

Michael Winter

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About

My work often explores simple processes where dynamic systems, situations, and settings are defined through minimal graphic- and text-based scores that can be realized in a variety of ways. To me, everything we experience is computable. Given this digital philosophy, I acknowledge even my most open works as algorithmic; and, while not always apparent on the surface of any given piece, the considerations of computability and epistemology are integral to my practice. I often reconcile epistemological limits with artistic practicality by considering and addressing the limits of computation from a musical and experiential vantage point and by collaborating with other artists, mathematicians, and scientists in order to integrate objects, ideas, and texts from various domains as structural elements in my pieces.

I have performed across the Americas and Europe at venues ranging in size from small basements to large museums to outdoor public spaces (some examples of more well known venues are REDCAT, Los Angeles; the University of Lille, France; the Ostrava Festival of New Music, Czech Republic; the CEAIT Festival, Los Angeles; the Museum of Contemporary Art, Los Angeles; and Museo de Arte Contemporáneo de Santiago, Chile). In 2008, I co-founded and currently co-directs *the wulf.*, a Los Angeles-based organization dedicated to experimental performance and art. As a laboratory and hub for exploring new ideas, *the wulf.* has become an experiment in alternative communities and economies. Similarly, my work subverts discriminatory conventions and hierarchies by exploring alternative forms of presentation and interaction. I currently live in Los Angeles in the same place where *the wulf.* primarily organizes and hosts events.

Experience

University of Southern California

Jan 2014 – present

BODB and GBDB Lead Developer

Neuroinformatics project connecting large datasets to promote cross-discipline collaborations

→ Helped developed and teach the neuroinformatics track of an AI course; Python/Django

Wolfram Research

Jun 2012 – present

Research Programmer and Consultant

Signal processing

→ Developing real-time audio/visual system

the wulf.

Aug 2008 – present

Cofounder and Codirector

A 501(c)(3) non-profit arts organization that presents free experimental music performances

→ Organizing regular public events in experimental arts; grant-writing

Wolfram Alpha

Apr 2011 – Jun 2012

Research Programmer

Computational knowledge engine

→ Developed algorithms for parsing music theory related queries; scraped and formatted large music- and sports-related datasets

The Art Institute of California, Hollywood <i>Instructor</i> Courses: Logic of Programming, Web Design, Sound Design, Interactive Design → Topics: interactive design, game theory, DAWs, sound design and synthesis, Python, HTML, CSS, history of electronic music	Jun 2010 – Apr 2011
Music Mastermind <i>Developer and Consultant</i> Game engine for generating music → Created algorithmic tools for automatic music creation	Jun 2008 – Jul 2009
University of California, Santa Barbara <i>Teaching Assistant</i> Courses: Transvergence, Digital Audio Signal Processing → Topics: digital architecture, philosophy of art, sound design and synthesis, composition, history of electronic music, Java, motion detection, immersive environments	Aug 2007 – Apr 2008
University of Virginia, Charlottesville <i>Teaching Assistant</i> Courses: Technosonics, Introduction to Music and Computers → Topics: DAWs, sound design and synthesis, composition, history of electronic music	Aug 2006 – May 2007
California Institute of the Arts <i>Teaching Assistant</i> Course: Introduction to Electronic Media and Computers → Topics: DAWs, sound design and synthesis, composition, history of electronic music	Aug 2003 – May 2005

Skills

Teaching: Music Composition, DSP, Electronic Music, Music Theory, Programming, Neuroinformatics
Coding: SuperCollider, Python, JavaScript, Lilypond, Java, Mathematica, CSS, HTML, MySQL, NoSQL

Education

University of California, Santa Barbara → PhD in Media Arts and Technology	Jun 2010
California Institute of the Arts, Valencia → MFA in Music Composition	May 2005
University of Oregon, Eugene → BS in Music Technology	Jun 2003

- Publications**
- From Scratch: Writings in Music Theory**
Tenney, J. editors Polansky, L.; Pratt, L.; Wannamaker, R.; and Winter, M. UI Press. 2015.
- On minimal change musical morphologies**
Winter, M. Proceedings of the 2014 International Congress on Music and Mathematics. forthcoming.
- Approximating Omega**
Winter, M. Carbono (online). volume 7. 2014.
- Chordal and timbral morphologies using Hamiltonian cycles**
Akhmedov, A. and Winter, M. Journal of Mathematics and Music. volume 8 (1). pages 1–24. 2014.
- Relativity and scalability with respect to sound and silence**
Winter, M. Word Events: Perspectives on Verbal Notation. editors Lely, J. and Saunders, M. Bloomsbury. 2012.
- A few more words about James Tenney: dissonant counterpoint and statistical feedback**
Polansky, L.; Barnett, A.; and Winter, M. Journal of Mathematics and Music. volume 5 (2). pages 63–82. 2011.
- Notes on a new economics for a new music**
Winter, M. Experimental Music Yearbook (online). volume 2. 2010.
- LiveScore: real-time notation in the music of Harris Wulfson**
Barrett, G.D. and Winter, M. Contemporary Music Review. volume 29 (1). pages 55–62. 2010.
- Structural Metrics: an epistemology**
Winter, M. Dissertation. 2010.
- James Tenney: Selected Works 1961–1969 (review)**
Winter, M. Journal of the Society for American Music. volume 4. pages 531–533. 2010.
- James Tenney biographical entry**
Hanson, S.; Streb, C.; Polansky, L.; and Winter, M. Grove Dictionary of American Music. 2009.
- On James Tenney's Arbor Vitae for string quartet**
Winter, M. Contemporary Music Review. volume 27 (1). pages 131–150. 2008.
- Mavericks on mavericks: James Tenney's last courses at CalArts**
Winter, M. MusikTexte. volume 112. pages 66–69. 2007.
- Automatic Notation Generators**
Barrett, G.D.; Winter, M.; and Wulfson, H. Proceedings of the 7th International NIME Conference. pages 346–351. 2007.

Talks	University of Southern California	Oct 2015
	<i>On James Tenney's Changes for six harps</i>	
	California Institute of the Arts	Oct 2015
	<i>A few ways to get from one thing to the next</i>	
	Universidad del Claustro de Sor Juana	Oct 2015
	<i>Noise in the system: reading Claude Shannon</i>	
	Conservatorio de Las Rosas	Nov 2014
	<i>New music for guitars</i>	

Universidad de Buenos Aires <i>Algorithmic Information Theory, Metabiology, Music</i>	Aug 2014
Universidad de Chile, Santiago <i>Algorithmic Information Theory, Metabiology, Music</i>	Aug 2014
Universidade Federal de Mato Grosso <i>Algorithmic Information Theory, Metabiology, Music</i>	Jul 2014
Universidade de São Paulo <i>Shape and Structure: a few good ideas on form and detail</i>	May 2014
Escola de Música e Belas Artes do Paraná <i>On community and radicality: a personal survey of dangerous artists and art movements</i>	May 2014
University of California, Santa Cruz <i>Several extremely simple ideas</i>	Feb 2014
University of California, Santa Barbara <i>Adapting and applying digital signal processing techniques to high-level music information</i>	Jan 2014
Workshop for Algorithmic Computer Music at University of California, Santa Cruz <i>A few thoughts on musical structure</i>	Jul 2013
Workshop for Algorithmic Computer Music at University of California, Santa Cruz <i>James Tenney's computer music</i>	Jul 2013
Dartmouth College <i>Where do you get your data from?</i>	May 2013
Dartmouth College <i>The computer in my life</i>	May 2013
Wesleyan University <i>My software thinks your software is beautiful: a few words about metabiology, beauty and music</i>	Nov 2011
University of California, Santa Cruz <i>A few words on elegance, creativity and beauty</i>	Oct 2011
Dartmouth College <i>Three Ideas: 1) sometimes I steal, sometimes I don't, and sometimes I think I am not stealing but actually am; 2) some thoughts on generalizing graphs and mathematical problems from musical ideas; 3) music, structural metrics and algorithmic information theory</i>	Apr 2011
Dartmouth College <i>On James Tenney's Changes for six harps</i>	Apr 2011
IRCAM <i>On generalizing graphs and mathematical problems from musical ideas</i>	Jan 2011
California Institute of the Arts <i>Structural metrics</i>	Apr 2009

Columbia University <i>On James Tenney's Arbor Vitae for string quartet</i>	Feb 2008
State University of New York, Buffalo <i>Lecture on the machine and music</i>	Dec 2006
State University of New York, Binghamton <i>Lecture on infinity</i>	Aug 2005

Releases

west coast soundings
small world
Edition Wandelweiser Records. CD. 2014.

rounds
welcome round for larry
the wulf. records. Vinyl. 2013.

Music of Ostrava Days 2009 Live
recitation, code, and (perhaps) round
Ostrava Center for New Music. CD. 2009.

DIY Canons
Filter IV P.I.X.L. Study No. 1
Pogus Productions. CD. 2005.

Works

A performance history, scores, and recordings are available at
<www.unboundedpress.org>.
All scores are also published or forthcoming through Frog Peak at
<www.frogpeak.org/fpartists/fpwinter.html>.

<i>single track</i> sustaining septet	2015
<i>tergiversate</i> low sustaining trio	
<i>fade and aviary</i> sustained sounds and computer	
<i>to hum and walk</i> voice and electronics	2014
<i>Approximating Omega (redux)</i> variable ensemble	
<i>[__south america__] miscellany</i> speaker and electronics	
<i>a conversation</i> speakers	
<i>necklaces</i> plucked strings	

partition and gate
sustaining instruments

chorale and finely tuned resonators
variable ensemble

2013

order matters
variable ensemble

to converge (abstract)
variable ensemble

scaffold and map
variable ensemble

material... for james klopfleisch
variable ensemble

lv
variable ensemble

glass economies
prepared piano, piano, and/or glasses.

economy study (in one dimension)
prepared piano, piano, and/or glasses.

copyedit
variable ensemble

2012

quieting rooms
installation

delayGraph pre-alpha
computer

half-normal
variable ensemble

project.reflect.refract
film projector, reflecting and refracting objects, sustaining instruments, and perhaps
percussion instruments with minimal decay

minor third
piano

mass and band
plucked strings and optional sustaining instruments

2011

minor third abstract
variable ensemble

slip and stitch
chimes

lower limit

variable ensemble

line and cipher

chimes with variable ensemble

partition conjugate prime (choir/orchestra/choir + one/two/one)

2010

variable ensemble

subset canon

variable ensemble

scene++

variable ensemble with electronics

before you cure the beast...

variable ensemble

just above and/or below the waterline...

variable ensemble

pedal, triangle machine, and (perhaps) coda

variable ensemble

after eons

variable ensemble

Approximating Omega

variable ensemble

piano machine

2009

piano

recitation, code, and (perhaps) round

choir

field and perfect circuit

variable ensemble

for gregory chaitin

variable ensemble

for Sol LeWitt

variable ensemble

gray codes

variable ensemble

towards completeness

2008

variable ensemble

small world

variable ensemble

dissection and field

variable ensemble

20 arrows 9 dashes

variable ensemble

for orin hildestad

variable ensemble

room and seams

variable ensemble

seams

variable ensemble

resonance i

variable ensemble

2007

maximum change

variable ensemble

after a koan

solo violin

sound.sound

variable ensemble

many many for james orsher and peter kotik

variable ensemble

4 James Orsher

variable ensemble

Vein Transcription

variable ensemble

Entropic Canon

variable ensemble

Three

variable ensemble

Transplanting, 06.11.07-06.16.07 (or Transcription, USA!)

variable ensemble

a chance happening

solo piano

cactus for james orsher

variable ensemble

1 sample, x performers, y seconds

variable ensemble

4 Ascents for James Tenney

variable ensemble

Trajectories

2006

variable ensemble

Prime Decomposition

variable ensemble

Intersections I

variable ensemble

Streams I

glissandi and electronics

diy for larry polansky

variable ensemble

three books and a dissertation

variable ensemble

in tone

variable ensemble

random I

variable ensemble

almost every piece

variable ensemble

for cassia streb

variable ensemble

for michael pisaro

variable ensemble

sort I

variable ensemble

nothing...I

variable ensemble

A Gaussian Canon

2005

solo piano

Infinity III

variable ensemble

Lecture on Infinity

variable ensemble

a tone for Erik KM Clark

solo violin

A Flourish

variable ensemble

Infinity 2

variable ensemble

Perspectives I
variable ensemble

Commas
variable ensemble

a set of pieces with one note
variable ensemble

Infinity 1 2004
variable ensemble

Filter IV - P.I.X.L. Study No. 1
tam-tam, cellos, cymbals, voices and electronics

Filter III - Transformation Filter
strings and electronics

Chromatic Study
variable ensemble

Tri-Dimensional Canon
variable ensemble

Difference
2 clarinets

2 Filters
variable ensemble

Flux
voice, bassoon, bass, clarinet, didgeridoo, and/or... and 2176 sine tones

Fission 2003
flutes, clarinets, trumpet, horn, vibraphones, pianos, and strings

Coincidental Canon
orchestra

Telot's Crystal
fixed digital media

A Meditation for Solo Piano 2002
solo piano

Beat Canon
variable ensemble

Density Study No. 2
fixed digital media

The Other Self 2001
fixed digital media