

AES International Conference on Audio for Virtual and Augmented Reality 2020

Online
17 - 19 August 2020

ISBN: 978-1-7138-1816-8

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



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

Copyright© (2020) by the Audio Engineering Society
All rights reserved.

Printed with permission by Curran Associates, Inc. (2021)

For permission requests, please contact the Audio Engineering Society
at the address below.

Audio Engineering Society
International Headquarters
551 Fifth Ave., Suite 1225
New York, NY 10176
USA

Phone: +1 212 661 8528

www.aes.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

ANTHROPOMETRIC FEATURES ESTIMATION USING INTEGRATED SENSORS ON A HEADPHONE FOR HRTF PERSONALIZATION	1
<i>M.T. Islam, I.J. Tashev</i>	
TESSERAL ARRAY FOR GROUP-BASED SPATIAL AUDIO CAPTURE AND SYNTHESIS.....	11
<i>Y. Tanabe, G. Yamauchi, A. Marui, T. Kamekawa</i>	
THE USE OF SPATIALISED AUDITORY AND VISUAL CUES FOR TARGET ACQUISITION IN A SEARCH TASK.....	19
<i>A. Barde, M. Ward, R.W. Lindeman, M. Billinghamurst</i>	
QUANTIFYING HRTF SPECTRAL MAGNITUDE PRECISION IN SPATIAL COMPUTING APPLICATIONS.....	34
<i>S. Crawford, R. Audfray, J.M. Jot</i>	
COMPARISON OF SPHERICAL HARMONICS AND NEAREST-NEIGHBOR BASED INTERPOLATION OF HEAD-RELATED TRANSFER FUNCTIONS	44
<i>C. Porschmann, J.M. Arend, D. Bau, T. Lubeck</i>	
VIRTUAL REALITY MUSIC IN THE REAL WORLD	54
<i>I. Neoran, M. Ben-Asher, G. Alchanati</i>	
TRANSLATION OF A HIGHER-ORDER AMBISONICS SOUND SCENE BY SPACE WARPING	64
<i>M. Kentgens, P. Jax</i>	
PERCEPTION OF DIRECT SOUND, EARLY REFLECTIONS, AND REVERBERATION IN AURALIZATIONS OF SPARSELY MEASURED BINAURAL ROOM IMPULSE RESPONSES.....	74
<i>T. Lubeck, C. Porschmann, J.M. Arend</i>	
ON THE MEASUREMENT OF PERCEIVED LATERAL ANGLE USING EYE TRACKING	84
<i>T. Rudzki, D. Murphy, G. Kearney</i>	
A NEW STEP TO OPTIMIZE SOUND LOCALIZATION ADAPTATION THROUGH THE USE OF VISION	94
<i>T.G. Bara, A. Guilbert, T. Bouchara</i>	
LOCALIZATION OF VIRTUAL SOUNDS IN DYNAMIC LISTENING USING SPARSE HRTFS	101
<i>Z. Ben-Hur, D.L. Alon, P.W. Robinson, R. Mehra</i>	
ACOUSTIC TRANSPARENCY IN HEARABLES FOR AUGMENTED REALITY AUDIO: HEAR-THROUGH TECHNIQUES REVIEW AND CHALLENGES	110
<i>R. Gupta, R. Ranjan, J. He, G.W. Seng, S. Peksi</i>	
COHERENCE-ADAPTIVE BINAURAL CUE ADAPTATION	120
<i>S. Nagel, D. Haupt, P. Jax</i>	
TOWARDS TRANSFER-PLAUSIBILITY FOR EVALUATING MIXED REALITY AUDIO IN COMPLEX SCENES	130
<i>S.A. Wirler, N. Meyer-Kahlen, S.J. Schlecht</i>	

LISTENER-PREFERRED HEADPHONE FREQUENCY RESPONSE FOR STEREO AND SPATIAL AUDIO CONTENT	139
<i>I. Engel, D.L. Alon, K. Scheumann, R. Mehra</i>	
BINAURAL REPRODUCTION USING BILATERAL AMBISONICS	146
<i>Z. Ben-Hur, D.L. Alon, R. Mehra, B. Rafaely</i>	
ENHANCEMENT OF AMBISONICS SIGNALS USING TIME-FREQUENCY MASKING.....	152
<i>M. Lugasi, B. Rafaely</i>	
CLOUD-ENABLED INTERACTIVE SOUND PROPAGATION FOR UNTETHERED MIXED REALITY.....	159
<i>M. Chemistruck, K. Storck, N. Raghuvanshi</i>	
REALISTIC AUDIO AI: SPATIAL SOUND MODELLING TO PROVIDE NPCs WITH SOUND PERCEPTION.....	169
<i>B. Cowan, B. Kapralos, K. Collins</i>	
BEAMFORMING-BASED BINAURAL REPRODUCTION BY MATCHING OF BINAURAL SIGNALS	178
<i>L. Madmoni, J. Donley, V. Tourbabin, B. Rafaely</i>	
FAST ACOUSTIC OBSTRUCTION WITH PROXIMITY COST DIFFERENCING (PCD).....	186
<i>K.W. Godin, N. Raghuvanshi</i>	

Author Index