

driftwood audio

audio, acoustics & technology

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andrew carballeira, chief engineer

Professional Objective

To apply my experience in acoustics, music and technology to the design of sustainable spaces for living, working and playing.

Selected Work Experience

- ❑ **Driftwood Audio. Ware, MA (2000-present)**
Position: Chief Engineer
Responsibilities: Operate a small consulting firm specializing in acoustical design and media production.
- ❑ **Berklee College of Music. Boston, MA (2007-present)**
Position: Assistant Professor, Acoustics
Responsibilities: Present fundamental concepts in acoustics to musicians, with an emphasis on issues relevant to the modern professional musician. Participate in course design discussions.
- ❑ **Cavanaugh Tocci Associates, Inc. Sudbury, MA (2002-2009)**
Position: Senior Consultant, Acoustics
Responsibilities: Propose, manage and conduct diverse assignments in acoustical consulting. Specific areas of expertise include environmental noise control, vibration analysis, room acoustics and speech privacy. Separate resume and writing sample available upon request.

Professional Affiliations

- ❑ Chairperson, Acoustical Society of America - Greater Boston Chapter (GBCASA)
- ❑ Member, Audio Engineering Society (AES)
- ❑ Member, Acoustical Society of America (ASA)
- ❑ Member, Institute of Noise Control Engineers (INCE)
- ❑ Advisor, The Robert Bradford Newman Student Award Fund Advisory Committee

Education

- ❑ **Berklee College of Music. Boston, MA (2000-2003)**
BM in Music Production and Engineering (GPA: 3.8).
Coursework in: Audio recording, mixing and mastering, jazz performance, acoustics and audio systems, composition, traditional studies, DSP, cSound, editing, digital delivery and synthesis.
- ❑ **University of Massachusetts at Lowell: Lowell, MA (2003)**
Course of study: Discrete mathematics
- ❑ **Capital Region Vocational-Technical Center. Albany, NY (1999)**
Course of study: CAD/CAM Design and Drafting, AutoCAD, Machining
- ❑ **Private Instrumental Studies**
Ten years of classical piano and traditional harmony training. Ten years of study in jazz, world and modern music for Hammond organ and piano. Extensive performance experience. Separate performance resume available upon request.



Experience

❑ Acoustics

- Design of spaces for performance and listening, addressing all aspects of architectural acoustics including room acoustics, sound isolation, noise and vibration control and electro-acoustic systems.
- Environmental noise assessment and control, including development of Environmental Noise Impact Assessments in accordance with federal, state and local regulations and guidance documents.
- Acoustical measurements using instrumentation from B&K, HP, Data Physics, Rion et al.
- Computer modeling and analysis using Cadna/A, CATT Acoustic, Trane Acoustics Program (HVAC), Excel, MATLAB, Max/MSP, Psysound3 and Smaart.
- Spatial audio for surround and binaural auralization systems.
- Audio/video system design, drafting, documentation and troubleshooting.

❑ Media

- Audio recording mixing, and mastering for stereo and surround delivery.
- Audio editing, noise reduction and archiving. Video editing and sound sweetening.
- Web design with HTML, CSS, PHP, MySQL, Joomla CMS and SEO technologies.
- Graphic design for web and print using industry standard tools.

❑ Computer Applications

- Operating Systems: Microsoft Windows, GNU/Linux, Mac OS9/OSX
- Engineering: Cadna/A, AutoCAD, Microsoft Office, Pro/Engineer, Solidworks, Google Earth
- Multimedia: Adobe Creative Suite, Sonic Scenarist, 3D Studio Max
- DAW/DVW: Nuendo, Wavelab, Pro Tools, Digital Performer, Sonic Solutions, CEDAR, Final Cut Pro

❑ Business infrastructure and facilities

- Administrative capabilities for Windows, Mac and GNU/Linux desktop and server environments.
- Practical skills in construction and electronics, including soldering, patch bay and rack layout, as well as operation of lathe, band saw and vertical milling machines.
- GNU/Linux and Windows OS system optimization.
- Design and installation of PC workstations, servers and network infrastructure.

Awards

- ❑ **The Robert Bradford Newman Medal** - *for Excellence in the Study of Acoustics and its Application to Architecture (2004 recipient).*

Publications

❑ Designing a simulation center to test acoustical criteria for healthcare facilities

Invited paper discusses validation of new hospital acoustical criteria through controlled auditory-induced sleep disruption studies. Presented at INCE NOISECON-07 in Reno, NV – 2007.

❑ Convergence

[A] J. Acoust. Soc. Am. Vol. 119, 3367 (2006)

Invited surround-sound loudspeaker composition and supporting lecture. Presented at the 151st Meeting of The Acoustical Society of America in Providence, RI – 2006.

❑ Musical instrument sound levels

[A] J. Acoust. Soc. Am, Vol. 116, No. 4, p. 2529, October 2004

Invited paper discusses measurements of various acoustic musical instrument sound levels and percentile descriptors, as well as partition sound isolation performance differences which arise between steady-state and musical noise sources. Presented at the 148th Meeting of The Acoustical Society of America in San Diego, CA – 2004.

