



# ROGER REYNOLDS

## 80TH BIRTHDAY CELEBRATION

### INTERMEDIA WORK-INSTALLATION

CONRAD PREBYS MUSIC CENTER, EXPERIMENTAL THEATER  
OPENING: FEBRUARY 3 @ 4:00p.m.  
EXHIBITION: FEBRUARY 3 @ 4:00p.m.-10:00p.m.  
FEBRUARY 4 and 5 @ 10:00a.m.-10:00p.m.

### SYMPOSIUM

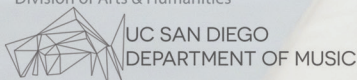
“THE INTERACTION OF SCIENTIFIC AND ARTISTIC IMAGINATION: PERCEPTUAL STUDIES AND THE MAKING OF MUSIC”

CONRAD PREBYS MUSIC CENTER, RECITAL HALL  
TUESDAY, FEBRUARY 3 @ 5:00p.m.-8:45p.m.

### ROGER REYNOLDS’ TRIBUTE CONCERT WITH ARDITTI QUARTET

CONRAD PREBYS MUSIC CENTER, CONCERT HALL  
WEDNESDAY, FEBRUARY 4 @ 7:00p.m.

UC San Diego  
Division of Arts & Humanities



(ART WORK) RAY KASS  
(PHOTO) CHRISTOPHER DOBEY/JCDC

ROGER REYNOLDS | CELEBRATION 80

February 3-5, 2015

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# ROGER REYNOLDS

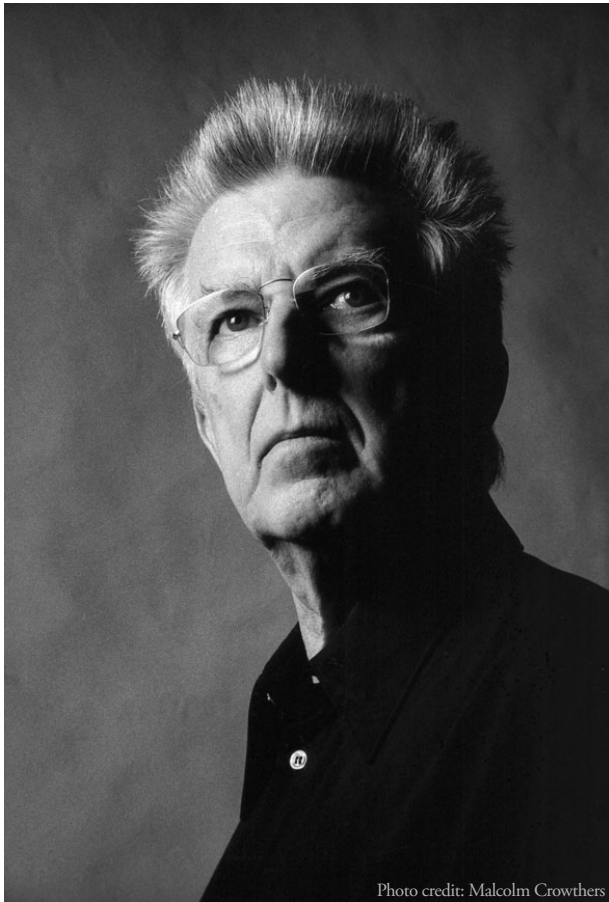


Photo credit: Malcolm Crowthers

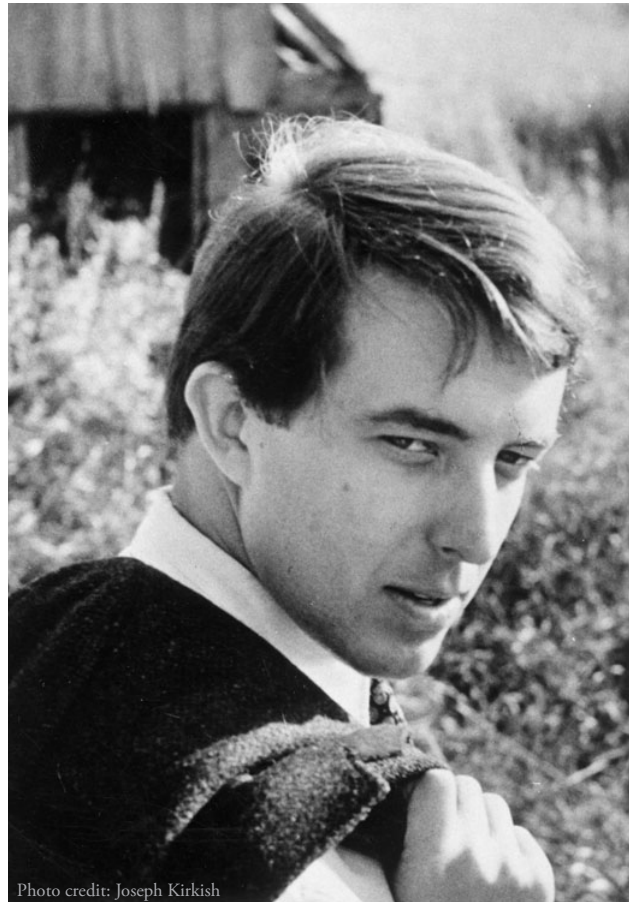


Photo credit: Joseph Kirkish

**b. 1934**

## ROGER REYNOLDS | CELEBRATION 80

February 3-5, 2015

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Born in Detroit in 1934, Reynolds commands a reputation as a bold explorer of what he likes to describe as the multilayered character of experience. For example, his works are known for engaging listeners with the spatial dimension of music and with a revelatory, complexly theatrical approach to text and voice. An excellent example can be found with *george WASHINGTON*. At the beginning of its season in September 2013, the National Symphony Orchestra and Christoph Eschenbach gave the world premiere of *george WASHINGTON*, a work commissioned in conjunction with the recent opening of the Fred W. Smith National Library for the Study of George Washington.

Collaborating with such colleagues as the intermedia artist Ross Karre and others, Reynolds designed *george WASHINGTON* as a continuous work in five interconnected sections that create a complex, nuanced portrait of the first president through an amalgam of musical score, narrators portraying Washington (in his own words) from three stages in his life, and continually morphing visuals projected onto three screens. The work dramatizes an ongoing and overlapping dialogue among different aspects of Washington's personality over the course of his life, across time.

Reynolds got a relatively late start on his career as a composer, having graduated with a degree in engineering physics and after working briefly in the missile industry in the 1950s. The choice to devote himself to music at a later stage, he recalls, gave him a unique perspective — one that prompted him to approach composition as “an encounter with life and its content that is shaped less by words and more by the direct experience of sound.”

The scope of the composer's catalogue indicates how that engagement has played out: his works range from instrumental compositions in the familiar formats of chamber and orchestral music to complex dramatic collaborations wedding elaborate technology with traditional art. (*Whispers Out of Time*, a work for string orchestra composed in response to a poem by John Ashbery, won the Pulitzer Prize for Music in 1989.)

Reynolds first came to attention with *The Emperor of Ice Cream* (1961-62), his music-theater work rendered after the Wallace Stevens poem. He earned a following through his involvement with the avant-garde ONCE festivals and his experimentation with analog and digital electronic sound. Deeply influenced by a period living abroad in Europe and Japan (including residencies at IRCAM, the Paris-based center for musical research founded by Pierre Boulez), Reynolds went on to create a North American counterpart with the Center for Music Experiment and Related Research at UCSD.

From his position as an influential teacher and researcher at the University of California, Reynolds has pursued a vast spectrum of interests spanning technology, sound as a spatially experienced phenomenon, literature, the visual arts, and mythology.

—Thomas May writes about music and theater and blogs at [memeteria.com](http://memeteria.com). These remarks are excerpted from his notes for a Phillips Collection event in Washington.



ROGER REYNOLDS | CELEBRATION 80

February 3, 4, 5, 2015  
Conrad Prebys Music Center, Experimental Theater

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INTERMEDIA WORK-INSTALLATION

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*george WASHINGTON* (2013)

*PING* (1968)

*MARKed MUSIC* (2011)

*SANCTUARY* (2003-2007)

Curated by Ross Karre  
Sound Design by Josef Kucera

OPENING

Tuesday, February 3, 4:00 p.m.

A public conversation with Ross Karre and Katharina Rosenberger

## INSTALLATION | NOTES

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### *george WASHINGTON* (2013)

Orchestra, 3 Narrators, Video projection, Real-time sound processing and spatialization  
Ross Karre, Videographer; Jaime Oliver, Computer Cues; Josef Kucera, Sound Design  
Clark Young, Thomas Keegan, Philip Larson, Narrators

First performances: 3, 4, 5 October 2013, John F. Kennedy Center for the Performing Arts, Washington, DC  
National Symphony Orchestra, Christoph Eschenbach, Conductor

A co-commission by the NSO, The Mount Vernon Ladies' Association, and the University of California Washington Center, *george WASHINGTON* is described by composer Roger Reynolds as “not a history lesson, but about trying to enter into Washington’s world — what he saw on his morning rides at Mount Vernon, what he heard, what he wrote in his diaries and to friends in letters. *george WASHINGTON* is not a narrative of those momentous times, rather a door through which we can pass, if briefly, into his space.”

**The Words of Washington:** The text for the work is drawn from letters, journals, and more, with the entire narration consisting of words Washington himself is known to have written or spoken. Three actors portray Washington in different phases of his life: as a youth (Clark Young), middle-aged (Thomas Keegan), and in his mid-60s (Philip Larson).

**The Sounds of Mount Vernon:** The singing of birds, the wind in the trees, the turning of the gristmill—these and other sounds Washington would have known are incorporated into the fabric of the work. Surround-sound is placed throughout the concert hall to immerse the audience more fully into the “sound world” of Mount Vernon.

**The Sights of Mount Vernon:** Three massive screens are subdivided into smaller panels in the configuration of the windows in the cupola that surmounts the estate house, thus revealing images as Washington himself would have seen from that vantage. Video crews visited Mount Vernon over two years, capturing these images through the seasons, reflecting the life of the estate.

The premiere of *george WASHINGTON* coincided with an important milestone for Mount Vernon: the September 27, 2013 opening of The Fred W. Smith National Library for the Study of George Washington. In addition to safeguarding original Washington volumes, the Library will serve as a center for research, educator programs, and leadership training.

—Thomas May

### *PING* (1968)

Pianist, flutist, percussionist; film; two slide machines; performers to modify images and to manage analog electronic devices; quadraphonic tape; 35mm slide projections by Karen Reynolds; 16mm film by the composer (1968) as restored by Ross Karre (2011)

Quadraphonic electroacoustic sound, live electronic processing  
First performance: 5 June 1968, Orchestral Space '68, Tokyo

In 1968, we were living in Japan. Interactions with Takemitsu brought film forward as something of a preoccupation for me. In an English language bookstore in Tokyo, I came upon a copy of *Encounter* magazine that contained a mesmerizing short story by Beckett. It was a study in claustrophobic permutation, a few words and phrases recurring again and again with only slight adjustments. In response to an invitation to participate in Takemitsu’s “Orchestral Space” Festival, I decided to undertake a multi-media work that would explore and also manifest my responses to the text.

I knew that the figure Beckett described should somehow be “there” for the audience, not just in the imagination. Equally clear was the gradual realization that the use of an actual speaking voice would distance the individual listener from the internal strangeness of the story that I wanted him or her immersed in. So I decided to ask Karen to design a set of slides (a total of 160 were needed) that would allow the words to appear for the audience in an immediate, but always evolving fashion. A succession of essentially white words in blackness were also to be replicated, scattered, colored in subtle and unpredictable ways by “visual performers” who manipulated prisms and colored filters.

To represent the perplexing white figure in a box described by Beckett I chose a young *Butoh* dancer (then known as) Sekiji Maro. Takemitsu made the (always necessary) introduction to one of Kurosawa’s cameramen. I devised a 22-minute script, detailing exactly what figure, camera, and lighting were to do in 15-second durational segments. We shot the film in two days.

The music was improvisational; also permutational. I decided upon three musicians (pianist/leader, flutist, and percussionist [harmonium, and bowed cymbals and tam-tam]). Over the three successive parts that comprised the whole, each of the musicians was assigned pitch, dynamic, and temporal normatives. From these they improvised in a subtle and responsive way, reacting to the suggestions of the film and the projected words.

To further complicate the mix and intensify the timbral world, ring modulation was used whereby the instrumentalists processed one another’s sounds. The performers managing the analog electronic dimensions of the performance also were given a score describing forms of distribution and movement that they were to emulate in each section. One critic, writing of a performance in Canada, noted that it felt like “being seared under a broiler,” while the *Los Angeles Times* simply headlined “Bizarre ‘Happening’ at Monday Evening Concert.”

## INSTALLATION | NOTES

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### *MARKed MUSIC* (2011)

Solo Contrabass, Real-time algorithmic transformation  
Mark Dresser, Contrabass, Jaime Oliver, Computer musician  
First performance: 25th August 2011, The Stone, New York City

*MARKed MUSIC* is a watershed work for me. It is, more than any other, a result of close collaboration, a circumstance that will, ideally, mark not only our musical, but also our societal future.\* In the present case, I first composed two short, complementary works for solo, unamplified contrabass: *imAge/contrabass (Assertive)* and *imAge/contrabass (Evocative)*. These involved a long period of close interaction with Mark Dresser, try-outs and frequent re-writings. These two source pieces were then recorded by Dresser for his *Guts* CD/DVD production. Mark's wizardry as an explorer of his instrument's resources nourished the emergence of the two solo pieces that are completely written out. His mastery of improvisation aroused the present work which is not fully notated.

My strategy was to devise a sectional structure with "filled" and "empty" parts. Those that are filled quote directly from the source solo pieces. The longer "empty" sections are often framed by initializing and cadential passages, but leave the remainder to what could be called "contextually-guided" improvisation. I provide the frame; the performers create an appropriate picture within it.

The solo instrument's progress throughout (essentially, a journey from pizzicato assertiveness to arco evocation) is supported, illuminated, and constantly inflected by a computer/musician who manages the evolution and inflection of four, multidimensional algorithms in real time. There are 33 such "Cues" over the course of *MARKed MUSIC*.

My exploration of algorithmic processes began at IRCAM in the early 80s, with David Wessel. The original pair (*SPLITZ* and *SPIRLZ*) have continued to be useful in the intervening decades, and have recently been joined by four new ones (*PROLIF*, *SMEARZ*, *MATRIX*, and *THINNR*). These are, in turn, indebted to collaborative interaction with Ian Saxton and Peter Otto, but most extensively with Jaime Oliver, the co-dedicattee of *MARKed MUSIC*. It was Jaime whose musicianship and programming skills propelled early versions of these processes into a fully dimensional form (each in an entirely distinctive way) and into performative fluency.

\* I also note, here, the pathbreaking collaborative interaction I have had since the mid-90s with percussionist Steve Schick. Together, we brought into being *Watershed* and the *Chatter/Clatter* movement of *Sanctuary*.

### *SANCTUARY* (2003-2007)

Percussion Quartet, Real-time computer processed and spatialized sound, Lighting design  
Steven Schick and red fish blue fish ensemble, Josef Kucera, Peter Otto, Jacob David Sudol, Sound projection  
First performance of full work: 18 November 2007, I.M. Pei's East Wing Atrium, National Gallery of Art

We were talking, in 2004, and Steve Schick observed that percussion more than any other musical medium involves an inherent theatricality due to the prominence of gesture, the diversity, size, and distribution of the instruments, and the often quasi-choreographic movement that works require simply (?) to realize their sonic ends. We had done a solo, multiple percussion work (*Watershed*) collaboratively before. Now, he challenged me to undertake a project with him and the red fish blue fish ensemble where all of this – the dimensions of percussion playing that are other than sound itself – would be integrated into the composition's materials and purposes. I began to make a malleable work intended to evolve with the experience of its creators (composer, performers, and technicians) and conceived so as to adapt to, and capitalize upon, the changing resources and contexts within which it is realized. And *Sanctuary* continued to evolve as new performance spaces were encountered, new performers added their talents, new interpretations emerged, and new technologies were employed to realize and document performances.

#### **The Movements**

*Sanctuary* creates a dynamic among four percussionists whose responsibilities to the piece include probing and revealing their own psychological make-up as they assemble the necessary instrumental sources in accord with my specified ideals. The piece is in three movements: *Chatter/Clatter*, *Oracle*, and *Song*.

*Chatter/Clatter* is a percussion solo about discovery. The player's hands strike, tremble, and scurry over a collection of unusual, even odd, sound sources (bottles, bowls, boxes, and gongs) exploring the contours of proto-melodies, gestures there are not yet well-formed and articulate.

In the second movement, *Oracle*, the quartet begins to converse, posing questions to which the oracle, positioned center stage, responds. The selection of an object that will function as the oracle is made by members of the quartet. Within broad parameters established in the score, they also assemble an instrumental array whose nature they influence. It includes, by design, a variety of quirky noise makers. The performers' choices are critical to the work's impact, to the nature of the "sanctuary" created in performance. The interaction between the percussionists and the oracle, and their exchanges with one another in movement and sound, involves the recursive exploration of a long line, a contour over time that serves as the "theme" of the work. Their behaviors mimic the way the eye scans back and forth across the lines of a poem: dwelling, balancing, refreshing.

## INSTALLATION | NOTES

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### *SANCTUARY* (continued)

In the last movement, *Song*, pitch enters the picture as a new resource. The quartet seeks, in stages, to rediscover the contours of the earlier movements as melodies that evolve towards a culminating lyricism.

#### **The Medium**

Percussion is the newest member of the instrumental complement of the Western tradition. But the playing of percussion is also among the oldest of musical strategies (along with song): find objects and bring them together to produce sound: striking, rattling, scraping. Or raise your voice – as need requires.

Percussion as a musical resource can also be burdensome, since the complement of “instruments” for each piece can be almost unimaginably variable. This has implications for the composer, performer, and for ensemble interactions. The range of percussion resource that can be employed raises logistical issues: Where do I put my instruments? Can I reach everything? Can I make eye-contact with my collaborators? To address this, I have tried to capitalize on percussion’s generality by composing conditions that the performers then decide how to fulfill in an adaptive way.

In *Sanctuary*, the percussionists determine aspects of their roles, shaping their repertoire of sounds and behavior by these decisions. The work also plays upon their relative locations in the staging centered on the oracle. As a result, the geometry of the instruments and performers and the movement of the performers through the space become a part of the dramaturgy of the experience: where I am playing (in space) can be as important as what I am playing, and my interactions with other member of the ensemble and with the oracle frame the performance overall.

The oracle in these performances is a “waterphone”. They are typically built as unique creations, using stainless steel and bronze – acoustic, tonal-friction instruments that capitalize on the phenomenon of echoing. The waterphone in the performances documented here is very large compared to the norm, and was custom-made of parts from the inside of an old clothes dryer.

#### **The Material**

*Sanctuary* is partially about nascent lines that strive to become melodies. What is a melody? It is a fluctuation, a contour over time, parsed so as to invite our empathy, our engagement. In this piece, I am not, of course, thinking of melody in the most direct and familiar sense. I am rather musing on melody and its origins as persuasive contours in time.

In considering melody, one thinks of pitch contours and rhythms. Of these two, rhythm – especially in the percussive context – is the more basic. I have composed explicit contours that take on different meanings depending upon the decisions that the performers have made about their instrumental resource. Communication is the metaphoric subject here. Are we heard to say what we intended to say?

Still, from the initial chattering of the soloist’s fingers in the first movement (equipped as they are with metallic disks that contain electrical sensors) everything that happens is indebted to a central “theme” – a pattern of ups and downs that I composed. This pattern – a nascent melody – is constantly evolving in its realizations, but is always informed by what has already happened in the piece, and what is yet to come.

#### **Technology**

Although the wealth of the percussive resource is great, there are certain effects that this resource cannot produce on its own. Employing computer technology allows, for example, the freeing of sounds from the physical position of their origins. Sounds can be made to move choreographically throughout a performance space, individually or in groups. They can migrate slowly or traverse rapid trajectories. A particular gesture made by a performer can be captured and then allowed to morph gradually over time, losing some of its original characteristics and acquiring new ones as it persists. Singular events can proliferate into flock-like collections that swoop and glide around the listener. A detail from the performer’s gestures can be captured by the computer and used not only in the service of the auditory experience, but to drive other transformations as the performance unfolds.

Finally, there is another advantage that technology enables: the considerable psychological power derived from capturing and then disseminating intimate activity. The smallest, quietest percussive action can be brought to the ears of all through judicious amplification and sound positioning. The Sanctuary Project is deeply indebted to a number of individuals, each of whom contributed uniquely valuable elements to the technological dimensions of *Sanctuary* and its documentation: Miller Puckette, Josef Kucera, Ian Saxton, Jacob David Sudol, Pei Xiang, David Curry, and Ross Karre, Doug Ramsey and Alex Mathews, as well as all the many performers whose imagination, skill, and investment allowed this music to flower. I also thank Joseph Malloch, Mark Marshall, and Marcelo M. Wanderley of the IDMI Laboratory, CIRMMT, McGill University, for technical suggestions on early prototypes of the gesture sensing systems used in *Sanctuary I: Chatter/Clatter*.

— Roger Reynolds

ROGER REYNOLDS | CELEBRATION 80

Tuesday, February 3, 2015  
5:00 p.m. – 8:45 p.m.  
Conrad Prebys Music Center, Recital Hall

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SYMPOSIUM

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**THE INTERACTION OF SCIENTIFIC AND ARTISTIC IMAGINATION:  
PERCEPTUAL STUDIES AND THE MAKING OF MUSIC**

Curated by Katharina Rosenberger

Introduction by Steven Schick

**GUEST SPEAKERS**

**Philippe Lalitte**

“Musical time in R. Reynolds’ Music: from theoretical concepts to musical dramaturgy”

**Stephen McAdams**

“Timbre and auditory grouping in relation to orchestration decisions in *The Angel of Death*”

**Aniruddh Patel**

“Blurring the line between music and language: artistic and scientific perspectives”

**SCHEDULE**

5:00 p.m. — Introduction by Steven Schick

5:10 p.m. — Philippe Lalitte (University of Burgundy, France)

6:00 p.m. — Stephen McAdams (McGill, Canada)

6:50 p.m. — Break, light refreshments served

7:10 p.m. — Aniruddh Patel (Tufts University, Massachusetts, USA)

8:00 p.m. — Panel discussion moderated by Steven Schick, with all speakers,  
plus Ross Karre, Katharina Rosenberger and Roger Reynolds

8:45 p.m. — Conclusion



**Musical time in R. Reynolds' Music: from theoretical concepts to musical dramaturgy**

Philippe Lalitte, University of Burgundy, Department of Music

Roger Reynolds' creative process is methodical and distinctive. For each work, Reynolds follows a normative procedure that moves from a global to a local perspective. The different methods used have a significant flexibility, giving to every piece a sense of individuality while allowing the composer to explore new ideas and concepts in every engagement, creating a body of music simultaneously diverse and cohesive. Reynolds has been keenly interested in perception and cognition throughout his career, and his engagement with such processes has informed his compositions at multiple levels, including formal design, motivic manipulation, and spatialization of sound. Firstly, I will expose some fundamental concepts of Reynolds' compositional thought concerning the large time-scale, the local, and their connection. Secondly, I will present some different methodological approaches to control musical events in time and will discuss them from a perceptual point of view. Finally, I will focus on some very idiosyncratic conceptions of musical form (variation, concerto and others) which have strong implications in the dramaturgy of music.

**Timbre and auditory grouping in relation to orchestration decisions in *The Angel of Death***

Stephen McAdams, Schulich School of Music, McGill University

Roger Reynolds' piece *The Angel of Death* for piano, ensemble and computer processed sound was the subject of a unique project intertwining musical creation, psychological experimentation and musicological reflection between 1993 (the first musings about the collaboration) and 2005 (the publication of an ebook on the project and a CD of the two versions of the piece). In this presentation, I will start by reviewing some of the results related to timbre perception and cognition and orchestrational thinking explored during that project: the double conception of thematic materials for piano and ensemble, the effect of orchestration on the perception of relatedness of thematic materials, and recognition of musical materials under different orchestrations. I will then present some of my current work in which new categories for the analysis of orchestration effects based on auditory grouping principles are developed, and I will examine the ways in which these principles are at work in *The Angel of Death*. I will close with a brief discussion on bridge building between music creation and music scholarship of both humanistic and scientific kinds.

**Blurring the line between music and language: artistic and scientific perspectives**

Aniruddh Patel, Tufts University, Department of Psychology

Art is often ahead of science in breaking down boundaries between domains of human experience. The work of Roger Reynolds, starting with his influential *The Emperor of Ice Cream* from the 1960s has often entwined music and language in ways that challenge our typical ontological divisions between these categories. I will discuss recent research from cognitive science which affirms this perspective, and which indicates that the boundaries between language and music in the mind are far more porous than was previously believed.

ROGER REYNOLDS | CELEBRATION 80

Wednesday, February 4, 2015  
7:00 p.m.  
Conrad Prebys Music Center, Concert Hall

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TRIBUTE CONCERT WITH THE ARDITTI QUARTET

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PROGRAM

*not forgotten* (2007-2010)  
**Giverny, Ryoanji, Toru, Iannis, Elliott, Now**

Roger Reynolds

*Liquid Study 1* (2015, world premiere)  
For string quartet and electronic sound

Benjamin Hackbarth

*Anea Crystal Cycle: Seed I* (2008)

Chaya Czernowin

*Ariadne's Thread* (1994)  
For string quartet and UPIC-generated quadraphonic sound

Roger Reynolds

ARDITTI QUARTET  
Irvine Arditti and Ashot Sarkissjan, violins  
Ralf Ehlers, viola  
Lucas Fels, cello

*Please join us for a post-concert reception*

## CONCERT | NOTES

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### ***NOT FORGOTTEN*** (2007-2010)

Roger Reynolds

*not forgotten*, for string quartet, comprises six short movements, and each has “attachments” for me, arising from memories of a person or a place that left particularly vivid impressions. Three movements respond to composer friends: Takemitsu, Carter, and Xenakis. Three places are also implicated: Giverny, Ryoanji, and the Aegean Sea. As memories are themselves mobile – shifting and recombining over time – so is the central content of this work. A performance always begins with Giverny and ends with its complement, a “tutti solo,” Now, that surveys the work’s landscape of associations with notable unanimity. The remaining movements are intended to occur in a different order with each performance, lending a tension of the unexpected even when the content of the materials themselves is fully mastered. Should not music be, as life is, significantly unpredictable? The behavior already mentioned – an “ensemble solo” that ends the work serving as a metaphoric introduction to the initial Giverny movement (were the quartet’s larger process to loop) – emerges more directly in each of the other movements. Elliott is preceded by a violin 1 solo and Iannis by one for violin 2; the Toru movement is introduced by the viola; while Ryoanji is preceded by a cello solo. There are further complications: Takemitsu is fitfully disrupted by *wasabi*, while Iannis is framed by the Aegean. Giverny is a malleable chorale, responding to a memorable sketch Monet used to posit his aims for one of the miraculous water lily paintings. Iannis alternates between tremulous unanimity and assertive independence, my music converges upon and then emerges out of his specifics. Ryoanji responds to the raked sand and surrounded rocks of the fifteenth century Zen garden in Kyoto, evoking a parched landscape of sounds with only the faintest touch of the lyric. Takemitsu was almost as enamored of film as he was of sounds and their music. His scores include one for Teshigahara’s haunting film *Woman in the Dunes*, and Toru visits that space. Carter’s riotous *Third String Quartet* includes a passage during which the cello rises in a powerfully expressive challenge to the surrounding successions of acerbic, block-like chords. But I am concerned in this quartet not only with the music of these individuals, but with their ways ... as remembered. *not forgotten* was commissioned by the Siemens Foundation, with the cooperation of the West German Radio and the Cité de la musique, and is dedicated to the Arditti Quartet. It was premiered by them at the Wittener Tage Festival April 23, 2010.

— *Roger Reynolds*

### ***LIQUID STUDY 1*** (2015)

Benjamin Hackbarth

Dedication: to Roger Reynolds

This is the first in a series of pieces that I intend to write to explore an imagined physics based on the behavior of fluids. Ideas such as turbulence, disruptions and ripples, surface tension, and the interaction of dissimilar liquids inspire both the gestural language and the formal design of this composition. While the electronic and acoustic sounds often share certain articulative tendencies and a similar sense of gestural elasticity, they rarely fuse together as one. Rather they behave much more like oil and water – two distinct entities which share a diaphanous boundary, inherently responsive to each other, yet stubbornly separate and divisible. Always filling each others’ voids, pulling when pushed and pushing when pulled.

This piece is warmly dedicated to Roger Reynolds, who taught me, among other things, that the act of searching for words to describe what you do invariably connects your music to the world around you. I would like to thank the following researchers whose insights and ideas have inspired and enabled my work: Norbert Schnell, Gilbert Nouno, Joachim Goßmann, Arshia Cont, Diemo Schwarz and Philippe Esling.

— *Benjamin Hackbarth*

***ANEA CRYSTAL CYCLE: SEED I*** (2008)

Chaya Czernowin

*Anea* is an invented name for a music-crystal modeled on an ionic crystal. It is a piece written in three independent and individual movements which can be played separately or together.

*Seed I* and *Seed II* are for string quartet and *Anea* is for string octet, being built of both *Seeds* together played simultaneously with some changes. The pieces belong to the series *Shifting Gravity* together with the pieces *Sheva* (Seven) and *Sahaf* (Drift).

The five pieces on this series are each a concise and concentrated focus on a singular physical gesture. Close examination of the gesture reveals the strange physical laws of the world in which the gesture exists, and the body performing it. One could conceive of *Anea Crystal* as an ionic crystal of gestures. *Anea Crystal* is dedicated to Johannes Kalitzke.

— *Chaya Czernowin*

***ARIADNE'S THREAD*** (1994)

Roger Reynolds

*Ariadne's Thread* arose out of a longstanding interest in line, whether evoked as sound or inscribed graphically by such masterful hands as those of Sengai, Klee or Rembrandt. Continuity, directionality, inflection, intensification, rarefaction, whimsy, even violence are subsumed in the manifestations and depictions that line allows. *Ariadne's Thread* is for string quartet and also computer generated sound which supports, augments, alternates with, and occasionally replaces the instrumentalists' efforts, expanding the range of what an unaided string ensemble can accomplish.

Elements from the myth inform the piece — the Minotaur's vertiginous rage, the number seven, the strategy of surreptitious substitution, and Dionysus "in the wings" — but, after all, it is not meant as illustration. Having composed two earlier works that address the quartet traditions, I allowed a less reasoned obsessiveness to invade this one, an obsession that requires a particular sort of unanimity.

*Ariadne's Thread* was written for the Arditti Quartet, and premiered by them in Messiaen Hall at Radio France on 2 December 1994. The piece was jointly commissioned by Radio France, The Florence Gould Foundation, and Les Ateliers UPIC. The computer materials were realized in Paris at Les Ateliers UPIC and assembled at the University of California, San Diego, where Timothy Labor was my musical assistant (Michael Theodore was the musical assistant in the quadraphonic version).

— *Roger Reynolds*

## BIOGRAPHIES

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### ARDITTI QUARTET

The Arditti Quartet enjoys a world-wide reputation for their spirited and technically refined interpretations of contemporary and earlier 20th century music. Many hundreds of string quartets and other chamber works have been written for the ensemble since its foundation. These works have left a permanent mark on 20th and 21st century repertoire and have given the Arditti Quartet a firm place in music history. Their performances and recordings set a unique standard of interpretation. The ensemble believes that close collaboration with composers is vital to the process of interpretation. The list of composers they have personally worked with reads like a who's who. A substantial part of their repertoire is documented on more than 200 CDs featuring the Quartet, released by various labels.

Over the past 35 years, the ensemble has received many prizes for its work, the most prestigious being the Ernst von Siemens Music Prize, Germany's Nobel prize equivalent for music, which was awarded in 1999 for 'lifetime achievement' in music. This prize has only ever been awarded to individuals and to this day the Arditti Quartet is the only ensemble to have received this award.

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It was with great pleasure that I accepted an invitation to UCSD on behalf of the Arditti quartet for us to join in with the celebration of Roger Reynolds' 80th and a great honor for all four of us to be part of this celebration. The Arditti quartet is no stranger to San Diego but this was a perfect occasion for us to return. I first met Roger many years ago in the early '80s, when he came to observe the quartet in action performing in the UK. My first observations assessed him as an extremely intelligent and enthusiastic character, who I wanted to see more of. This was made possible by Roger's suggestion and my enthusiasm for him to write us a string quartet which gave birth to *Coconino*, our first collaboration. Other works were to follow in the years to come: *Visions*, *Ariadne's Thread*, and *not forgotten*, the latter being a tribute to three composers, Carter, Takemitsu and Xenakis, whom we both knew, all as collaborators and friends. Roger had interwoven small fragments of their music into a rich tapestry of his own. Roger also wrote two works for me for violin. *Kokoro*, for solo violin, came first and was followed by *Aspiration*, with ensemble. Our collaboration never ceased to inspire me and our listeners also.

I have seen Roger not only at work with the quartet or myself but also with numerous young composers giving them guidance and inspiring them to think in different ways. His generosity towards the younger generation has made him mentor of many composers around the world. I have visited museums, archaeological sites, and sat in divine restaurants listening to Roger's mesmerizing descriptions of the food I was eating. Roger's culinary abilities are extremely well known and there is no need to dwell on them but I have to say I have seen him demonstrate in my own kitchen in London how he could also have been a painter, with his lavish brush strokes decorating the dishes, my walls and floor with the magical food we were just about to eat.

Please don't stop Roger. Please don't stop doing anything you do, as we all need to be inspired by the depth of your perception and insight as well as your youthful enthusiasm for life.

— Irvine Arditti (January 2015)



## BIOGRAPHIES

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### CHAYA CZERNOWIN

Chaya Czernowin was born and brought up in Israel. After her studies in Israel, at the age of 25, she continued studying in Germany (DAAD grant), the US, and then was invited to live in Tokyo, Japan (Asahi Shimbun Fellowship and American NEA grant), in Germany (at the Akademie Schloss Solitude), and in Vienna. Her music has been performed throughout the world, by some of the best performers of new music, and she has held a professorship at UCSD, and was the first woman to be appointed as a composition professor at the University of Music and Performing Arts in Vienna, Austria (2006-2009), and at Harvard University in (2009 and on) where she has been the Walter Bigelow Rosen Professor of Music. Together with Jean- Baptiste Jolly, the director of Akademie Schloss Solitude near Stuttgart and with composer Steven Kazuo Takasugi, she has founded the summer Academy at Schloss Solitude, a biannual course for composers. Takasugi and Czernowin also teach at Tzllil Meudcan, an International course based in Israel founded by Yaron Deutsch of Ensemble Nickel.

Czernowin's output includes chamber and orchestral music, with and without electronics. Her works were played in most of the significant new music festival in Europe and also in Japan, Korea, Australia, US, and Canada. She composed 2 large scale works for the stage: *Prima...ins Innere* (2000, Munich Biennale), chosen to be the best premiere of the year by Opernwelt yearly critic survey, and *Adama* (2004/5) with Mozart's *Zaide* (Salzburg Festival 2006). She was appointed Artist in Residence at the Salzburg Festival in 2005/6 and at the Lucern Festival, Switzerland in 2013. Characteristic of her work are working with metaphor as a means of reaching a sound world which is unfamiliar; the use of noise and physical parameters as weight, textural surface (as in smoothness or roughness etc), problematization of time and unfolding and shifting of scale in order to create a vital, visceral and direct sonic experience. All this with the aim of reaching a music of the subconscious which goes beyond style conventions or rationality.

In addition to numerous other prizes, Czernowin represented Israel at Unesco composer's Rostorum 1980; was awarded the DAAD scholarship 83- 85; Stipendiumpreis (88) and Kranichsteiner Musikpreis (92), at Darmstadt Fereinkurse; IRCAM (Paris) reading panel commission 1998; scholarships of SWR experimental Studio Freiburg 98/00/ 01; The composer's prize of Siemens Foundation 03; the Rockefeller Foundation, 04; a nomination as a fellow to the Wissenschaftkolleg Berlin in 08; Fromm Foundation Award 09; and Guggenheim Foundation fellowship 11. She is published by Schott. Her music is recorded on Mode records NY, Wergo, Col Legno, Deutsche Gramophone, Neos, Ethos, Telos and Einstein Records. She lives near Boston with composer Steven Kazuo Takasugi and their son.

### BENJAMIN HACKBARTH

Benjamin Hackbarth is currently head of composition at the University of Liverpool where he writes music for instruments and electronic sound. He has a Ph.D. from the University of California, San Diego where he studied composition with Roger Reynolds, Philippe Manoury, and received a Master's degree while working with Chaya Czernowin. At UCSD he also studied electronic music with Miller Puckette, Tom Erbe and F. Richard Moore. He has a bachelor's in composition from the Eastman School of Music where he studied with Allan Schindler, Robert Morris and trumpet with James Thompson.

Ben has been composer in residence for musical research and composer in research at IRCAM. He was also a composer affiliated with the Center for Research and Computing in the Arts (CRCA) and a Sonic Arts Researcher at CalIT2. He has had residencies at Cité des Arts, Centre Internationale de Récollets, Akademie Schloss Solitude and the Santa Fe Chamber Music Festival. In addition to writing concert music, he has collaborated with other artists to create multimedia installations with realtime graphics, sound and motion tracking.

Notable performances include those by the Arditti Quartet, Ensemble InterContemporain, the L.A. Percussion Quartet, the Collage New Music Ensemble, Ensemble SurPlus and the Wet Ink Ensemble. His work has been presented in venues such as Cité de la Musique, Akademie Schloss Solitude, the MATA festival, SIGGRAPH, the Florida Electro-acoustic Music Festival, the Santa Fe Chamber Music Festival, the Ingenuity Festival, E-Werk, the Pelt Gallery, the San Diego Museum of Art, the Los Angeles Municipal Art Gallery, the Roulette Concert Space and l'Espace de Projection at IRCAM. Ben's music can be heard on CD releases by the Carrier Records, UCSD and EMF labels.

## BIOGRAPHIES

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### ROSS KARRE

Ross Karre (b. 1983 in Battle Creek, MI) is a percussionist and temporal artist based in New York City. His primary focus is the combination of media selected from classical percussion, electronics, theater, moving image, visual art, and lighting design. After completing his Doctorate in Music at UCSD with Steven Schick, Ross formalized his intermedia studies with a Master of Fine Arts from UCSD. He is a percussionist and director of production for the International Contemporary Ensemble (ICE) and performs regularly with red fish blue fish, Third Coast Percussion (Chicago), the National Gallery of Art New Music Ensemble. His projection design work has been presented all over the world in prestigious venues such as the BBC Scotland, the Park Avenue Armory, the Kennedy Center, the National Gallery of Art, and the BIMhuis (Amsterdam).

### JOSEF KUCERA

Josef Kucera is the Chief Recording Engineer for Department of Music at the University of California, San Diego. He has been involved in Recording Arts and New Music for more than 40 years and has engineered over 100 commercial CD, DVD and DVD-A projects in the U.S., Asia and Europe. He holds a BA in Music Theory/Composition from the University of California, Santa Barbara, and has composed music for film, dance and live theatre. Since 2007, he has been an Adjunct Professor at San Diego City College teaching recording arts and the AVID Music Production Certification curriculum. He is a past member of the Association for Recorded Sound Collections, a current member of the Audio Engineering Society and the National Academy of Recording Arts and Sciences.

### PHILIPPE LALITTE

Philippe Lalitte is musicologist, Maître de conférences at the Université de Bourgogne, researcher at the Centre Georges Chevrier (UMR CNRS 5605, Dijon) and associate researcher at the Laboratoire d'Etude de l'Apprentissage et du Développement (LEAD, UMR CNRS 5022, Dijon) and at the Labex GREAM (Strasbourg). He is also co-founder of the Contemporary Music Festival "Why Note" in Burgundy. His main topics of research focus on 1) work analysis and performance analysis using new technologies, 2) cognition and emotion in music, 3) history and aesthetics of 20th century music, particularly with composers weaving links with sciences (acoustics, psychoacoustics and psychology of music).

### STEPHEN MCADAMS

Stephen McAdams studied music composition and theory with Julia Hansen at De Anza College in California before entering the realm of perceptual psychology (BSc in Psychology, McGill University, 1977, under the tutelage of Albert S. Bregman; PhD in Hearing and Speech Sciences, Stanford University, 1984, under the guidance of Earl D. Schubert). In 1986, he founded the Music Perception and Cognition team at the world-renowned music research center IRCAM in Paris. While there he collaborated with Roger Reynolds on several projects from the early 1980s to 2005 with the publication of their major collaboration around *The Angel of Death* in an eBook. This project included the first real-time audience response measures in a live concert at the world premier in Paris and the North American premier in La Jolla. McAdams also organized the first Music and the Cognitive Sciences conference in 1988 at IRCAM, which subsequently gave rise to the three international societies dedicated to music perception and cognition, as well as the International Conference on Music Perception and Cognition. He was Research Scientist and then Senior Research Scientist in the French Centre National de la Recherche Scientifique (CNRS) from 1989 to 2004. He took up residence at McGill University in 2004, where he is Professor and Canada Research Chair in Music Perception and Cognition. He directed the Centre for Interdisciplinary Research in Music, Media and Technology (CIRMMT) in the Schulich School of Music at McGill from 2004 to 2009. His research interests include multimodal scene analysis, musical timbre perception, sound source perception, and the cognitive and affective dynamics of musical listening. He is currently working on a psychological foundation for a theory of orchestration.

## BIOGRAPHIES

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### ANIRUDDH PATEL

Aniruddh Patel joined Tufts University in the fall of 2012 as an associate professor of psychology. Previously he was a senior fellow at The Neurosciences Institute in San Diego. As a cognitive neuroscientist, he conducts research that focuses on the relationship between music and language, using this interface to explore the mental foundations of both of these distinctively human abilities. He has used a range of methods in his research, including human brain imaging, theoretical analyses, acoustic research, and comparative work with other species. Patel has served as president of the Society for Music Perception and Cognition, is the 2009 recipient of the Music Has Power Award from the Institute for Music and Neurologic Function in New York City, and is the author of a scholarly book, *Music, Language and the Brain* (Oxford University Press), which won a Deems-Taylor award from ASCAP in 2008. Patel received a Ph.D. from Harvard in organismic and evolutionary biology and a B.A. in biology from the University of Virginia. He serves on editorial boards for *Cognition*, *Music Perception*, and *Empirical Musicology Review*.

### KATHARINA ROSENBERGER

Katharina Rosenberger, born in Zürich, holds a Doctor of Musical Arts in Composition from Columbia University, under the mentorship of Tristan Murail. Katharina holds the position of Associate Professor in Composition at the Department of Music, University of California, San Diego.

Much of her work manifests in a transdisciplinary context and is bound to confront traditional performance practice in terms of how sound is produced, heard and seen. Her compositions, installations and interdisciplinary music theatre projects have been featured at festivals such as the Weimarer Frühlingstage, KunstFestSpiele Herrenhausen, Hanover, Festival Archipel, Festival La Bâtie, Geneva, Zürcher Theaterpektakel, Journées Contemporaine, Basel, Festival Les Musiques, Marseille, Festival Bernaola, Victoria, Spain, New Media Art, Yerevan, Spark Festival of Electronic Music and Art, Minneapolis, the Shanghai New Music Week, the Shanghai International Electro-Acoustic Music Festival, and the October Contemporary in Hong Kong.

Katharina's installation work *VIVA VOCE* and *Room V* have been awarded with the "Media Projects Award"/ Sitemapping of the Swiss Federal Agency (OFC), Berne. She is a past recipient of the Hellman Fellowship, San Francisco, the Sony Scholar Award, and the Ernst von Siemens Musikstiftung Commission for her composition *Gesang an das noch namenlose Land*. Her portrait CD *TEXTUREN* with the Wet Ink Ensemble, released on HatHut Records, has been awarded the prestigious Copland Recording Grant and was selected for the Preis der Deutschen Schallplattenkritik, Bestenliste\_4, 2012.

### STEVEN SCHICK

Percussionist, conductor, and author Steven Schick was born in Iowa and raised in a farming family. For forty years he has championed contemporary music by commissioning or premiering more than one hundred-fifty new works. He was the founding percussionist of the Bang on a Can All-Stars (1992-2002) and served as Artistic Director of the Centre International de Percussion de Genève (2000-2005). Schick is founder and Artistic Director of the percussion group, "red fish blue fish." Currently he is Music Director of the La Jolla Symphony and Chorus and Artistic Director of the San Francisco Contemporary Music Players. In 2012 he became the first Artist-in-Residence with the International Contemporary Ensemble (ICE). Schick founded and is currently Artistic Director of "Roots and Rhizomes," a summer course on contemporary percussion music held at the Banff Centre for the Arts. He maintains a lively schedule of guest conducting including appearances in this season with the BBC Scottish Symphony Orchestra, the Saint Paul Chamber Orchestra, the Nova Chamber Ensemble and the Asko/Schönberg Ensemble. Schick will be music director of the 2015 Ojai Festival. Among his acclaimed publications are a book, *The Percussionist's Art: Same Bed, Different Dreams*, and numerous recordings of contemporary percussion music including a 3 CD set of the complete percussion music of Iannis Xenakis (Mode). Mode released a companion recording on DVD of the early percussion music of Karlheinz Stockhausen in 2014. Steven Schick is Distinguished Professor of Music at the University of California, San Diego.



Karen Hill, Melvin Kangas, and Roger Reynolds, the "Today" show, 1963  
Karen and Roger Reynolds Archives

For more information on Roger Reynolds and a complete list of his works, please visit:  
[WWW.ROGERREYNOLDS.COM](http://WWW.ROGERREYNOLDS.COM)



# ACKNOWLEDGMENTS

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Aleck Karis, Associate Dean  
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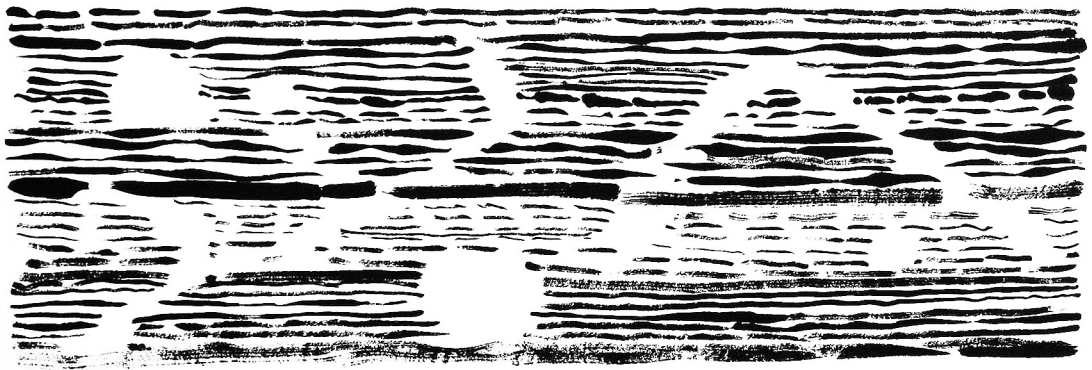
A black and white photograph of the San Diego skyline at night, viewed from across a body of water. The city lights are reflected on the water's surface. The skyline includes several prominent skyscrapers, some with distinctive architectural features like the pointed top of the San Diego-Coronado Center.

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