Saturday, April 7, 2012 at 8:00PM
Richardson Auditorium in Alexander Hall

The Princeton Laptop Orchestra (PLOrk)
Dan Trueman and Rebecca Fiebrink, Directors
Jeffrey Snyder, Associate Director
Perry Cook, Co-Founder (with Dan Trueman)

From the Waters
LOrX Aeterna
Walo
Some Assembly Required

Anne Hege
Perry Cook
Lainie Feferman
Jascha Narveson

— INTERMISSION —

Undeciphered Writing
windows that won’t
Victorian Webs

Jeffrey Snyder
Konrad Kaczmarek
Michael Early

Kathy Supové, Piano

Four Squared for Ligeti

Kathy Supové, Piano

Dan Trueman
ABOUT THE PROGRAM AND PLOrk:

*a horde of premieres and pianos with PLOrk!*

For the first time in three years, the Princeton Laptop Orchestra (PLOrk) returns to Richardson Auditorium in Alexander Hall. The first ensemble of its size and kind, PLOrk has inspired the formation of laptop orchestras across the world, from Oslo through Dublin, to Bangkok through Stanford. PLOrk has performed widely, from Carnegie Hall to The Kitchen, and has been covered by *The New York Times*, *Wired Magazine*, NPR, *The Guardian* (UK), and many others. In 2008, PLOrk was awarded a major grant from the MacArthur Foundation.

Joining PLOrk on this program is renowned New York pianist **Kathy Supové** (“What Ms. Supové is really exploding is the piano recital as we have known it, a mission more radical and arguably more needed.” —Anthony Tommasini, *The New York Times*). Supové will premiere a new “mini-concerto”—*Four Squared for Ligeti*—for piano and laptop orchestra composed by PLOrk co-founder and Director **Dan Trueman**, as well as new works by **Michael Early** and **Lainie Fefferman**.

Returning to PLOrk for the first time since retiring from Princeton is PLOrk co-founder and renowned computer musician **Perry Cook** for the premiere of “LOrX Aeterna” (*non plangit amissa Binary dIgiTs*), a piece that crosses two and fro between virtual and real choirs. **Jeff Snyder** brings a gaggle of his groundbreaking instruments for his new piece, including the neo-medieval/space-age digital contrivelande and the manta, as well as some new instruments built especially for the occasion. In their new works, **Jascha Narveson** explores the possibilities of democratic action and live-coding via wireless networking, while **Konrad Kaczmarek** approaches laptop improvisation from a jazzer’s perspective. Finally, **Anne Hege** ritualistically and physically conjures a gorgeous sound world with her new work.

Many of these new works will be featured at the first ever symposium on laptop orchestras in Baton Rouge, Louisiana later this month, and will be recorded this coming summer for release in 2013.

**PLOrk MEMBERS:**

**PLOrk Mini-Orchestra 1** *(for Hege, Cook, and Fefferman):*

Minh Tam Trinh
Sarah Strenio
Hannah Kronenberg
Shu Haur Tang
Avneesh Sarwate
Nikitas Tampakis
Samantha Gebb

**PLOrk Mini-Orchestra 2** *(for Kaczmarek and Snyder):*

Riley Thomasson
Charles Evans  
Iris Chang  
Evan Leichter  
Hana Shin  
Daniel Chyan  
Kenrick Rilee  

PLOrk Mini-Orchestra 3  
(for Early and Trueman):  
Abulhair Saparov  
Isaac Julian  
Christina Hummel  
Travis Henry  
Kynan Rilee  
Ben Siegfried  

All three mini-orchestras come together for Narveson and Trueman pieces.

PROGRAM NOTES AND BIOS:  

LOrX Aeterna  
Perry Cook  

This is a study in using the onboard laptop sensors and digital signal processing to augment the human singing voice. The singer voices are captured, processed, and controlled by tilting of the laptops, to expand and transform the choir. Long live laptop orchestras (and choirs)!

Perry R. Cook attended the University of Missouri at Kansas City Conservatory of Music from 1973 to 1977, studying voice and electronic music. He worked as a sound engineer and designer from 1976 - 1981. He received a BA in music in 1985, and a BS in Electrical Engineering in 1986 from UMKC. He received a Masters and PhD in Electrical Engineering from Stanford in 1990. Along with working for companies such as NeXT Inc., Media Vision, Xenon/Chromatic, and Interval Research, he continued at Stanford as Technical Director of the Center for Computer Research in Music and Acoustics, until joining the faculty of Princeton University in 1996 as a Professor of Computer Science, with a joint appointment in Music.

Cook has published over 200 technical and music papers, books, and book chapters, and presented lectures throughout the world on the acoustics of the voice and musical instrument simulation, human perception of sound, and interactive devices for expressive musical performance. He is also the author of the Synthesis Toolkit in C++ (STK), and co-author of the ChucK audio programming language. He has performed as a vocal soloist and as a computer musician throughout the world, and has recorded Compact Disks on the Lyricord Early Music Series Record Label with the vocal group Schola Discantus, and live electronic music with the group Interface on the Cycling 74 label. He was the recipient of a 2003 Guggenheim Fellowship, to write a book on the subject of Technology and the Voice. Along with Dan Trueman, Cook is the co-founder of PLOrk, which received a 2008 Digital Learning Initiative grant from the MacArthur Foundation. In January of 2009
Cook was named a Fellow of the Association of Computing Machinery, for his contributions to "Computer Music, Physics-Based Sound Synthesis, and Voice Analysis/Synthesis. He is now Emeritus Professor at Princeton, and holds faculty/arts fellowships at Arizona State University, California Institute of the Arts, and Stanford CCRMA. Cook is a founding advisor and consultant to the iPhone/Pad startup SMule, and lives in Southern Oregon where, at Humbug Sonic Arts, he researches, writes, composes, farms sunlight, and eats lots of locally grown food.

Michael Early’s Victorian Webs is a fantasy based loosely on Morse code. Listening to the ‘performance’ of Morse code is mesmerizing – its rhythms falling into musically unpredictable patterns. The piece uses fragments of Morse code – words, letters, punctuation – to create a more uniquely musical language. The bits of Morse code that I use come mostly from the inaugural message transmitted on the first U.S. commercial telegraph, in Pennsylvania: “Why don’t you write, you rascals?” The title of the piece is adapted from Tom Standage’s book The Victorian Internet, which draws parallels between our own Internet and the Victorian era’s use of the telegraph to communicate and transmit information over long distances.

Michael Early is a composer and performer who will happily participate in any tradition of music making that he can wrap his ears, head, or hands around. He creates music for acoustic ensembles, electric guitars, laptops, and headphones, and is particularly interested in the intersections between Western concert music and Rock music, between acoustic and electronic instruments, and between the live concert experience and the written page. In addition to performing with Sideband, he is active as a performer on electric guitar with the duo X10, and sings and writes songs as ThreeAcrePlot. He is completing his Ph.D. at Princeton University, and teaches in the MFA program in Music Composition at Vermont College of Fine Arts.

Walo
Lainie Fefferman

This is one in a series of pieces I’m doing that are meant to be portraits of the ensembles playing them (very meta!). I like the idea of a piece of music that acts like a visual art portrait – you get to see something of the artist and something of the subject at the same time and the whole thing feels really personal. The voices you’ll hear in this piece are all founders, members, and former members of PLOrk. I love PLOrk and I love these guys and I hope you enjoy it. (PS. Thanks to Konrad Kaczmarek for teaching me Max and hearing me whine about how confusing it is!)

New York composer Lainie Fefferman has written music for voices, orchestral instruments, banjos, bagpipes, shawms, car parts, and electronic media. Her music draws inspiration from the rigorous, the gorgeous,
the nasty, and the zany. She began her studies as a math major, but ended up a composer at Yale and is now working toward a Ph.D. in composition at Princeton. Her recent collaborators include Newspeak, JACK Quartet, So Percussion, and electric guitar quartet Dither. She has sung at the United Nations, been a rehearsal pianist at Westminster Choir College, and performed on kazoo with the Bang on a Can All-Stars. She is thrilled to be entering the wide world of coding for this piece!

*From the Waters*

Anne Hege

For me, there is something inherently magical about the laptop orchestra. It has seemingly endless potential, and somehow, I imagine if anything were to bring a spirit back, this meshing of machine, man, woman, and music would be it. For those of us who grew up thinking that a time machine was a beautiful Delorean, or a space-like pod could merge man and fly, the hemispherical speaker of the laptop orchestra and the slim lines of the tether controller convince me that this is the vehicle for speaking with the beyond. My thanks to Maya Deren for her inspiring book *Divine Horsemen: The Living Gods of Haiti*, Rebecca Fiebrink for her fabulous application the Wekinator and all her help building this piece, as well as the performers of *Middle Passage* (an earlier version) and *From the Waters*, Dan Trueman, and Rinde Eckert, for their feedback and advice.

Born in Oakland, CA, Anne Hege began her musical studies singing with the Piedmont Children’s Choir and the Oakland Youth Chorus. Formative projects with innovators Keith Terry and Linda Tillery inspired her multimedia leanings. Hege has composed works for film, installation art, dance, and concert settings. Over the last two years, she has explored writing music for dance in her work with choreographers Carrie Ahern, Jill Sigman, Elena Demyanenko and Donna Costello. Her latest compositions lie somewhere between ritual, music, and theater with some homemade instruments thrown in for good measure. She is currently researching multimedia works that engage physical awareness for her dissertation in Music Composition at Princeton University.

*windows that won’t*

Konrad Kaczmarek

*windows that won’t* is an improvisatory piece for laptop ensemble and solo piano. Members of the ensemble play an instrument that monitors their keystrokes to play back both pre-recorded sounds and audio that is sampled from the soloist in real-time. The piece is structured into three sections, each of which highlights a different form of interaction between the soloist and the ensemble. The soloist also acts as conductor by sending out various program changes and text-based performance instructions.
Konrad Kaczmarek is a composer, musician, and programmer whose music incorporates live audio processing and improvisation, drawing freely on his diverse musical and technical background. As a soloist, he has performed at the Sonorities Festival at Queens University in Belfast, The SoundBytes Festival in Halifax NS, Bargemusic, The Stone, Joyce SoHo, The Chelsea Art Museum, and the 92nd Street Y. His compositions have been performed by an eclectic group of performers and ensembles including Janus, Psappha, Kate Campbell, PLOrk, and the NOW Ensemble. He has been awarded residencies at the Atlantic Center for the Arts, The Banff Centre in Canada, and STEIM in The Netherlands. His freelance programming and performing have taken him to the Kunstnernes Hus in Olso, Norway, The New Zealand International Arts Festival, The 2008 Whitney Biennial Performance Series, the Next Wave Festival at the Brooklyn Academy of Music, “Works and Process” at the Guggenheim, and The Strings of Autumn Festival at the Estate Theater in Prague. More recently, he has been developing a real-time audio processing program called ‘Tide’ for the performance artist Laurie Anderson. He received a B.A. in music from Yale, a MMus in electronic music composition from University of London, Goldsmiths, and is currently pursuing his doctoral degree in composition at Princeton.

Some Assembly Required
Jascha Narveson

Like a lot of PLOrk pieces, this piece sends messages over a network to all the players, co-ordinating musical events across the ensemble. Unlike most PLOrk pieces, the main creative input from the players involves making all of the sounds that respond to these messages. All the beeps, boops, hums, buzzes, and samples that you hear in this piece are the creations of the individual players, while the sequence in which you hear them is being sent from a central conductor computer. In performance, the main creative input from players is voting to move from scene to scene when they get bored with whatever's happening - once enough players vote to move to a new scene, the music progresses. The final scene is the end of the piece, and all the sound stops.

Jascha Narveson is a graduate student in the Department of Music at Princeton University. More sounds and info at: http://www.jaschanarveson.com

Undeciphered Writing
Jeffrey Snyder

"In roast you are a guest of the ducks - go dream!" - attempted translation of the Sitovo inscription, written in an unknown script.

This piece is written for an ensemble of instruments designed and built by the
composer. The music is inspired by examples of writing that have been discovered but never translated ranging from intentional codes to ancient scripts for which the spoken language is unknown or can’t be identified.

Jeff Snyder (b. 1978) is a composer, improviser and instrument designer living in Princeton and active in the New York City area. He performs on analog modular synthesizer in duos with Sam Pluta and Eric Wubbels, and also leads a band as his electro-country alter ego Owen Lake. He is currently the Technical Director of the Princeton University Electronic Music Studios, and the Associate Director of PLOrk, the Princeton Laptop Orchestra. In 2011, he received a doctorate with distinction in Music Composition from Columbia University. In 2009, Jeff started a small business designing and manufacturing electronic musical instruments under the name Snyderphonics. The same year, he co-founded an experimental music record label with Sam Pluta and David Brynjar-Franzson called Carrier Records.

Four Squared for Ligeti
Dan Trueman

Both Ligeti’s famous Musica Ricercata II, for solo piano (perhaps most known for its cameo in the Kubrick film Eyes Wide Shut), and my own Four, for, um, solo 6-string electric violin (unknown for anything, as far as I know) are spare, spacious pieces, featuring just a few notes, oft repeated and separated by long silences. In an experiment in musical vandalism, I have smashed these two pieces together and filled most of the silences as best I can. At the heart of this new Frankenstein is a pair of “synchronic metropianos;” laptop-interconnected, strangely-tuned virtual pianos with embedded, pitched metronomes (don’t worry if that’s not crystal clear — you’ll hear). This pair, in tandem with a good, old-fashioned piano, creates a constantly shifting core of meter changes, among other things. Surrounding this trio is a cohort of other laptop instruments. Some slowly sustain the piano sounds with modified golf videogame controllers (the tethers, fast becoming a standard instrument in the laptop orchestra worldwide; no kidding here!). Others type, creating chattering clusters of clicky sounds, all synchronized via a wireless network. Finally (speaking of Franksteins), others play a bizarre digital hybrid of the flute and electric guitar (affectionately called the blotar, a brainchild of the nutty Dr. Perry Cook), also with the tethers (multi-talented, these tethers), using a neural-network created with PLOrk co-Director Rebecca Fiebrink’s fantastic Wekinator. Finally finally, the piece closes with the chatter of as many mechanical metronomes as we could muster, something Ligeti himself would surely have appreciated. Did I forget anything? I’m grateful to these wonderful PLOrk students for being so adventurous in taking on this piece and all the others on this program, and to Kathy Supové for inspiring this piece at the outset.
Dan Trueman (b. 1968) is an American composer and fiddler. He began studying violin at the age of 4, and decades later, after a chance encounter, fell in love with the Norwegian Hardanger fiddle, an instrument and tradition that has deeply affected all his work. His explorations of musical instruments have extended into new technologies; Dan is the co-founder and director of the Princeton Laptop Orchestra (PLOrk), the first ensemble of its size and kind. Dan’s compositions reflect this range, exploring the rhythmic tension between traditional dance music and machines, or the unusual phrasings and counterpoint of traditional Norwegian music, or the diverse influences of composers like Bach, Stravinsky, Reich, Cage, and others. He has performed his music with many, including his own Trollstilt and QQQ, the American Composers Orchestra, So Percussion, the Crash Ensemble, the Brentano String Quartet, and innumerable wonderful fiddlers. Dan’s work has been recognized by awards from the Guggenheim and MacArthur Foundations, among others. He teaches composition, counterpoint, electronic/computer music, and tune-making at Princeton University.

Upcoming projects include a recording of neither Anvil nor Pulley with So Percussion, a piece for fiddler Caoimhín Ó Raghallaigh and members of the Crash Ensemble, a couple projects with the great sean nós singer Iarla Ó Lionáird, a piece for steel-drum virtuoso Josh Quillen, a record of laptop orchestra music with Sideband, a record of original and traditional tunes with the aforementioned Caoimhín, a project with the Irish group Yurodny, and more ...