



PROCEEDINGS OF THE 5TH INTERNATIONAL CONFERENCE ON LIVE CODING  
- ICLC2020 -

University of Limerick - Ireland

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*February 2020*

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ICLC2020  
INTERNATIONAL CONFERENCE ON LIVE CODING

WED 5th 2020  
University of Limerick - Ireland

# Evening Concerts

Wednesday 5th of February 2020  
19:30  
Theater 1 Irish World Academy UL

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# Very Long Cat

David Ogborn\* & Shawn Mativetsky

\*McMaster University & McGill University

very long cat is a tabla and live coding duo that rehearses and performs over the Internet (between Hamilton and Montréal). For ICLC2020 we propose a co-located improvisation highlighting the capacity of the Punctual browser-based live coding language to produce generative visuals, incorporating the analysis of audio signals from the tabla as well as transformed photographic textures.

The Punctual browser-based live coding language has been developed as a “core” language of the Estuary collaborative live coding platform, with an emphasis on economical notations to describe how successive definitions of the same computational entity relate to each other in time (ie. “transitions”). The language allows graphs of oscillators, filters, mathematical operations, etc to be directed to both audio and visual outputs (as Web Audio API graphs, and WebGL fragment shaders, respectively). In earlier performances, very long cat made heavy use of the JITlib affordances of SuperCollider as well as the JackTrip software for network audio – our proposed performance for ICLC 2020 is a chance to showcase the evolution of that practice, now based heavily on zero-installation web technologies (such as Punctual and Estuary).

## Bio

Dynamic performer Shawn Mativetsky is considered one of Canada’s leading ambassadors of the tabla, and is a pioneer in bridging the worlds of Western and Indian classical music. Called an “exceptional soloist” by critic Réjean Beaucage, Whole Note’s Andrew Timar adds that “as a leading disciple of the renowned Sharda Sahai, he has serious street cred.” Shawn Mativetsky is highly sought-after as both performer and educator, and is active in the promotion of the tabla and North Indian classical music through lectures, workshops, and performances across Canada and internationally. Based in Montreal, Shawn teaches tabla and percussion at McGill University. His first solo recording, Payton MacDonald: Works for Tabla, was released in 2007,

and Cycles, his recording of Canadian compositions for tabla, was released in the fall of 2011. His most recent release, Rivers, is a solo tabla album rooted in the rich traditions of the Benares style of tabla playing. <https://www.shawnmativetsky.com/>

David Ogborn / dktr0: <http://www.dktr0.net> hacker, composer, artistprogrammer, live coding and guitar performer; lead developer of numerous software projects used in network music and live coding, including EspGrid, extramuros, Punctual, and Estuary; a founding member of the Cybernetic Orchestra; director of the Networked Imagination Laboratory <http://nil.mcmaster.ca>, and the Centre for Networked Media and Performance (CNMAP) at McMaster University; Associate Professor in McMaster's Department of Communication Studies and Multimedia, teaching in the undergraduate Multimedia program, the MA in Communication and New Media, and the PhD in Communication, New Media, and Cultural Studies <https://csmm.mcmaster.ca>.



# Three Ravens

Francisco Bernardo, Chris Kiefer & Thor Magnusson

Emute Lab, School of Music, University of Sussex

We present a live coding musical performance that illustrates live coding systems created with Sema1, our new Web-based live coding language design and performance system. Using three bespoke languages, Kiefer, Bernardo and Magnusson will collaborate on a co-located networked musical performance where the music is live coded in real-time. Each of the languages serves as an instrument in the ensemble of three. This performance brings together three connected live coding languages supported by Sema. The second iteration of Sema (to be presented at ICLC2020) enables users to create their own mini-language. We have created three distinct mini-languages that serve as instruments of a musical ensemble. We explore the extent to which these mini-languages enable expressive live coding performance. In a live coding fashion, the screens will be projected onto the wall enabling the audience to follow the performance as it is played on the pidgin languages.

## Bio

Thor Magnusson is a worker in rhythm, frequencies and intensities. His research interests include musical improvisation, new technologies for musical expression, live coding, musical notation and digital scores, artificial intelligence and computational creativity, programming education, and the philosophy of technology. These topics have come together in the ixiQuarks, ixi lang, and the Threnoscope live coding systems he has developed.

Chris Kiefer is a computer-musician and musical instrument designer, specialising in musician-computer interaction, physical computing, and machine learning. He performs with custom-made instruments including malleable interfaces, touch screen software, interactive sculptures and a modified self-resonating cello. Chris is an experienced live-coder, performing under the name 'Luuma'. He performs with Feedback Cell and Brain Dead Ensemble, and has released music with ChordPunch, Confront Recordings and Emute.

Francisco Bernardois a computer scientist, an interactive media artist, and a multi-instrumentalist. His research is focused on human-computer interaction approaches to toolkits that broaden and accelerate user innovation with interactive machine learning. In 2008, Francisco designed BEN, a language that augments Bluetooth naming for mobile interaction with intelligent and ubiquitous environments. Francisco has performed with different acts (e.g. FRANTICØ,;papercutz), and most recently, with his solo project MNISTREL

# Voodoo Suite

Diego Villaseñor, Alejandro Franco Briones\* & David Ogborn\*

Independent, McMaster University\*

We are proposing a performance using the libraries and platforms developed by the authors: Nanc-In-A-Can, TimeNot and FluentCan which emphasise poly-temporality and other forms of complex time relationships. The name of the performance is Voodoo Suite in reference to the long-scale music work by the Cuban-Mexican mambo composer and performer Damaso Pérez Prado. This piece is characterised by the counter position of various musical styles relevant for the author: mambo, African traditional music and Jazz. In this spirit, we intend to produce a multilinguistic livecoding act that not only oscillates between beat-oriented music and polytemporal experimental textures but also manages to express simultaneously similar or complementary compositional and algorithmic ideas with different live coding languages, notations and platforms. Moreover, the poly-temporal and rhythmic ideas expressed here will have a literary (words), visual and sonic output.

## Bio

Alejandro Franco Briones My interests focus on experimenting with sonic phenomena in order to develop alternative ways to structure and perceive music/sound art. Two of the major focal point for my work as a composer/sound artists are the development of a rhythm oriented music, and the interactions and the multi lateral flow of information which occur between the composer, the programmer, the code score, the instrumentalists, the performer and the audience. By the act of listening, I attempt to make evident the interplay that occurs between the audible and the muted qualities of musical reality.

Diego Villaseñor de Cortina I am a composer, improviser, philosopher and programmer. My work focuses on the exploration of the possibilities of modular composition, the interaction of heterogeneous entities and the creation, exploration and intervention of open systems. Alongside Alejandro Franco Briones I am the coauthor of Nan-in-a-Can, a SuperCollider library for the creation of temporal canons. I

am also a member of the free improvisation collective Ruido13, from Mexico City, with whom he has worked on concepts such as, the deconstruction of the musical instrument leading sound synthesis with acoustic instruments objects, of various forms of rhythmic texturing.

0001 is a project by Gerard Roma focusing on small-scale digital lo-fi experiments. In "Weathery", the project explores a more rigorous approach to one-bit synthesis. The sound generators are driven (where to?) by chaotic oscillators.

## **Bio**

Performer: 0001

Affiliation: CeReNeM, University of Huddersfield

# Weathery

Gerard Roma [0001]

University of Huddersfield

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# Livecoding with integrated visualization of code information and sound impression

Hiroki Matsui  
Tokyo University of Technology

This performance presents an integrated audio visualization that combines code information and music abstraction contained in TidalCycles. The system called RIPPLE (Real-time Image Production Platform for Livecoding Environment) integrates two types of information. The numerical values that compose the music quantitatively are obtained from the code. The impression of the sound is obtained in real-time by machine learning. In the machine learning module, I use the statistical model trained by myself to visualize the sound in a reflection of the coder's impressions and ideas. I try to generate visuals that are organically connected to music by sending the estimated results to openFrameworks.

## Bio

Born in Shimane, Japan. He received a bachelor's degree in media science from Tokyo University of Technology (TUT) in 2019. He is currently studying live coding, creative coding, audio and speech science at the graduate school of Bionics, Computer and Media Sciences, TUT.

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# Bionic March: Live Coding with Voice and Machine Listening

Alex MacLean

McMaster University

This performance will combine live coding, voice, and machine listening. The live coding will be done in TidalCycles and accompanied by live vocals. A synth running in SuperCollider will be controlled by both the sound created by typing on the computer's keyboard and the live vocals with the use of onset and pitch detection, the machine listening component. This piece was first workshopped at the 2019 live coding intensive in the Networked Imagination Laboratory, and for a performance at ICLC 2020 will be augmented by working with samples from field recordings and generative visuals. The work makes use of Nick Collins' work on machine listening in SuperCollider (Nick Collins. 2015. "Live Coding and Machine Listening". Proceedings of the First International Conference on Live Coding).

## Bio

Alex (aka Monalex as a live coding artist) is a musician, songwriter, audio/live sound engineer, and software developer from Northern Ontario. He has played in many bands over the years and told even more to turn their amps down on stage. His current band, Deepsea Challenger, is a progressive rock band based in Hamilton, ON that Alex sings, writes, and plays guitar for. He holds both a diploma in Music Industry Arts from Fanshawe College and a degree in Computer Science from Western University and has worked for several years as a DevOps and Cloud Engineer in the broadcast industry. More recently, as an MA candidate in Communication and New Media at McMaster University, he is investigating assistive applications of machine learning for the performing arts.

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# Terpsicode

Kate Sicchio, Marissa Forbes and Zeshan Wang

Virginia Commonwealth University

This performance is a duet for dancer and coder using Terpsicode, a developing programming language for live coding dance performance scores. It allows a visual score for a dancer to be created in real time as the work unfolds. The live coder is using the new programming language Terpsicode, designed specifically for this use. The code patterns images which are then projected into the performance space and interpreted by the dancer.

## Bio

Dr. Kate Sicchio is a choreographer, media artist and performer—whose work explores the interface between choreography and technology with wearable technology, live coding, and videosystems. Her work has been shown internationally in many countries including the US, Germany, Australia, Belgium, Sweden, and the UK at venues such as PS122 (NYC), Banff New Media Institute (Canada), V&A Digital Futures (London), and Artisan Gallery (Hong Kong). She is currently Assistant Professor of Dance and Media Technology at Virginia Commonwealth University.

Zeshan Wang is a motion and 3D artist interested in the relationship between how people represent themselves physically and digitally. They are currently a student at Virginia Commonwealth University majoring in Kinetic Imaging and Computer Science.