

Audio Engineering Society

123<sup>rd</sup> Audio Engineering  
Society Convention  
2007

October 5 - 8, 2007  
New York, NY, USA

Volume 1 of 3

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571  
[www.proceedings.com](http://www.proceedings.com)

ISBN: 978-1-60423-902-7

**Some format issues inherent in the e-media version may also appear in this print version.**

Audio Engineering Society

# Convention Papers

This CD-ROM has been produced from the authors' advance manuscripts, without editing, corrections, or consideration by the Review Board. The AES takes no responsibility for the content. All rights reserved. Individual articles may be copied or printed singly for use in research or teaching, or for personal use. Redistribution or resale of the content is not permitted.

Audio Engineering Society

123<sup>rd</sup> Audio Engineering Society Convention  
2007

## TABLE OF CONTENTS

### VOLUME I

<b>A Note on the Implementation of Directive Sources in Discrete Time-Domain Dispersive Meshes for Room Acoustic Simulation</b> .....	1
<i>Cobos, Maximo; Escolano, José; López, José J.; Pueo, Basilio</i>	
<b>Addressing the Discrepancy Between Measured and Modeled Impulse Responses for Small Rooms</b> .....	10
<i>Chen, Zhixin; Maher, Rob</i>	
<b>Scattering Uniformity Measurements and First Reflection Analysis in a Large Non-Anechoic Environment</b> .....	24
<i>Conti, Lorenzo; Farina, Angelo; Galaverna, Paolo; Martignon, Paolo; Rizzi, Lorenzo; Rosati, Andrea</i>	
<b>Acoustics in Pop and Rock Music Halls</b> .....	38
<i>Adelman-Larsen, Niels W.; Gade, Anders C.; Thompson, Eric R.</i>	
<b>Comparison of Simulated and Measured HRTFs: FDTD Simulation Using MRI Head Data</b> .....	46
<i>Kato, Hiroaki; Mokhtari, Parham; Nishimura, Ryouichi; Takemoto, Hironori</i>	
<b>Analysis of Edge Boundary Conditions on Multiactuator Panels</b> .....	58
<i>Bleda, Sergio; Escolano, José; López, José J.; Pueo, Basilio</i>	
<b>Rendering of Virtual Sound Sources with Arbitrary Directivity in Higher Order Ambisonics</b> .....	65
<i>Ahrens, Jens; Spors, Sascha</i>	
<b>The III-Conditioning Problem in Sound Field Reconstruction</b> .....	74
<i>Fazi, Filippo M.; Nelson, Philip A.</i>	
<b>A Simple Simulation of Acoustic Radiation from a Vibrating Object</b> .....	86
<i>Maxwell, Cynthia Bruyns</i>	
<b>A New Methodology for the Acoustic Design of Compression Driver Phase-Plugs with Concentric Annular Channels</b> .....	99
<i>Dodd, Mark; Ocleo-Brown, Jack</i>	
<b>Damping of an Electrodynamical Loudspeaker by Air Viscosity and Turbulence</b> .....	120
<i>Djurek, Danijel; Djurek, Ivan; Petosic, Antonio</i>	
<b>Intrinsic Membrane Friction and Onset of Chaos in an Electrodynamical Loudspeaker</b> .....	130
<i>Djurek, Danijel; Djurek, Ivan; Petosic, Antonio</i>	
<b>Simulating the Directivity Behavior of Loudspeakers with Crossover Filters</b> .....	135
<i>Ahnert, Wolfgang; Feistel, Stefan; Hughes, Charles; Olson, Bruce</i>	
<b>Improvement of One-Dimensional Loudspeaker Enclosure Models</b> .....	154
<i>Backman, Juha</i>	

<b>A Computational Model for Optimizing Microphone Placement on Headset Mounted Arrays</b> .....	185
<i>Carneal, Jamie;Gillett, Philip;Johnson, Marty</i>	
<b>Energetic Sound Field Analysis of Stereo and Multichannel Loudspeaker Reproduction</b> .....	194
<i>Merimaa, Juha</i>	
<b>Suppression of Musical Noise Artifacts in Audio Noise Reduction by Adaptive 2D Filtering</b> .....	204
<i>Alexey Lukin, Jeremy Todd</i>	
<b>A Study of Hearing Damage Caused by Personal MP3 Players</b> .....	211
<i>Farina, Adriano</i>	
<b>Electret Receiver for In-Ear Earphone</b> .....	218
<i>Chen, Yan-Ren;Chiang, Dar-Ming;Lee, I-Chen;Lin, Shu-Ru</i>	
<b>Immersive Auditory Environments for Teaching and Learning</b> .....	223
<i>Parvin, Elizabeth A.</i>	
<b>New Generation Artificial Larynx</b> .....	233
<i>Czyzewski, Andrzej;Kostek, Bozena;Ody, Piotr;Szczyko, Piotr</i>	
<b>A Graphical, Motion-Based Method for Exploring Spectra Containing Harmonics, Sidebands and Other Patterns</b> .....	238
<i>Catravas, Palmyra</i>	
<b>Loudspeaker Systems for Flat Television Sets</b> .....	248
<i>Behrends, Herwig;Bradinal, Werner;Heinsberger, Christoph</i>	
<b>Loudspeakers for Flexible Displays</b> .....	256
<i>Ando, Akio;Hara, Akira;Kurozumi, Kohichi;Miura, Akito;Morita, Yuichi;Ono, Kazuho;Sugimoto, Takehiro</i>	
<b>A System for Remote Control of the Height of Suspended Microphones</b> .....	266
<i>McKinnie, Douglas</i>	
<b>Software Based Live Sound Measurements – Part 2</b> .....	271
<i>Ahnert, Wolfgang;Feistel, Stefan;Finder, Enno;Miron, Alexandru Radu</i>	
<b>Music at Your Fingertips: An Electrotactile Fader</b> .....	285
<i>Loviscach, Joern</i>	
<b>A Very Low Bit Rate Protection Layer to Increase the Robustness of the AMR-WB+ Codec Against Bit Errors</b> .....	293
<i>Gournay, Philippe</i>	
<b>Trellis Based Approach for Joint Optimization of Window Switching Decisions and Bit Resource Allocation</b> .....	311
<i>Melkote, Vinay;Rose, Kenneth</i>	
<b>Transcoding of Dynamic Range Control Coefficients and Other Metadata Into MPEG-4 HE AAC</b> .....	321
<i>Krauss, Kurt;Rödén, Jonas;Schildbach, Wolfgang</i>	
<b>Quality Impact of Diotic Versus Monaural Hearing on Processed Speech</b> .....	329
<i>Arnault, Nagle;Battistello, Anne;Quinquis, Catherine;Slock, Dirk;Sollaud, Aurelien</i>	
<b>Network Music Performance with Ultra-Low-Delay Audio Coding Under Unreliable Network Conditions</b> .....	338
<i>Carot, Alexander;Jens, Hirschfeld;Kraemer, Ulrich;Schuller, Gerald;Wabnik, Stefan;Werner, Christian</i>	

<b>A Study of the MPEG Surround Quality Versus Bit-Rate Curve .....</b>	<b>349</b>
<i>Breebaart, Jeroen;Hilpert, Johannes;Hölzer, Andreas;Koppens, Jeroen;Linzmeier, Karsten;Purnhagen, Heiko;Rödén, Jonas;Schuijers, Erik</i>	
<b>Advanced Audio for Advanced IPTV Services.....</b>	<b>364</b>
<i>Vlaicu, Roland</i>	
<b>A Novel Audio Post-Processing Toolkit for the Enhancement of Audio Signals Coded at Low Bit Rates.....</b>	<b>371</b>
<i>Annadana, Raghuram;E.V., Harinarayanan;Ferreira, Anibal;Sinha, Deepen</i>	
<b>Subjective Evaluation of the Immersive Sound Field Rendition (ISR) System and Recent Enhancements.....</b>	<b>378</b>
<i>Annadana, Raghuram;Dubey, Chandresh;Ferreira, Anibal;Sinha, Deepen</i>	
<b>Music Information Retrieval in Broadcasting : Some Visual Applications .....</b>	<b>389</b>
<i>Evans, Michael J.;Mason, Andrew;Sheikh, Alia</i>	
<b>Content Management Using Native XML and XML-Enabled Database Systems in Conjunction with XML Metadata Exchange Standards.....</b>	<b>403</b>
<i>Sincaglia, Nicolas</i>	
<b>Music Structure Segmentation Using the Azimugram in Conjunction with Principal Component Analysis .....</b>	<b>411</b>
<i>Barry, Dan;Coyle, Eugene;Gainza, Mikel</i>	
<b>Using the Semantic Web for Enhanced Audio Experiences .....</b>	<b>418</b>
<i>Raimond, Yves;Sandler, Mark</i>	
<b>Applications of ENF Analysis Method in Forensic Authentication of Digital Audio and Video Recordings .....</b>	<b>430</b>
<i>Grigoras, Catalin</i>	
<b>Further Investigation into the ENF Criterion for Forensic Authentication.....</b>	<b>443</b>
<i>Brixen, Eddy B.</i>	
<b>Experiment in Computational Voice Elimination Using Formant Analysis .....</b>	<b>449</b>
<i>Begault, Durand R.</i>	
<b>Quantifying the Speaking Voice: Generating a Speaker Code as a Means of Speaker Identification using a Simple Code-Matching Technique .....</b>	<b>456</b>
<i>Popolo, Peter S.;Sanders, Richard W.;Titze, Ingo R.</i>	
<b>Improved Stereo Imaging in Automobiles.....</b>	<b>469</b>
<i>Smithers, Michael J.</i>	
<b>Recursive Natural Sampling for Digital PWM .....</b>	<b>477</b>
<i>Midya, Pallab;Paulo, Theresa;Roeckner, Bill</i>	
<b>Generation of Variable Frequency Digital PWM .....</b>	<b>484</b>
<i>Midya, Pallab</i>	
<b>A Listening Test System for Automotive Audio - Part 4: Comparison of Attribute Ratings Made by Expert and Non-Expert Listeners .....</b>	<b>494</b>
<i>Choisel, Sylvain;Christensen, Flemming;Ellermeier, Wolfgang;Ghani, Jody;Hegarty, Patrick;Pedersen, Benjamin;Song, Wookeun</i>	
<b>A Listening Test System for Automotive Audio – Part 3: Comparison of Attribute Ratings Made in a Vehicle with Those Made Using an Auralisation System.....</b>	<b>511</b>
<i>Bech, Søren;Choisel, Sylvain;Hegarty, Patrick</i>	
<b>The Application of Direct Digital Feedback for Amplifier System Control .....</b>	<b>530</b>
<i>Bell, Craig;Jones, David;Watts, Robert</i>	

<b>Room Reflections Misunderstood?</b> .....	538
<i>Linkwitz, Siegfried</i>	

<b>Headphone Transparification: A Novel Method for Investigating the Externalisation of Binaural Sounds</b> .....	555
<i>Moore, Alastair H.;Nicol, Rozenn;Tew, Anthony I.</i>	

## VOLUME II

<b>Localisation in Spatial Audio - From Wave Field Synthesis to 22.2</b> .....	564
<i>Korn, Thomas;Kunze, Kristina;Liebetrau, Judith;Mank, Christoph;Marquard, Daniel;Matheja, Timo;Mauer, Stephan;Mayenfels, Thomas;Möller, Robert;Schnabel, Michael-Andreas;Slobbe, Benjamin;Sporer, Thomas;Ueberschaer, Andreas</i>	

<b>On the Sound Colour Properties of Wavefield Synthesis and Stereo</b> .....	573
<i>Rumsey, Francis;Theile, Günther;Wittek, Helmut</i>	

<b>Thresholds for Discriminating Upward from Downward Trajectories for Smooth Virtual Source Motion Within a Sagittal Plane</b> .....	600
<i>Benson, David H.;Martens, William L.;Scavone, Gary P.</i>	

<b>Aspects of Reverberation Echo Density</b> .....	617
<i>Abel, Jonathan S.;Huang, Patty</i>	

<b>Multiple Regression Modeling of the Emotional Content of Film and Music</b> .....	624
<i>Chew, Elaine;Kyriakakis, Chris;Parke, Rob</i>	

<b>Short-term Memory for Musical Intervals: Cognitive Differences for Consonance and Dissonant Pure-tone Dyads</b> .....	634
<i>Levitin, Daniel J.;Rogers, Susan E.</i>	

<b>On the Use of Graphic Scales in Modern Listening Tests</b> .....	639
<i>Brooks, Peter;Rumsey, Francis;Zielinski, Slawomir</i>	

<b>Potential Biases in MUSHRA Listening Tests</b> .....	652
<i>Hardisty, Philip;Hummersone, Christopher;Rumsey, Francis;Zielinski, Slawomir</i>	

<b>Measurements and Perception of Nonlinear Distortion – Comparing Numbers and Sound Quality</b> .....	662
<i>Voishvillo, Alex</i>	

<b>Influence of Loudness Level on the Overall Quality of Transmitted Speech</b> .....	677
<i>Gautier-Turbin, Valérie;Möller, Sebastian;Nicolas, Côté</i>	

<b>Subjective and Objective Rating of Intelligibility of Speech Recordings</b> .....	685
<i>Bradley, John S.;Gover, Bradford N.</i>	

<b>A Model-Based Technique for the Perceptual Optimization of Multi-Modal Musical Performances</b> .....	697
<i>Braasch, Jonas;Valente, Daniel L.</i>	

<b>The Effects of Latency on Live Sound Monitoring</b> .....	704
<i>Boley, Jon;Lester, Michael</i>	

<b>Evaluating Off-Center Sound Degradation in Surround Loudspeaker Setups for Various Multichannel Microphone Techniques</b> .....	724
<i>Braasch, Jonas;McAdams, Stephen;Peters, Nils</i>	

<b>Interaction between Loudspeakers and Room Acoustics Influences Loudspeaker Preferences in Multichannel Audio Reproduction</b> .....	744
<i>Martens, William L.;Olive, Sean E.</i>	

<b>A Perforated Desk Surface to Diminish Coloration in Desktop Audio-Production Environments .....</b>	<b>773</b>
<i>Braasch, Jonas;Calamia, Paul;Gentner, Karl</i>	
<b>Perceptually Modelled Effects of Interchannel Crosstalk in Multichannel Microphone Technique.....</b>	<b>797</b>
<i>Lee, Hyun-Kook;Mason, Russell;Rumsey, Francis</i>	
<b>Deriving Physical Predictors for Auditory Attribute Ratings Made in Response to Multichannel Music Reproductions .....</b>	<b>816</b>
<i>Kim, Sungyoung;Martens, William L.</i>	
<b>Modelling of Non-Linearities in Electrodynamic Loudspeakers.....</b>	<b>826</b>
<i>Bard, Delphine;Sandberg, Göran</i>	
<b>Listening Tests of the Localization Performance of Stereodipole and Ambisonic Systems.....</b>	<b>833</b>
<i>Adriaensen, Fons;Capra, Andrea;Farina, Angelo;Fontana, Simone</i>	
<b>Round Robin Comparison of HRTF Simulation Systems: Preliminary Results.....</b>	<b>843</b>
<i>Greff, Raphaël;Katz, Brian F.G.</i>	
<b>Simulation of Complex and Large Rooms Using a Digital Waveguide Mesh.....</b>	<b>848</b>
<i>Escolano, José;López, José J.;Pueo, Basilio</i>	
<b>The Flexible Bass Absorber.....</b>	<b>861</b>
<i>Adelman-Larsen, Niels W.;Gade, Anders C.;Thompson, Eric R.</i>	
<b>The Relation Between Active Radiating Factor and Frequency Responses of Loudspeaker Line Arrays - Part 2.....</b>	<b>869</b>
<i>An, Kang;Ou, Dayi;Shen, Yong</i>	
<b>Time Varying Behaviour of the Loudspeaker Suspension.....</b>	<b>876</b>
<i>Agerkvist, Finn T.;Pedersen, Bo Rohde</i>	
<b>Diffusers with Extended Frequency Range.....</b>	<b>883</b>
<i>Angus, Jamie A.S.;Cox, Trevor J.;Dadiotis, Konstantinos</i>	
<b>Digital Waveguide Mesh Reverberator with Internal Decay and Diffusion Structures .....</b>	<b>890</b>
<i>Abel, Jonathan S.;Huang, Patty;Smith, Julius O., III</i>	
<b>A Tutorial: Fiber Optic Cables and Connectors for Pro-Audio .....</b>	<b>897</b>
<i>Ajemian, Ronald G.</i>	
<b>Using Audio Classifiers as a Mechanism for Content Based Song Similarity .....</b>	<b>919</b>
<i>Casey, Michael;Fields, Benjamin</i>	
<b>The Most Appropriate Method of Producing TV Program Audio Focusing on the Audience.....</b>	<b>927</b>
<i>Fukada, Akira;Kouchi, Hiroshi;Ohmata, Hisayuki</i>	
<b>Beyond Splicing: Technical Ear Training Methods Derived from Digital Audio Editing Techniques.....</b>	<b>937</b>
<i>Corey, Jason</i>	
<b>Pump Up the Volume: Enhancing Music Phone Audio Quality and Power Using a Supercapacitor for Power Management.....</b>	<b>945</b>
<i>Mars, Pierre</i>	
<b>New Trends in Sound Reinforcement Systems Based on Digital Technology .....</b>	<b>954</b>
<i>Dziechcinski, Pawel;Grzadziel, Wojciech;Kozlowski, Piotr Z.</i>	

<b>Digital Audio Processing on a Tiny Scale: Hardware and Software for Personal Devices</b> .....	961
<i>Eastty, Peter</i>	
<b>Enhancing End-User Capabilities in High Speed Audio Networks</b> .....	976
<i>Chigwamba, Nyasha;Foss, Richard</i>	
<b>Sharing Acoustic Spaces Over Telepresence Using Virtual Microphone Control</b> .....	988
<i>Braasch, Jonas;Peters, Nils;Valente, Daniel L.</i>	
<b>Impact of Equalizing Ear Canal Transfer Function on Out-Of-Head Sound Localization</b> .....	996
<i>Hokari, Haruhide;Kudo, Akihiro;Shimada, Shoji;Yoshida, Masataka</i>	
<b>A Method for Estimating the Direction of Sound Image Localization for Designing a Virtual Sound Image Localization Control System</b> .....	1004
<i>Obata, Kensaku;Ohta, Yoshiaki</i>	
<b>A Preliminary Experimental Study on Perception of Movement of a Focused Sound Using a 16 Channel Loudspeaker Array</b> .....	1010
<i>Ashihara, Kaoru;Horiguchi, Ryoza;Ichiki, Manon;Kiryu, Shogo;Oto, Teruki;Sato, Daiki</i>	
<b>Perceptual Categories of Artificial Reverberation for Headphone Reproduction of Music</b> .....	1015
<i>Marui, Atsushi</i>	
<b>Correspondence Relationship Between Physical Factors and Psychological Impressions of Microphone Arrays for Orchestra Recording</b> .....	1032
<i>Irimajiri, Hideo;Kamekawa, Toru;Marui, Atsushi</i>	
<b>Assessment of the Quality of Digital Audio Reproduction Devices by Panels of Listeners of Different Professional Profiles</b> .....	1045
<i>Kleczkowski, Piotr;Piotrowski, Szymon;Pluta, Marek</i>	
<b>Towards Textual Annotation of Rhythmic Style in Electronic Dance Music</b> .....	1056
<i>Davies, Matthew;Jacobson, Kurt;Sandler, Mark</i>	
<b>Key-Independent Classification of Harmonic Change in Musical Audio</b> .....	1061
<i>Bello, Juan Pablo;Li, Ernest</i>	
<b>Automatic Bar Line Segmentation</b> .....	1069
<i>Barry, Dan;Coyle, Eugene;Gainza, Mikel</i>	
<b>The Analysis and Determination of the Tuning System in Audio Musical Signals</b> .....	1076
<i>Heydarian, Peyman;Jones, Lewis;Seago, Allan</i>	
<b>Dynamic Bit-Rate Adaptation for Speech and Audio</b> .....	1081
<i>Gros, Laetitia;van de Par, Steven;van Schijndel, Nicolle H.</i>	
<b>A 330mW 216kHz 124dB Single Die Stereo Delta Sigma Audio Analog-To-Digital Converter</b> .....	1090
<i>Abraham, Jacob;Sculley, Terry;Yang, YuQing</i>	
<b>Encoding Bandpass Signals Using Level Crossings:A Model-Based Approach</b> .....	1096
<i>Kumaresan, Ramdas;Panchal, Nitesh</i>	

### VOLUME III

<b>Theory of Short-Time Generalized Harmonic Analysis (SGHA) and Its Fundamental Characteristics</b> .....	1118
<i>Ifukube, Tohru;Miura, Takahiro;Muraoka, Teruo;Ochiai, Daisuke</i>	

<b>Special Hearing Aid for Stuttering People</b> .....	1135
<i>Czyzewski, Andrzej;Ody, Piotr</i>	
<b>An Improved Low Complexity AMR-WB+ Encoder Using Neural Networks for Mode Selection</b> .....	1144
<i>Lecomte, Jérémie;Lefebvre, Roch;Richard, Guy</i>	
<b>Concept and Components of a Sound Field Effector Using a Loudspeaker Array</b> .....	1153
<i>Hua, Jiang;Kamekawa, Toru;Kiryu, Syogo;Oto, Teruki;Tamura, Risa;Tanno, Tomoaki</i>	
<b>A Novel Mapping with Natural Transition from Linear to Logarithmic Scaling</b> .....	1157
<i>Panzer, Joerg</i>	
<b>Real Time Implementation of an Innovative Digital Audio Equalizer</b> .....	1165
<i>Bettarelli, Ferruccio;Cecchi, Stefania;Lattanzi, Ariano;Palestini, Lorenzo;Peretti, Paolo;Piazza, Francesco</i>	
<b>Wideband Beamforming Method using Two-Dimensional Digital Filter</b> .....	1173
<i>Kushida, Koji;Nishikawa, Kiyoshi;Shimizu, Yasushi</i>	
<b>Linear Phase Mixed FIR/IIR Crossover Networks: Design and Real-Time Implementation</b> .....	1186
<i>Bettarelli, Ferruccio;Cecchi, Stefania;Lattanzi, Ariano;Palestini, Lorenzo;Peretti, Paolo;Piazza, Francesco</i>	
<b>Convolutional Blind Source Separation of Speech Signals in the Low Frequency Bands</b> .....	1195
<i>Jafari, Maria G.;Plumbley, Mark D.</i>	
<b>A Highly Directive 2-Capsule Based Microphone System</b> .....	1199
<i>Faller, Christof</i>	
<b>Interactive Beat Tracking for Assisted Annotation of Percussive Music</b> .....	1208
<i>Evans, Michael J.</i>	
<b>Identification of Partial in Polyphonic Mixtures Based on Temporal Envelope Similarity</b> .....	1222
<i>Gunawan, David;Sen, D.</i>	
<b>Audio Synthesis and Visualization with Flash CS3 and ActionScript 3.0</b> .....	1227
<i>Kolasinski, Jordan</i>	
<b>Vibrato Experiments with Bassoon Sounds by Means of the Digital Pulse Forming Synthesis and Analysis Framework</b> .....	1231
<i>Oehler, Michael;Reuter, Christoph</i>	
<b>Structural Decomposition of Recorded Vocal Performances and It's Application to Intelligent Audio Editing</b> .....	1239
<i>Fazekas, Gyorgy;Sandler, Mark</i>	
<b>A High Level Musical Score Alignment Technique Based on Fuzzy Logic and DTW</b> .....	1247
<i>Brunet, Charles-Antoine;Gagnon, Bruno;Lefebvre, Roch</i>	
<b>Real-time Spatial Representation of Moving Sound Sources</b> .....	1259
<i>Tsakostas, Christos; Floros, Andreas</i>	
<b>The Use of Cephalometric Features for Headmodels in Spatial Audio Processing</b> .....	1268
<i>Bharitkar, Sunil;Gislason, Pall</i>	
<b>MDCT Domain Analysis and Synthesis of Reverberation for Parametric Stereo Audio</b> .....	1275
<i>Sreenivas, T. V.;Suresh, K.</i>	

<b>Binaural 3-D Audio Rendering Based on Spatial Audio Scene Coding .....</b>	<b>1282</b>
<i>Goodwin, Michael M.;Jot, Jean-Marc</i>	
<b>Correlation-Based Ambience Extraction from Stereo Recordings.....</b>	<b>1294</b>
<i>Goodwin, Michael M.;Jot, Jean-Marc;Merimaa, Juha</i>	
<b>Spatial Audio Scene Coding in a Universal Two-Channel 3-D Stereo Format .....</b>	<b>1309</b>
<i>Goodwin, Michael M.;Jot, Jean-Marc;Krishnaswami, Arvinth;Laroche, Jean;Merimaa, Juha</i>	
<b>360 Localization via 4.x RACE Processing .....</b>	<b>1324</b>
<i>Glasgal, Ralph</i>	
<b>Realtime Auralization Employing a Not-Linear, Not-Time-Invariant Convolver .....</b>	<b>1335</b>
<i>Farina, Adriano;Farina, Angelo</i>	
<b>Real-Time Panning Convolution Reverberation .....</b>	<b>1345</b>
<i>Sandler, Mark;Stewart, Rebecca</i>	
<b>Ambisonic Panning.....</b>	<b>1354</b>
<i>Neukom, Martin</i>	
<b>Adaptive Wave Field Synthesis for Sound Field Reproduction: Theory, Experiments and Future Perspectives.....</b>	<b>1361</b>
<i>Berry, Alain;Gauthier, Philippe-Aubert</i>	
<b>Adaptive Karhunen-Lòeve Transform for Multichannel Audio .....</b>	<b>1383</b>
<i>Jiao, Yu;Rumsey, Francis;Zielinski, Slawomir</i>	
<b>Extension of an Analytic Secondary Source Selection Criterion for Wave Field Synthesis .....</b>	<b>1410</b>
<i>Spors, Sascha</i>	
<b>A Low Complexity Perceptually Tuned Room Correction System .....</b>	<b>1425</b>
<i>Johnston, James D.;Smirnov, Serge</i>	
<b>Sampling the Energy in a 3D Sound Field.....</b>	<b>1431</b>
<i>Abildgaard Pedersen, Jan</i>	
<b>Variable-Octave Complex Smoothing.....</b>	<b>1442</b>
<i>Bharitkar, Sunil</i>	
<b>An In-Flight Low Latency Acoustic Feedback Cancellation Algorithm.....</b>	<b>1448</b>
<i>Clarke, Victor E.;Osmanovic, Nermin;Velandia, Erich</i>	
<b>Multichannel Inverse Filtering with Minimal-Phase Regularization.....</b>	<b>1456</b>
<i>Bouchard, Martin;Norcross, Scott G.</i>	
<b>Multi-Source Room Equalization: Reducing Room Resonances .....</b>	<b>1464</b>
<i>Vanderkooy, John</i>	
<b>The Concept, Design, and Implementation of a General Dynamic Parametric Equalizer .....</b>	<b>1476</b>
<i>Wise, Duane K.</i>	
<b>Perceptually Motivated Gain Filter Smoothing for Noise Suppression .....</b>	<b>1489</b>
<i>Faller, Christof;Favrot, Alexis</i>	
<b>A Novel Automatic Noise Removal Technique for Audio and Speech Signals.....</b>	<b>1497</b>
<i>E. V., Harinarayanan;Ferreira, Anibal;Saeed, Shamail;Sinha, Deepen</i>	
<b>Filter Reconstruction and Program Material Characteristics Mitigating Word Length Loss in Digital Signal Processing-Based Compensation Curves Used for Playback of Analog Recordings .....</b>	<b>1504</b>
<i>Robinson, Robert S.</i>	

<b>Rapidly Prototyping and Implementing Audio on DSPs Using Model-Based Design and Automatic Code Generation .....</b>	<b>1512</b>
<i>Ananthan, Arvind</i>	
<b>Design of a Flexible Crossfade/Level Controller Algorithm for Portable Media Platforms.....</b>	<b>1517</b>
<i>Fedigan, Stephen;Hayes, Jeff;Jochelson, Danny;Kridner, Jason</i>	
<b>Audio Delivery Specification .....</b>	<b>1529</b>
<i>Lund, Thomas</i>	
<b>Multi-Core Signal Processing Architectures for Audio Applications.....</b>	<b>1538</b>
<i>Gallimore, Simon;Karley, Brent;Lieberman, Sergio</i>	
<b>Loudness Domain Signal Processing.....</b>	<b>1548</b>
<i>Seefeldt, Alan</i>	
<b>Time-Frequency Characterisation of Loudspeaker Responses Using Wavelet Analysis .....</b>	<b>1563</b>
<i>Di Cola, Mario;Ponteggia, Daniele</i>	
<b>Equalization of Loudspeaker Resonances Using Second-Order Filters Based on Spatially Distributed Impulse Response Measurements .....</b>	<b>1582</b>
<i>Choisel, Sylvain;Dyreby, Jakob</i>	
<b>Sigma-Delta Modulators Without Feedback Around the Quantizer? .....</b>	<b>1595</b>
<i>Bodmann, Bernhard G.;Lipshitz, Stanley P.;Vanderkooy, John</i>	
<b>The Effect of Different Metrics on the Performance of “Stack” Algorithms for Look-Ahead Sigma Delta Modulators .....</b>	<b>1610</b>
<i>Angus, Jamie A.S.;Websdell, Peter C.</i>	
<b>Evaluation of Time-Frequency Analysis Methods and Their Practical Applications.....</b>	<b>1623</b>
<i>Brunet, Pascal;Rimkunas, Zachary;Temme, Steve</i>	
<b>Author Index</b>	