Ribiero, <i>Traffic noise and annoying by environment acoustic expert</i> |
| 10:10 | Pannel session "Automotive in soundscape " |
| 11:10 | Coffee & Tea Break and Networking in the exhibition |
| 11:40 | Keynote CSTB (Pionnering HumanLab for Sensory Evaluation) : <i>Sensory Perception Objectivation of noise and vibration through psychophysiology</i> |
| 12:00 | Exhibitors Presentation 2 mm - 2 slides / exhibitors |
| 12:40 | Lunch & Networking |

Day 1 afternoon



| Parrallel Session | | | |
|-------------------|--|---|--|
| | BEV/PHEV/MHEV Moderator: Léon GAVRIC | PBN / Regulation Modérateur: Arnaud Duval | Audio / ANC / Sound Modérateur: Jean François RONDEAU |
| 14:10 | Study of passive treatments coupled to an electric vehicle battery Johan Grebert -- Autoneum | Assesment of run-to-run dispersion phenomena in pass-by-noise measurements according to R51-03 Ivan Chapelier - PSA | Active and passive acoustic package synergy Ludovic Dejaeger - Faurecia |
| 14:35 | Why tailored dampers are needed for HEV power-trains? Hervé Mahe - Valeo | Determination of racing cars by-pass noise using acoustic beamforming Laurent Bollade - Dyva | Design of interior and exterior sound using vehicle audio systems Chritoph Steffens-FEV |
| 15:00 | NVH issues for Electric Rear Axle Drive (e-RAD) Emmanuel Libert - PSA | Major impacts of uncertainties on compliance and development of noise regulations Yannick Denoual - Renault | Innovative simulation techniques for audio system performances assessment Thibaud Costes-FFT |
| 15:25 | IBSG, Integrated Belt Starter Generator 48V architecture PO.Comfort optimisation for the vehicule through the lab. Stéphane Desenclos- Valeo | Pass-by noise regulation: Development of indoor methodologies toward virtual testing Romain Barbeau - Utac Ceram | Sound Quality analysis of Active Sound Design implementation Ricardo Sales - Siemens |
| 15:50 | NVH integration impact of thermal systems components in serial vehicle production Saad Bennouna - Valeo | Exterior Noise Regulation for Truck Medium Duty Powertrain: Challenges and Ways of working Fabien Acher - Volvo | Automotive active acoustic and audio augmented reality Louis-Ferdinand Pardo - Renault |
| 16:15 | Coffee & Tea Break and Networking in the exhibition | | |
| Parrallel Session | | | |
| | BEV/PHEV/MHEV Moderator: Pascal BOUVET | NVH Design Methods for Vehicles and Components Moderator: Thomas ANTOINE | Audio / ANC / Sound Moderator: Nicolas DAUCHEZ |
| 16:45 | Sound quality analysis of Electric Drive Units under different switching control strategies Karine Degrendele - Eomys | Whistling prediction using direct aeroacoustic simulation on exhaust components Florent Morin - Renault | Experimental evaluation of a new class of algorithms for active noise attenuation Ioan Landau - Univ Grenobles- Alpes |
| 17:10 | Design of e-Powertrain mounting and structure borne whining Stephan Philip - PSA | Stability and energy localization of automotive vibration absorber with cyclic symmetry Alexandre Renault - Valeo | Bass reflex enclosure for headrest application Benjamin Eller - Faurecia |
| 17:35 | The sound of silence of electric vehicles – Updated issues and answers Louis-Ferdinand Pardo - Renault | The importance of R-DoF in blocked force descriptions of mechatronic components Eric Pasma - Vibes | Active Vibration Control Applied to Speakerless Audio Using the HyVibe Exciter Adrien Mamou - Mani - Hyvibe |
| 18:00 | Multi-criteria optimization of an electric powertrain to reach the NVH targets Sylvestre Lecuru - Vibratrec | Relative effect of sound and powertrain vibrations on the overall discomfort in a driving car experience Luc Laroche - PSA | Sporty sound development and evaluation based on a DoE approach Jonathan Toumadre - Faurecia |
| 18:25 | End Day 1 | | |
| 19:00 | Transfer to ... | | |
| 20:00 | Abbaye Event and Dinner | | |

Day 2 morning



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|-------|--|--|---|
| 07:45 | Welcome coffee | | |
| 08:15 | Day 2 Introduction | | |
| 08:20 | Keynote : NVH SIA Expert Community <i>Interior Noise / Tiredness / Psychoacoustics</i> | | |
| 08:40 | Keynote <i>Human Sound Perception</i> | | |
| 09:00 | Pannel session : <i>The automotive users NVH comfort and the metrics used by NVH experts</i> | | |
| 10:00 | Coffee & Tea Break and Networking in the exhibition | | |
| | Parallel Session | | |
| | BEV/PHEV/MHEV <i>Moderator: Peiran LI</i> | NVH Design Methods for Vehicles and Components <i>Moderator: Kresimir TRDAK</i> | Insulation and acoustic integration <i>Moderator: Said NAJI</i> |
| 10:30 | Analysis of the influence of Range Extender System Design on the vehicle NVH Performanc CAERI | Simulation of acoustic transfer functions inside a car cabin using beam-tracing: correlation status and an updated industrial viewpoint Arnaud Jund - PSA | Numerical prediction of the sound absorption of a thermo-compressed 3D hood absorber using equivalent fluid models following high compression rates Lei Lei - Treves |
| 10:55 | High frequency source characterization of an E-motor using Component Based TPA Mostapha Choukri - Siemens | Research on Simulation and optimization of vehicle road noise Dayong Jiang - Caeri | How can interfaces significantly change the vibroacoustic behavior of assemblies? Jean-Baptiste Chaussang - Renault |
| 11:20 | Emotor NVH issues for automotive applications: specification, influent parameters and predesign phase Wilfrid Raguenet - PSA | Design of a poroelastic lamellar metamaterial for sound attenuation Li Ke-UTC | Data-guided computational analysis of cross-correlations for the digital reconstruction of membranes in polydisperse foams: Towards a novel optimization path Cong Truc Nguyen - Université Gustave Eiffel |
| 11:45 | Proper use and improvement of TPA method to control the whining noise of electrified powertrains Jean-Luc Wojtowicki - Vibratec | 3D vision method for vibration pattern measurement Marie-Hélène Moulet - CTTM | Identification of global damping added by a trim foam on a steel plate with an inverse vibration problem Meryem Le Deunf - Ceva |
| 12:10 | Experimental and numerical study for Ventilated Brake Disc low frequency harmonic noise Le Yang- BYD | Acoustic Imaging coupled with Artificial Intelligence to improve End of Assembly Line Diagnosis Abdelhakim Darraz - Valeo | Classification of non-conventional phenomena involved in meta-materials Fabien Chevillotte - Matelys |

Day 2 afternoon



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| | Plenary Session | | |
| 12:40 | Key Notes <i>Regulatory issues for vehicle noise</i> | | |
| 13:00 | First NVH Congress Chairman conclusions Leon Gavric | | |
| 13:15 | Lunch & Networking | | |
| 14:30 | Parallel Session | | |
| | BEV/PHEV/MHEV <i>Moderator: Jean -Christophe LE ROUX</i> | NVH Design Methods for Vehicles and Components <i>Moderator: Charles PEZERAT</i> | Insulation and acoustic integration <i>Moderator: Johan GREBERT</i> |
| 14:30 | Acoustic performance overview of new energy vehicles in Chinese market Dr Charles Zhang - BYD | Development of a car aeroacoustic noise prediction method Hervé Foucart - Vsolution | Virtual Prototyping Platform for NVH System Design of EPS Pascal Moulaire -JTEKT |
| 14:55 | Dedicated powertrain mounting systems for electric vehicles David Roth - Vibracoustic | Attenuation of an acoustical mode by using an Helmholtz resonator with nonlinear behavior Emmanuel Gourdon - CNRS | An advanced encapsulated acoustic solution for automotive applications Mathieu Gontier - Recticel |
| | Plenary Session | | |
| 15:30 | Sudents Award + Congress Conclusions | | |
| 16:15 | Plenary Session Cocktail <i>Closing remarks: Hervé GROS, Hervé PICHON</i> | | |
| 16:30 | End | | |