CELLIST MARIÉL ROBERTS WORKS IN THE CONCERT HALL DURING A SUMMER RECORDING RESIDENCY.

DANCER AND FILM ARTIST CAROLINE GARCIA PRODUCES FLYGIRL A RESIDENCY IN PARTNERSHIP WITH THE AUSTRALIA COUNCIL FOR THE ARTS.

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**SEPTEMBER**

- **THU / SEP 01, 7:00 PM**
  - MUSIC / SOUND, TALK
  - 108 Troubles
  - Patricia L Boyd and Anne Boyer

- **THU / SEP 07, 7:30 PM**
  - MUSIC / SOUND, PERFORMANCE
  - Three Cases of Amnesia
  - Xinan Bokaer

- **THU / SEP 13, 7:30 PM**
  - STUDENT UNION UNION SPEAKERS FORUM
  - Matt Roloff

- **THU / SEP 22, 7:30 PM**
  - MUSIC / SOUND
  - Trois Hommages by Georg Friedrich Haas
  - Mabel Kwan

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**OCTOBER**

- **THU / OCT 06, 8:00 PM**
  - MUSIC / SOUND
  - Lapalux

- **THU / OCT 13, 7:00 PM**
  - CAMERAS / VIDEO, SERIES, TALK
  - Return of the Electric Love (Take II)
  - Ephraim Asili

- **THU / OCT 17, 7:00 PM**
  - SCHOOL OF ENGINEERING
  - National Manufacturing Day

- **THU / OCT 27, 7:00 PM**
  - TALK, WORKSHOP
  - Black Power of Hip Hop Dance: on Kinesthetic Politics
  - Naomi Breagh

- **SAT / OCT 29, 8:00 PM**
  - MUSIC / SOUND
  - Viky Iyer and Craig Taborn

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**NOVEMBER**

- **THU / NOV 10, 7:00 PM**
  - CAMERAS / VIDEO, SERIES, TALK
  - The Unreliable Narrator
  - Martine Syms

- **SAT / NOV 19**
  - SCHOOL OF HUMANITIES ARTS AND SOCIAL SCIENCES
  - Fall Concert

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**DECEMBER**

- **THU / DEC 01, 7:00 PM**
  - MUSIC / SOUND
  - Jlin + Qrion

- **THU / DEC 08, 7:00 PM**
  - MUSIC / SOUND
  - Jlin + Qrion

- **THU / DEC 18**
  - RENSSELAER HOLIDAY CONCERT
  - Winter Concert

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**Please note: the calendar is current as of printing; our website is continually updated throughout the season: empac.rpi.edu.**
WATERING THE FLOWERS

Ephraim Asili, Charles Atlas, and Martine Syms

CURATOR: VICTORIA BROOKS

WATERING THE FLOWERS is a new year-long screening program. Each evening focuses on a recent film or video by an EMPAC-affiliated artist, and will be succeeded by a program of other short or features that were influential in the making of their work, whether fiction or documentary, experimental or commercial.

WATERING THE FLOWERS, or "L’Arroseur," is the title of a lost film from 1896 by cinema pioneer Georges Méliès, based on Louis Lumière’s film "L’Arroseur Arrosé," which was released the previous year. L’Arroseur Arrosé is often credited as the first fiction film, and its 45 seconds comprise a single gag played on a gardener watering his plants. Highly influential to the development of both narrative cinema and on-screen comedy, it was endlessly copied, parodied, duplicated, and is appropriated even to this day. Its promotional poster was also a first: an audience watching the film—an image of cinema itself.

The title has also been referred to in distinct ways: "The Waterer Watered" or "The Sprinkler Sprinkled." This act of differing translation points to the subjective relationship each of us has to language, either textual, visual, or sonic. All artists are inspired by and learn from others, and this program seeks to "water the flowers," so to speak, opening a space for collective watching through the artist’s eyes. At a time when so many of our moving images are viewed from a computer or handheld device, and our selections are channeled algorithmically according to our narrow interests, this program provides the opportunity to see films that are "lost." Not films lost in the sense of Méliès’ work, but films that are potentially masked by the flood of daily data. Watering the Flowers pursues inspiration through the juxtaposition of the unusual, the banned, the overlooked, the old, the new, the personal, the counter-historical, the experimental, and the popular.

The SubBassProtoTon

Johannes Goebel

INSTALLATION

First invented in 1986 and recently reconstructed on the EMPAC mezzanine, the SubBassProtoTon is a walk-in cubical organ pipe that allows visitors to physically experience frequencies that are too low for audible perception and to interactively explore sound when it reaches the range of hearing. The exhibit is free and open to the public during normal daytime hours (9-5 Mon-Fri, 10-4 Sat).

The SubBassProtoTon (literally, “below-low-first-tone”) was first constructed by EMPAC’s Director Johannes Goebel for a large outdoor art event in Germany, and then traveled Europe as part of a sound exhibition for children and students.

The instrument consists of a wooden box large enough to comfortably accommodate two to three people. When inside, participants can manipulate a sliding wooden wedge that opens and closes a window at the front of the box. Air is generated by a motorized organ blower outside the box and is channeled towards the wedge where different sounds are created depending on how far the wedge is opened or closed. This oscillating air pressure results in a sonic frequency that moves from the audible human range to below what can be heard, yet can be physically felt.

The instrument allows visitors to explore some fundamental principles of sound while actually being immersed in the box itself. Anyone who interacts with the ProtoTon, regardless of age and musical or scientific aptitude, can come to understand the basic dynamic of sound behind instruments as diverse as the organ, flute, or ocarina, and enjoy the gentle massage that comes from standing inside these instruments’ vibrations.

Rob Hamilton

MUSIC / SOUND, INSTALLATION

"108 Troubles" will be the Department of Arts at Rensselaer as an assistant professor of Music and Media in 2015.

In Spring 2016, EMPAC completed construction on a 496-channel wave-field audio system, one of the most extensive in the world. Consisting of very small speaker heads oriented very close together, the system produces a 3D audio environment by localizing the source of individual sounds with an extreme level of precision. As of yet unexplored, this array will give electronic composers access to a new dimension of space and immersion in their work.

For the wave field array’s inaugural performance, Rensselaer Professor Rob Hamilton will create a running installation August 22–September 2, and performance on September 2, to explore and demonstrate advanced concepts of spatialized sound. Using a Disklavier piano, Hamilton will transform digitally recorded notes and distribute them across each of the independently controlled speakers in the system. Audiences are encouraged to physically explore the resulting environment much like a giant sonic hologram.

Dr. Rob Hamilton, a composer, performer, researcher and software designer, explores the cognitive implications of the spaces between interactive game environments, network topographies, and procedurally-generated sound and music. Dr. Hamilton joined the Department of Arts at Rensselaer as an assistant professor of Music and Media in 2015.

CURATOR: ARGEO ASCANI
San Francisco-based artist Patricia L Boyd presents a new video work, commissioned by EMPAC. The project is grounded in Boyd’s research into what she calls “the protocol of production-as-exhaustion,” which acknowledges the debt (of time, vitality, and labor) that must be paid to capitalism by every living body, as well as the internal economies of self-preservation that a body must undertake to honor this debt. In light of such demands, Boyd’s work deploys an “unproductive” body within a structure of “wasted” time.

The shoot, which took place over five days last spring, used a system of four moving cameras in the EMPAC Theater—two bird’s-eye views moving up and down on vertical axes, and two horizontal tracking shots—to surround and relentlessly document the space in which performer Nour Mobarak took up an extended and repetitive series of gestures. Within this matrix of cameras—running in constant motion according to pre-programmed commands—the system inevitably documents itself, each camera puncturing the frame of the others and capturing the static lighting rig and technical equipment used on-set. Mobarak’s body, like all the objects represented, is passed by again and again and thereby can never become a fixed subject of the film since the system is not programmed to privilege her presence any more than the adjacent objects. Her performance then plays with its own attitude of indifference.

Dancer, choreographer, and media artist Jonah Bokaer will combine three of his iconic solos—False Start, Charade, and Nudedescendance—in a 60-minute performance titled Three Cases of Amnesia. Rarely performed in the United States, the program showcases Bokaer’s pioneering work with choreographed, computer-generated animations.

Where does a movement begin? Where does it end? What, and who, does it leave behind? Bokaer uses a digital avatar to compose body movements that he might not discover working with a physical person, and he then transposes that choreography onto his own body for live performance. Over the course of the performance, Bokaer and his animated double dance together, the uncanny precision of each movement building upon the last. The result is an intimate portrait of a man and the various media he comes in contact with—not just a computer, its software and projections, but also a chair, a ladder, an apple, and clothing. Bokaer navigates these objects with a personal movement style that goes beyond any specific technique and dialogues with themes of play, memory, ephemeralness, and disappearance.

Jonah Bokaer is an American choreographer and media artist known for addressing the human body in relation to contemporary technologies. Recruited to the Merce Cunningham company at the unprecedented age of 18, Bokaer is a John Simon Guggenheim Memorial Fellow in Choreography, a United States Artists Fellow in Dance (Ford Foundation), and a Bessie award-winner. In addition to his own work, he has also choreographed for Robert Wilson and danced for such choreographers as John Jasperse, Deborah Hay, and Tino Seghal.

CURATOR: ASHLEY FERRO-MURRAY
One can make out the surface only by placing any dark-colored object on the ground

Hannah Rickards

One can make out the surface only by placing any dark-colored object on the ground as a performance that uses navigational techniques to choreograph the interaction of a moving camera with two performers.

The title refers to how one can travel in polar whiteout conditions by placing an object on the ground and continuing to place the object in front of you as you move forward. By this successive act, a pattern is formed, which can be viewed as a visual score for performance. Inspired by the graphic scores of Morton Feldman and exposed new frames. At times these imperfections dance across the screen, as much a part of the image as the bodies of the martial artists.

This performance has been developed specifically for the production environment of Studio 1 and will be the only time this work is performed live. Following the artist’s residency, One can make out the surface... will tour solely as a video installation.

Lapalux

Considered “one of the finest producers of the moment,” London-based artist Lapalux (AKA Stuart Howard) is a rising star of electronic music. Mixing R&B, IDM, and a penchant for sci-fi with woozy, glitched-out beats, his early work caught the ear of LA mastermind Flying Lotus, whose forward-listening hip-hop record, Brainfeeder, has subsequently released Lapalux’s first two records.

Last year’s Lustmore was inspired by the experience of hypnogogia, the transitional state of consciousness between wakefulness and sleep, with each track aspiring to create a liminal world populated by enigmatic characters and cinematic plotlines. Taking movie soundtracks and visual ideas as inspiration, Lapalux creates dance music for both the body and the imagination. For this performance, he will explore a new audio-visual experience.

Return of the Electric Love (Take II)

Ephraim Asili

Hudson-based artist Ephraim Asili will screen and discuss his recent film and other films that are influential to his work. Return of the Electric Love (Take II) is an optically printed 35mm film made from found footage of Kung Fu movies.

The sequel to a film Asili had recently completed, which was immediately lost in transit from the film lab, Return of the Electric Love (Take II) reuses this same archive of footage as its source material. His technique of re-photographing short gestural sequences from the original films adds washes of color to the action. A riot of fast-paced images and their fractured, synchronized soundtracks, the film moves from repetitive Kung Fu gestures—flying kicks and spins—to abstract blocks of color, each frame saturated red, pink, green, and blue in quick succession. In the making of this film, the projector light picked out the time-worn scratches, dust, and water damage etched upon the surface of the celluloid. Asili then photographed these marks using the optical printer and exposed new frames. At times these imperfections dance across the screen, as much a part of the image as the bodies of the martial artists.

Hypercube

Charles Atlas

Artist Charles Atlas introduces a program of films that were influential in the development of his work-in-progress 3D video and performance. Tesseract, which will be premiered at EMPAC in January 2017 in collaboration with choreographers Rahaan Mitchell and Silas Riener. Cube2: Hypercube by Andrzej Sekula will be shown along with accompanying shorts.

Cube2: Hypercube is a 2002 science fiction feature by Andrzej Sekula that was filmed almost exclusively within the constrained space of a metal-framed “cube” of diffused light. Reliant on active camera work that renders identical rooms with variable timescales, gravity shifts, folding spaces, and deadly CG effects, the film portrays a group of increasingly disoriented protagonists as they attempt to puzzle their way out of a quantum maze. Circling Steadicam work and close-up shots alternate with split-screens and camera rotations to render claustrophobic parallel realities.

Atlas’ Tesseract is a six-chapter work of science fiction, shot in digital 3D, which traverses a series of hybrid and imagined worlds. Often filmed with a mobile camera that pierces into the dancers’ choreography, the images reach out from the theatrical and cinematic realm and into otherworldly dimensions beyond the screen. Shifting back and forth between the stage and screen, the accompanying performance combines Mitchell and Riener’s choreography with Atlas’ live video via a series of active cameras on stage.
While their personal geographies and artistic methods place them worlds apart, Jlin and Qrion each create dance music perfectly suited to the contemporary moment, when regional flavors and the tension between sampled material and self-composed sounds are finding common other-worldly ground.

Jlin is one of the most prominent female electronic producers of the current generation. She grew up in Gary, Indiana, and made her first tracks while working at a steel mill. Drawing on the legacy of RP Boo and DJ Rashad, she has advanced the Chicago-oriented style of footwork into dark and creative new dimensions. Though her earlier work relied on sampling—often from horror movies—she now composes her dense, frenetic tracks from all original source material. Her 2015 debut record *Dark Energy* was named the year’s best by a number of publications, including *The Wire*.

Hailing from Sapporo, the snowy capital of Japan’s northernmost island, Qrion released her first two EPs while still attending high school. Internet acclaim eventually led to her label’s servers being overloaded during the free release of 2014’s *sink*, a download-only mini album. Later that year, a high-profile collaboration with producer Ryan Hemsworth exposed Qrion’s music to a global audience.

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**Vijay Iyer and Craig Taborn**

Two of the most progressive voices in American jazz piano join forces for a performance that blurs the line between composition and improvisation. Vijay Iyer and Craig Taborn have each risen to prominence within the jazz scene by expanding the boundaries of the genre and establishing a highly personalized approach to improvisation. Together, the two will draw on an evolving sketchbook of compositional ideas, developed through earlier iterations of the project, to continue a musical conversation that defies the notion of completion.

**Vijay Iyer** was born in Albany, NY and has become “one of the most interesting and vital young pianists in jazz today,” according to Pitchfork. A Grammy-nominated recording artist on the ECM label, Iyer has a PhD in physics and undertook pioneering scholarship on the “embodied cognition” of musical performance. Interested in what happens to a listener “from the shoulders down,” Iyer approaches jazz from this level of direct vibrational experience. As a leader and sideman, he’s collaborated with artists as diverse as Roscoe Mitchell, Dave Douglas, Amiri Baraka, Das Racist, and most recently Wadada Leo Smith.

**Craig Taborn** is one of the most sought-after sidemen and sessioners working today, having recorded more than 100 albums with artists such as Evan Parker, Tim Berne, and Steve Coleman, and toured with the likes of Dave Holland, Bill Frisell, Ches Smith, and Paul Motian. Known for his work on electric piano and organ as well as acoustic piano, he has topped critics’ and readers’ polls in jazz publications such as *Downbeat* and *JazzTimes*. In addition to recording with his own ensembles for ECM and Tzadik, Taborn regularly performs solo.

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**The Unreliable Narrator**

Martine Syms

Los Angeles-based artist Martine Syms is in residence at EMPAC to develop a new feature-length film project using a 360-degree camera rig. For this event, Syms will introduce several recent videos, alongside a discussion of moving images that have been influential to her work. An artist, performer, and designer, Syms also founded the imprint Dominica Publishing, which publishes artists books exploring blackness as a topic, reference, marker, and audience in visual culture. Her book *Implication and Distinctions: Format, Content and Context in Contemporary Race Film* considers performances of blackness in mainstream cinema from 1990 to the present. Other work includes *The Mundane Afrofuturist Manifesto*, which calls for the culture of the African diaspora to focus its energy on Earth rather than toward transcendence in the cosmos.
Ipse dixit / I-puh-DEK-sit / noun (Latin).
Literally “he, himself, said it.”
An unproven yet dogmatic statement, which the speaker expects the listener to accept as valid without proof beyond the speaker’s assumed expertise.

Ipsa dixit: “she, herself, said it . . .”

Ipsa Dixit is a 2014 work by French artist Laure Prouvost, in which she installed moving lights and synched audio into a gallery in order to animate and narrate her exhibition of objects. In doing so, she transformed the static exhibition into a stage. Magic Electronics is exemplary of an approach that slips between formats (video, sculpture, installation) and registers (speech, image, object, light), deliberately mistranslating and misunderstanding as it goes.

Magic Electronics will figure as the center of an evening-long conversation between Prouvost and EMPAC curator Victoria Brooks during which the pair will screen and discuss a selection of Prouvost’s work, taking the audience on a journey from the pre-recorded and situated to the live and one-off. Prouvost is in residence at EMPAC to develop a new performance, which will be premiered alongside her solo exhibition at Walker Art Center in 2017–18.

Laure Prouvost (based in Antwerp, Belgium) is known for her films and installations, characterized by richly layered stories, translation, and surreal moments. Engaged in an ongoing conversation with the history of art and literature, Prouvost often makes use of humor and the fantastical to explore the boundaries between fiction and reality, unhinging commonplace and expected connections between language, image, and perception. In 2013 she was the recipient of the Turner Prize, the United Kingdom’s most publicized award in contemporary art.

Magic Electronics is a 2014 work by American composer Kate Soper. Exploring the intersection of music, language, and meaning, the piece blends elements of monodrama, Greek theater, and screwball comedy to skewer the treachery of language and the questionable authenticity of artistic expression. Each of the piece’s six movements draw on texts by thinkers such as Aristotle, Plato, Freud, Wittgenstein, Jenny Holzer, and Lydia Davis, delivering ideas from the linguistic disciplines of poetics, rhetoric, and metaphysics through extended vocal techniques and blistering ensemble virtuosity. Developed in pieces since 2010, Soper’s EMPAC residency will culminate in the first performance of the work’s entire cycle, featuring percussionist Ian Antonio, violinist Josh Modney, and flutist Erin Lesser.

Kate Soper is a composer and vocalist whose work is notable for its engagement with rhetoric and theatricality. Trained in piano and extended vocal techniques, her compositional style has been called “exquisitely quirky.” As the managing director of the NYC-based new music ensemble Wet Ink, she regularly performs as a soprano on new works by emerging composers. She is a recent recipient of Guggenheim and Radcliffe fellowships, and is currently on the faculty of Smith College in Northampton, Massachusetts.
Artist residencies are the heart of the curatorial program at EMPAC and figure into the overarching programming vision of the attending curator. Residencies often provide space, resources, and expertise unavailable elsewhere.

**ARTIST-IN-RESIDENCE PROGRAM**

**CHARLES ATLAS, RASHAUN MITCHELL, AND SILAS RIENER (DEC 13–18)**
Filmmaker Charles Atlas and dancer/choreographers Rashaun Mitchell and Silas Riener are in residence to finish their multi-year project combining a group of dancers, live cameras, and 3D projection. The performance will premiere at EMPAC in January 2017.

**OLIVIA DE PRATO (SEP 02–04)**
Violinist Olivia De Prato is in residence in the Concert Hall to record, mix, edit, and master new solo works by composers Reiko Furing, Taylor Brook, Ned Rothenberg, Samson Young, Tsyhwan Sorey, and Missy Mazzoli.

**MABEL KWAN**
(JULY 25–29, SEP 19–22)
Mabel Kwan is in residence in the Concert Hall to record, edit, mix, and master Georg Friedrich Haas’ *Trio Hommages*, a composition for two pianos played by one pianist. She will perform the piece on September 22.

**Longleaf**
Lisa Parra
Belaga Patrick
Isabelle Pauwels
Jean-François Peyret
Phantom Limb
Pharmakon
Robert Gerard Pietrusko
Poor Dog Group

**LAURE PROUVOST**
(NOV 28–DEC. 9)
Artist Laure Prouvost is in residence to experiment with performance technologies for a new work using light, objects, and music in Studio 1. The project will be premiered alongside her solo exhibition at Walker Art Center in 2017–18.

**HANNAH RICKARDS**
(SEP 12–30)
Artist Hannah Rickards is working in Studio 1 with actors Ted Schmitz and Carinna James to rehearse *One*, a new production that features lighting, projection mapping, and 3D sound spatialization. The performance will be premiered in Fall 2017.

**PATRICIA L BOYD**
(AUG 24–SEP 01)
Artist Patricia L. Boyd is in residence to complete the post-production work on her EMPAC-produced moving-image project. The film will be premiered alongside a commissioned text by poet Anne Boyer on September 1.

**JULY 25–29, SEP 19–22**
Silenus
Mabel Kwan

**ARTIST-IN-RESIDENCE PROGRAM**

**OLIVIA DE PRATO**

**MABEL KWAN**

**HANNAH RICKARDS**

**PATRICIA L BOYD**

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**ARTIST-IN-RESIDENCE PROGRAM**

**OLIVIA DE PRATO**

**MABEL KWAN**

**HANNAH RICKARDS**

**PATRICIA L BOYD**
STUDENT OPPORTUNITIES AT EMPAC

From student work to research and performance opportunities, extracurricular clubs to special events, EMPAC offers a range of ways for Rensselaer students to be involved.

All EMPAC-curated events are open to Rensselaer students at the price of $6 and free admission is available to classes that integrate the programming into their curricula. Tickets for non-Rensselaer students are available at the discounted rate of $13. Starting this fall, the EMPAC+student program will make attendance free upon enrollment and offer new ways of exploring EMPAC productions.

Every year, the Rensselaer department of the arts programs seven events utilizing the infrastructure and support of the production teams at EMPAC. These productions often include final graduate thesis projects that are developed in the venues themselves. As a part of the Rensselaer initiative to integrate art across the institute’s curriculum, EMPAC hosts interdisciplinary Art_X classes taught by faculty who use the EMPAC-curated program as an artistic and experiential part of the class’s specific topic of inquiry. Students are also often involved with research projects conducted by Rensselaer faculty using EMPAC infrastructure.

A large number of student workers support EMPAC’s operation in the box office, as ushers, and with the various production (video, audio, IT, stage, lighting, etc.) and administrative (artist services, design/marketing, etc.) teams. For employment opportunities, please visit the student page on empacs website.

Outside of events, productions, and classes, EMPAC is a meeting place for student groups. The People Using Live Software and Electronics (PULSE) group is a forum for students interested in experimenting with live audio and video technology. This group performs every fall at the freshmen mixer MashUp!, as well as for their spring dance party PULSE Live! To get involved, please contact Eric Ameres at ameree@rpi.edu.

The Physical Computing for Art and Design (PCAD) group also meets with Eric Ameres on a weekly basis. The EMPAC Unpacked club is a forum for students to meet and discuss EMPAC arts programming. The group meets with artists, curators, and the EMPAC tech teams to explore the ideas behind EMPAC productions. Contact Josh Potter (pottej2@rpi.edu) to get involved.

STUDENT PERFORMS DURING SEMESTER FINALE OF THE PIP (PRODUCTION, INSTALLATION, PERFORMANCE) CLASS.
Geoff Abbas / Director for Stage Technologies
Eric Ameres / Senior Research Engineer
Argeo Ascani / Curator, Music
Eileen Baumgartner / Graphic Designer
David Bebb / Senior Network Administrator
Peter Bellamy / Senior Systems Administrator
Michael Bello / Video Engineer
Victoria Brooks / Curator, Time-Based Visual Arts
Eric Brucker / Lead Video Engineer
Michele Cassano / Guest Services Coordinator
John Cook / Box Office Manager
David DeLaRosa / Desktop Support Analyst
Zhenelle Falk / Artist Services Administrator
Ashley Ferre-Murray / Associate Curator, Theater & Dance
Kimberly Gardner / Manager, Administrative Operations
Johannes Goebel / Director
Ian Hamelin / Project Manager
Ryan Jenkins / Senior Event Technician
Shannon Johnson / Design Director
Carl Lewandowski / Production Technician
Eric Chi-Yeh Lin / Lead Stage Technician
Stephen McLaughlin / Senior Event Technician
Josh Potter / Marketing and Communications Manager
Alena Samoray / Event Technician
Candice Sherman / Senior Business Administrator
Avery Stempel / Front of House Manager
Kim Strosahl / Production Coordinator
Jeffrey Swatek / Audio Engineer
Dan Swalec / Master Electrician
Todd Vos / Lead Audio Engineer
Michael Wells / Operation Technician
THIS FALL: WAVE FIELD SYNTHESIS

Until recently, the acoustic concept of “wave field synthesis” existed only as a mathematical formula. Researchers knew that it was theoretically possible to create a “holophonic” 3D sound environment, but very few had attempted to build a system of loudspeakers capable of handling the task. This spring, the EMPAC audio team cleared a couple key engineering hurdles to complete construction on our very own array. Featuring 496 very small, independently controllable speakers, this is one of the most precise sound systems of its type in the world and will be a major part of the EMPAC music/sound program going forward.

For an electronic composer, wave field synthesis unlocks a whole new aesthetic dimension for exploration and expression. All of what we do at EMPAC can be thought of as “time-based,” in the sense that these projects only exist in the duration of time that the audience experiences the performance (unlike static gallery art). This is especially easy to understand with music. But when a composer has the ability to place a particular sound in a particular corner of a room, or move a sound around the body of an audience member, music can become a highly spatial, immersive phenomenon, almost like architecture.

This fall, Rensselaer professor Rob Hamilton will have the honor of taking this system for its first test drive. Working in Goodman—Studio 1, he’ll develop a performance and immersive installation by first recording sounds on a computer-controlled player piano and then distributing those sounds across the wave field system’s 496 channels. 108 Troubles will be free and open to experience between August 22 and September 2.

But this is just a taste of what’s to come. Through our artist-in-residence program, an international cadre of electronic composers has been invited to develop new work for the system, much of which will premiere in the coming seasons. At the same time, this audio system can be used for the refined development of computer-human interfaces, like those currently being researched by the Cognitive and Immersive Systems Laboratory (CISL @ EMPAC). It’s projects like these that make EMPAC an exceptional point of convergence between developments in art, science, research, and engineering—and exemplary of the New Polytechnic, a new paradigm for cross-disciplinary research and research at Rensselaer.