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## 118 Research output

### 2022

#### > **Simulation des Einflusses von Materialparametern auf das Schwingungsverhalten einer Gitarrendecke**

Published

[Merchel, S.](#), Zenker, B., [Altinsoy, M. E.](#) & Olson, D., 2022, *Proceedings of DAGA 2022 - 48th German Annual Conference on Acoustics*.

*Research output: Contribution to book/conference proceedings/anthology/report > Conference contribution > Contributed*

### 2021

#### > **Improved Directivity of Flat Panel Loudspeakers by Minimizing the Off-Axis Radiation below Coincidence**

Published

Zenker, B., Schurmann, R., [Merchel, S.](#) & [Altinsoy, M. E.](#), Jul 2021, In: [Applied sciences](#).

*Research output: Contribution to journal > Research article > Contributed > peer-review*

#### > **Improved Directivity of Flat Panel Loudspeakers by Minimizing the Off-Axis Radiation below Coincidence**

Published

Zenker, B., Schurmann, R., [Merchel, S.](#) & [Altinsoy, M. E.](#), 2021, In: [Applied sciences](#). 11, 15

*Research output: Contribution to journal > Research article > Contributed > peer-review*

#### > **Localization Masking - Reducing the Influence of the Direct Sound on Localization in Sound Projection by the Additional Generation of One or More Leading Sounds**

Published

[Wühle, T.](#), [Merchel, S.](#) & [Altinsoy, M. E.](#), 2021, In: [Journal of the Audio Engineering Society](#). 69, 9, p. 683-693 11 p.

*Research output: Contribution to journal > Research article > Contributed > peer-review*

2020

- › **Charakterisierung von flächigen Schallabsorbern auf Basis von natürlichen Vliesstoffstrukturen** Published
- Ruiz, R., Eduardo, A., Klochkova-Schiefer, M., Natzschka, T., [Merchel, S.](#), Haase, E., Krzywinski, S. & [1 others](#), , 2020, p. 882-885. 4 p.
- Research output: Contribution to conferences › Paper › Contributed*
- › **Einfuss der Materialdämpfung auf den Klang verschiedener DML-Membranen** Published
- Vater, A., Zenker, B., [Merchel, S.](#) & [Altinsoy, M. E.](#), 2020.
- Research output: Contribution to conferences › Paper › Contributed*
- › **Improved Sound Radiation of Flat Panel Loudspeakers Using the Local Air Spring Effect** Published
- Zenker, B., Schurmann, R., [Merchel, S.](#) & [Altinsoy, M. E.](#), 2020, In: [Applied sciences](#). 10, 24
- Research output: Contribution to journal › Research article › Contributed › peer-review*
- › **Low-frequency performance of a woofer-driven flat-panel loudspeaker (Part 2: Numerical system optimization and large signal analysis)** Published
- Zenker, B., Heini, M., [Merchel, S.](#) & [Ercan Altinsoy, M.](#), 2020.
- Research output: Contribution to conferences › Paper › Contributed › peer-review*
- › **Optimization of the Aspect Ratio and Material Parameters of a DML Membrane** Published
- Rawoof, S. S. A., Zenker, B., [Merchel, S.](#) & [Altinsoy, M. E.](#), 2020.
- Research output: Contribution to conferences › Paper › Contributed*
- › **Optimized Radiation Pattern and Time Response of Flat Panel Loudspeakers due to the Specific Damping of the Boundary Conditions** Published
- Zenker, B., [Merchel, S.](#) & [Altinsoy, M. E.](#), 2020.
- Research output: Contribution to conferences › Paper › Contributed*

› **Psychophysical comparison of the auditory and tactile perception: a survey** Published

[Merchel, S.](#) & [Altinsoy, M. E.](#), 2020

*Research output: Other contribution › Other › Contributed › peer-review*

› **Realisierung eines Schallprojektors mit verbessertem Abstrahlverhalten im hohen Frequenzbereich** Published

[Wühle, T.](#), [Beyer, F.](#), Bulla, L., [Merchel, S.](#) & [Altinsoy, M. E.](#), 2020.

*Research output: Contribution to conferences › Paper › Contributed*

› **Upper Frequency Limit of Flat Panel Loudspeakers - Evaluation of the Voice Coil Break-Up Modes** Published

Zenker, B., [Merchel, S.](#) & [Altinsoy, M. E.](#), 2020.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

› **Vergleich von Modellen zur Simulation von Lautsprechern in linearen Arrays unter Berücksichtigung des Richtverhaltens realer Lautsprecher** Published

[Beyer, F.](#), [Wühle, T.](#), [Merchel, S.](#) & [Altinsoy, M. E.](#), 2020.

*Research output: Contribution to conferences › Paper › Contributed*

## 2019

› **DrumEverywhere – Ein augmented reality drumkit mit Pure Data** Published

[Merchel, S.](#), Peetz, A., Ankermann, S., Ridder, V. & [Altinsoy, M. E.](#), 2019.

*Research output: Contribution to conferences › Paper › Contributed*

› **Influence of tonewood parameters on the perceived sound quality of a steel-string acoustic guitar** Published

[Merchel, S.](#), Olson, D. & [Altinsoy, E.](#), 2019.

*Research output: Contribution to conferences › Paper › Contributed*

› **Low Deviation and High Sensitivity—Optimized Exciter Positioning for Flat Panel Loudspeakers by Considering Averaged Sound Pressure Equalization** Published

Zenker, B., Rawoof, S. S. A., [Merchel, S.](#) & [Altinsoy, M. E.](#), 2019.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

› **Optimized Exciter Positioning Based on Acoustic Power of a Flat Panel Loudspeaker** Published

Zenker, B., Rawoof, S. S. A., [Merchel, S.](#) & [Altinsoy, M. E.](#), 2019.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

› **Perception of auditory events in scenarios with projected and direct sound from various directions** Published

[Wühle, T.](#), [Merchel, S.](#) & [Altinsoy, M. Ercan](#), 2019.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

› **Perceptual evaluation of bracewood and soundboard wood variations on the preference of a steel-string acoustic guitar** Published

[Merchel, S.](#), [Altinsoy, M. E.](#) & Olson, D., 2019

*Research output: Other contribution › Other › Contributed › peer-review*

› **Psychophysical Comparison of the Auditory and Vibrotactile Perception - Absolute Sensitivity** Published

[Merchel, S.](#) & [Altinsoy, M. E.](#), 2019.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

› **Rethinking Flat Panel Loudspeakers—An Objective Acoustic Comparison of Different Speaker Categories** Published

Zenker, B., [Merchel, S.](#) & [Altinsoy, M. E.](#), 2019.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

› **The natural variability of spruce soundboards: Perceptual differences in the tonal quality of acoustic guitars** Published

[Merchel, S.](#), Olson, D. & [Altinsoy, M.](#), 2019.

*Research output: Contribution to conferences › Paper › Contributed*

› **The Precedence Effect in Scenarios with Projected Sound** Published

[Wühle, T.](#), [Merchel, S.](#) & [Altinsoy, M. E.](#), 2019, In: [AES: Journal of the Audio Engineering Society](#). 3, p. 1-9 9 p.

*Research output: Contribution to journal › Research article › Contributed › peer-review*

## 2018

› **Auditory-Tactile Experience of Music** Published

[Merchel, S.](#) & [Altinsoy, M. E.](#), 2018, *Musical Haptics*.

*Research output: Contribution to book/conference proceedings/anthology/report › Chapter in book/anthology/report › Contributed › peer-review*

› **Dodekaederlautsprecher mittels 3D-Druck** Published

[Merchel, S.](#), Volkmann, J., Nicht, A., [Beyer, F.](#) & [Altinsoy, M. E.](#), 2018.

*Research output: Contribution to conferences › Paper › Contributed*

› **Evaluation of the frequency dependent influence of direct sound on the effect of sound projection** Published

[Wühle, T.](#), [Merchel, S.](#) & [Altinsoy, M. E.](#), 2018.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

› **Identification and Evaluation of Perceptual Attributes for Periodic Whole-Body and Hand-Arm Vibration** Published

[Rosenkranz, R.](#), Gruschwitz, S., Wilberg, M., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2018.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

- › **Influence of the frequency dependent directivity of a sound projector on the localization of projected sound** Published

[Merchel, S.](#), Reichmann, F., [Wühle, T.](#) & [Altinsoy, M.Ercan](#), 2018.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

- › **Intensity Perception for Complex Vertical Whole-Body Vibration** Published

Schwendicke, A., Cheng, S., Yu, X., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2018.

*Research output: Contribution to conferences › Paper › Contributed*

- › **Perceptually Optimized Signal Processing for Vibro-Acoustical Music Reproduction** Published

[Merchel, S.](#) & [Altinsoy, M.](#), 2018.

*Research output: Contribution to conferences › Paper › Contributed*

- › **Touchscreens and Musical Interaction** Published

[Altinsoy, M. E.](#) & [Merchel, S.](#), 2018, *Musical Haptics*.

*Research output: Contribution to book/conference proceedings/anthology/report › Chapter in book/anthology/report › Contributed › peer-review*

- › **Untersuchung zum Einfluss des direkten Schallanteils auf die Richtung von Hörereignissen in Wiedergabeszenarios mit projizierten Schallquellen** Published

[Wühle, T.](#), [Maravich, M. M.](#), [Merchel, S.](#) & [Altinsoy, M. E.](#), 2018.

*Research output: Contribution to conferences › Paper › Contributed*

## 2017

- › **Evaluation of auditory events with projected sound sources using perceptual attributes** Published

[Wühle, T.](#), [Merchel, S.](#) & [Altinsoy, M.Ercan](#), 2017.

*Research output: Contribution to conferences › Paper › Contributed*

› **freeDSPx AMP x4: Ein kostengünstiges, quelloffenes Mehrkanal - Audioverstärkermodul** Published

[Wühle, T.](#), [Merchel, S.](#), [Altinsoy, M. E.](#) & Steiner, S., 2017.

*Research output: Contribution to conferences › Paper › Contributed*

› **Implementierung eines Ionenwindlautsprechers ohne Plasmaflamme** Published

[Merchel, S.](#), Creutzburg, L., Schwock, A., Fleck, T. & [Altinsoy, M. E.](#), 2017.

*Research output: Contribution to conferences › Paper › Contributed*

› **Makerspace Lautsprecher AG - Praxisnahes Lernen am Lehrstuhl für Akustik und Haptik** Published

[Merchel, S.](#) & [Altinsoy, M. E.](#), 2017.

*Research output: Contribution to conferences › Paper › Contributed*

› **Nutzung von Wahrnehmungsmerkmalen zur Charakterisierung von amplitudenmodulierten sinusoidalen Ganzkörperschwingungen** Published

[Rosenkranz, R.](#), Gruschwitz, S., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2017.

*Research output: Contribution to conferences › Paper › Contributed*

› **Spüren Sie den Unterschied? - Zeitliche Maskierung für vertikale Ganzkörperschwingungen** Published

Schwendicke, A., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2017.

*Research output: Contribution to conferences › Paper › Contributed*

## 2016

› **Comparison of the Perceived Intensity of Time-varying Signals in the Tactile and Auditory Domain** Published

[Merchel, S.](#), Dou, J. & [Altinsoy, M. E.](#), 2016.

*Research output: Contribution to conferences › Paper › Contributed*



- › **Konzept und Prototyp eines Ionenwindlautsprechers** Published  
[Merchel, S.](#), Creutzburg, L., Schwock, A., Fleck, T. & [Altinsoy, M. E.](#), 2016.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Untersuchungen zur Wahrnehmung projizierter Schallquellen** Published  
[Wühle, T.](#), [Merchel, S.](#) & [Altinsoy, M. E.](#), 2016.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Vergleich der Intensität zeitabhängiger Signale in der taktilen und auditiven Wahrnehmung** Published  
[Merchel, S.](#), Jing, D. & [Altinsoy, M. E.](#), 2016.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Wahrnehmungsmerkmale von breitbandigen Ganzkörperschwingungen im Vergleich zu sinusoidalen Ganzkörperschwingungen** Published  
[Rosenkranz, R.](#), Gruschwitz, S., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2016.  
*Research output: Contribution to conferences › Paper › Contributed*

## 2015

- › **IEEE TRANSACTIONS ON HAPTICS, MANUSCRIPT ID 1 Electrotactile Feedback for Handheld Devices with Touch-Screen and Simulation of Roughness** Published  
[Altinsoy, M. E.](#) & [Merchel, S.](#), 22 Oct 2015, In: [IEEE Transactions on Haptics](#).  
*Research output: Contribution to journal › Research article › Contributed › peer-review*
- › **Tactile intensity perception compared to auditory loudness perception** Published  
[Merchel, S.](#), [Altinsoy, M. E.](#) & Schwendicke, A., 26 Jun 2015, *2015 IEEE World Haptics Conference (WHC)*. IEEE Press, p. 356-361 6 p. 7177738  
*Research output: Contribution to book/conference proceedings/anthology/report › Conference contribution › Contributed › peer-review*

- › **Designing Auditory-Tactile Perception of Music** Published  
[Merchel, S.](#) & [Altinsoy, M. E.](#), 2015.  
*Research output: Contribution to conferences › Paper › Contributed › peer-review*
- › **Entwicklung eines Softwarecoders mit Hilfe der wertschöpfungsübergreifenden Lead User Methode** Published  
Marx, P., [Merchel, S.](#), [Altinsoy, M. E.](#), Reinhardt, R. & Schefcyk, M., 2015.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **freeDSP - ein quelloffenes DIY Audioprocessorboard** Published  
[Merchel, S.](#) & Kormann, L., 2015.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Untersuchung der Pegelabhängigkeit von Wahrnehmungsmerkmalen von Ganzkörperschwingungen** Published  
[Rosenkranz, R.](#), [Altinsoy, M. E.](#) & [Merchel, S.](#), 2015.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Vergleich verschiedener Lautsprecherzeilen im Nahfeld** Published  
[Wühle, T.](#), [Merchel, S.](#) & [Altinsoy, M. E.](#), 2015.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Vibro-Acoustical Sound Reproduction in Cars** Published  
[Merchel, Sebastian](#), [Altinsoy, M. E.](#), Kaule, D. & Volkmar, C., 2015.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Vibroakustische Audiowiedergabe im KFZ** Published  
[Merchel, S.](#), [Altinsoy, M. E.](#), Kaule, D. & Volkmar, C., 2015.  
*Research output: Contribution to conferences › Paper › Contributed*

- › **Was fühlen wir noch? - Ganzkörperschwingungsfühlschwellen für hohe Frequenzen** Published  
Schwendicke, A., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2015.  
*Research output: Contribution to conferences › Paper › Contributed*

## 2014

- › **Auditory-Tactile Music Perception** Published  
[Sebastian, M.](#), 2014  
*Research output: Book/Report/Anthology › Monograph › Contributed*

- › **Comparison of Different Loudspeaker Arrays in the Near-Field** Published  
[Wühle, T.](#), [Merchel, S.](#) & [Altinsoy, M. Ercan](#), 2014.  
*Research output: Contribution to conferences › Paper › Contributed*

- › **Der Einfluss von Vibrationen auf den bevorzugten Basspegel bei der Musikdarbietung** Published  
[Merchel, S.](#), Caspari, A. & [Altinsoy, M. E.](#), 2014.  
*Research output: Contribution to conferences › Paper › Contributed*

- › **Freedsp: An Open-Source Low-Budget Audio DSP Board** Published  
[Merchel, S.](#) & Kormann, L., 2014.  
*Research output: Contribution to conferences › Paper › Contributed › peer-review*

- › **Modifying the Virtual Acoustical Room Size in an CAVE Echoic Environment** Published  
[Altinsoy, M. E.](#), Gürtler, T. & [Merchel, S.](#), 2014.  
*Research output: Contribution to conferences › Paper › Contributed*

› **The Influence of Vibrations on Musical Experience** Published

[Merchel, S.](#) & [Altinsoy, M. E.](#), 2014, In: [AES: Journal of the Audio Engineering Society](#). 4, p. 1-15 15 p.

*Research output: Contribution to journal › Research article › Contributed › peer-review*

› **The Influence of Vibrations on the Preferred Bass Equalization in an Audio System** Published

[Merchel, S.](#), Caspari, A. & [Altinsoy, M. E.](#), 2014.

*Research output: Contribution to conferences › Paper › Contributed*

## 2013

› **Auditory-Tactile Music Perception** Published

[Merchel, S.](#) & [Altinsoy, M. E.](#), 2013.

*Research output: Contribution to conferences › Paper › Contributed*

› **Der Einfluss von Vibrationen auf die Konzertwahrnehmung** Published

[Merchel, S.](#) & [Altinsoy, M. E.](#), 2013.

*Research output: Contribution to conferences › Paper › Contributed*

› **Music-induced Vibrations in a Concert Hall and a Church** Published

[Merchel, S.](#) & [Altinsoy, M. E.](#), 2013, 6 p.

*Research output: Other contribution › Other › Contributed › peer-review*

› **Nutzung von taktilen semantischen Informationen zur Synthese von plausiblen Ganzkörperschwingungen** Published

[Rosenkranz, R.](#), [Altinsoy, M. E.](#), Stamm, M. & [Merchel, S.](#), 2013.

*Research output: Contribution to conferences › Paper › Contributed*

› **Perceptual Evaluation of Violin Vibrations and Audio-tactile Interaction.** Published  
[Altinsoy, M. E.](#), [Merchel, S.](#) & Tilsch, S., 2013.  
*Research output: Contribution to conferences › Paper › Contributed*

› **Vibration in Music Perception** Published  
[Merchel, S.](#) & [Altinsoy, M. E.](#), 2013.  
*Research output: Contribution to conferences › Paper › Contributed › peer-review*

## 2012

› **Electrotactile Feedback for Handheld Devices with Touch Screen and Simulation of Roughness** Published  
[Altinsoy, M. E.](#) & [Merchel, S.](#), 1 Mar 2012, In: [IEEE Transactions on Haptics](#). 5, 1, p. 6-13 8 p., 6042861.  
*Research output: Contribution to journal › Research article › Contributed › peer-review*

› **Akustische Synthese für die Erweiterung von Force-Feedback zur virtuellen Form- und Objekterkennung** Published  
Stamm, M., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2012.  
*Research output: Contribution to conferences › Paper › Contributed*

› **Der Konzertsaal bebt - Vibroakustische Messungen in der Dresdner Semperoper** Published  
[Merchel, S.](#) & [Altinsoy, M. E.](#), 2012.  
*Research output: Contribution to conferences › Paper › Contributed*

› **Lokalisation in virtuellen Arbeitsbereichen** Published  
Stamm, M., [Altinsoy, M. E.](#), [Merchel, S.](#) & [Rosenkranz, R.](#), 2012.  
*Research output: Contribution to conferences › Paper › Contributed*

- › **Taktile Wahrnehmung im Kontext multimodaler virtueller Umgebungen** Published  
[Rosenkranz, R.](#), [Altinsoy, M. E.](#), Stamm, M. & [Merchel, S.](#), 2012.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Touch the Sound: Audio-Driven Tactile Feedback for Audio Mixing Applications** Published  
[Merchel, S.](#), [Altinsoy, M. E.](#) & Stamm, M., 2012, In: [AES: Journal of the Audio Engineering Society](#). 1/2, p. 47-53 7 p.  
*Research output: Contribution to journal › Research article › Contributed › peer-review*

## 2011

- › **Electrotactile feedback for handheld devices with touch screen — Texture reproduction** Published  
[Altinsoy, M. E.](#) & [Merchel, S.](#), 12 Jan 2011, *2011 IEEE International Conference on Consumer Electronics (ICCE)*. IEEE Press, p. 59-60 2 p. 5722761  
*Research output: Contribution to book/conference proceedings/anthology/report › Conference contribution › Contributed › peer-review*
- › **Application of Audiotactile Intensity Interaction on Touch-Screens** Published  
[Altinsoy, M. E.](#) & [Merchel, S.](#), 2011.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Audiotaktile Interaktion und neue Steuerungssysteme** Published  
[Altinsoy, M. E.](#), [Merchel, S.](#) & Stamm, S., 2011, 2 p.  
*Research output: Other contribution › Other › Contributed › peer-review*
- › **Auditory Enhancement of Haptic Force-Feedback for Discriminating Virtual Curved Surfaces** Published  
Stamm, M., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2011.  
*Research output: Contribution to conferences › Paper › Contributed*

- **BRTF (Body Related Transfer Function) and Whole-body Vibration Reproduction Systems** Published  
[Altinsoy, M. E.](#) & [Merchel, S.](#), 2011.  
*Research output: Contribution to conferences › Paper › Contributed › peer-review*
- **Einfluss der Hörereignisrichtung auf die Schätzung virtueller Längen** Published  
Stamm, M., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2011.  
*Research output: Contribution to conferences › Paper › Contributed*
- **Equal Intensity Contours for Whole-Body Vibrations Compared with Vibrations Cross-Modally Matched to Isophones** Published  
[Merchel, S.](#), [Altinsoy, M. E.](#) & Stamm, M., 2011, *Haptic and Audio Interaction Design, LNCS 6851*. Berlin, Germany  
*Research output: Contribution to book/conference proceedings/anthology/report › Chapter in book/anthology/report › Contributed › peer-review*
- **Evaluating Kinesthetic Feedback and Its Audio-tactile Extension for Virtual Shape and Object Identification** Published  
Stamm, M., [Altinsoy, M. E.](#), [Merchel, S.](#) & [Rosenkranz, R.](#), 2011.  
*Research output: Contribution to conferences › Paper › Contributed*
- **Feeling the Sound: Audio-tactile Intensity Perception** Published  
[Merchel, S.](#), Schwendicke, A. & [Altinsoy, M. E.](#), 2011.  
*Research output: Contribution to conferences › Paper › Contributed*
- **Influence of the Auditory Localization Direction on the Haptic Estimation of Virtual Length** Published  
Stamm, M., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2011, *Haptic and Audio Interaction Design, LNCS 6851*. Berlin, Germany  
*Research output: Contribution to book/conference proceedings/anthology/report › Chapter in book/anthology/report › Contributed › peer-review*

- › **Just-Noticeable Frequency Differences for Whole-Body Vibrations** Published  
[Merchel, S.](#), [Altinsoy, M. E.](#) & Stamm, M., 2011.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Sweetspotter - Releasing the Stereophonic Listener from Its Static Hearing Position** Published  
[Merchel, S.](#), 2011.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Tactile Identification of Non-Percussive Music Instruments** Published  
[Merchel, S.](#), [Altinsoy, M. E.](#) & Stamm, M., 2011.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Vorrichtung und Verfahren zur adaptiven Anpassung des Singularwiedergabebereichs in stereophonen Schallwiedergabesystemen an Hörpositionen: Praktische Erprobung** Published  
[Altinsoy, M. E.](#), [Merchel, S.](#) & [Altinsoy, M. E.](#), 2011, Patent No. DE102009015174A1  
*Research output: Intellectual Property › Patent application/Patent*

## 2010

- › **Adaptive Adjustment of the "Sweet Spot" for Head Rotation** Published  
[Merchel, S.](#) & Groth, S., 2010.  
*Research output: Contribution to conferences › Paper › Contributed*
- › **Adaptively Adjusting the Stereophonic Sweet Spot to the Listener's Position** Published  
[Merchel, S.](#) & Groth, S., 2010, In: [AES: Journal of the Audio Engineering Society](#). 10, p. 809-817 9 p.  
*Research output: Contribution to journal › Research article › Contributed › peer-review*



› **Apparatus for Processing and Reproducing Signals in Electronic Systems for Electrotactile Stimulation: Prototype** Published

[Altinsoy, M. E.](#), [Merchel, S.](#) & [Altinsoy, M. E.](#), 2010

*Research output: Intellectual Property › Patent application/Patent*

› **Automatische Anpassung des stereophonen Sweetspots bei Kopfdrehung** Published

[Merchel, S.](#) & Groth, S., 2010.

*Research output: Contribution to conferences › Paper › Contributed*

› **Cross-Modal Frequency Matching: Sound and Whole-Body Vibration** Published

[Altinsoy, M. E.](#) & [Merchel, S.](#), 2010, *Haptic and Audio Interaction Design, LNCS 6306*.

Berlin, Germany

*Research output: Contribution to book/conference proceedings/anthology/report ›*

*Chapter in book/anthology/report › Contributed › peer-review*

› **Cross-Modality Matching of Loudness and Perceived Intensity of Whole-Body Vibrations** Published

[Merchel, S.](#) & [Altinsoy, M. E.](#), 2010, *Haptic and Audio Interaction Design, LNCS 6306*.

Berlin, Germany

*Research output: Contribution to book/conference proceedings/anthology/report ›*

*Chapter in book/anthology/report › Contributed › peer-review*

› **Einfluss des audiotaktilen Feedbacks auf die Qualität von Touchscreens für Digital Audio Workstations** Published

[Altinsoy, M. E.](#) & [Merchel, S.](#), 2010.

*Research output: Contribution to conferences › Paper › Contributed*

› **Frequenzwahrnehmung von Ganzkörperschwingungen im Vergleich zur auditiven Wahrnehmung I** Published

Stamm, M., [Altinsoy, M. E.](#) & [Merchel, S.](#), 2010.

*Research output: Contribution to conferences › Paper › Contributed*

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[Altinsoy, M. E.](#), Stamm, M. & [Merchel, S.](#), 2010.

*Research output: Contribution to conferences › Paper › Contributed*

➤ **Multisensorische Interaktion im Fahrzeug: Audio-Taktile Intensitätswahrnehmung** Published

[Merchel, S.](#), [Altinsoy, M. E.](#) & Leppin, A., 2010.

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[Altinsoy, M. E.](#), Jekosch, U., Landgraf, J. & [Merchel, S.](#), 2010.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

➤ **Tactile Music Instrument Recognition for Audio Mixers** Published

[Merchel, S.](#), [Altinsoy, M. E.](#) & Stamm, M., 2010.

*Research output: Contribution to conferences › Paper › Contributed › peer-review*

➤ **Touch the Sound: Audio-Driven Tactile Feedback for Audio Mixing Applications** Published

[Merchel, S.](#), [Altinsoy, M. E.](#) & Stamm, M., 2010.

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TU Dresden is co-financed by tax funds using the budget approved by the Landtag of the Free State of Saxony.

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