

Acoustic analysis of compact silencer solution based on microperforated panel

Villau, Margus; Rämmal, Hans; Lavrentjev, Jüri Modern Materials and Manufacturing 2023 : Tallinn, Estonia, 2–4 May 2023 2024 / art. 030014 <https://doi.org/10.1063/5.0189854> [Article at Scopus](#) [Conference Proceedings at Scopus](#)

Acoustic analysis of small engine catalytic converters : SAE 2010-32-0022

Lavrentjev, Jüri; Rämmal, Hans SAE technical papers 2010 / [12] p

Acoustic studies of micro-perforates for small engine silencers

Kabral, Raimo; Rämmal, Hans; Lavrentjev, Jüri SAE technical papers 2012 <https://www.sae.org/publications/technical-papers/content/2012-32-0107/>

Acoustic studies on small engine silencer elements

Kabral, Raimo; Rämmal, Hans; Lavrentjev, Jüri; Auriemma, Fabio SAE technical papers 2011 / [8] p. : ill

Acoustic study of multi-layered microperforated elements for fibreless noise control applications

Villau, Margus; Rämmal, Hans; Lavrentjev, Jüri IOP conference series : materials science and engineering 2021 / art. 012015, 7 p. : ill <https://doi.org/10.1088/1757-899X/1140/1/012015>

Acoustic study of novel eco-friendly material for vehicle NVH applications

Rämmal, Hans; Lavrentjev, Jüri Materials today: proceedings 2020 / p. 2331-2337 <https://doi.org/10.1016/j.matpr.2020.04.632> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Acoustic study on motorcycle helmets with application of novel porous material

Lavrentjev, Jüri; Rämmal, Hans SAE Technical Paper Series : The 25th Small Engine Technology Conference (SETC2019) : Small Powertrains—Innovating for Their Future Role, International Conference Center Hiroshima, November 19-21, 2019 : Final program 2020 / Paper 2019-32-0531, p. 1-7 : ill <https://www.sae.org/publications/technical-papers/content/2019-32-0531/> http://www.setc-sae.com/2019docs/SETC2019_FinalProgram_all.pdf [Conference proceedings at Scopus](#) [Article at Scopus](#)

Acoustic study on tubular micro-perforated flow plug sections for vehicle silencer's application

Villau, Margus; Rämmal, Hans; Lavrentjev, Jüri SAE Technical Paper 2022 / p. 1-7 <https://doi.org/10.4271/2022-01-0933> <https://www.sae.org/publications/technical-papers/content/2022-01-0933/> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Acoustical methods for investigating turbocharger flow instabilities

Kabral, Raimo; Rämmal, Hans; Abom, Mats SAE Technical Papers 2013 <https://doi.org/10.4271/2013-01-1879> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Acoustics of turbochargers

Rämmal, Hans; Abom, Mats SAE Technical Paper Series : SAE 2007 Noise and Vibration Conference and Exhibition : St.Charles, IL (USA), May 15-17 2007 2007 / paper nr. 2007-01-2205

Analysis and design of multifunctional laminated glass composite structures

Majak, Jüri; Pohlak, Meelis; Õunapuu, Erko; Auriemma, Fabio; Rämmal, Hans; Saarts, Samo 24th International Conference on Composites/Nano-Engineering : ICCE-24 : Haikou, Hainan Island, China, July 17-23, 2016 2016 / [2] p. : ill

Application of novel micro-grooved elements to small engine silencer

Auriemma, Fabio; Rämmal, Hans; Lavrentjev, Jüri SAE Technical Papers 2013 / [10] p.: ill <https://www.sae.org/publications/technical-papers/content/2013-32-9001/> <https://doi.org/10.4271/2013-32-9001> [Journal metrics at Scopus](#) [Article at Scopus](#)

Characterization of air terminal device noise using acoustic 1-port source models

Rämmal, Hans; Abom, Mats Journal of sound and vibration 2007 / 3/5, p. 727-743 : ill <https://www.sciencedirect.com/science/article/pii/S0022460X06006857>

A complete acoustic analysis on the passive effect of small engine silencer elements

Kabral, Raimo; Rämmal, Hans; Lavrentjev, Jüri; Auriemma, Fabio Proceedings of International Congress on Sound and Vibration (ICSV18) : Rio de Janeiro, Brazil, 10 to 14 July 2011 2011

Concept study of sustainable noise control solution for HVAC systems based on microperforated elements

Villau, Margus; Rämmal, Hans; Lavrentjev, Jüri Proceedings of the Estonian Academy of Sciences 2021 / p. 461-469 : ill <https://doi.org/10.3176/proc.2021.4.13> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Dedicated testrig for acoustic characterization of automotive silencers

Lavrentjev, Jüri; Rämmal, Hans Proceedings of the ICSV 16 : The 16th International Congress on Sound and Vibration : Krakow, Poland, 5-9 July, 2009 2009 / [6] p https://www.researchgate.net/publication/287088587_Dedicated_testrig_for_acoustic_characterization_of_automotive_silencers

Design and performance of acoustic metamaterial structure for inlet duct noise attenuation

Lavrentjev, Jüri; Rämmal, Hans SAE Technical Papers 2017 / 2017-32-0066, [6] p. : ill <https://www.sae.org/publications/technical-papers/content/2017-32-0066/> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Design and performance of acoustic metamaterial structure for inlet duct noise attenuation [Online resource]

Lavrentjev, Jüri; Rämmal, Hans SETC 2017 : 23rd Small Engine Technology Conference "Small Engine Technology - Generating a Promising Future", November 15-17, 2017 Jakarta, Indonesia : Final program : SAE Technical Paper 2017 / 2017-32-006, p. 37 http://www.setc-jsae.com/past_docs/2017/list_of_paper.pdf

Determination of acoustic properties for open duct termination in hot jet conditions using FEM simulation

Rämmal, Hans; Lavrentjev, Jüri Proceedings of the 14th International Congress on Sound and Vibration (ICSV 14) : Cairns (Australia), 9-12 July, 2007 2007 / ? p https://www.researchgate.net/publication/315747798_DETERMINATION_OF_ACOUSTIC_PROPERTIES_FOR_OPEN_DUCT_TERMINATION_IN_HOT_JET_CONDITIONS_USING_FEM_SIMULATION

Endurance of micro-perforated elements in unmanned ground vehicle's small diesel engine silencer application

Rämmal, Hans; Lavrentjev, Jüri SAE Technical Paper Series : The 25th Small Engine Technology Conference (SETC2019) : Small Powertrains-Innovating for Their Future Role, International Conference Center Hiroshima, November 19-21, 2019 : Final program 2020 / Paper 2019-32-0533, p. 1-8 http://www.setc-jsae.com/2019docs/SETC2019_FinalProgram_all.pdf [Conference proceedings at Scopus](#) [Article at Scopus](#)

Experimental acoustic characterization of IC-engine simulated hot exhaust system

Rämmal, Hans; Lavrentjev, Jüri Proceedings of INTER-NOISE 2004 / ? p

Experimental concept study of a small engine silencer unit based on microperforated elements

Villau, Margus; **Rämmal, Hans; Lavrentjev, Jüri** Proceedings of the Estonian Academy of Sciences 2024 / p. 159-167 : ill., fot <https://doi.org/10.3176/proc.2024.2.09> https://www.ester.ee/record=b2355998*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental determination of acoustic reflection coefficient of duct openings in simulated hot conditions [Electronic resource]

Rämmal, Hans; Lavrentjev, Jüri Proceedings of 33-th International Congress and Exposition on Noise Control Engineering : INTERNOISE2005 : 07-10 August 2005, Rio de Janeiro, Brazil 2005 / ? p. [CD-ROM] <https://www.ingentaconnect.com/contentone/ince/incecp/2005/00002005/00000007/art00035>

Experimental determination of sound transmission in turbo-compressors : SAE Tech. paper no.2009-01-2045

Rämmal, Hans; Abom, Mats SAE Technical Papers 2009 / [7] p <https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A750030&dswid=-9882>

Experimental facility for the complete determination of sound transmission in turbochargers : SAE 2010-01-1424

Rämmal, Hans; Abom, Mats; Tiikoja, Heiki; Boden, Hans SAE technical papers 2010 / [9] p <https://saemobilus.sae.org/papers/experimental-facility-complete-determination-sound-transmission-turbochargers-2010-01-1424>

Experimental investigations of sound reflection from hot and subsonic flow duct termination

Tiikoja, Heiki; Lavrentjev, Jüri; Rämmal, Hans; Abom, Mats Journal of sound and vibration 2014 / p. 788-800 : ill <https://doi.org/10.1016/j.jsv.2013.09.030> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental methods for sound propagation studies in automotive duct systems

Rämmal, Hans 2007 https://www.ester.ee/record=b2298297*est

Experimental study of noise barrier boards with increased acoustic performance by utilizing Helmholtz resonator effects

Lavrentjev, Jüri; Rämmal, Hans Materials today: proceedings 2020 / p. 2566-2571 <https://doi.org/10.1016/j.matpr.2020.05.402> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Extended investigations on micro-grooved elements - a novel solution for noise control

Auriemma, Fabio; Rämmal, Hans; Lavrentjev, Jüri SAE international journal of materials and manufacturing 2014 / p. 184-194 : ill <https://doi.org/10.4271/2013-24-0068> [Journal metrics at Scopus](#) [Article at Scopus](#)

Innovative fibreless HVAC duct silencer based on microperforated elements

Villau, Margus; Rämmal, Hans; Lavrentjev, Jüri Materials today: proceedings 2021 / 7 p. : ill <https://doi.org/10.1016/j.matpr.2021.06.201> [Journal metrics at Scopus](#) [Article at Scopus](#)

Investigations of automotive turbocharger acoustics

Tiikoja, Heiki; Rämmal, Hans; Abom, Mats; Boden, Hans SAE international journal of engines 2011 / p. 2531-2542

Micro-grooved elements - a novel solution for noise control

Auriemma, Fabio; Rämmal, Hans; Lavrentjev, Jüri SAE international journal of material and manufacturing 2013 / p. 599-610 : ill

Mida suudavad välja uurida autotehnika eksperdid?

Riik, Marvel; **Luppin, Janek**; Rämmal, Hans Õhtuleht 2016 / lk. 6-7 <https://www.oh tuleht.ee/769291/mida-suudavad-valja-uurida-autotehnika-eksperdid>

Modified multi-load method for nonlinear source characterization

Rämmal, Hans; Boden, Hans Journal of sound and vibration 2007 / 4/5, p. 1094-1113
<https://www.sciencedirect.com/science/article/pii/S0022460X06006663>

A novel design for cruiser type motorcycle silencer based on micro-perforated elements

Kabral, Raimo; Rämmal, Hans; Auriemma, Fabio; Luppin, Janek; **Kõiv, Risto**; **Tiikoja, Heiki**; **Lavrentjev, Jüri** SAE technical papers 2012 https://www.researchgate.net/publication/236005547_A_Novel_Design_for_Cruiser_Type_Motorcycle_Silencer_Based_on_Micro-Perforated_Elements

On Acoustic Properties of Duct Termination Exhausting Hot Flow by Utilizing FEMSimulation

Rämmal, Hans; Lavrentjev, Jüri Evolutions in mechanical engineering 2021 / art. EME.000565
<https://crimsonpublishers.com/eme/fulltext/EME.000565.php>

On experimental techniques to determine acoustic performance of small exhaust silencers : SAE tech. paper no. 2009-32-0015

Lavrentjev, Jüri; Rämmal, Hans SAE Technical Papers 2009 / [6] p <https://www.sae.org/publications/technical-papers/content/2009-32-0015/>

On the acoustic reflection at pipe opening

Rämmal, Hans; Lavrentjev, Jüri; Tiikoja, Heiki Proceedings of the 17th International Congress on Sound & Vibration (ICSV17) : Cairo, 18-22 July 2010 2010 / [8] p

Reliability study of micro-perforated elements in small engine silencer application

Rämmal, Hans; Lavrentjev, Jüri SETC 2017 : 23rd Small Engine Technology Conference "Small Engine Technology - Generating a Promising Future", November 15-17, 2017 Jakarta, Indonesia : Final program : SAE Technical Paper 2017 / 2017-32-0075, p. 37
http://www.setc-jsae.com/setc2017docs/2017finalprogram/SETC2017_Final.pdf Conference proceedings at Scopus Article at Scopus

Sound reflection at an open end of a circular duct exhausting hot gas

Rämmal, Hans; Lavrentjev, Jüri Noise control engineering journal 2008 / 2, p. 107-114
<https://www.ingentaconnect.com/content/ince/ncej/2008/00000056/00000002/art00002;jsessionid=1nroaerjkh1bh.x-ic-live-01>

Sound reflection from subsonic flow duct termination exhausting hot jet

Rämmal, Hans; Lavrentjev, Jüri INTER-NOISE 2008 : 37th International Congress and Exposition on Noise Control Engineering : Shanghai, 26-29. October 2008 : proceedings. Vol 3 2009 / p. 1703-1711 <https://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A337599&dsid=3257>

Sound transmission in automotive turbochargers

Tiikoja, Heiki; Rämmal, Hans; Abom, Mats; Boden, Hans SAE Technical Papers 2011 / [12] p
<https://www.sae.org/publications/technical-papers/content/2011-01-1525/>

Studies of flow duct acoustics with applications to turbocharged engines : doctoral thesis

Rämmal, Hans 2009 <https://www.diva-portal.org/smash/get/diva2:220198/fulltext01>

Testrig for characterization of turbo-compressor acoustic properties [Electronic resource]

Rämmal, Hans; Abom, Mats Proceedings of the 29th International AIAA Aeroacoustics Conference : Vancouver, Canada, 2008 2008 / ? p. [CD-ROM] <https://arc.aiaa.org/doi/10.2514/6.2008-2959>

Testrig for complete acoustic characterization of turbochargers

Tiikoja, Heiki; Rämmal, Hans; Abom, Mats; Boden, Hans International Aeronautics and Aeroacoustics Conference, Stockholm, Sweden, 07-09 June, 2010 2010 https://www.researchgate.net/publication/268581496_Test-Rig_for_Complete_Acoustic_Characterization_of_Turbochargers

The passive acoustic effect of automotive catalytic converters

Lavrentjev, Jüri; Rämmal, Hans; Tiikoja, Heiki SAE technical papers 2011 / [8] p.: ill
https://www.researchgate.net/publication/289649603_The_Passive_Acoustic_Effect_of_Automotive_Catalytic_Converters

The passive acoustic effect of turbo-compressors

Rämmal, Hans; Galindo, J. 9th International Conference on Turbochargers and Turbocharging : London, UK, 2010 2010

Validation of 1D and 3D analyses for performance prediction of an automotive silencer

Siano, Daniela; Auriemma, Fabio; Bozza, Fabio; **Rämmal, Hans** SAE technical papers 2011 / [14] p

https://www.researchgate.net/publication/258519244_Validation_of_1D_and_3D_Analyses_for_Performance_Prediction_of_an_Automotive_Silencer

Vibration analysis of multifunctional laminated glass panel [Online resource]

Väer, Kaur; Õunapuu, Erko; Eerme, Martin; Auriemma, Fabio; Rämmal, Hans International Conference "Functional Materials and Nanotechnologies 2017" : Tartu, Estonia in April, 24-27, 2017 : book of abstracts 2017 / p. 145
http://www.ester.ee/record=b4668793*est