

# John MacCallum

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Born: February 21, 1976—Long Beach, CA  
Nationality: U.S.A.

## Current Position

*Assistant Research Scientist*, TerraSwarm Research Center / Center for New Music and Audio Technologies, University of California, Berkeley

## Areas of Specialization

Polytemporal music, algorithmic and stochastic composition, spatial audio, media arts programming, programming language theory and design, time-aware computing, distributed computing, human-computer interaction.

## Education

- 2004–2010 PhD in Music Composition, University of California, Berkeley
- 1999–2003 MMus in Composition, McGill University
- 1996–1999 BMus in Composition / Theory, University of the Pacific

## Appointments Held

- 2013–2016 Postdoctoral Researcher, TerraSwarm Research Center / Center for New Music and Audio Technologies (CNMAT), University of California, Berkeley
- 2012–2013 Lecturer, California College of the Arts, Oakland / San Francisco, CA  
Course taught: *Math and Media*
- 2011–2012 Visiting Lecturer in Music Composition / Technology, Northeastern University, Boston, MA  
Courses taught: *Composition with Random Processes*, *Interactive Real-Time Performance*, *Composition Seminar*, *Western Music since 1900*, *Private Composition Lesions*
- 2010–2011 Lecturer in Music Composition, University of California, Berkeley  
Course taught: *Composition*
- 2008–2011 Musical Systems Designer, Center for New Music and Audio Technologies (CNMAT), University of California, Berkeley
- 2006– Instructor in CNMAT's renowned Max/MSP introductory and advanced summer workshops.

## Compositions

- 2016–17 *III* (30') For three musicians, three dancers wearing ECGs, and three breath practitioners. Currently in progress in collaboration with Teoma Naccarato (Choreographer), to be premiered at Tangente in Montréal, QC in April of 2017.
- 2016 *Study IV* (10') For three breath practitioners.  
Created and premiered at the Djerassi Resident Artists Program.
- 2016 *Study III* (8') For dancer with ECG, and bass flute.  
Realized in collaboration with Teoma Naccarato (dancer / choreographer), Stacey Pelinka (bass flute), and Laura Boudou (dancer). Created and premiered at the Djerassi Resident Artists Program.
- 2015 *Limn* (7') For flute, cello, and live electronics.  
Commissioned by the Left Coast Chamber Ensemble and premiered by Stacey Pelinka (flute) and Leighton Fong (cello), October 25–26, 2015.
- 2015 *Synchronism (I & II)* (3–4 hours)  
Performance Art Installation with Teoma Naccarato (choreographer / performer) consisting of one-on-one performance, sound installation, and a sound sculpture. Premiered at the Summerworks Festival, Toronto, ON, August 12–15.
- 2015 *Synchromism* (35') For organ (Rosales, Op. 16)  
Commissioned by Cyril Deaconoff and supported by a grant from the Fleishhacker Foundation. Premiered at the First Presbyterian Church of Oakland, CA on June 14, 2015.
- 2015 *Study II* (8') For dancer with ECG, percussion, and live electronics  
Realized in collaboration with Teoma Naccarato (dancer / choreographer) and Loren Mach (percussion). Premiered at the Summer Retreat for the Ubiquitous Swarm Lab, UC Berkeley.
- 2015 *Antony: A Reimagining* (15') For live electronics  
A reimagining of David Wessel's work *Antony* (1977) done in collaboration with Matthew Goodheart and Adrian Freed as a memorial to David Wessel for the San Francisco Tape Music Festival.
- 2014 *Study I* (8') For dancer with ECG, and live electronics  
Realized in collaboration with Teoma Naccarato (choreographer). Premiered at Ircam, Bekah Edie, dancer.
- 2014 *Hyphos* (10') For alto flute, bass clarinet, cello, and live electronics  
Commissioned and premiered by [Earplay](#) in San Francisco, CA.
- 2012–13 *Delicate Texture of Time* (13') For flute, clarinet, saxophone, 2 percussion, violin, viola, and cello  
Commissioned by the [ECO Ensemble](#) supported by a grant from the Mellon Foundation. Premiered in Berkeley, California
- 2010 *Aberration* (8') For percussion trio  
Commissioned and premiered by [Rootstock Percussion](#) (Chris Froh, Dan Kennedy, and Loren Mach) at the Freight and Salvage in Berkeley, CA.
- 2010 *El Árbol de la noche triste* (10') For viola and live electronics  
Written for and premiered by Ellen Ruth Rose (Empyrean Ensemble), at the Mondavi Center in Davis, California.
- 2008 *...blankness...* (12') For viola, vibraphone, and live electronics  
Premiered by Raphaël Chazal and Romain Garcera at the MANCA festival in Nice, Côte d'Azure.

- 2007 *...frozen into shards of ice...* (15') For live electronics  
Premiered in Berkeley, CA
- 2007 *...almost like hail...* (18') For percussion and live electronics  
Written for and premiered by Chris Froh in Berkeley, California.

### **Performances**

- 2016 *Hyphos* MANCA Festival, Nice, France.
- 2016 *Hyphos* Earplay  
Festival of New American Music, Sacramento State University.
- 2016 *Study IV*  
John MacCallum, Teoma Naccarato, Laura Boudou  
Djerassi Resident Artists Program
- 2016 *Study III*  
Teoma Naccarato (choreographer), Stacey Pelinka (bass flute), Laura Boudou (dancer)  
Djerassi Resident Artists Program
- 2016 *Limn*  
Left Coast Chamber Ensemble: Stacy Pelinka (flute), Leighton Fong (cello), John MacCallum (live electronics)  
CCRMA, Stanford University
- 2015 *Limn*  
Left Coast Chamber Ensemble: Stacy Pelinka (flute), Leighton Fong (cello), John MacCallum (live electronics)  
Center for the Arts, Religion, and Education (CARE)
- 2015 *Limn*  
Left Coast Chamber Ensemble: Stacy Pelinka (flute), Leighton Fong (cello), John MacCallum (live electronics)  
San Francisco Conservatory of Music
- 2015 *Limn*  
Left Coast Chamber Ensemble: Stacy Pelinka (flute), Leighton Fong (cello), John MacCallum (live electronics)  
142 Throckmorton Theatre, Mill Valley, CA
- 2015 *Antony: A Reimagining*  
John MacCallum, Matthew Goodheart, electronics  
International Computer Music Festival (ICMC)
- 2015 *Synchronism II*  
Teoma Naccarato (one-on-one performance)  
Montréal, QC
- 2015 *Synchronism I*  
Teoma Naccarato (one-on-one performance), John MacCallum (live electronics)  
Summer Works Festival, Toronto ON
- 2015 *Synchromism*  
Cyril Deaconoff (organ), John MacCallum (live electronics)  
First Presbyterian Church of Oakland, CA
- 2015 *Study II*  
Teoma Naccarato (dancer), Loren Mach (percussion) John MacCallum (live electronics)  
Ubiquitous Swarm Lab Summer Retreat, Berkeley, CA

- 2015 *Antony: A Reimagining*  
John MacCallum, Matthew Goodheart, electronics  
San Francisco Tape Music Festival
- 2014 *Study I*  
Bekah Edie (dancer), John MacCallum (live electronics)  
Ircam
- 2014 *The Delicate Texture of Time*  
Eco Ensemble  
Venice Biennale
- 2014 *...frozen into shards of ice...*  
John MacCallum  
Center for New Music, San Francisco, CA
- 2014 *...frozen into shards of ice...*  
John MacCallum  
Berkeley Arts Fest.
- 2014 *Hyphos Earplay*  
San Francisco, CA
- 2013 *Aberration*  
Rootstock Percussion Trio (Chris Froh, Dan Kennedy, Loren Mach)  
Music in the Mountains Summerfest, Nevada City, CA
- 2013 *The Delicate Texture of Time*  
ECO Ensemble  
Berkeley, CA
- 2013 *Aberration*  
Rootstock Percussion Trio (Chris Froh, Dan Kennedy, Loren Mach)  
University of California, Davis
- 2012 *Aberration*  
Rootstock Percussion Trio (Chris Froh, Dan Kennedy, Loren Mach)  
Festival of New American Music, Sacramento, CA
- 2012 *Aberration*  
Rootstock Percussion Trio (Chris Froh, Dan Kennedy, Loren Mach)  
Central Pacific Rail Road Tunnel 6, Donner Pass, California
- 2012 *...frozen into shards of ice...*  
Music Technology Faculty Concert (Johnny Meek performing)  
Fenway Center, Boston, MA
- 2012 *Aberration*  
McGill Percussion Ensemble  
Pollack Hall, McGill University
- 2011 *El Árbol de la noche triste*  
Jin-Won Yoon (viola)  
Seoul International Computer Music Festival
- 2011 *Aberration*  
Rootstock Percussion Trio (Chris Froh, Dan Kennedy, Loren Mach)  
Community Music Center, San Francisco
- 2010 *Aberration*  
Rootstock Percussion Trio (Chris Froh, Dan Kennedy, Loren Mach)  
Berkeley New Music Project, UC Berkeley, California

- 2010 *Aberration*  
Rootstock Percussion Trio (Chris Froh, Dan Kennedy, Loren Mach)  
Classical at the Freight, Freight and Salvage, Berkeley, California
- 2010 *Aberration*  
Rootstock Percussion Trio (Chris Froh, Dan Kennedy, Loren Mach)  
California State University Sacramento
- 2010 *El Árbol de la noche triste*  
Benjamin Taylor, viola  
Spark Festival, Minneapolis, MN
- 2010 *El Árbol de la noche triste*  
Ellen Ruth Rose, viola  
Berkeley New Music Project, UC Berkeley, California
- 2010 *El Árbol de la noche triste*  
Ellen Ruth Rose, viola  
Empyrean Ensemble, Mondavi Center for the Performing Arts, Davis, California
- 2009 *...blankness...*  
Pemi Paull, (viola), Fabrice Marandola, (percussion)  
International Computer Music Conference (ICMC), McGill University, Montréal, QC
- 2009 *...blankness...*  
Darcy Rindt (viola), Loren Mach (percussion)  
Berkeley New Music Project, UC Berkeley
- 2008 *...blankness...*  
Raphaël Chazal (viola), Romain Garcera (percussion)  
MANCA Festival, Nice, Côte d'Azure
- 2008 *...almost like hail...*  
Chris Froh (percussion)  
UC Davis Percussion Festival
- 2007 *...almost like hail...*  
Chris Froh (percussion)  
Berkeley New Music Project, UC Berkeley
- 2007 *...frozen into shards of ice...*  
Fire Wire Ensemble  
Chicago, IL
- 2007 *...frozen into shards of ice...*  
John MacCallum, live electronics  
MANCA Festival, Nice, Côte d'Azure
- 2007 *...frozen into shards of ice...*  
International Computer Music Festival (ICMC)  
Royal Danish Library, Copenhagen, Denmark
- 2007 *...frozen into shards of ice...*  
John MacCallum (live electronics)  
CNMAT/CCRMA Exchange, Stanford University
- 2007 *...frozen into shards of ice...*  
John MacCallum (live electronics)  
Berkeley New Music Project, UC Berkeley

## Articles

- 2016 John MacCallum, Teoma Naccarato, “From Tempo to Temporalities” *Journal of New Music Research*, 2017 (in press).
- 2016 Jean Bresson, John MacCallum, Adrian Freed, “o.OM: Structured-Functional Communication between Computer Music Systems using OSC and Odot” *Proceedings of the ACM SIGPLAN International Workshop on Functional Art, Music, Modelling and Design (FARM)*, 2016, Nara, Japan.
- 2015 Teoma Naccarato, John MacCallum, “From Representation to Relationality: Bodies, Biosensors, and Mediated Environments,” *Journal of Dance and Somatic Practices: 8.1, Embodiment, Interactivity, and Digital Performance*, 2015.
- 2015 Jean Bresson, John MacCallum, “Tempo Curving as a Framework for Interactive Computer-Aided Composition,” *Proceedings of the Sound and Music Computing Conference (SMC)*, Maynooth, 2015.
- 2015 John MacCallum, Matthew Goodheart, Adrian Freed, “Antony: A Reimagining,” *Proceedings of the International Computer Music Conference (ICMC)*, Denton, 2015.
- 2015 John MacCallum, Ilya Rostovtsev, Rama Gottfried, Jean Bresson, Adrian Freed, “Dynamic Message-Oriented Middleware with Open Sound Control and Odot,” *Proceedings of the International Computer Music Conference (ICMC)*, Denton, 2015.
- 2015 John MacCallum, Teoma Naccarato, “The Impossibility of Control: Real-time Negotiations with the Heart,” *Proceedings of the Electronic Visualization in the Arts Conference (EVA)*, London, 2015.
- 2015 Jean Bresson, Dimitri Bouche, Jérémie Garcia, Thibaut Carpentier, Florent Jacquemard, John MacCallum, Diemo Schwarz, “Projet EFFICACe: Développements et perspectives en composition assistée par ordinateur,” *Proceedings of the Journées d’Informatique Musicale*, Montréal, 2015.
- 2014 John MacCallum, Adrian Freed, David Wessel, “[New Tools for Aspect-Oriented Programming in Music and Media Programming Environments](#),” *Proceedings of the International Computer Music Conference (ICMC)*, Thessaloniki, 2014.
- 2014 Adrian Freed, David DeFilippo, Rama Gottfried, John MacCallum, Jeff Lubow, Derek Razo, David Wessel, “[o.io: a Unified Communications Framework for Intermedia and Cloud Interaction](#),” *Proceedings of the International Computer Music Conference (ICMC)*, Thessaloniki, 2014.
- 2013 John MacCallum, Adrian Freed, David Wessel, “[Agile Interface Development using OSC Expressions and Process Migration](#),” *Proceedings of the New Interfaces for Musical Expression Conference (NIME)*, Daejeon, 2013.
- 2013 Adrian Freed, Frances-Marie Uitti, Sam Mansfield, John MacCallum “[‘Old’ is the new ‘New’: a Fingerboard Case Study in Recrudescence as a NIME Development Strategy](#)” *Proceedings of the New Interfaces for Musical Expression Conference (NIME)*, Daejeon, 2013.
- 2011 Adrian Freed, John MacCallum, Andrew Schmeder, “[Composability for Musical Gesture Signal Processing Using New OSC-based Object and Functional Programming Extensions to Max/MSP](#),” *Proceedings of the New Interfaces for Musical Expression Conference (NIME)*, Oslo, 2011.
- 2011 Adrian Freed, John MacCallum, Andrew Schmeder, “[Dynamic, Instance-Based, Object-Oriented Programming in Max/MSP Using Open Sound Control Message Delegation](#),” *Proceedings of the International Computer Music Conference (ICMC)*, Huddersfield, 2011.

- 2010 Adrian Freed, John MacCallum, Andrew Schmeder, David Wessel, “[Visualizations and Interaction Strategies for Hybridization Interfaces](#),” Proceedings of the New Interfaces for Musical Expression Conference (NIME), Sydney, 2010.
- 2010 John MacCallum, Andrew Schmeder, “[Timewarp: A Graphical Tool for the Control of Polyphonic Smoothly Varying Tempos](#),” Proceedings of the International Computer Music Conference (ICMC), Manhattan / Stony Brook, 2010.
- 2009 John MacCallum, Andrew Schmeder, David Wessel, “[Timbral Migration: Stochastic Processes for the Control of Smooth Spectral Transformation](#),” Proceedings of the International Computer Music Conference (ICMC), Montréal, 2009.
- 2008 John MacCallum, Aaron Einbond, “[Real-Time Analysis of Sensory Dissonance](#),” Computer Music Modeling and Retrieval: Sense of Sounds, edited by Richard Kronland-Martinet, Sølvi Ystad and Kristoffer Jensen, 203-211, Berlin / Heidelberg: Springer, 2008.
- 2005 John MacCallum, Aaron Einbond, “[Real-Time Analysis of Sensory Dissonance \(abr.\)](#),” Proceedings of the International Computer Music Conference (ICMC), Copenhagen, 2007.
- 2005 John MacCallum, Jeremy Hunt, and Aaron Einbond, “Timbre as a Psychoacoustic Parameter for Harmonic Analysis and Composition,” Proceedings of the International Computer Music Conference (ICMC), Barcelona, 2005.

## Talks

*Conference talks that correspond to an article listed above have been omitted.*

- 2016 *Choreography and Composition of Internal Time: Biosensors as an Intervention in Creative Practice*  
Colloquium on Interdisciplinary Creation/Research Methodologies: Art, Body and New Technologies, Santiago, Chile.
- 2016 *Choreography and Composition of Internal Time: Biosensors as an Intervention in Creative Practice*  
Trinity Laban Conservatoire of Music and Dance.
- 2016 *Choreography and Composition of Internal Time: Biosensors as an Intervention in Creative Practice*  
Center for Dance Research (C-DaRE), Coventry University.
- 2016 *Choreography and Composition of Internal Time: Biosensors as an Intervention in Creative Practice*  
Colloquium on Interdisciplinary Creation/Research Methodologies: Art, Body and New Technologies, Santiago, Chile.
- 2015 *Limn: Illuminating Traces of Interaction*  
Center for the Arts, Religion, and Education, Berkeley, CA
- 2015 *Prescriptive and Descriptive Notational Strategies for Polytemporal Composition*, with Teoma Naccarato  
Interactivity in music composition and performance: EFFICACe international workshop, McGill University, Montréal
- 2015 *Choreography and Composition of Internal Time*, with Teoma Naccarato  
UC Berkeley, February 27, 2015.
- 2014 *Choreography and Composition of Internal Time*, with Teoma Naccarato  
IRCAM, Séminaires Recherche et Création, December 12, 2014

- 2014 *Choreography and Composition of Internal Time*, with Teoma Naccarato  
Goldsmith University, November 16, 2014.
- 2014 *Choreography and Composition of Internal Time*, with Teoma Naccarato  
Sussex University, November 14, 2014.
- 2014 *Choreography and Composition of Internal Time*, with Teoma Naccarato  
Ircam, Séminaires Recherche et Création, October 13, 2014.
- 2014 *Polytemporal Composition*  
IRCAM, November 4, 2014.
- 2012 *Asynchrony, Plesiochrony, and Virtual Tempos: Thoughts on Rhythm and Time*  
McGill University, December 20th, 2012.
- 2012 *Asynchrony, Plesiochrony, and Virtual Tempos: Thoughts on Rhythm and Time*  
Institute for Psychoacoustics and Electronic Music, Gent, Belgium, November 21st, 2012.
- 2012 *Open Sound Control Data Stream Processing*  
UC Berkeley SwarmLab Winter Retreat, May 18th, 2012.
- 2012 *Asynchrony, Plesiochrony, and Virtual Tempos: Thoughts on Rhythm and Time*  
IRCAM, Séminaires Recherche et Création, March 6th, 2012.
- 2012 *Asynchrony, Plesiochrony, and Virtual Tempos: Thoughts on Rhythm and Time*  
Northeastern University, Colloquium, January 26th, 2012.
- 2010 *Software Tools for Musical Interaction*  
Concordia University, Design and Computational Arts Program, 2010.
- 2010 *El Árbol de la noche triste*  
UC Davis Composer Colloquium Series, 2010.
- 2010 *El Árbol de la noche triste*  
UC Berkeley Composer Colloquium Series, 2010.
- 2010 *Recent Research at CNMAT*  
UC Davis Electronic Music Seminar, 2009.
- 2008 *Indeterminacy in Electronic Music*  
Conservatoire National à Rayonnement Régional de Nice, 2008.
- 2007 *...frozen into shards of ice...*  
University of Gothenburg Composition Seminar, 2007.
- 2006 *Recent Works*  
UC Berkeley Composer Colloquium Series, 2006.
- 2006 *Why Does Modern Music Sound So Weird?*  
Napa Valley Symphony Musical Experience Lecture Series, Copia Winery, 2006.

## Residencies

- 2016 Djerassi Resident Artists Program (with Teoma Naccarato)
- 2015 Synthesis Center, College of Arts Media and Engineering, Arizona State University (with Teoma Naccarato)
- 2014 Ircam Musical Research Residency (with Teoma Naccarato)



## Programming Languages

I am proficient and able to work, teach, and direct research in C, (Common) LISP, Java, Javascript, ECMAScript, Max/MSP/Jitter, OpenMusic, PWGL, Perl, Python, PHP, Lua, Flex, Bison, Haskell, Matlab, Mathematica, and  $\LaTeX$ .

## References

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