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AES Audio Engineering Society - Pacific Northwest Section

Around the Puget Sound, Seattle, Washington, U.S.A.

May Meeting Notice
Rational Acoustics: SMAART
History, Applications, Unusual Case Studies
and
The Role of Curiosity in Audio
Presented by
Michael Lawrence — Rational Acoustics
Application Support Specialist
Smaart SPL Product Manager
Jamie Anderson — Rational Acoustics
Founder & CEO
and the
AES PNW Section
ZOOM MEETING 6:00PM PDT (UTC -7)
Monday, 17 May, 2021



Smaart is an FFT-based audio analysis program. The name stands for *System Measurement Acoustic Analysis Real-time Tool*. *Smaart* can be used in many ways to examine sound systems in detail in order to diagnose and solve problems, and to confirm proper setup and operation. It can also be used to characterize the performance of and diagnose problems with the components of those sound systems, as well as components of the system's acoustic output itself and the space containing the sound. In many ways, the program's capabilities are only limited by the user's imagination, and this meeting will explore these capabilities and more.

Starting off with a brief history of FFT audio analysis, we'll look at how it got translated into audio use, and how *Smaart* came to be and to evolve into what it is today. Rational Acoustics' President Jamie Anderson, who has been present and active in much of the history of FFT audio analysis, will share some of that history with us.

Jamie and Michael Lawrence, Rational Acoustics' Application Support Specialist and *Smaart* SPL Product Manager, will guide us through some of the ways *Smaart* is used to assist in evaluating sound, both conventional and unconventional. This includes the idea of "sandbox engineering," which is using your available tools to design experiments that allow you to answer your own questions rather than waiting for someone else to answer them for you.

Our own Bob Smith will be on hand to share his experiences and usages of *Smaart*. Other attendees' experiences and usage stories will be welcomed.

This Zoom meeting is free to all, and free tickets are available at the Eventbrite link below. We require that all present use their real names in Zoom, mute your microphone and turn off your video during the presentation except when asking questions, and that each attendee gets tickets through Eventbrite (no account needed, no ticket sharing) so we can know how many people are going to attend. Our Zoom account has a finite capacity.

The Presenters

Jamie Anderson has been teaching and working in the field of sound system engineering, measurement and alignment for over 25 years. Prior to founding Rational Acoustics, he worked as a technical support manager and *SIM* instructor for Meyer Sound Laboratories, as a system engineer on tour for A-1 Audio (kd Lang) and UltraSound (Dave Matthews Band) as a product manager and instructor for SIA and EAW.

In the course of his professional career, Jamie has taught more than 300 *SIM* and *Smaart* classes, for over 4,000 students, in over 20 countries on 6 continents. He has been the house system engineer for 4 Montreux Jazz Festivals and 6 Telluride Bluegrass Festivals, has worked with Grateful Dead, Anita Baker and Louis Miguel tours, and has been involved in hundreds of system alignments across a vast and diverse range of venues (studio to stadium) and applications (theatre, church, clubs, rock and roll tours, conventions, etc.)

What he has learned from his career so far is that the art and practice of system alignment is as varied and expanding as the people, equipment and applications that encompass the field, that

training classes are always a two-way street, and that anyone that understands their tools can create new and effective ways to use them.

Michael Lawrence's love affair with professional audio began in the seventh grade, when he was left unattended in his school auditorium. After graduating from Berklee College of Music in Boston MA, he spent a few years touring independently with various artists before becoming more focused on sound system measurement, analysis and optimization. In 2019 he was adopted by audio analysis industry leader Rational Acoustics, where he works feverishly on the SPL featureset of the *Smaart* audio analyzer in exchange for a steady diet of graham crackers and tacos.

Smaart website

[Rational Acoustics Website](#)

THIS EVENT IS FREE, OPEN TO ALL, AND AES MEMBERSHIP IS NOT REQUIRED

[Eventbrite](#)

Election Notice

We will hold our annual officer and committee member election at our June meeting. Officers (Chair, Vice Chair, Secretary, and Treasurer) are typically nominated from the existing Committee. Committee members can be anyone interested and willing to help your section produce meetings. Officers serve for one year. Committee members serve for two years, with half electing on odd numbered years, and the other half electing on even numbered years. The current list of persons running for election, as well as other details about the election can be found [HERE](#).

If you are interested in being an officer or serving on the committee, please contact any current officer or committee member. You must be a member or associate member at the time you assume the position. More information about Officer or Committee duties can be found at this [link](#)

PNW AES Zoom Meetings

We started holding our meetings via Zoom beginning with the April 2020 meeting. Zoom has dramatically increased our reach, well beyond our Section's geographic area. Since doing this, we've had attendees from Canada, and as far away as Indonesia, and Australia. Zoom gives the ability to record our meetings, and those recordings will be posted in our past meetings Archive. For now, video from our Zoom meetings can be found (mostly) at Dan Mortensen's [YouTube channel](#).

We use EventBrite to manage our free tickets to meetings. You need to RSVP for yours via the following link. The Zoom URL will appear on the virtual ticket for the event. Copy it down!

[Eventbrite](#)

When you register at EventBrite and when you enter the Zoom meeting, please use your real first and last names so we can get to know each other. You do NOT need to create an EventBrite account to register.

Please Note

In order to maintain decorum and avoid interruptions, even unintended ones, we have established a few ground rules for meeting attendees:

1. We want to see your full name on display in Zoom at the meeting.
2. All audience audio and video will be muted for the duration of the event.
3. The presenter will determine if they can accept questions during the presentation, or wait until specific Q&A times, and that will be announced at the beginning of the meeting. (We often use the "chat" feature to allow attendees to ask questions when they think of them, with moderators passing them on to the presenter at the appropriate time.)
4. Based on our experience with no-shows, we reserve the right to issue more tickets than available slots. We don't want to turn people away based on inaccurate estimates of attendance, but we do have budgetary limits to the number of slots we can make available. If we reach capacity before you log in, we regret that we have no way to expand capacity at the last minute.
5. It would be good if you watched the chat stream during the meeting. Not only is it a way to submit questions to the presenters, but it's also a way for others to contact you personally. You have the option there to direct your comment to anyone who is part of the meeting as well as to one person in particular.

Finally, in the rare instance of behavior by an attendee that moderators believe is disruptive, we reserve the right to immediately eject such attendees.

Spring 2021 Virtual Convention

The Spring convention, traditionally held in Europe, will be a virtual event this year. If you've been unable to attend due to travel, cost, and/or logistics, this is your golden opportunity. You can view this year's program online:

aeseurope.com/program/

When you look at the program, note that times are given as CET, central european time. At the right, there is a dropdown menu for timezone, use this to make the schedule times conform to your timezone. Since this is a European event, event times are set to be convenient for those living in Europe. The good news for us is that the presentations are recorded, and available online in your own timezone, however by attending the actual event, you have the opportunity to interact with the presenters.

This is not a free event, and if you're not a member, the cost of attending includes a one-year membership in the society. Regardless, the cost is considerably less than it is when attending in person.

Tea* Time Topics **every Saturday, 3:30pm (Pacific) to 6:30pm** **A Virtual Zoom meeting**



Former Chair Dan Mortensen started the custom of people introducing themselves at our meetings. The breadth and depth of your skills and interests led to Dan wanting a more in-depth kind of presentation but without the preparation needed for a full-on meeting.

The idea behind these events is that "Audio" is a big subject with many specialties, and at our meetings we all focus together on one subject. When we do our self-introductions as part of our meetings, it's ALWAYS fascinating to hear about the kinds of things our audience members do to manifest their love of audio.

Dan thought it would be fun to create an event where the meeting IS the audience members' descriptions of what you do, preferably with pictures/recordings/movies or whatever will help you convey to us what you're up to/interested in/want to learn more about.

Format

The TTT meetings take place each Saturday afternoon via Zoom, and will continue for the foreseeable future, if not beyond. If things open up and people start getting busy again, we'll adjust the schedule. We've been doing this for several months now, and the topics have been varied and interesting. Here is a [summary \(click here\)](#) of the topics we've explored since we began in May.

Registration to attend Tea* Time Topics

You will need to register by contacting Dan via [When you register](#), please give your real first and last name.

Note that these Tea* Time Topics events are in addition to our normal 10 times/year (not in July or August) Section meetings and not a replacement for them.

Footnote: *This is Dan's normal time for tea. You may have whatever refreshments you wish, but if you get unruly/belligerent you'll be bounced without apology.

Greg Dixon

AES PNW 2020-2021 Section Chair

n.b. *The material presented at our meetings is the opinion of the presenter and not necessarily that of the Society. You are encouraged to conduct your own research and to form your own opinions before adopting the presented material as Truth.*

Last Modified 05/13/2021 2200 hrs

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AES PNW Section 2021 Election of Officers and Committee

More Information

Our section's Mission Statement can be found at this [LINK](#).

[More about Elections](#)

Slate of Candidates and Biographical Information

The nominations committee has proposed the following Slate of Candidates:

Officers

- **Chair — Greg Dixon**

Greg Dixon teaches courses in Advanced Composition and Sound Design at DigiPen. He holds a Ph.D. in music composition with a specialization in computer music from the University of North Texas, where he worked as a composition teaching fellow, recording engineer, and technical assistant for The Center for Experimental Music and Intermedia (CEMI). Greg received his M.M. in Music Composition and B.M. in Music Engineering Technology from Ball State University.



His compositional research focuses on electronic music and interactive music systems for games, acoustic instruments, sensor technologies, and human interface devices.

Greg has worked for more than fifteen years as a professional sound engineer, which has greatly influenced his strategies for designing sounds in the studio. In addition, he has served as a producer, recording engineer, arranger, performer, mixer, and mastering engineer on dozens of commercially available recordings in a wide variety of genres.

- **Vice Chair — Bob Smith**

Bob has a BSEE from the University of Washington and has worked in the Biomedical industry for over 30 years. The last 20 years he has spent developing acoustic research and audio engineering disciplines for Styer/Physio-Control to improve speech intelligibility for medical device voice prompting and voice recording systems in noisy environments. He is responsible for voice prompting in 30+ languages. The department now handles acoustic measurements of components such as drivers, microphone capsules and system measurements including Thiele-Small parameters, polar plots, waterfalls, frequency response, impulse response, several speech intelligibility methods, etc.

When he's not playing acoustic/audio monkey for his corporate master, he runs an acoustic lab, SoundSmith Labs. From time to time, he can also be found recording local musical talents. Currently he is comparing several hardware and software acoustic / audio measurement systems to assess how much they vary and to the degree they converge on similar results.

- **Secretary — Gary Louie**



Gary has been the recording engineer for the University of Washington School of Music since 1979, previously earning his BSEE at the UW. He has served as AES PNW Section Chair, Vice Chair, Committee, and most recently, Secretary since 1993. Gary is also the co-author, with Glenn White, of the *Audio Dictionary* 3rd Ed.

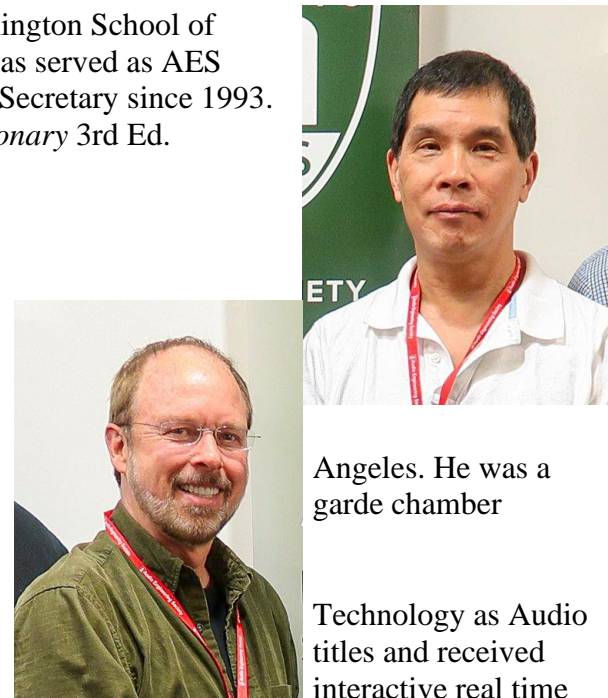
- **Treasurer — Lawrence Schwedler**

Lawrence Schwedler is a musician with twenty years of experience in the video game industry as a composer, sound designer, and audio director. In 1993 he graduated with a Master of Fine Arts degree in classical guitar performance and electronic music from the University of California at Los Angeles. He was a founding member of the Modern Arts Guitar Quartet, an avant-ensemble which toured Europe, Mexico, Canada and the U.S.

From 1999 to 2012 he worked for Nintendo Software Director, where he produced music and sound for fifteen game titles and received credit as co-author on two United States patents, one for music composition and another for interactive wave table sound generation. In 2012 he left Nintendo to design and direct two new undergraduate degree programs in music and sound design at the DigiPen Institute of Technology in Redmond.

He lives in Sammamish, Washington with his wife, artist Randi Ganulin, accompanied from time to time by their son and daughter.

Section Committee (alphabetical order) There are 5 committee positions open, and 5 people vying to fill those positions. Our by-laws stipulate that new nominations can occur for any open position at the meeting called for the election: the June meeting. You can self-nominate, with a second needed, or nominate someone else who has agreed to run and serve if elected, also with a second needed.



Angeles. He was a garde chamber

Technology as Audio titles and received interactive real time generation. In 2012 he

Long time Committee member Steve Malott, recently retired from the Music Technology Department at Shoreline Community College. will become a Committee Member At-Large. In this appointed position, he'll be the executive producer of our meetings.

The top 5 vote getters are elected to fill the Committee positions. Persons serving must be AES members by the time of the summer planning meeting.

- **Jess Berg**

Jess has been working as a live sound engineer for over 17 years, and has been recording sound since she got her first Tascam four-track cassette recorder in 1996. Born and raised in Minnesota, and being a lifelong musician, Jess decided to pursue her audio engineering and production education at The Institute of Production and Recording in 2002. She wanted to learn how to better record her own music and fell in love with working behind the scenes. She starting running sound in the local jazz clubs in 2003, and in 2004 was the assistant engineer for Skywynd's *Escape Plan* album. The next year, while still running sound in the jazz clubs, she also began working at Voiceworks, one of the top local voiceover studios, as their dub room engineer. In 2006, Jess became the Concert & Event Coordinator for the Minneapolis Park & Recreation Board, booking over 220 shows at five outdoor venues between June 1-Labor Day. During this time she was also a founding member of the JLR Foundation, a non-profit to help inner-city youth gain access to real-world recording technology in the parks. In 2009 she left the parks to work at The Institute of Production & Recording as the Academic Coordinator and co-instructor for their immersive SXSW course. Jess got her BS in Media Business at a sister school during this time, and continued to run sound at the Dakota Jazz Club. She was also a founding member of the Twin Cities Mobile Jazz Project, a non-profit aimed at providing under-privileged youth direct access to instruments and mentors from the greater MN music community.



In 2013, Jess moved to Los Angeles to pursue a touring career. She got her first gig a few months later, as the Front of House engineer and Tour Manager for a direct support act on a six-week North American club tour. The woman who hired her was an A-level tour manager and taught her everything she knew. This gig led to many more, and Jessica has since toured the world as a Front of House Engineer, Monitor Engineer, Tour Manager, and Production Manager, depending on the client's needs. During this time she also volunteered for a few years

with SoundGirls, worked production at Coachella, and had local audio and production gigs in L.A. while in between tours with various production companies like Showpro, Rat Sound and Bigger Hammer. In 2017, Jessica decided to go back to school and pursue a Master of Arts in Music Industry Administration. She graduated in 2019 and moved to the Seattle area to base her tour life closer to nature, where she connected with the AES PNW Section and officially became an AES member. Jess began working as a house engineer with the local AEG venues (Showbox, Showbox SoDo) in between tours, and also picked up audio gigs with Eighth Day Sound in SoCal. In 2020, she signed on to work freelance A2 live audio gigs with Microsoft, and was a part of their shift to live event broadcasting from their production studios when covid hit. She continues to network and participate in music and audio discussions about the future of our industry while figuring out her next adventures. Jess and her rescue dog currently reside in Bellingham, WA.

- **Angela Dane**

Dr. Angela Dane lives in Seattle, Washington, and teaches Women's Studies at the local community college. Her book, *Sabina Spielrein: The Woman and the Myth* was selected for the Gold Medal in Adult Nonfiction by Foreword Reviews in 2017. She is a Staff Writer and Editor for *Tom Tom Magazine*, the only publication in the world dedicated to female and non-binary percussionists. She owns and operates the only female and black-owned drum studio in Seattle dedicated to empowering women through the drum kit, Atrocity Drums. Additionally, she is the drummer for the all-female heavy rock band Atrocity Girl, whose members are recording and engineering their own debut album through a self-built home studio under the auspices of their LLC. She is currently enrolled in the University of Washington's Audio Production Certificate Program in order to learn the ropes of recording and started Seattle's *Womxn & Audio* Facebook Group to connect to and collaborate with others in the community. [Gear Fanatix, a site for underrepresented voices](#)



- **Micah Hayes**

Micah Hayes is the Assistant Professor of Music Technology and Director of Music Production at Seattle Pacific University, a position he began in the fall of 2020. He is a recording engineer and composer who began his musical career as a guitarist in his native Southern California. He began recording and composing music as a student at California State University, Chico where he completed a BA in Music with an emphasis in Recording Arts. After college, he continued his audio career with the New World Symphony in Miami Beach, Florida where he was the Recording Engineer Fellow from 2000-2002. After receiving a master's degree in music composition from the University of Oregon, Micah moved to New York where he worked as the live sound engineer for Redeemer Presbyterian Church's Upper West Side services, while also freelancing as a composer, recording engineer, and educator for a couple of years before accepting a teaching position at the University of Texas at Arlington. As a professor at UT Arlington, he helped create the Music Industry Studies area, overseeing the area's growth from 8 to 70 majors. In the summers, he engineered music at the Banff Centre for the Arts in 2001 and at the Aspen Music Festival where he was a Senior Recording Engineer from 2003-05.

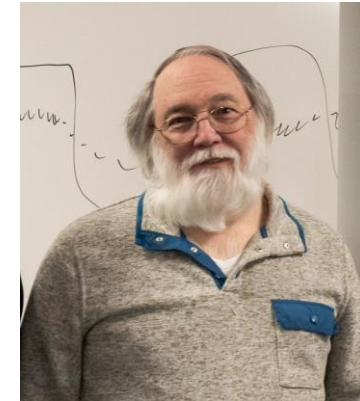


He began working as a film composer after being the sole recipient of the ASCAP Foundation Fellowship for Film Scoring and Composition at the Aspen Music Festival in 2006 where he studied with such composers as John Corigliano and Jeff Rona. As a film composer, he has scored multiple projects including *Wolf*, a film by Ya'Ke Smith that premiered at the South by Southwest Film Festival, and the short film *Dawn*, which aired on HBO several times.

- **James D. (JJ) Johnston**

James D. (jj) Johnston is Chief Scientist of Immersion Networks. He has a long and distinguished career in electrical engineering, audio science, and digital signal processing. His research and product invention spans hearing and psychoacoustics, perceptual encoding, and spatial audio methodologies.

He was one of the first investigators in the field of perceptual audio coding, one of the inventors and standardizers of MPEG 1/2 audio Layer 3 and MPEG-2 AAC. Most recently, he has been working in the area of auditory perception and ways to expand the limited sense of realism available in standard audio playback for both captured and synthetic performances.



Johnston worked for AT&T Bell Labs and its successor AT&T Labs Research for two and a half decades. He later worked at Microsoft and then Neural Audio and its successors before joining Immersion. He is an IEEE Fellow, an AES Fellow, a NJ Inventor of the Year, an AT&T Technical Medalist and Standards Awardee, and a co-recipient of the IEEE Donald Fink Paper Award. In 2006, he received the James L. Flanagan Signal Processing Award from the IEEE Signal Processing Society, and presented the 2012 Heyser Lecture at the AES 133rd Convention: *Audio, Radio, Acoustics and Signal Processing: the Way Forward*. In 2021, along with two colleagues, Johnston was awarded the *Industrial Innovation Award* by the Signal Processing Society "for contributions to the standardization of audio coding technology."

JJ received the BSEE and MSEE degrees from Carnegie-Mellon University, Pittsburgh, PA in 1975 and 1976 respectively.

- **Dr. Michael Matesky**

Dr. Mike Matesky, a PNW AES member for over twenty years and current program committee member, has a Doctorate in Music from the University of Washington, has been a university professor of music, taught advanced audio engineering and been recorded on over one hundred commercial albums.

He was principal cello of numerous orchestras as well as the 5th Avenue Theater orchestra and has played with many touring artists. His father worked at nine motion picture studios in Los Angeles.

Dr. Mike has won national awards for audio and video productions. Opus 4 Studios, designed and owned by Dr. Mike, is a highly advanced audio/video recording studio with the world's most controllable acoustics featuring LARES. The studio features two grand pianos. Designed and built from the ground up by Dr. Mike, the Large Room (as measured by fellow AES member Bob Smith) is extraordinarily quiet and articulate.

Opus 4 Studios, has posted approximately 1200 viewable audio/videos on YouTube.com>opus4.

Dr. Mike is eternally grateful for the valuable assistance he has received and continues to receive from fellow AES members.

- **Dan Mortensen**

Dan is President of Dansound Inc., which specializes in live sound reinforcement. He is currently serving on the Committee, and has previously held the posts of Chair, Vice-Chair, and Treasurer. After 30 years on the Committee, Dan continues to find that serving the AES PNW Section in one capacity or another is still one of his favorite things.

For nearly a year, he's been hosting a weekly Section Zoom meeting called "Tea Time Topics" in which a bunch of really smart people share presentations about something they are interested in (a wide range of topics!) and the 50th meeting is



rapidly approaching. It's open to all, and info can be found at www.aes.org/sections/pnw/tt

For almost 13 years he has enjoyed researching the history of CBS's 30th St. recording studio, home to the Section's late friend Frank Laico; much of that research can be found online at forums.stevhoffman.tv...

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