

EARS Report - Winter - Summer 2019

Ethan Castro - Monday, August 12, 2019

The following report briefly summarizes EARS activity from Winter, Spring, and Summer 2019.

1) Overview

The Experimental Acoustic Research Studio (EARS) is an active research and teaching facility since 2008. EARS offers an audio studio environment for teaching and research on sound, music and technology, with a heavy emphasis on interdisciplinary collaboration.

EARS has experienced growth in teaching, research, outreach, and sustainability due to the activity from the EARS Student Group, and official UCR classes and discussions now being held at the facility. EARS has increased inventory by several pieces of audio equipment which are used in classes that are taught in the facility.

Recommend Reading Ethan's Fall 2018 quarterly report for a comprehensive look at Fall 2018.

2) Instruction

Winter 2019: EARS was active through weekly creative sessions put on by the EARS student groups. This was adapted from the Songwriting model prototyped in Winter 2018, but instead of having a single large event that spans 8 hours a day for two days, we attempted to spread the exertion in weekly chunks, where a small intensive takes place for 2 hours every Friday after the weekly student group meeting. The products of the intensive were shared with other members, along with methodology and approach.

Some members also put on weekly workshops. Ethan put shared audio engineering tips and workflows in the software Logic Pro X, Christiaan Clark shared composition techniques in the software Ableton Live.

EARS Student Group also collaborated with fellow music student group **R'Comp** (aka Composers' Collective) to put on three events:

- I. 1/25/2019 - Cereal, Serialism, and the Matrix (20th century Serialism music)
- II. 3/1/2019 - Thai, Chai, and Tchaikovsky (A big Tchaikovsky-fest)
- III. 4/1/2019 - Rach, Rock, and the Rock...in Moana (Rachmaninov and Rock music)

Spring 2019: EARS saw the inclusion of its first class - MUS 023 taught by visiting assistant professor Bradley Butterworth, along with MUS 144 (Intro to Songwriting - taught on campus in MUS 136) seemed to temporarily quench many students' expressed desire to apply their musical and technical knowledge to popular, commercial, and contemporary music opportunities.

Due to a scheduling error, both MUS 023 and MUS 009 were scheduled at the same time, at EARS, resulting in 45 students coming to the first week of classes - implying that there is a great interest in commercial music and digital audio.

PHOTO RIGHT: STUDENTS OF MUS 023 ANALYZING MICROPHONE PLACEMENT FOR A VOCAL SESSION.



Music Improvisation Ensemble (MUS 179) met every Friday from 3-5pm at EARS during Spring 2019.

PHOTO BELOW: MUS 179 LED BY DR. LYSLOFF AT EARS FOR WEEKLY FRIDAY CLASS.



PHOTO BELOW: AREA 52 IMPROV ENSEMBLE MEMBERS JAMMING AT CENTRAL EARS TABLE.



Summer 2019: Ethan now has office hours and his lab discussion for the MUS009 class meet at EARS every Monday and Wednesday from 3-5pm.

His students practice audio techniques learned in class, with the materials available at the EARS studio. The students also assisted in preparing and executing a drum session for the EARS Student Group artist project “Delfino^2 [squared]” where they experienced multitrack recording for an applied purpose.

PHOTO RIGHT: 7/10/19 MIGUEL DIAZ, A MUSIC MAJOR AT UCR WEARS TACTILE RESEARCH DEVICE “SUBPAC” SO HE CAN VISCERALLY FEEL BOTH PRE-RECORDED BASS AND HIS OWN PERFORMANCE AS HE IS RECORDED - PART OF TACTILE RESEARCH BEING CONDUCTED AT EARS.



3) Internships

Our intern and now alumni, **Eli Olivares (pictured right)** returns to EARS to continue sharing his journey of becoming a music producer, Christiaan and Ethan met with him several times to assist his new project. Kevin Leevarinpanich now works with Ethan at the Riverside Philharmonic, and as a band leader at Rosemead High School. He also independently assists with administration and logistics for EARS Student Group artist project “G. Bautista”.

Currently, Sociology Major and Music Minor Student Jessica Bradley has been stepping up immensely to assist project completion, recording projects, and joining the executive

committee of the EARS Student Group to ensure events, obligations and projects meet completion.



PHOTO LEFT: JESSICA BRADLEY AND ETHAN CASTRO USE NEW DIGITAL TECHNOLOGY TO LIVE MIX STUDENT ORGANIZATION ACAPELLA GROUP “NOT SO SHARP” AT END OF QUARTER SHOWCASE.



4) Events and collaboration

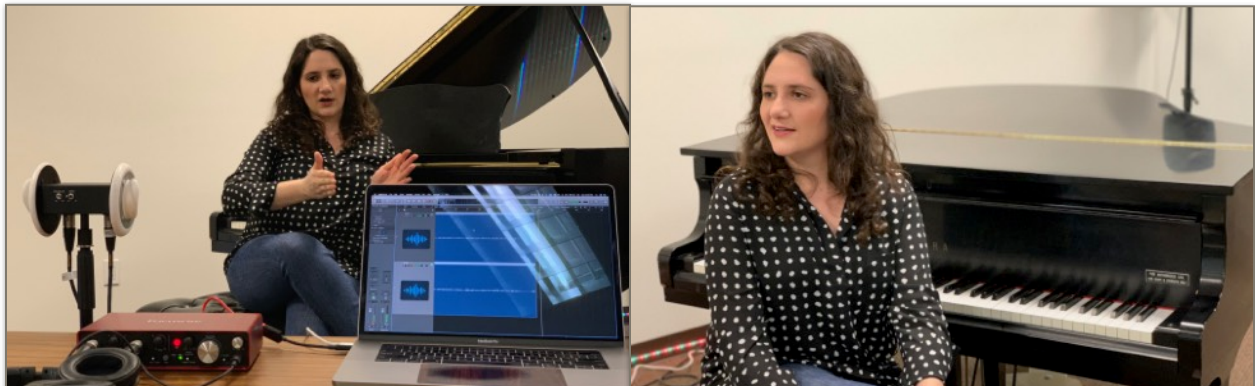
EARS Student Group has assisted on several EARS events to showcase collaborations and musical/audio research. The following contains selected events:

1/10/19 - BINAURAL RECORDING TO EXPERIMENT WITH NEW MICROPHONES.



Paulo Chagas records performers on new original piece for Cello and Piano with new binaural microphones.

1/13/19 - RECORDING AND PRODUCTION OF MICRO-OPERA VIDEO FOR DEAN PEÑA



Visiting assistant professor Dr. Dana Kaufman records a recap of her Fall 2018 seminar “Creating Micro-Operas” for Dean Peña who requested a video to share with CHASS departments.

1/23/19 - EARS STUDENT GROUP X R'COMP: CEREAL, SERIALISM, AND THE MATRIX



EARS Student Group and UCR organization “R’Comp” collaborate on an event based on the 20th century compositional technique called ‘serialism’ which involves matrices. Naturally, we ate cereal and watched the Sci-Fi movie “The Matrix” after rousing presentations of modern applications of the technique.

2/22/19 - EARS STUDENT GROUP: IAN DICKE “COWBOY ROUNDS” PERFORMANCE

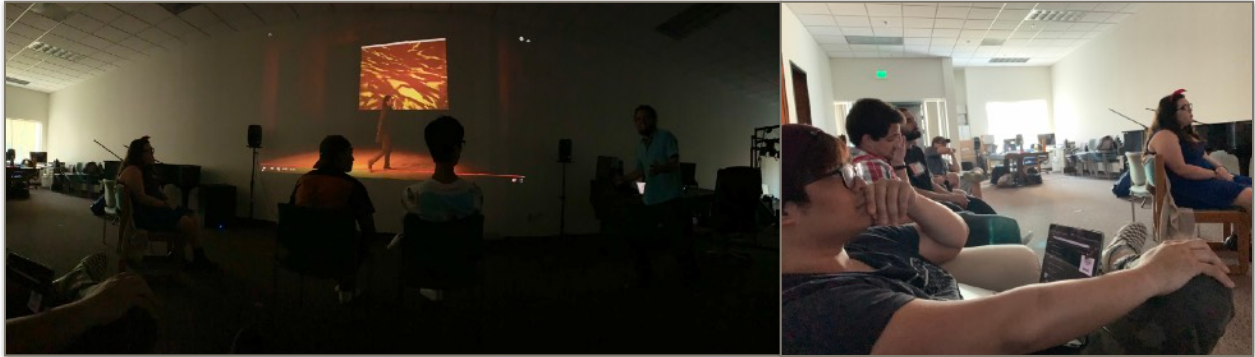
Dr. Ian Dicke demonstrates a live performance of his piece “Cowboy Rounds”. He then entertained a Q&A session afterwards to display his technical setup to interested students.

3/1/19 - EARS STUDENT GROUP X R’COMP: THAI, CHAI, AND TCHAIKOVSKY

Music instructor Dr. Gary Barnett gave a talk about Tchaikovsky, and graduate student Anna Emilova performs with professor Dr. Dana Kaufman while students dine on Thai food and Chai tea.

4/5/19 - EARS STUDENT GROUP: SPRING SHOWCASE

Quarterly demonstration of interdisciplinary research and artistic projects of EARS.

4/26/19 - EARS STUDENT GROUP: ALVARO LOPEZ ON OSC CONTROL

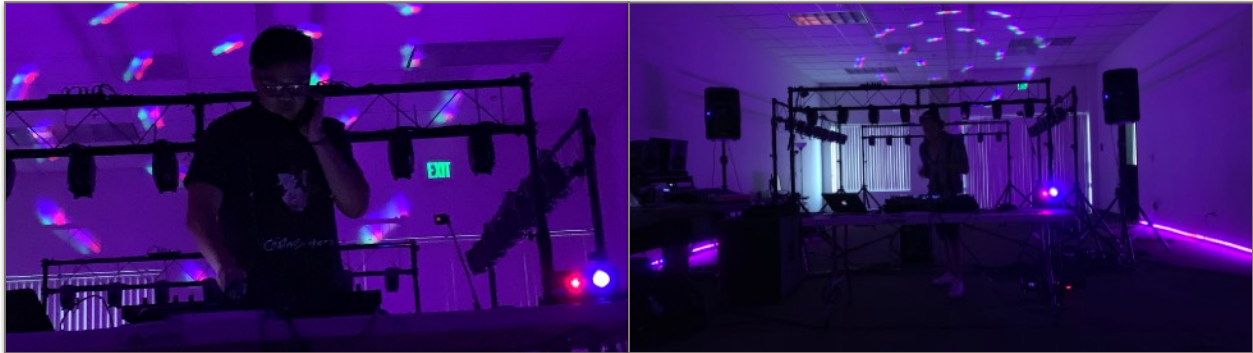
Graduate student Alvaro Lopez shares his programmable performance research with the Student Group. Students then applied these techniques to a creative session immediately following.

5/30/19 - EARS STUDENT GROUP X R'COMP: "SCANTRON" FEAT. BRADLEY BUTTWORTH

VAP Bradley Butterworth, demonstrates his musical skill and network in an end-of-quarter concert.

6/1/19 - EARS STUDENT GROUP: "DELFINO ^2" AN EARS STUDENT GROUP ARTIST PROJECT

As part of the EARS initiative to present a different artistic project featuring UCR ensembles, students, and guest composers and artists every year, the EARS student group presented the entire discography of interdisciplinary student ensemble Delfino ^2 (Squared) - an artistic research project that involved many students over the course of the past year.

6/7/19 - EARS STUDENT GROUP X DVC: "BATTLE OF THE BEATS"

A collaboration between EARS Student Group and well known student organization "Deejay and Vinylphile Club"

These are representative of the types of events that occurred at EARS with the aid of the EARS Student Group. Many collaborative events happen on a weekly basis aside from the weekly creative session hosted by the EARS Student Group.

5) Highlights for Winter and Spring 2019

- **Roughly 78 unique audio, visual, audiovisual, video game, and engineering projects created and worked on by members of EARS Student Group in the EARS facility.**
- EARS Student Group earned a \$1,000 sponsorship from the Office of Technology Partnerships (OTP) for a series of innovation-focused music events such as a hackathon for creating music keyboards out of foil and cardboard, that could be used with phones in music theory classes, songwriting camps, and artist development camps, among many other ideas.
- EARS Supported and shared research with UCR Student Life by establishing collaboration relationships for EARS Student Group with student organizations Deejay and Vinylphile Club (DVC), Not So Sharp (NSS), R'Shorts, Lot 1 Productions, IEEE, Gamespaw, and Association of Black Music Artists (ABMA).
- EARS supported our artistic projects beyond simply providing a place to perform. A research initiative to optimize the independent artist workflow allowed EARS Student Group to act as a Record Label and finish and published 10 works of audio from 2 student artists through major digital platforms (Spotify, Apple Music, Amazon mp3, etc.)
- EARS supported video game research by experimenting with VR sessions, which can now be displayed on projector and external loudspeakers as a result of a routing experiment. This enables non-players to interact with the session performer, which is traditionally a single-player experience.

6) Conclusion

EARS is a community of interdisciplinary artists, engineers, and creative thinkers that develop patentable technology through experience and application of academic skills - achieving the vision that Dr. Chagas proposed in his 2008-2013 EARS proposal. The journey to get to this point has not been without its challenges, but the UCR staff and music department have been instrumental in supporting EARS through funding for equipment, janitorial staff, collaboration with events and marketing tools .

Ethan's recommendations are:

I. Hire student assistants to open/close studio

There are many students that wish to come work on projects outside of office hours or class hours, since the equipment at EARS is specialized and state of the art - very much outside the price range of undergrad students - time at the studio is coveted, and is currently dependent on Ethan's personal and professional schedule to open the studio for students. While it would not be wise to allow *any* undergraduate to have unrestricted access to EARS, many students have taken either MUS009 or MUS023 - both of which teach students how to handle the sensitive equipment at EARS. Those students could be allowed to check in via a keycard system, and check out equipment via online resource, with trained student assistants opening and closing the studio, overseeing and supporting new students.

II. Assign or appoint studio manager or administrator

With the increase use in the studio, more equipment needs to be replace/repaired/purchased. A dedicated studio manager or administrator could keep up with the rapidly changing needs of the students, and be the key point person for repair orders that go through the music department, UCR real estate, or other repair route.

III. Production Academic Track

Undergrad: MUS 009, MUS 023, MUS 137, MUS 139, MUS 144, MUS 145A+B, MUS 173
 Graduate: All plus MUS 232, MUS 249, MUS 251, MUS 252, MUS 256 and MUS 257

These courses can offer many concentrations of a Digital Production track with emphasis in either:

1. Digital Composition
2. Audio Production
3. Music for Film
4. Music for Video Games
5. Commercial Music and Audio

IV. Services

I also echo Dr. Chagas's recommendation from the 2018 EARS Report to allow the students, the studio, and the music department to earn a bit of revenue from the advanced abilities of the students which exceed the expectations of the commercial climate in the Inland Empire, and even some Los Angeles commercial studios. Having the students perform services on behalf of the music department would aid in funding the other recommendations in this list.

Submitted Respectfully,
 Ethan Castro, PhD Student