CODEN: JASMAN

The Journal of the

Acoustical Society of America

Vol. 119, No. 3	Mar	ch 2006
ACOUSTICAL NEWS-USA		1281
USA Meeting Calendar		1284
ACOUSTICAL STANDARDS NEWS		1289
Standards Meeting Calendar		1289
TECHNICAL PROGRAM SUMMARY		1293
OBITUARIES		1295
REVIEWS OF ACOUSTICAL PATENTS		1299
REVIEW ARTICLE		
A review of finite-element methods for time-harmonic acoustics		1315
LETTERS TO THE EDITOR		
Effect of masker-fringe onset asynchrony on overshoot (L)	Andrzej Miśkiewicz, Søren Buus, Mary Florentine	1331
GENERAL LINEAR ACOUSTICS [20]		
The Stokes relations linking time reversal and the inverse filter	F. Vignon, JF. Aubry, A. Saez, M. Tanter, D. Cassereau, G. Montaldo, M. Fink	1335
Dispersive surface waves along partially saturated porous media	Gabriel Chao, D. M. J. Smeulders, M. E. H. van Dongen	1347
Resonance modes in a one-dimensional medium with two purely resistive boundaries: Calculation methods, orthogonality, and completeness	Jean Kergomard, Vincent Debut, Denis Matignon	1356
AEROACOUSTICS, ATMOSPHERIC SOUND [28]		
Three-dimensional underwater sound pressure field due to sonic boom	Douglas M. Moody	1368
UNDERWATER SOUND [30]		
Mapping seabed variability: Rapid surveying of coastal regions	Charles Holland	1373
Haro Strait geometry (flat bottom)	A. Tolstoy	1388
Classification of shallow-water acoustic signals via alpha-Stable modeling of the one-dimensional wavelet coefficients	Michael I. Taroudakis, George Tzagkarakis, Panagiotis Tsakalides	1396

VOL. 119, NO. 3, MARCH 2006

CONTENTS—Continued from preceding page

Low-frequency sound scattering by internal waves in the ocean	Alexander G. Voronovich, Vladimir E. Ostashev	1406
An experimental demonstration of blind ocean acoustic tomography	Sérgio M. Jesus, Cristiano Soares, Emanuel Coelho, Paola Picco	1420
APPLIED ACOUSTICS PAPER: ULTRASONICS QUANTUM ACOUSTICS, AND PHYSICAL EFFECTS OF SOUND [35]		
Cost-effective assembly of a basic fiber-optic hydrophone for measurement of high-amplitude therapeutic ultrasound fields	Jessica E. Parsons, Charles A. Cain, J. Brian Fowlkes	1432
ULTRASONICS, QUANTUM ACOUSTICS, AND PHYSICAL EFFECTS OF SOUND [35]		
Sound attenuation by small spheroidal particles due to visco-inertial coupling	Frank Babick, Andreas Richter	1441
The interaction of ultrasound with particulate composites	Christopher Layman, N. Sanjeeva Murthy, Ruey-Bin Yang, Junru Wu	1449
Relationship between Nusselt number and the thermoviscous (Rott) functions	Jin Liu, Steven L. Garrett	1457
A study of the vibro-acoustic modulation technique for the detection of cracks in metals	Philippe Duffour, Marco Morbidini, Peter Cawley	1463
STRUCTURAL ACOUSTICS AND VIBRATION [40]		
Experimental and numerical investigations on resonant characteristics of a single-layer piezoceramic plate and a cross-ply piezolaminated composite plate	Chien-Ching Ma, Hsien-Yang Lin, Yu-Chih Lin, Yu-Hsi Huang	1476
Centralized and decentralized control of structural vibration and sound radiation	Wouter P. Engels, Oliver N. Baumann, Stephen J. Elliott, R. Fraanje	1487
NOISE: ITS EFFECTS AND CONTROL [50]		
Stability analysis of active control of self-sustained pressure fluctuations due to flow over a cavity	P. Micheau, Ludovic Chatellier, Janick Laumonier, Yves Gervais	1496
ARCHITECTURAL ACOUSTICS [55]		
On the use of a diffusion equation for room-acoustic prediction	V. Valeau, J. Picaut, M. Hodgson	1504
ACOUSTIC SIGNAL PROCESSING [60]		
Imaging nonlinear scatterers applying the time reversal mirror	T. J. Ulrich, P. A. Johnson, A. Sutin	1514
On analysis of exponentially decaying pulse signals using stochastic volatility model	C. M. Chan, S. K. Tang, H. Wong	1519
PHYSIOLOGICAL ACOUSTICS [64]		
The relation between electrophysiologic channel interaction and electrode pitch ranking in cochlear implant recipients	Michelle L. Hughes, Paul J. Abbas	1527
Electrophysiologic channel interaction, electrode pitch ranking, and behavioral threshold in straight versus perimodiolar cochlear implant electrode arrays	Michelle L. Hughes, Paul J. Abbas	1538

VOL. 119, NO. 3, MARCH 2006

CONTENTS—Continued from preceding page

Auditory evoked potentials in females with high and low acceptance of background noise when listening to speech	Joanna W. Tampas, Ashley W. Harkrider	1548
PSYCHOLOGICAL ACOUSTICS [66]		
A glimpsing model of speech perception in noise	Martin Cooke	1562
Estimates of effective frequency selectivity based on the detection of a tone added to complex maskers	Virginia M. Richards, Zhongzhou Tang	1574
Using monkeys to explore perceptual "loss" versus "learning" models in English and Spanish voice-onset-time perception	Joan M. Sinnott, Laura A. Powell, Jazmin Camchong	1585
Release from speech-on-speech masking by adding a delayed masker at a different location	Brad Rakerd, Neil L. Aaronson, William M. Hartmann	1597
Effects of reverberation and masking on speech intelligibility in cochlear implant simulations	Sarah F. Poissant, Nathaniel A. Whitmal,III, Richard L. Freyman	1606
A comparison of adaptive procedures for rapid and reliable threshold assessment and training in naive listeners	Sygal Amitay, Amy Irwin, David J. C. Hawkey, Justin A. Cowan, David R. Moore	1616
SPEECH PRODUCTION [70]		
Effects of auditory feedback on fricatives produced by cochlear- implanted adults and children: Acoustic and perceptual evidence	Sneha V. Bharadwaj, Emily A. Tobey, Peter F. Assmann, William F. Katz	1626
Fundamental frequency of infants' and parents' utterances in longitudinal recordings	Shigeaki Amano, Tomohiro Nakatani, Tadahisa Kondo	1636
Loud speech over noise: Some spectral attributes, with gender differences	Sten Ternström, Mikael Bohman, Maria Södersten	1648
Functional data analysis of prosodic effects on articulatory timing	Sungbok Lee, Dani Byrd, Jelena Krivokapić	1666
Phonological systems in bilinguals: Age of learning effects on the stop consonant systems of Korean-English bilinguals	Kyoung-Ho Kang, Susan G. Guion	1672
Training the perception of Hindi dental and retroflex stops by native speakers of American English and Japanese	John S. Pruitt, James J. Jenkins, Winifred Strange	1684
SPEECH PERCEPTION [71]		
Perception of the [m]-[n] distinction in consonant-vowel (CV) and vowel-consonant (VC) syllables produced by child and adult talkers	Ralph N. Ohde, Katarina L. Haley, Christine W. Barnes	1697
Extrinsic context affects perceptual normalization of lexical tone	Alexander L. Francis, Valter Ciocca, Natalie King Yu Wong, Wilson Ho Yin Leung, Phoebe Cheuk Yan Chu	1712
The relative roles of vowels and consonants in discriminating talker identity versus word meaning	Michael J. Owren, Gina C. Cardillo	1727
The use of visual cues in the perception of non-native consonant contrasts	Valerie Hazan, Anke Sennema, Andrew Faulkner, Marta Ortega-Llebaria, Midori Iba, Hyunsong Chung	1740
The effects of hearing loss on the contribution of high- and low-frequency speech information to speech understanding. II. Sloping hearing loss	Benjamin W. Y. Hornsby, Todd A. Ricketts	1752

1891

THE JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA

CUMULATIVE AUTHOR INDEX

VOL. 119, NO. 3, MARCH 2006

 ${\tt CONTENTS--} Continued \ from \ preceding \ page$

SPEECH PROCESSING AND COMMUNICATION SYSTEMS [7	72]	
Constrained tone transformation technique for separation and combination of Mandarin tone and intonation	Jinfu Ni, Hisashi Kawai, Keikichi Hirose	1764
MUSIC AND MUSICAL INSTRUMENTS [75]		
Interferometric studies of a piano soundboard	Thomas R. Moore, Sarah A. Zietlow	1783
Contribution to harmonic balance calculations of self-sustained periodic oscillations with focus on single-reed instruments	Snorre Farner, Christophe Vergez, Jean Kergomard, Aude Lizée	1794
Spectral characteristics of three styles of Croatian folk singing	Paul Boersma, Gordana Kovacic	1805
BIOACOUSTICS [80]		
Acoustic detection and classification of microchiroptera using machine learning: Lessons learned from automatic speech recognition	Mark D. Skowronski, John G. Harris	1817
Effects of nonlinear propagation, cavitation, and boiling in lesion formation by high intensity focused ultrasound in a gel phantom	Vera A. Khokhlova, Michael R. Bailey, Justin A. Reed, Bryan W. Cunitz, Peter J. Kaczkowski, Lawrence A. Crum	1834
Information entropy of humpback whale songs	Ryuji Suzuki, John R. Buck, Peter L. Tyack	1849
Acoustic features of objects matched by an echolocating bottlenose dolphin	Caroline M. DeLong, Whitlow W. L. Au, David W. Lemonds, Heidi E. Harley, Herbert L. Roitblat	1867
Elastic stiffness coefficients $(c_{11},c_{33},{\rm and}c_{13})$ for freshly excised and formalin-fixed myocardium from ultrasonic velocity measurements	Min Yang, Steven L. Baldwin, Karen R. Marutyan, Kirk D. Wallace, Mark R. Holland, James G. Miller	1880
ERRATA		
Erratum: "Development of a quick speech-in-noise test for measuring signal-to-noise ratio loss in normal-hearing and hearing-impaired listeners" [J. Acoust. Soc. Am. 116(4), 2395–2405 (2004)]	Mead C. Killion, Patricia A. Niquette, Gail I. Gudmundsen, Lawrence J. Revit, Shilpi Banerjee	1888
JASA EXPRESS LETTERS		
The effect of source amplitude and phase in matched field source localization	Zoi-Heleni Michalopoulou	EL21
Electromechanical emulation of active vibratory systems	Wenyuan Chen, Pierre E. Dupont	EL27
Classification of vocalizations of killer whales using dynamic time warping	Judith C. Brown, Andrea Hodgins-Davis, Patrick J. O. Miller	EL34
Auditory brainstem response in a harbor porpoise show lack of automatic gain control for simulated echoes	Kristian Beedholm, Lee A. Miller, Marie-Anne Blanchet	EL41
A hail size distribution impact transducer	John E. Lane, Robert C. Youngquist, William D. Haskell, Robert B. Cox	EL47

CODEN: JASMAN

The Journal of the

Acoustical Society of America

Vol. 119, No. 4		April 2006
ACOUSTICAL NEWS-USA USA Meeting Calendar		1897 1899
ACOUSTICAL NEWS-INTERNATIONAL International Meeting Colondor		1901
International Meeting Calendar		1901
BOOK REVIEWS		1903
REVIEWS OF ACOUSTICAL PATENTS		1905
LETTERS TO THE EDITOR		
Dual-probe laser interferometer for structural health monitoring (L)	Stefan Hurlebaus, Laurence J. Jacobs	1923
Measuring flow resistivity of porous materials at low frequencies range via acoustic transmitted waves (L)	Z. E. A. Fellah, M. Fellah, N. Sebaa, W. Lauriks, C. Depollier	1926
Quantitative measurements of acoustic emissions from cavitation at the surface of a stone in response to a lithotripter shock wave (\mathbf{L})	Parag V. Chitnis, Robin O. Cleveland	1929
A theoretical model to predict the low-frequency sound absorption of a Helmholtz resonator array (\boldsymbol{L})	SangRyul Kim, Yang-Hann Kim, Jae-Hee Jang	1933
Automated pure-tone threshold estimations from extrapolated distortion product otoacoustic emission (DPOAE) input/output functions (L)	Nicolas Schmuziger, Jochen Patscheke, Rudolf Probst	1937
Cochlear compression wave: An implication of the Allen-Fahey experiment (L)	Tianying Ren, Alfred L. Nuttall	1940
Loudness of brief tones measured by magnitude estimation and loudness matching (\boldsymbol{L})	Michael Epstein, Mary Florentine	1943
Auditory temporal resolution in normal-hearing preschool children revealed by word recognition in continuous and interrupted noise (\mathbf{L})	Andrew Stuart, Gregg D. Givens, Letitia J. Walker, Saravanan Elangovan	1946
Perceptual learning in speech: Stability over time (L)	Frank Eisner, James M. McQueer	n 1950
EDUCATION IN ACOUSTICS [10]		
The method of waveform images for finite waveguides with resistive terminations subject to arbitrary initial conditions	Jerry H. Ginsberg	1954
GENERAL LINEAR ACOUSTICS [20]		
High order approximate low frequency theory of elastic anisotropic lining and coating	D. D. Zakharov	1961

VOL. 119, NO. 4, APRIL 2006

CONTENTS—Continued from preceding page

Generation of the basis sets for multi-Gaussian ultrasonic beam models—An overview	Hak-Joon Kim, Lester W. Schmerr,Jr., Alexander Sedov	1971
On using polynomial chaos for modeling uncertainty in acoustic propagation	Dennis B. Creamer	1979
Wave propagation in two-dimensional periodic lattices	A. Srikantha Phani, J. Woodhouse, N. A. Fleck	1995
Elastic wave propagation in sinusoidally corrugated waveguides	Sourav Banerjee, Tribikram Kundu	2006
Curle's equation and acoustic scattering by a sphere	Anthony M. J. Davis, Raymond J. Nagem	2018
Acoustical determination of the parameters governing viscous dissipation in porous media	Raymond Panneton, Xavier Olny	2027
Scattering of Rayleigh-Lamb waves by a surface breaking crack in an elastic plate	Miguel A. Flores-López, R. Douglas Gregory	2041
Mode-matching without root-finding: Application to a dissipative silencer	Jane B. Lawrie, Ray Kirby	2050
Impedance of a sphere oscillating in an elastic medium with and without slip	Andrew N. Norris	2062
NONLINEAR ACOUSTICS [25]		
Bubble pulsations between parallel plates	Jianying Cui, Mark F. Hamilton, Preston S. Wilson, Evgenia A. Zabolotskaya	2067
AEROACOUSTICS, ATMOSPHERIC SOUND [28]		
Acoustic pulse propagation near a right-angle wall	Lanbo Liu, Donald G. Albert	2073
Sound generated by vortices in the presence of a porous half- cylinder mounted on a rigid plane	C. K. Lau, S. K. Tang	2084
UNDERWATER SOUND [30]		
Calculation of amplitudes of acoustic normal modes from the reciprocity principle	Oleg A. Godin	2096
Mean field of a low-frequency sound wave propagating in a fluctuating ocean	Alexander G. Voronovich, Vladimir E. Ostashev	2101
Multiple ping sonar accuracy improvement using robust motion estimation and ping fusion	Lian Yu, Nicola Neretti, Nathan Intrator	2106
ULTRASONICS, QUANTUM ACOUSTICS, AND PHYSICAL EFF	ECTS OF SOUND [35]	
Elastic moduli approximation of higher symmetry for the acoustical properties of an anisotropic material	Andrew N. Norris	2114
Model-based analysis of dispersion curves using chirplets	Helge Kuttig, Marc Niethammer, Stefan Hurlebaus, Laurence J. Jacobs	2122
STRUCTURAL ACOUSTICS AND VIBRATION [40]		
Active vibration control using an inertial actuator with internal damping	Christoph Paulitsch, Paolo Gardonio, Stephen J. Elliott	2131
Near-irreversibility in a conservative linear structure with singularity points in its modal density	A. Carcaterra, A. Akay, I. M. Koç	2141
The modeling of the radiation and response Green's function of a fluid-loaded cylindrical shell with an external compliant layer	J. M. Cuschieri	2150

VOL. 119, NO. 4, APRIL 2006

CONTENTS—Continued from preceding page

Vibro-acoustic control with a distributed sensor network	Kenneth D. Frampton	2170
NOISE: ITS EFFECTS AND CONTROL [50] Noise annoyance and activity disturbance before and after the erection of a roadside noise barrier	Mats E. Nilsson, Birgitta Berglund	2178
ARCHITECTURAL ACOUSTICS [55]		
Relaxation of sound fields in rooms of diffusely reflecting boundaries and its application in acoustical radiosity simulation	Honghu Zhang	2189
Effects of the inclination of a rigid wall on the free vibration characteristics of acoustic modes in a trapezoidal cavity	K. S. Sum, J. Pan	2201
Mechanism and calculation of the niche effect in airborne sound transmission	Roman Vinokur	2211
ACOUSTIC SIGNAL PROCESSING [60]		
Automatic determination of the number of targets present when using the time reversal operator	Angela Quinlan, Jean-Pierre Barbot, Pascal Larzabal	2220
PHYSIOLOGICAL ACOUSTICS [64]		
Resonant modes in transiently evoked otoacoustic emissions and asymmetries between left and right ear	W. Wiktor Jedrzejczak, Katarzyna J. Blinowska, Wieslaw Konopka	2226
Cochlear transducer operating point adaptation	Yuan Zou, Jiefu Zheng, Tianying Ren, Alfred Nuttall	2232
Frequency- and level-dependent changes in auditory brainstem responses (ABRs) in developing mice	Lei Song, JoAnn McGee, Edward J. Walsh	2242
PSYCHOLOGICAL ACOUSTICS [66]		
PSYCHOLOGICAL ACOUSTICS [66] Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model results	Sean A. Davidson, Robert H. Gilkey, H. Steven Colburn, Laurel H. Carney	2258
Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model	Gilkey, H. Steven Colburn, Laurel	2258 2276
Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model results Sensitivity to isolated and concurrent intensity and fundamental frequency increments by cochlear implant users under	Gilkey, H. Steven Colburn, Laurel H. Carney Cheryl F. Rogers, Eric W. Healy,	
Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model results Sensitivity to isolated and concurrent intensity and fundamental frequency increments by cochlear implant users under natural listening conditions Compensation following real-time manipulation of formants in	Gilkey, H. Steven Colburn, Laurel H. Carney Cheryl F. Rogers, Eric W. Healy, Allen A. Montgomery David W. Purcell, Kevin G.	2276
Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model results Sensitivity to isolated and concurrent intensity and fundamental frequency increments by cochlear implant users under natural listening conditions Compensation following real-time manipulation of formants in isolated vowels Coherence detection: Effects of frequency, frequency uncertainty,	Gilkey, H. Steven Colburn, Laurel H. Carney Cheryl F. Rogers, Eric W. Healy, Allen A. Montgomery David W. Purcell, Kevin G. Munhall	2276 2288
Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model results Sensitivity to isolated and concurrent intensity and fundamental frequency increments by cochlear implant users under natural listening conditions Compensation following real-time manipulation of formants in isolated vowels Coherence detection: Effects of frequency, frequency uncertainty, and onset/offset delays	Gilkey, H. Steven Colburn, Laurel H. Carney Cheryl F. Rogers, Eric W. Healy, Allen A. Montgomery David W. Purcell, Kevin G. Munhall Rong Huang, Virginia M. Richards John H. Grose, Joseph W. Hall, III,	2276 2288 2298
Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model results Sensitivity to isolated and concurrent intensity and fundamental frequency increments by cochlear implant users under natural listening conditions Compensation following real-time manipulation of formants in isolated vowels Coherence detection: Effects of frequency, frequency uncertainty, and onset/offset delays Temporal processing deficits in the pre-senescent auditory system Age-related changes in within- and between-channel gap detection	Gilkey, H. Steven Colburn, Laurel H. Carney Cheryl F. Rogers, Eric W. Healy, Allen A. Montgomery David W. Purcell, Kevin G. Munhall Rong Huang, Virginia M. Richards John H. Grose, Joseph W. Hall,III, Emily Buss	2276 2288 2298 2305
Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model results Sensitivity to isolated and concurrent intensity and fundamental frequency increments by cochlear implant users under natural listening conditions Compensation following real-time manipulation of formants in isolated vowels Coherence detection: Effects of frequency, frequency uncertainty, and onset/offset delays Temporal processing deficits in the pre-senescent auditory system Age-related changes in within- and between-channel gap detection using sinusoidal stimuli	Gilkey, H. Steven Colburn, Laurel H. Carney Cheryl F. Rogers, Eric W. Healy, Allen A. Montgomery David W. Purcell, Kevin G. Munhall Rong Huang, Virginia M. Richards John H. Grose, Joseph W. Hall, III, Emily Buss Antje Heinrich, Bruce Schneider Douglas S. Brungart, Nandini Iyer,	2276 2288 2298 2305 2316
Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model results Sensitivity to isolated and concurrent intensity and fundamental frequency increments by cochlear implant users under natural listening conditions Compensation following real-time manipulation of formants in isolated vowels Coherence detection: Effects of frequency, frequency uncertainty, and onset/offset delays Temporal processing deficits in the pre-senescent auditory system Age-related changes in within- and between-channel gap detection using sinusoidal stimuli Monaural speech segregation using synthetic speech signals	Gilkey, H. Steven Colburn, Laurel H. Carney Cheryl F. Rogers, Eric W. Healy, Allen A. Montgomery David W. Purcell, Kevin G. Munhall Rong Huang, Virginia M. Richards John H. Grose, Joseph W. Hall, III, Emily Buss Antje Heinrich, Bruce Schneider Douglas S. Brungart, Nandini Iyer,	2276 2288 2298 2305 2316
Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model results Sensitivity to isolated and concurrent intensity and fundamental frequency increments by cochlear implant users under natural listening conditions Compensation following real-time manipulation of formants in isolated vowels Coherence detection: Effects of frequency, frequency uncertainty, and onset/offset delays Temporal processing deficits in the pre-senescent auditory system Age-related changes in within- and between-channel gap detection using sinusoidal stimuli Monaural speech segregation using synthetic speech signals APPLIED ACOUSTICS PAPER: SPEECH PRODUCTION [70] A geometric representation of spectral and temporal vowel features:	Gilkey, H. Steven Colburn, Laurel H. Carney Cheryl F. Rogers, Eric W. Healy, Allen A. Montgomery David W. Purcell, Kevin G. Munhall Rong Huang, Virginia M. Richards John H. Grose, Joseph W. Hall,III, Emily Buss Antje Heinrich, Bruce Schneider Douglas S. Brungart, Nandini Iyer, Brian D. Simpson	2276 2288 2298 2305 2316 2327

VOL. 119, NO. 4, APRIL 2006

 ${\tt CONTENTS--} Continued \ from \ preceding \ page$

Vocal responses to unanticipated perturbations in voice loudness feedback: An automatic mechanism for stabilizing voice amplitude	Jay J. Bauer, Jay Mittal, Charles R. Larson, Timothy C. Hain	2363
Electropalatographic, acoustic, and perceptual data on adaptation to a palatal perturbation	Wendi A. Aasland, Shari R. Baum, David H. McFarland	2372
On phonetic convergence during conversational interaction	Jennifer S. Pardo	2382
SPEECH PERCEPTION [71]		
Perceptual invariance of coarticulated vowels over variations in speaking rate	Janet W. Stack, Winifred Strange, James J. Jenkins, William D. Clarke,III, Sonja A. Trent	2394
Stimulus variability and the phonetic relevance hypothesis: Effects of variability in speaking style, fundamental frequency, and speaking rate on spoken word identification	Mitchell S. Sommers, Joe Barcroft	2406
Effects of introducing unprocessed low-frequency information on the reception of envelope-vocoder processed speech	Michael K. Qin, Andrew J. Oxenham	2417
The influence of perceived sexual orientation on fricative identification	Benjamin Munson, Sarah V. Jefferson, Elizabeth C. McDonald	2427
The ability of listeners to use recovered envelope cues from speech fine structure	Gaëtan Gilbert, Christian Lorenzi	2438
Effect of masker type on native and non-native consonant perception in noise	M. L. Garcia Lecumberri, Martin Cooke	2445
Age-related differences in identification and discrimination of temporal cues in speech segments	Sandra Gordon-Salant, Grace H. Yeni-Komshian, Peter J. Fitzgibbons, Jessica Barrett	2455
MUSIC AND MUSICAL INSTRUMENTS [75]		
Synchronization of organ pipes: experimental observations and modeling	M. Abel, S. Bergweiler, R. Gerhard-Multhaupt	2467
Noncontact modal analysis of a pipe organ reed using airborne ultrasound stimulated vibrometry	Thomas M. Huber, Mostafa Fatemi, Randy Kinnick, James Greenleaf	2476
Effect of the glottal source and the vocal tract on the partials amplitude of vibrato in male voices	Ixone Arroabarren, Alfonso Carlosena	2483
Bayesian analysis of polyphonic western tonal music	Manuel Davy, Simon Godsill, Jérôme Idier	2498
BIOACOUSTICS [80]		
Investigation of superharmonic sound propagation and imaging in biological tissues in vitro	Qingyu Ma, Dong Zhang, Xiufen Gong, Yong Ma	2518
Perception of complex sounds in budgerigars (Melopsittacus undulatus) with temporary hearing loss	Robert J. Dooling, Brenda M. Ryals, Micheal L. Dent, Tracy L. Reid	2524
JASA EXPRESS LETTERS		
Polling the effective neighborhoods of spoken words with the verbal transformation effect	James A. Bashford,Jr., Richard M. Warren, Peter W. Lenz	EL55
CUMULATIVE AUTHOR INDEX		2535

CODEN: JASMAN

The Journal of the

Acoustical Society of America

Vol. 119, No. 5	N	May 2006
ACOUSTICAL NEWS-USA USA Meeting Calendar		2541 2547
ACOUSTICAL STANDARDS NEWS Standards Meeting Calendar		2549 2549
BOOK REVIEWS		2553
OBITUARIES		2555
REVIEWS OF ACOUSTICAL PATENTS		2557
FORUM		2573
LETTERS TO THE EDITOR Pseudo-3D modeling of a surface-bonded Lamb wave source (L)	Emmanuel Moulin, Sébastien	2575
1 seduc-3D modeling of a surface-bonded Emili wave source (E)	Grondel, Mustapha Baouahi, Jamal Assaad	2373
GENERAL LINEAR ACOUSTICS [20]		
Time-dependent stochastic inversion in acoustic travel-time tomography of the atmosphere	Sergey N. Vecherin, Vladimir E. Ostashev, George H. Goedecke, D. Keith Wilson, Alexander G. Voronovich	2579
Fast calculation system specialized for head-related transfer function based on boundary element method	Makoto Otani, Shiro Ise	2589
Iterative simulation of elastic wave scattering in arbitrary dispersions of spherical particles	Timothy E. Doyle	2599
Paranasal sinus ventilation by humming	Svante Granqvist, Johan Sundberg, Jon O. Lundberg, Eddie Weitzberg	2611
Active control of buzz-saw tones: Experimental results from a laboratory-scale, no-flow rig	M. J. Wilkinson, P. F. Joseph	2618
Broadband sound reflection by plates covering side-branch cavities in a duct	Lixi Huang	2628
NONLINEAR ACOUSTICS [25]		
Determination of the nonlinear parameter by propagating and modeling finite amplitude plane waves	F. Chavrier, C. Lafon, A. Birer, C. Barrière, X. Jacob, D. Cathignol	2639
Acoustical origin of rainbands in an ideal tropical hurricane	S. A. Elder	2645

VOL. 119, NO. 5, MAY 2006

 ${\tt CONTENTS-\!-} Continued\ from\ preceding\ page$

AEROACOUSTICS, ATMOSPHERIC SOUND [28]		
The radiation of atmospheric microbaroms by ocean waves	Roger Waxler, Kenneth E. Gilbert	2651
Time-domain impedance boundary conditions for surfaces with subsonic mean flows	X. D. Li, C. Richter, F. Thiele	2665
UNDERWATER SOUND [30]		
Measurement and simulation of the channel intensity impulse response for a site in the East China Sea	Jee Woong Choi, Peter H. Dahl	2677
ULTRASONICS, QUANTUM ACOUSTICS, AND PHYSICAL EFFECTS OF SOUND [35]		
Detailed study of a traveling wave thermoacoustic refrigerator driven by a traveling wave thermoacoustic engine	Wei Dai, Ercang Luo, Yong Zhang, Hong Ling	2686
Coupling mechanism of electromagnetic acoustical transducers for ultrasonic generation	X. Jian, S. Dixon, R. S. Edwards, J. Reed	2693
APPLIED ACOUSTICS PAPER: TRANSDUCTION [38]		
An active headrest for personal audio	Stephen J. Elliott, Matthew Jones	2702
TRANSDUCTION [38]		
Sources of excess noise in silicon piezoresistive microphones	Robert Dieme, Gijs Bosman, Toshikazu Nishida, Mark Sheplak	2710
Adaptive wave field synthesis with independent radiation mode control for active sound field reproduction: Theory	Philippe-Aubert Gauthier, Alain Berry	2721
STRUCTURAL ACOUSTICS AND VIBRATION [40]		
Transient response of a hollow cylinder with radial and axial material inhomogeneity	Michael El-Raheb	2738
Three-dimensional simulation of electron-acoustic detections	Chun-ming Gao, Shu-yi Zhang, Zhong-ning Zhang, Xiu-ji Shui	2750
Cluster control of acoustic potential energy in a structural/acoustic cavity	Nobuo Tanaka, Kozue Kobayashi	2758
APPLIED ACOUSTICS PAPER: NOISE: ITS EFFECTS AND CONTROL [50]		
Aircraft noise effects on sleep: Application of the results of a large polysomnographic field study	Mathias Basner, Alexander Samel, Ullrich Isermann	2772
NOISE: ITS EFFECTS AND CONTROL [50]		
Acoustic impedance of perforations in contact with fibrous material	Iljae Lee, Ahmet Selamet, Norman T. Huff	2785
APPLIED ACOUSTICS PAPER: ARCHITECTURAL ACOUSTICS [55]		
Evaluation of a boss model and subtraction technique for predicting wideband scattering phenomena in room acoustics	Georgios Natsiopoulos, Mendel Kleiner	2798
ARCHITECTURAL ACOUSTICS [55]		
The influence of circumferential edge constraint on the acoustical properties of open-cell polyurethane foam samples	Huoy-Shyi Tsay, Fung-Huei Yeh	2804
Piezoelectric vibration control by synchronized switching on adaptive voltage sources: Towards wideband semi-active damping	A. Badel, G. Sebald, D. Guyomar, M. Lallart, E. Lefeuvre, C. Richard, J. Qiu	2815

VOL. 119, NO. 5, MAY 2006

ACOUSTICAL MEASUREMENTS AND INSTRUMENTATION [58]	8]	
Measuring the free field acoustic impedance and absorption coefficient of sound absorbing materials with a combined particle velocity-pressure sensor	R. Lanoye, G. Vermeir, W. Lauriks, R. Kruse, V. Mellert	2826
ACOUSTIC SIGNAL PROCESSING [60]		
Accuracy of an acoustic location system for monitoring the position of duetting songbirds in tropical forest	Daniel J. Mennill, John M. Burt, Kurt M. Fristrup, Sandra L. Vehrencamp	2832
Passive imaging of underground acoustic sources	Stephen J. Norton, Bradley J. Carr, Alan J. Witten	2840
PHYSIOLOGICAL ACOUSTICS [64]		
Middle ear ossicles motion at hearing thresholds with air conduction and bone conduction stimulation	Stefan Stenfelt	2848
A geometrically nonlinear finite-element model of the cat eardrum	Hanif M. Ladak, W. Robert J. Funnell, Willem F. Decraemer, Joris J. J. Dirckx	2859
Simultaneous latency estimations for distortion product otoacoustic emissions and envelope following responses	David W. Purcell, Patricia Van Roon, M. Sasha John, Terence W. Picton	2869
Signal to noise ratio analysis of maximum length sequence deconvolution of overlapping evoked potentials	Jorge Bohórquez, Özcan Özdamar	2881
Time-course of the human medial olivocochlear reflex	Bradford C. Backus, John J. Guinan, Jr.	2889
PSYCHOLOGICAL ACOUSTICS [66]		
Asynchrony and the grouping of vowel components: Captor tones revisited	Brian Roberts, Stephen D. Holmes	2905
Spectral loudness summation for short and long signals as a function of level	Anne-Kristin Anweiler, Jesko L. Verhey	2919
Discrimination of nonlinear frequency glides	Nick Thyer, Doug Mahar	2929
Effect of modulation maskers on the detection of second-order amplitude modulation with and without notched noise	Rosalie M. Uchanski, Brian C. J. Moore, Brian R. Glasberg	2937
The influence of spectral, temporal, and interaural stimulus variations on the precedence effect	Roberto M. Dizon, H. Steven Colburn	2947
Directional loudness in an anechoic sound field, head-related transfer functions, and binaural summation	Ville Pekka Sivonen, Wolfgang Ellermeier	2965
Binaural detection of 500-Hz tones in broadband and in narrowband masking noise: Effects of signal/masker duration and forward masking fringes	Leslie R. Bernstein, Constantine Trahiotis, Richard L. Freyman	2981
Effect of electrode configuration on psychophysical forward masking in cochlear implant listeners	Bom Jun Kwon, Chris van den Honert	2994
SPEECH PRODUCTION [70]		
Numerical study of the effects of inferior and superior vocal fold surface angles on vocal fold pressure distributions	Sheng Li, Ronald C. Scherer, MingXi Wan, SuPin Wang, HuiHui Wu	3003
An experimental analysis of the pressures and flows within a driven mechanical model of phonation	Bogdan R. Kucinschi, Ronald C. Scherer, Kenneth J. DeWitt, Terry T. M. Ng	3011

VOL. 119, NO. 5, MAY 2006

 ${\tt CONTENTS--} Continued \ from \ preceding \ page$

Enhanced contrast for vowels in utterance focus: A cross-language study	Jessica F. Hay, Momoko Sato, Amy E. Coren, Cheryl L. Moran, Randy L. Diehl	3022
Comparing the rhythm and melody of speech and music: The case of British English and French	Aniruddh D. Patel, John R. Iversen, Jason C. Rosenberg	3034
Language redundancy predicts syllabic duration and the spectral characteristics of vocalic syllable nuclei	Matthew Aylett, Alice Turk	3048
SPEECH PERCEPTION [71]		
Cue weighting in auditory categorization: Implications for first and second language acquisition	Lori L. Holt, Andrew J. Lotto	3059
Early learners' discrimination of second-language vowels	Anders Højen, James E. Flege	3072
Phonological versus phonetic cues in native and non-native listening: Korean and Dutch listeners' perception of Dutch and English consonants	Taehong Cho, James M. McQueen	3085
Speech perception in gated noise: The effects of temporal resolution	Su-Hyun Jin, Peggy B. Nelson	3097
SPEECH PROCESSING AND COMMUNICATION SYSTEMS [72	2]	
A rule-based emotion-dependent feature extraction method for emotion analysis from speech	Vladimir Hozjan, Zdravko Kačič	3109
MUSIC AND MUSICAL INSTRUMENTS [75]		
Interaction of reed and resonator by sound generation in a reed organ pipe	András Miklós, Judit Angster, Stephan Pitsch, Thomas D. Rossing	3121
BIOACOUSTICS [80]		
Measurements of the anisotropy of ultrasonic attenuation in freshly excised myocardium	Steven L. Baldwin, Karen R. Marutyan, Min Yang, Kirk D. Wallace, Mark R. Holland, James G. Miller	3130
Using self-organizing maps to recognize acoustic units associated with information content in animal vocalizations	John Placer, C. N. Slobodchikoff, Jason Burns, Jeffrey Placer, Ryan Middleton	3140
Tissue deformation induced by radiation force from Gaussian transducers	Matthew R. Myers	3147
Acoustic structures in the alarm calls of Gunnison's prairie dogs	C. N. Slobodchikoff, J. Placer	3153
Using an artificial neural network to classify black-capped chickadee (<i>Poecile atricapillus</i>) call note types	Michael R. W. Dawson, Isabelle Charrier, Christopher B. Sturdy	3161
Nonconstant quality of auditory filters in the porpoises, <i>Phocoena phocoena</i> and <i>Neophocaena phocaenoides</i> (Cetacea, Phocoenidae)	Vladimir V. Popov, Alexander Ya. Supin, Ding Wang, Kexiong Wang	3173
Comparison of in-air evoked potential and underwater behavioral hearing thresholds in four bottlenose dolphins (<i>Tursiops truncatus</i>)	James J. Finneran, Dorian S. Houser	3181
CUMULATIVE AUTHOR INDEX		3193

CODEN: JASMAN

The Journal of the

Acoustical Society of America

Vol. 119, No. 6		June 2006
ACOUSTICAL NEWS-USA		3493
USA Meeting Calendar		3498
ACOUSTICAL NEWS-INTERNATIONAL		3503
International Meeting Calendar		3503
BOOK REVIEWS		3506
OBITUARIES		3507
REVIEWS OF ACOUSTICAL PATENTS		3509
LETTERS TO THE EDITOR		
Comments on "Intraspecific and geographic variation of West Indian manatee (<i>Trichechus manatus spp.</i>) vocalizations" [J. Acoust. Soc. Am. 114, 66–69 (2003)] (L)	Renata S. Sousa-Lima	3537
Comparison of Levitt- and Zwislocki-type adaptive procedures for stimulus placement in human listeners (\boldsymbol{L})	Daniel Rowan, Kathryn Hinton, Emma Mackenzie	3538
No adaptation in the amplitude modulation domain in trained listeners $\left(L\right)$	Laetitia Bruckert, Marion Herrmann, Christian Lorenzi	3542
On the sound absorption of quadratic residue diffuser groups with various shapes and combinations (L)	Jianbin Yang, Yong Shen, Han Wang	3546
Passive correlation imaging of a buried scatterer (L)	Eric Larose, Oleg I. Lobkis, Richard L. Weaver	3549
GENERAL LINEAR ACOUSTICS [20]		
Expressions for direct evaluation of wave number in cylindrical shell vibration studies using the Flügge equations of motion	Denis G. Karczub	3553
Sound absorption by viscoelastic coatings with periodically distributed cavities	Sven M. Ivansson	3558
Approximations for the scattered field potential from higher mode transmission in rectangular apertures	J. L. Horner, K. S. Peat	3568
Stochastic inversion in acoustic scattering	Beatrice Faverjon, Roger Ghanem	3577
Natural resonance frequencies, wave blocking, and energy localization in an elastic half-space and waveguide with a crack	Evgeny Glushkov, Natalia Glushkova, Michael Golub, Ander Boström	3589
Analysis and design of composite/folded variable area perforated tube resonators for low frequency attenuation	T. Kar, P. P. R. Sharma, M. L. Munjal	3599

VOL. 119, NO. 6, JUNE 2006

CONTENTS—Continued from preceding page

NONLINEAR ACOUSTICS [25]		
Investigation of a three-phase medium with a negative parameter of nonlinearity	D. H. Trivett, Hervé Pincon, Peter H. Rogers	3610
Strong on-axis focal shift and its nonlinear variation in low-Fresnel- number ultrasound beams	Y. N. Makov, V. Espinosa, V. J. Sánchez-Morcillo, J. Ramis, J. Cruañes, F. Camarena	3618
The effect of reflector geometry on the acoustic field and bubble dynamics produced by an electrohydraulic shock wave lithotripter	Yufeng Zhou, Pei Zhong	3625
Resonant solutions in wave phase conjugation induced by a limited magnetoacoustic conjugator	Alain Merlen, Qi Zhang	3637
AEROACOUSTICS, ATMOSPHERIC SOUND [28]		
Identification of multipole noise sources in low Mach number jets near the peak frequency	Takao Suzuki	3649
UNDERWATER SOUND [30]		
First-order and zeroth-order head waves, their sequence, and implications for geoacoustic inversion	Jee Woong Choi, Peter H. Dahl	3660
The directionality of acoustic T-phase signals from small magnitude submarine earthquakes	N. R. Chapman, R. Marrett	3669
A probabilistic model for the noise generated by breaking waves	Richard M. Heitmeyer	3676
Low-frequency acoustic propagation loss in the Arctic Ocean: Results of the Arctic climate observations using underwater sound experiment	Alexander N. Gavrilov, Peter N. Mikhalevsky	3694
Geoacoustic inversion of broadband data by matched beam processing	Yongmin Jiang, N. Ross Chapman, Harry A. DeFerrari	3707
Temporal and cross-range coherence of sound traveling through shallow-water nonlinear internal wave packets	Timothy F. Duda	3717
Dugong (Dugong dugon) vocalization patterns recorded by automatic underwater sound monitoring systems	Kotaro Ichikawa, Chika Tsutsumi, Nobuaki Arai, Tomonari Akamatsu, Tomio Shinke, Takeshi Hara, Kanjana Adulyanukosol	3726
Design of an underwater Tonpilz transducer with 2-2 mode piezocomposite materials	Yongrae Roh, Xiaoguang Lu	3734
ULTRASONICS, QUANTUM ACOUSTICS, AND PHYSICAL EF	FFECTS OF SOUND [35]	
Finite element modeling of torsional wave modes along pipes with absorbing materials	Michel Castaings, Christophe Bacon	3741
Bulk conical and surface helical acoustic waves in transversely isotropic cylinders; application to the stiffness tensor measurement	M. Perton, B. Audoin, Y. D. Pan, C. Rossignol	3752
A method for modeling polymer viscoelastic data and the temperature shift function	Walter M. Madigosky, Gilbert F. Lee, Jan M. Niemiec	3760
Acousto-mechanical and thermal properties of clotted blood	Volodymyr M. Nahirnyak, Suk Wang Yoon, Christy K. Holland	3766
Ultrasonic evaluation of residual stresses in flat glass tempering: Comparing experimental investigation and numerical modeling	Marc Duquennoy, Dany Devos, Mohammadi Ouaftouh, Dominique Lochegnies, Eric Roméro	3773

VOL. 119, NO. 6, JUNE 2006

CONTENTS—Continued from preceding page

STRUCTURAL ACOUSTICS AND VIBRATION [40]		
In-plane vibration of thin circular structures submitted to pulsed microwave	Anis Redha Hadj Henni, C. Bacon, B. Hosten	3782
Vibrational modes of partly filled wine glasses	Gregor Jundt, Adrian Radu, Emmanuel Fort, Jan Duda, Holger Vach, Neville Fletcher	3793
NOISE: ITS EFFECTS AND CONTROL [50]		
Prediction method for tire air-pumping noise using a hybrid technique	Sungtae Kim, Wontae Jeong, Yonghwan Park, Soogab Lee	3799
A linearized Euler finite-difference time-domain sound propagation model with terrain-following coordinates	Dietrich Heimann, Regina Karle	3813
APPLIED ACOUSTICS PAPER: ACOUSTICAL MEASUREMENT	S AND INSTRUMENTATION [58]	
Experimental methods for investigating the acoustical interaction between transducers	Boris Aronov	3822
ACOUSTICAL MEASUREMENTS AND INSTRUMENTATION [58]	
Characterization of impedance boundary as damped harmonic oscillators via impulse reflection	KY. Fung, Xiaodong Jing	3831
ACOUSTIC SIGNAL PROCESSING [60]		
Steerable frequency-invariant beamforming for arbitrary arrays	Lucas C. Parra	3839
Time reversal operator decomposition with focused transmission and robustness to speckle noise: Application to microcalcification detection	Jean-Luc Robert, Michael Burcher, Claude Cohen-Bacrie, Mathias Fink	3848
Adjoint-based acoustic inversion for the physical characterization of a shallow water environment	Jean-Pierre Hermand, Matthias Meyer, Mark Asch, Mohamed Berrada	3860
PHYSIOLOGICAL ACOUSTICS [64]		
Spectral fine-structures of low-frequency modulated distortion product otoacoustic emissions	Lin Bian	3872
Hybrid measurement of auditory steady-state responses and distortion product otoacoustic emissions using an amplitude-modulated primary tone	Johann A. Oswald, Thomas Rosner, Thomas Janssen	3886
Reducing reflected contributions to ear-canal distortion product otoacoustic emissions in humans	Tiffany A. Johnson, Stephen T. Neely, Judy G. Kopun, Michael P. Gorga	3896
PSYCHOLOGICAL ACOUSTICS [66]		
The case of the missing delay lines: Synthetic delays obtained by cross-channel phase interaction	Alain de Cheveigné, Daniel Pressnitzer	3908
Amplitude modulation sensitivity as a mechanism for increment detection	Frederick J. Gallun, Ervin R. Hafter	3919
Monaural and binaural loudness of 5- and 200-ms tones in normal and impaired hearing	Shani Whilby, Mary Florentine, Eva Wagner, Jeremy Marozeau	3931
Informational masking of speech in children: Auditory-visual integration	Frederic Wightman, Doris Kistler, Douglas Brungart	3940
The detection of increments and decrements is not facilitated by	Christopher J. Plack, Frederick J.	3950

VOL. 119, NO. 6, JUNE 2006

CONTENTS—Continued from preceding page

Effect of masker-frequency variability on the detection performance of infants and adults	Lori J. Leibold, Lynne A. Werner	3960
Interaural fluctuations and the detection of interaural incoherence: Bandwidth effects	Matthew J. Goupell, William M. Hartmann	3971
SPEECH PRODUCTION [70]		
Simulation of vocal fold impact pressures with a self-oscillating finite-element model	Chao Tao, Jack J. Jiang, Yu Zhang	3987
Broadband sound generation by confined pulsating jets in a mechanical model of the human larynx	Zhaoyan Zhang, Luc G. Mongeau	3995
Evidence for attractors in English intonation	Bettina Braun, Greg Kochanski, Esther Grabe, Burton S. Rosner	4006
SPEECH PERCEPTION [71]		
Speech categorization in context: Joint effects of nonspeech and speech precursors	Lori L. Holt	4016
Processing unattended speech	Marie Rivenez, Christopher J. Darwin, Anne Guillaume	4027
Speech perception based on spectral peaks versus spectral shape	James M. Hillenbrand, Robert A. Houde, Robert T. Gayvert	4041
Improving syllable identification by a preprocessing method reducing overlap-masking in reverberant environments	Nao Hodoshima, Takayuki Arai, Akiko Kusumoto, Keisuke Kinoshita	4055
Auditory-visual speech perception and synchrony detection for speech and nonspeech signals	Brianna Conrey, David B. Pisoni	4065
BIOACOUSTICS [80]		
Measuring the off-axis angle and the rotational movements of phonating sperm whales using a single hydrophone	Christophe Laplanche, Olivier Adam, Maciej Lopatka, Jean-François Motsch	4074
A helical biosonar scanning pattern in the Chinese Noctule, Nyctalus plancyi	Rolf Müller, Hongwang Lu, Shuyi Zhang, Herbert Peremans	4083
Correlation analysis of the beam angle dependence for elastography	Min Rao, Tomy Varghese	4093
JASA EXPRESS LETTERS		
Frequency and form as determinants of functor sensitivity in English-acquiring infants	Rushen Shi, Anne Cutler, Janet Werker, Marisa Cruickshank	EL61
Real time decomposition of speech into modulated components	Yadong Wang, Ramdas Kumaresan	EL68
INDEX TO VOLUME 119		
How To Use This Index		4105
Classification of Subjects		4105
Subject Index To Volume 119		4110
Author Index To Volume 119		4162