

Pantelis N. Vassilakis, Ph.D.

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EDUCATION**Post-Doc. Auditory Science - University of California, Los Angeles, 2003**

Post doctoral certificate in Auditory Science (Otoacoustic emissions; UCLA, Department of Physiological Science, P.M. Narins's laboratory).

Ph.D. Music Cognition, Acoustics & Aesthetics - University of California, Los Angeles, 2001

Doctor of Philosophy in Ethnomusicology, specialization in Systematic Musicology
(Music Cognition and Acoustics, Musical Aesthetics - Advisor: R.A. Kendall).

M.A. Music Cognition, Acoustics & Aesthetics - University of California, Los Angeles, 1997

Master of Arts in Ethnomusicology, specialization in Systematic Musicology.

B.A. Composition - Kingston University, Surrey, England, 1993

Bachelor of Arts in Music Composition and Music Technology.

Thesis: *The Nutcracker Ball: Three original compositions celebrating the centennial of Tchaikovsky's Nutcracker* (commissioned by the English National Ballet).

Electrical Engineering - National Polytechnic of Athens, Greece, 1982-86

Courses in Physics (Mechanics, Waves, Electricity & Magnetism) and Digital Systems of Communication.

TEACHING EXPERIENCE**DePaul University, School of Music / IDD / Libraries, 2003-**

- Introduction to acoustical and cognitive aspects of music composition and performance
 - Film music's role in meaning construction within the cinematic experience
 - Recent trends in music education research
 - Introduction to qualitative and quantitative methods in music research
- Also: Instructional design for face-to-face, online, and hybrid courses & Research, development, and implementation of technology tools for teaching music.

Columbia College, Audio Arts and Acoustics Department 2007-

- Introduction to Psychoacoustics

Stanford University, Center for Computer Research in Music and Acoustics (CCRMA), 2008

- Auditory roughness, cultural background, and musical tension-release judgments.
[Invited lecture]

Acoustical Society of America, Los Angeles Chapter, 2002

- Three-dimensional sound signals and their relevance to wave energy quantities and sound interference products. [Invited lecture]

UCLA, Department of Ethnomusicology, 2000

- *Teaching Ethnomusicology with Technology*: Web design, digitization software, digital multimedia, and their application in Ethnomusicological research.

UCLA, Department of Ethnomusicology (Teaching Assistant), 1996-1999

- *Cognitive Psychology of Music*: Introduction to and survey of the study of music as a product of cognitive behavior (Advisor: R.A. Kendall).
- *Musical Acoustics*: General introduction to the science of sound and its application to musical composition and performance (Advisor: R.A. Kendall).
- *Field & Lab Methods*: Introduction to theories and methods related to fieldwork in ethnomusicology (Advisor: T. Rice).

UCLA, Department of Ethnomusicology Laboratory, 1996-2000

Research associate, assisting graduate students and faculty with documentation of ethnomusicological fieldwork.

AREAS OF RESEARCH INTEREST

Cognition (psychoacoustics, timbre, harmony, sound localization)

Acoustics (musical acoustics, digital sound, spectral analysis, architectural acoustics)

Hearing (otoacoustic emissions, cochlear mechanics)

Film Music (theory, aesthetics, interrelationship of aural and visual stimuli)

Ethnomusicology (theory and methods, cross-cultural aesthetics, music and ethnicity)

Aesthetics (musical meaning and emotion, hermeneutics, experimental aesthetics)

Instructional Design (assessment- and multimedia-driven course design)

PUBLICATIONS

Vassilakis, P.N. and Fitz, K. (2008). *SRA 2.0: A Web-based Research Tool for Spectral and Roughness Analysis of Sound Signals*. Supported by a Northwest Academic Computing Consortium grant to J. Middleton, Eastern Washington University.

[<http://musicalgorithms.ewu.edu/algorithms/roughness.html>] or

[<http://www.acousticlab.org/roughness>]

Various versions presented/published as

Vassilakis, P.N. (2007a). "SRA: A web-based research tool for spectral and roughness analysis of sound signals," *Proceedings of the 4th Sound and Music Computing (SMC) Conference*: 319-325. C. Spyridis, A. Georgaki, G. Kouroupetroglou, and C.

Anagnostopoulou, editors. Lefkada, Greece: National Kapodistrian University of Athens.

Vassilakis, P.N. (2007b). "SRA: An online research tool for sound signal analysis."

Presented at the 7th MERLOT International Conference (MIC), 2007 (Thu. 8/9/07, 5:30 p.m.). [<http://conference.merlot.org/2007/>]

Vassilakis, P.N. (2006). SRA: "An online tool for Spectral and Roughness Analysis of sound signals," *J. Acoust. Soc. Am.* 120(5/2): 3677.

Vassilakis, P.N. and Fitz, K. (2006). "SRA: An online tool for Spectral and Roughness Analysis of sound signals," *Proceedings of the 9th ICMPC*: 486. M. Baroni, A. R. Addressi, R. Caterina, and M. Costa, editors. Bologna: Bononia University Press.

Simmons, D.D., Meenderink, S.W.F., and Vassilakis, P.N. (2006). "Anatomy, physiology, and function of auditory end-organs in the frog inner ear," in *Hearing and Sound Communication in Amphibians*, P.M. Narins, A.S. Feng, R.R. Fay, and A.N. Popper, editors,

pp. 184-220. Vol. 28 in the series, "*Springer Handbook of Auditory Research*," R.R. Fay, and A.N. Popper, editors. New York: Springer.

Alves, W. and Vassilakis, P.N. [online supplement only] **(2006)**. "Active listening tools - Online supplement," in *Music of the Peoples of the World*. Belmont, CA: Wadsworth / Thomson Learning. [http://music.wadsworth.com/alves_1e]

Vassilakis, P.N. (2005a). "Organizing and recognizing musical tension/release patterns may be culture dependent," *Acoustical Institute of Physics Press Room*. [<http://www.aip.org/149th/Vassilakis.html>].

Also as **Vassilakis, P.N. (2005)**. "An improvisation on the Middle-Eastern mijwiz; auditory roughness profiles and tension/release patterns," *J. Acoust. Soc. Am.* 117(4/2): 2476.

Vassilakis, P.N. (2005b). "Auditory roughness as means of musical expression," *Selected Reports in Ethnomusicology* 12: 119-144.

Vassilakis, P.N., Meenderink, S.W.F, and Narins, P.M. (2004). "Distortion product otoacoustic emissions provide clues to hearing mechanisms in the frog ear," *J. Acoust. Soc. Am.* 116(6): 3713-3726.

Giorgoudes, P. and Vassilakis, P.N. (2004). *Cyprus Music Network: Online digital music archive of Cypriot folk music*. Nicosia: Intercollege. Project funded by the *Cyprus Research Promotion Foundation*. [<http://www.cmn.intercollege.ac.cy>].

Vassilakis, P.N. (2002). *Music of the Near East: Online teaching and research tool showcasing UCLA's Near East music ensemble*. Los Angeles, CA: UCLA. Project supported by the *Department of Ethnomusicology, University of California, Los Angeles*. [<http://acousticlab.org/world/Ensembles/NearEast/NearEast.htm>].

Vassilakis, P.N. (2001). *Perceptual and Physical Properties of Amplitude Fluctuation and their Musical Significance*. Doctoral Dissertation. University of California, Los Angeles.

Vassilakis, P.N. (1997). *Beats, the Difference tone, and the Perception of the Missing Fundamental*. Master's Thesis. University of California, Los Angeles.

PRESENTATIONS

Vassilakis, P.N. (2008). "Culture-dependent emotional reactions to music." Invited presentation at the *Center for Computer Research in Music and Acoustics (CCRMA)*, Stanford University.

Vassilakis, P.N. and Kendall, R.A. (2007). "Acoustical, perceptual, and cognitive aspects of Ganga singing: Culture dependent emotional reactions to a Ganga song." Paper presented at the *52nd SEM Conference* (Society for Ethnomusicology, Pre-conference Symposium on Cognitive Ethnomusicology).

Vassilakis, P.N. (2007a). "Interdisciplinary challenges and potential in film music course design," *Proceedings of the 8th Conference of The Society for Music Perception and Cognition*: 63-64. C. Beckett and M. Hall, editors. Montreal, Canada: Concordia University. [Invited Presentation - Symposium on *Music in multimedia: Theoretical, empirical, and pedagogical perspectives*.]

- Kendall, R.A. and Vassilakis, P.N. (2007).** "Interactions of timbre with consonance, dissonance, and roughness in multitimbral triads," *Proceedings of the 8th Conference of The Society for Music Perception and Cognition*: 30-31. C. Beckett and M. Hall, editors. Montreal, Canada: Concordia University.
- Vassilakis, P.N. (2007b).** "Representing sound energy, phase, and interference using three-dimensional signals," *J. Acoust. Soc. Am.* 121(5/2): 3098.
[Invited Presentation - Special session on *Speech Communication: Frontiers of Spectrum Analysis with Speech Applications*.]
- Vassilakis, P.N. (2007c).** "Assessment- and multimedia-driven course design that aims at collaborative learning." Paper presented at the *50th National Conference of the College Music Society*, Salt Lake City.
- Vassilakis, P.N., Kendall, R.A., and Racy, A.J. (2006).** "The worlds of music: culture-dependent emotional reactions to an improvisation on the mijwiz," *Proceedings of the 51st SEM*: 197. University of Hawai'i at Manoa.
- Kendall, R.A. and Vassilakis, P.N. (2006).** "Perceptual acoustics of consonance and dissonance in multitimbral triads," *J. Acoust. Soc. Am.* 120(5/2): 3276.
- Vassilakis, P.N. (2006).** "Music as a means for modeling the human experience of time," *Proceedings of the 4th Annual HICAH* (Hawai'i International Conference on Arts and Humanities). CD-ROM (ISSN #1541-5899), Honolulu, HI. [<http://www.hichumanities.org>]
- Vassilakis, P.N. and Kendall, R.A. (2006).** "Musical tension/release patterns and auditory roughness profiles in an improvisation on the Middle-Eastern mijwiz," *Proceedings of the 9th ICMPC*: 361. M. Baroni, A. R. Addessi, R. Caterina, and M. Costa, editors. Bologna: Bononia University Press.
- Vassilakis P.N. and Moore J. (2006).** "Using multimedia instructional materials and frequent assessments to achieve learning." Paper presented at the *4th Annual SLATE Conference* (Supporting Learning and Technology in Education). Chicago, IL: University of Chicago.
- Vassilakis, P.N. (2005).** "Art as a mode of knowing and a model for action," *Proceedings of the 3rd Annual HICAH* (Hawai'i International Conference on Arts and Humanities). CD-ROM (ISSN #1541-5899), Honolulu, HI. [<http://www.hichumanities.org>]
- Vassilakis, P.N. (2004a).** "Instructional design in online environments: Challenges and possibilities." Paper presented at the *2nd Annual SLATE Conference* (Supporting Learning and Technology in Education). Chicago, IL: University of Chicago.
- Vassilakis, P.N. (2004b).** "Dichotic beats: Perception of sound interference versus detection of sound-source motion," *Proceedings of the 8th ICMPC*. R. Ashley and S. Lipscomb, editors (CD-ROM). Evanston, IL: Northwestern University.
- Vassilakis, P.N. (2004c).** "Towards a phenomenology of film music," *Proceedings of the 2nd Annual HICAH* (Hawai'i International Conference on Arts and Humanities). CD-ROM (ISSN #1541-5899), Honolulu, HI. [<http://www.hichumanities.org>]
- Vassilakis, P.N. (2003).** "Three-dimensional sound signals and their relevance to wave energy quantities and sound interference products," *J. Acoust. Soc. Am.* 114(4/2): 2350.

- Vassilakis, P.N. and Narins, P.M. (2003).** "Evoked otoacoustic emissions provide clues to hearing mechanisms in the frog," *J. Acoust. Soc. Am.* 114(4/2): 2414. [Also presented at the 33rd annual meeting of the *Society for Neuroscience*, New Orleans, LA.]
- Vassilakis, P.N. (2002).** "Dichotic sound interference products, sound localization cues, and wave interaction at a neural level," *J. Acoust. Soc. Am.* 112(5/2): 2299.
- Vassilakis, P.N. (2001).** "Auditory roughness estimation of complex spectra - roughness degrees and dissonance ratings of harmonic intervals revisited," *J. Acoust. Soc. Am.* 110(5/2): 2356.
- Vassilakis, P.N. (2000a).** "Amplitude modulation depth versus degree of amplitude fluctuation: implementation error, adjustment and implications," *J. Acoust. Soc. Am.* 108(5/2): 2597.
- Vassilakis, P.N. (2000b).** "Auditory roughness estimation of complex spectra," *Proceedings of the 6th ICMPC*. C. Woods, G. Luck, R. Brochard, F. Seddon, and J. A. Sloboda, editors (CD-ROM). Keele, England: Keele University.
- Vassilakis, P.N. (1999).** "Chords as spectra, harmony as timbre," *J. Acoust. Soc. Am.* 106(4/2): 2286 (supported by UCLA's Graduate Division).
- Vassilakis, P.N. (1998a).** "A single model explaining the first and second pitch-shift effects as alternative manifestations of a single phenomenon," *Proceedings of the 5th ICMPC*: 107-114. Seoul, Korea: Seoul National University.
- Vassilakis, P.N. (1998b).** "The first pitch-shift effect as a Doppler effect: a simple physical explanation to a complex perceptual phenomenon," *J. Acoust. Soc. Am.* 104(3/2): 1799.
- Vassilakis, P.N. (1997).** "First and second pitch-shift effects as alternative manifestations of a single phenomenon: introduction," *J. Acoust. Soc. Am.* 102(5/2): 3186.

PROFESSIONAL EXPERIENCE

DePaul University Libraries, Digital Audio/Visual Collection, 2003-

Digitization/production, cataloguing, and dissemination of digital audio and video files for DePaul University's School of Music courses.

Multimedia Development: *World Music* (CD-ROM), 2001- <http://www.acousticslab.org/world>

Design and production of a CD ROM introducing twelve musical traditions through images, video clips, sound examples, and text providing historical, ethnographic, musicological, and organological information.

_ Portions were licensed to: Alves, W. (2006) (see the *Publications* section)

Digital Sound Production, 1998-2003

Digital restoration and mastering of sound recordings for:

- _ T. Rice's *The Music of Bulgaria: Experiencing Music, Expressing Culture*; BookCD (2003)
- _ Apsara Media's *Sidi Sufis: African Indian Mystics of Gujarat* - CD (2002)
- _ C-T Seck's *West African Music Meets Jazz* - CD, Vol. 2 of UCLA Artist Series (2002)
- _ Rounder Records' *Sacred Music of the Moroccan Jews* - CD(2000)
- _ Garland Encyclopedia's volume on *Europe*; BookCD (2000)
- _ H. Rees's *Echoes of History: Naxi Music in Modern China*; BookCD (2000)
- _ Portions of the reel-to-reel collections at UCLA's Ethnomusicology Archive.

Gateway Studios, London, England, 1994-1995

Composed, co-produced and co-engineered "Rites of Passage", a recording of material commissioned by the *London Chinese Orchestra*.

BBC Radio 3 / London Greek Radio / London Greek Theater Company, England, 1994-1995

Engineered and produced theater projects for radio programming and the stage.

London Chinese Orchestra, London, England, 1993-1994

Composed, arranged, and conducted the original score for the Orchestra's 1994 London tour. Portions of the work were broadcast on *BBC TV Channel 2* (1/94).

English National Ballet, London, England, 1992

Composed, arranged, and produced the original recording for the "Nutcracker Ball", an *English National Ballet* production celebrating the 100 years of Tchaikovsky's "Nutcracker."

Web Design, 2000-2003

www.cmn.intercollege.ac.cy

www.julianagondek.org

www.afrodisia.com/index.htm

www.dimitriosvassilakis.com

www.galleryasha.com

AWARDS / HONORS**Ph.D. Processional Marshal, 2002**

University of California, Los Angeles – Doctoral Hooding Ceremony.

Best Student Paper Award in Musical Acoustics, 2001

142nd meeting of the Acoustical Society of America, Ft. Lauderdale, Florida.

Dissertation Year Fellowship, 2000-2001

University of California, Los Angeles - Graduate Division.

Graduate Student Profile, Fall 2000

University of California, Los Angeles - Graduate Quarterly.

Annual Research Fellowship, 1999-2000

University of California, Los Angeles - Graduate Division.

Gallery of Acoustics, First Prize, 1999

Acoustical Society of America - Interdisciplinary Technical Group on Signal Processing in Acoustics - 138th meeting of the Acoustical Society of America; Columbus, Ohio.

Summer Research Fellowship, 1999

University of California, Los Angeles - Graduate Division.

Ethnomusicology Department Fellowship, 1995-1996

University of California, Los Angeles.

National Training Award (N.T.A.), England, 1994

London winner of the *N.T.A. for Individual Achievement* - Award offered annually to recent college graduates, recognizing a significant achievement in business and the arts.

London Arts Board Award (L.A.B.), England, 1993

L.A.B. Award for Original Cross-Cultural Contributions in the Arts, recognizing my work for the *London Chinese Orchestra*.

English National Ballet & HRH Princess of Wales, Honorary Award, 1992

Special honor recognizing my work for the English National Ballet.

SERVICE

– **Ad hoc Reviewing**

Journal of the Acoustical Society of America
Computer Music Journal
Empirical Musicology Review
Journal of Comparative Physiology – A
Oxford University Press
MERLOT
Hawaii International Conference on the Arts and Humanities
Pre-publication review for
Borgo, D. (2006). *Synch or Swarm: Improvising Music in a Complex Age*. New York: Continuum
Post-publication review for
Hanna, W. (2007). The New Bloom's Taxonomy: Implications for Music Education. *Arts Education Policy Review*, 108(4): 7-16

– **Committees**

Society for Ethnomusicology – Audiovisual Committee
DePaul Teaching and Learning Resources – Teaching, Learning, and Technology Committee (grant writing; various sub-committees)
DePaul Libraries – Digital Projects Committee; Vision 2012 Steering Committee
DePaul School of Music – Technology and Web Services Committee
DePaul IDD – Consultant Hiring Committee

– **Memberships**

Acoustical Society of America
Society for Music Perception and Cognition
Society for Ethnomusicology
College Music Society
MERLOT – Music editorial team

COMPUTER SKILLS

Digital Sound (SoundForge, HelixProducer, QuickTimePro, ProTools, SoundEdit)

Web Design (FrontPage, Dreamweaver, HTML, JAVA Script)

Digital Image & Video (Photoshop, Windows Movie Maker, Media 100, Premier)

Programming (Visual Basic)

Word Processing & Desktop Publishing (Office, PageMaker, FrameMaker)

Mathematics (Statistica, MATLAB)

LANGUAGES

English and **Greek**: fluent.

German and **French**: intermediate.