Monday, March 14, 2011, 8pm
Hertz Hall

Composer Portrait: Pierre Boulez

Graeme Jennings, *violin*
John MacCallum, *electronics*

Eco Ensemble
David Milnes, *conductor*

Hrabba Atladottir	*violin*
Kyle Bruckmann	*oboe*
Leighton Fong	*cello*
Christopher Froh	*percussion*
David Granger	*bassoon*
Peter Josheff	*clarinet*
Dan Levitan	*harp*
Loren Mach	*percussion*
Ellen Ruth Rose	*viola*
Alicia Telford	*horn*
Ann Yi	*piano*

PROGRAM

Pierre Boulez (b. 1925) Anthèmes 2 (1997)

INTERMISSION

Boulez Dérive 2 (1988, 2006)
West Coast Premiere

Multichannel audio provided by Greg Kuhn, Jay Cloidt, Meyer Sound and CNMAT.

This performance is funded, in part, by the French-American Fund for Contemporary Music, a program of FACE with major support from the Cultural Services of the French Embassy, SACEM, Institut Français and the Florence Gould Foundation.

Cal Performances' 2010–2011 season is sponsored by Wells Fargo.

Pierre Boulez once proclaimed, "It is not enough to deface the *Mona Lisa* because that does not kill the *Mona Lisa*. All the art of the past must be destroyed." Such incendiary statements (he later claimed this one was merely a quip) are anything but an exception for Pierre Boulez. His charisma, poetic sensitivity and uncanny musical precision have placed him on a par with the greatest conductors of his day, while his scores and writings have made him one of the most enigmatic, controversial and significant figures in the concert world.

Born the son of an industrial engineer, Boulez began playing piano at the age of six and became the soprano soloist in a Catholic seminary choir at 13. Despite his father's fierce objections, he finally left for Paris and studies at the Conservatoire in 1942. Enrolling in an advanced harmony course with the famous composer Olivier Messiaen in 1944, the youth at first excelled, but over time became increasingly disdainful of traditional harmony. "He became angry with the whole world," Messiaen later recalled. "He thought everything was wrong with music." After receiving his diploma in 1945, Boulez encountered composer René Leibowitz, who introduced him to Arnold Schoenberg's twelve-tone music or "dodecaphony." He threw himself into serial composition with great passion and virtuosity, rejecting old restrictions and inventing new structural principles to suit his needs. Works of this period, including the First Piano Sonata (1946), are meticulously organized in terms of pitch and other elements, but are also highly dramatic, full of dark violence and stark contrast.

In 1952, just a few months after Schoenberg's death, Boulez created a scandalous sensation by publishing an article in the English music journal *Score* with the shocking title, "Schoenberg is dead." Here, he attacked the late composer for having set in motion the serialist revolution, only to then hinder it with "a warped romantico-classicism" that relied too heavily on formal structures borrowed from older traditions. He urged composers to follow in the purer, more "logical" serialist footsteps of Schoenberg's student, Anton Webern, a statement which quickly elevated Webern from a position of obscurity to that of hero and role model for composers both in Paris and in the new music center of Darmstadt, Germany. In another article titled "Eventually..." Boulez proclaimed, "Any musician who has not felt...the necessity of the dodecaphonic language is *useless,* for everything he writes will fall short of the imperatives of his time." Boulez followed up these manifestos within the year with *Structures* (1952) for two pianos, a work of near-obsessive control and complexity in which serialist principles lie at the heart of not just pitch, but also rhythm, duration, intensity and mode of attack.

Technically, *Structures* achieved nearly everything prescribed in his article, but soon Boulez had shifted his attention toward new approaches that were equally complex, but far more intuitive. His first undisputed masterpiece from this time, *Le marteau sans maître* ("The Hammer Without a Master"), was described even by the imperious Igor Stravinsky as "one of the few significant works of the post-war period of exploration." At the heart of this score, and others to follow, is a tremendous confluence of music and literature, in this case the poetry of René Char. In 1958, he was inspired by the fluid structures of Stéphane Mallarmé's poetry to create the *Improvisations sur Mallarmé* (1958), which were later re-orchestrated as the second and third movements of the monumental *Pli selon pli* ("Fold upon Fold," 1961) for soprano and orchestra. Other sources of inspiration include Marcel Proust, Henri Michaux, Kafka and Beckett.

In his meditation on music and text, Boulez has concerned himself with much more than simple text setting or "accompaniment." He has drawn deep analogies between literary and musical creation to pose questions about the linear, moment-by-moment unfolding of musical time. In relation to his Third Piano Sonata (1956–1957), he wrote: "Let us reclaim for music the right to parentheses and italics...an idea of discontinuous time thanks to structures which are interwoven instead of remaining partitioned and watertight...." Unusually, the Third Sonata also incorporates aleatory or chance elements

(an after-effect of the composer's complicated contact with John Cage in Darmstadt), but the idea of cyclical or interpenetrating musical time has continued to find powerful expression in Boulez's scores. In fact, if one considers computer codes as a family of languages, Boulez has helped to foster hundreds of new musico-linguistic intersections through his work at the Institut de Recherche et de Coordination Acoustique/Musique (IRCAM) in Paris, a computer music center which he was instrumental in forming and where he served as director from 1978 until 1992.

Beth E. Levy

Pierre Boulez (b. 1925)
Anthèmes 2 (1997), for violin and electronics

Anthèmes 2 is an expansion of *Anthèmes 1*, composed in 1991 as a *pièce de concours* for the Yehudi Menuhin Violin Competition in Paris.[1] As is often the case with Boulez, this work shares some "genetic material" with other works which together form a kind of family. Like *Rituel* (1975) and *Mémoriale (...explosante-fixe...Originel)* (1985), *Anthèmes 1* belongs to a cluster of works all deriving from *...explosante-fixe...*, a kind of compositional recipe book laid out in the early 1970s. This particular scion of the *...explosante-fixe...* clan then itself begat an offspring of its own: the seven-minute *Anthèmes* was enlarged into the 20-odd minute *Anthèmes 2*, premiered in Donaueschingen in 1998, for violin and a technological accompaniment (and thereby turning *Anthèmes* into *Anthèmes 1*). A live electronic system, developed at IRCAM, the Parisian institution founded by Boulez which is devoted to the development of interactions between musicians and technology, captures the live sound of the violin, transforms it in a multitude of ways and controls its diffusion through a series of loudspeakers placed around the hall. As one would expect of an imposed piece in a competition, one finds over the course of its duration a fairly comprehensive assortment of standard but also so-called "extended" violin techniques. These include ricocheted double stops, rapid shifts from *sul tasto* to normal position, glissandi as well as half hair/half wood bowing positions. In addition to these, the second short section of *Anthèmes* is performed entirely pizzicato, i.e., by plucking the strings. These various playing techniques add to the purely acoustic interest of the piece, producing a broad array of timbral effects from a single instrument, effects which are bolstered in *Anthèmes 2* by electronic means. The central pitch of *Anthèmes 2* is D, a note which is particularly suitable for varied treatment on the violin, as open string, octave, artificial or natural harmonic. The central D is emphasized by appearing as both the first long trill of the piece and as a lingering pedal note heard for over two minutes at the end of the work.

Anthèmes 2 is more than a virtuosic compendium of violin techniques, however, and what extended techniques there are in *Anthèmes* are used to confer a characteristic contour or color onto the musical figures it contains, in line with Boulez's renewed interest in musical themes, discernable in his works and writings form the 1970s onwards. *Anthèmes* 2 features many of these short musical figures which undergo constant variation, while retaining nevertheless their characteristic form, rendering them easily recognizable at each return: a lazy and oft-repeated arpeggiated pizzicato chord, a brusquely impertinent rapid flourish, a languorous glissando which slides its way down the string, etc. The appearance of these themes is already hinted at in the title: the word "*anthèmes*" is a neologism derived from the English word "anthem." It is used, according to the composer, as a play on words on "*en thèmes*," i.e., "in themes," because it marks a return for the composer to a form of thematic writing. The "anthem" of the title is also a reference to the solemn, hymn-like atmosphere of the work as well as to the essentially simple form, divided as it is, after a short introduction, into six sections. Each of its six relatively autonomous sections is separated by a characteristic figure: a few long notes in harmonics, ending in glissandi, constituting a kind of aural signature. Boulez terms these sounds "signals" and has likened them to the Hebrew letters which divide the Latin text of the psalm books familiar to him from his early Catholic education.[2]

Boulez uses the live electronic dimension of *Anthèmes 2* to augment or expand aspects of the work already contained in the instrumental part, creating a kind of "hyper-violin." Metaphorically, it is as if the violin stood in for a singer's voice in this "anthem," and the electronic system assumed the role of the accompanying choir. In fact, Boulez only briefly uses the electronics and the violin in alternation (at the beginning of section 6), preferring here to build up a fusion between instrument and electronics rather than an opposition. The rest of the time, Boulez uses the electronic part to create a homophonic texture which envelopes the hymn-like utterances of the violin. The electronics "thicken the line" in an effect comparable to the combined sonorities of organ mutations. Boulez likens this procedure to what painter Paul Klee expressed in his Bauhaus courses, when the latter used pedagogical sketches to show the ways in which the thickening of a line can be used as a visual manifestation of an increase of energy.

In *Anthèmes 2*, Boulez gives pride of place to two very common types of electronic sound processing: frequency shifting and harmonizer. The harmonizer adds a certain number of notes at a fixed interval to the notes of the violin; this creates a halo of chords in parallel motion with the violin's line; the parallel motion of the chords tends to create a fusion effect in which we perceive a single sound with a transformed timbre, rather than a multiplicity of independent voices. Frequency shifting, on the other hand, adds one or several notes of fixed frequency (measured in hertz) to the violin's note. This creates a less uniform accompaniment, since, owing to the logarithmic relationship between frequency and pitch, the lower the note played on the violin, the greater the interval between the violin and the electronic sound; very high notes will differ only slightly in pitch from their electronic doppelgänger. Boulez then uses these two types of sound processing to differentiate material. Boulez goes on to use the electronics systematically in the rest of the work to further individualize the musical figures or themes, and the following table samples some of these correspondences.

TYPE OF MATERIAL	SOUND PROCESSING
"*Jeté*" septuplets	Frequency shifting
Trill groups	Harmonizer
Long notes in harmonics	Ring modulation, harmonizer, infinite reverb
Pizzicato notes	Spatializer
Passages marked "*irrégulier*"; nervous bowing	Randomly triggered samples
Triple stops surmounted by trills	Infinite reverb
Trills preceded by legato appoggiatura	Sampled violin sounds in antiphony

It is obvious that from the extravagant variety of sounds available for use in a live electronic work, Boulez makes use of an exceedingly narrow swathe: only those which do not render their source, the violin, unrecognizable. Thus the sound world of the piece remains that of the violin, in a virtual, augmented version which goes beyond the range of the instrument; it contains passages which are performed faster than any human being could play, chords which often contain more than the maximum number of simultaneities possible on the violin, and different types of reverberation not limited to the acoustics of the hall in which it is performed. The electronics can also make the sound travel, thanks to the system of speakers set up around the audience in performance. Boulez's approach to electronics characteristically stresses coherence and economy, a fairly sober approach to a domain in which it is relatively easy to create a "phantasmagoria" of sound. In fact, the principal use of electronic manipulation in this work concerns sound spatialization, a procedure which has preoccupied Boulez even before he had digital electronic techniques at his disposal, as the unconventional seating of the orchestra in *Doubles* (1958) attests, or the way the clarinetist ambles between six different small ensembles of musicians in *Domaines* (1961–1968). In *Anthèmes 2*, sound is made to travel around the audience,

and this is a parameter which Boulez controls as much as any other. For example, in the "pizzicato" section, the violin part sounds three distinct voices compressed into a single line in a kind of rhythmic canon. The corresponding electronic part then effects what Boulez calls a "counterpoint in space" as a foil to the violin's counterpoint in time.

Formally speaking, *Anthèmes 2* is somewhat unusual: It is constructed as five short sections followed by a final one which is longer than all of the preceding ones combined. A curious antecedent of this form can be found on a larger scale in Gustav Mahler's *Das Lied von der Erde*. Like *Anthèmes*, Mahler's lyric symphony contains five movements followed by a sixth whose duration is as long as the first five.[3] It is worth mentioning that Mahler's *Song of the Earth* was published—in 1912—by Universal Edition, who would become Boulez's publisher, and that *Anthèmes 1* was dedicated "*en souvenir amical*" to Alfred Schlee (1901–1999), the longtime director of Universal on the occasion of his 90th birthday. Although it may not have been deliberate, the form of *Anthèmes 2* may constitute a subtle tribute to another illustrious Universal composer, one whose symphonies Boulez conducts on a regular basis.

Over and above the acrobatics of the violin hyper-instrument, *Anthèmes 2* is a work which, like the lament-like *Rituel*, is fundamentally solemn. Its strophic form reflects the religious connotations of its title. However, in the profusion of its ornamentation multiplied through electronic processes, it also takes on a highly dramatic—even theatrical—character. Describing the end of the piece, in which the long held D is abruptly cut off by a dry thud, struck *col legno batutto*, Boulez once commented that "one approaches this ending, and the texture thins out until all that is left is a single note, which is cut off by a gesture on the violin which is both willful and humorous, as if saying "That's enough for now! See you later!" This is how I want the ending to be […]."[4]

The violin in *Anthèmes 2*, even when augmented by electronics, is doubtless a far cry from the "instrument of frenzy *par excellence*"—his way of characterizing the piano[5]—but it is certainly the instrument of a rich and "hyper"-expressive proliferation, housed within a sharply articulated form.

1. For a more detailed presentation of *Anthèmes 1* and *2*, see Jonathan Goldman, *The Musical Language of Pierre Boulez: Compositions and Writings*, Cambridge University Press, 2011.

2. A public discussion between Pierre Boulez and musicologist Peter Szendy, on *Anthèmes 2* on the occasion of its French premiere on October 21, 1997, at IRCAM, Paris.

3. I wish to thank the composer Christopher Butterfield for having pointed out this feature of Mahler's work to me. It is surely no coincidence that Butterfield's own string quartet *Trip* (2008) describes a similar formal trajectory.

4. In transcription of Boulez's 1997 lecture, in Jonathan Goldman, *Analyzing Pierre Boulez: Notes on* Anthèmes*, for solo violin*, p. 118; reprinted in Jean-Jacques Nattiez, *Quêtes d'absolu*, p. 21–22.

5. "L'instrument même du délire," used in reference to the piano writing of Schoenberg's Op. 11 and *Die Kreuze* from *Pierrot lunaire*, in *Conversations with Célestin Deliège*, London: Eulenburg, 1976, p. 30.

Jonathan Goldman

Jonathan Goldman is Assistant Professor of Musicology at the School of Music, University of Victoria

Dérive 2 (1988, 2006), for eleven instruments
[English horn, clarinet in A, bassoon, French horn, violin, viola, cello, vibraphone, marimba, harp and piano]

In an interview with journalist Andy Carvin, Pierre Boulez described the organic interrelatedness of many of his scores. "My recent music," he observed, "is much like a family tree—one tree spawns many other trees, and so on. *Dérive 1* is from *Répons*, mostly music I left out, so I derived it from the piece, hence the name. *Dérive 2* is based off of studies I did for *Répons*. *Dérive 3* is also like that. *Répons* itself was my response to *Poésie pour pouvoir*, which I had written over 20 years earlier. As long as material from another piece is not used fully, I like to expand on it until it is exhausted. This is why they are all works-in-progress."[6]

The idea of "work in progress" has special meaning for a composer like Boulez, for whom the ideas of progress and process are so deeply intertwined. In the very earliest phases of his career, he held fast to an uncompromising rhetoric of artistic evolution, according to which music that did not participate in and deepen the structures made available through twelve-tone and other serial processes would inevitably "fall short of the imperatives of [its] time." In more recent years, Boulez seems to have turned the imperative for artistic progress inward onto his own scores, viewing each one not just as a finished product but also as a provisional stepping stone toward ever greater complexity, depth or refinement.

In particular, *Dérive 2* takes as its research agenda the idea of "periodicity," the strictly or loosely cyclic return of basic materials that is, at least in theory, predictable. In practice, audible recurrences or periodic points of return are difficult if not impossible to apprehend; yet the central idea remains: recurrence without stasis, unity without uniformity. Paraphrasing the composer himself, contemporary music critic Paul Griffiths describes Boulez's aim to create in his music "a universe," "music of long duration, music that would contain within itself continuous expansion." Such a universe requires, if not a general theory of relativity, at least a theory of relatedness among its basic materials.[7]

In *Dérive 2,* these basic materials are drawn from Boulez's earlier works, most particularly *Répons* (1980–1984) and *Dérive 1* (1984). All three build upon a set of six chords that Boulez invented to honor Paul Sacher, Swiss conductor, collector, and patron of new music. (The Sacher Archive in Basel preserves materials from Berio, Feldman, Ligeti, Stockhausen, Stravinsky and Webern, among dozens of others—including Boulez himself.) Updating a musical cipher or spelling game that can be traced back to the Renaissance, Boulez chose to write out Sacher's name in musical "letters," using a combination of note names and solfège syllables from several languages: E-flat (= S in German), A, C, (= H in German), E, D (= "*ré*" in French).[8]

The fabric that Boulez weaves together from his "Sacher chords" demonstrates a linguistic richness on several levels. While the union of French and German note names may seem straightforward enough, and the implied commemoration of one of modern music's greatest polyglot collections may seem merely a convenience, *Dérive 2* also exhibits an incredible fecundity of instrumental utterances and musical "codes." To begin with, one might note the different "languages" associated with the three instrumental families represented on stage: a quartet of wood winds (English horn, clarinet in A, bassoon and French horn), a trio of strings (violin, viola and cello), and four percussion instruments (vibraphone, marimba, harp and piano) that seem chosen for their capacity to mix and match with the predominantly melodic capacities of the other two families. Near the outset, all eleven work more or less in concert, coalescing, almost pulsing together like the component parts of a single circulatory system. Over the monumental space of the work, however, Boulez seems intent on exhausting every set and subset of the instrumental forces at his disposal.

Many critics have called Boulez's combinations kaleidoscopic—and with good reason: the self-similarity of harmonic material exists in dialectic tension with the proliferation of new forms, aspects, and rotations that unfold at the composer's beck and call. In Griffiths's words, "Characteristic Boulezian harmonies march pretty well all through, while the surface activity may be dazzling, surprising, exciting and, at times, graced with the less common trait in this

composer's music of humor. The work proceeds like a river, sometimes dashing through rapids, where the instrumental lines crash against one another and break up, sometimes entering pools of harmonic reflection. There are passages where the beat is strong and others where movement is flexible. Small groups of players can join in a dance; soloists will occasionally emerge to sing; references may range from Debussy to the modern jazz of Boulez's youth."[9]

Indeed, *Dérive 2* has a rich and varied surface that may seem surprising if one enters the concert hall expecting the austerity of Boulez's early experiments with "total serialism." Yet its rich palette should not surprise those who recall his masterstroke, *Le marteau sans maître* ("The Hammer Without a Master," 1953–1957), which the composer himself sometimes connected to the sound worlds made available by African percussion and Asian string instruments. In his more recent scores, it is also tempting to see (or, rather, to hear) allusive musical gestures as one reflection of Boulez's increasing engagement as a conductor not just of new music but of the canonic works of the standard repertory—from Debussy and Mahler to Wagner and Beethoven. *Dérive 2* was undertaken in 1988 as an homage to Elliott Carter on his 80th birthday and it pays its respects to the American composer's dramatic and flexible (yet rigorous) treatment of time and tempo. Boulez has also indicated that his thoughts on "periodicity" or cyclic return spring in part from the ideas of György Ligeti, best known for the rich textures of his "micropolyphonic" scores and Conlon Nancarrow, whose player-piano–inspired rhythmic are wondrously baffling to the hands and ears.

As with the music of Carter, Ligeti and Nancarrow, audience members need feel no shame if Boulez's cyclic overlappings remain out of audible reach—they are, by and large, meant to be neither seen nor heard. In fact, many of the intricate iterations in *Dérive 2* were at first generated by computer and then, in the words of Wolfgang Fink (general manager of the Bamberg Symphony Orchestra), they "developed a life of their own." Writing about an "intermediate" version of *Dérive 2,* recorded by Boulez's own Ensemble Intercontemporain in 2002, Fink notes that "Boulez, who loathes repetition for repetition's sake, overlays several differently structured periodic processes, which blithely intersect, concealing their periodicity, rather than revealing it. Only at the end are these processes ironed out, as it were, making the paradoxical point that the surface of the piece is pellucid, while the periodic structure beneath it is completely obscured."[10] In its newest incarnation, *Dérive 2* at last releases the energy of its periodic diversity in a unified and triumphant outburst—a final but never finished testament to the composer's fertile and imaginative ear.

6. Andy Carvin, "The Man Who Would Be King," an interview with Pierre Boulez: http://www.rodoni.ch/busoni/tecadiarticoli/teca2/boulez2.html (accessed March 4, 2011). Mr. Carvin is a blogger, coordinator of the Digital Divide Network and a senior project manager for National Public Radio.

7. Paul Griffiths, program notes for "Composer Portraits: Pierre Boulez," concert series held at the Miller Theatre, Columbia University, New York, December 6, 2010.

8. http://www.paul-sacher-stiftung.ch/de/home.html (accessed March 6, 2011).

9. Griffiths, *supra*.

10. Wolfgang Fink, CD liner notes for Boulez: "*Le marteau sans maître*," "*Dérive 1* & *2*" (Deutsche Grammophon, 2005), trans. Stewart Spencer.

Beth E. Levy

Beth E. Levy is Associate Professor of Musicology at UC Davis.

Australian violinist **Graeme Jennings**, born in 1968, studied in the United States and Australia. A former member of the Arditti String Quartet (1994–2005), Mr. Jennings has toured widely throughout the world, made more than 70 CDs, given over 200 premieres, and received numerous accolades, including the prestigious Siemens Prize (1999) and two *Gramophone* Awards. As a recitalist, he has a repertoire ranging from Bach to Boulez and beyond. His main focus these days is on chamber music, while being an enthusiastic proponent of new music. He has worked with and been complimented on his interpretations by many of the leading composers of our time. After hearing him give the Australian premiere of his *Partita* in 1987, Witold Lutosławski described Mr. Jennings as an "inspired performer." In recent seasons, he has given performances of Berg's Violin Concerto, and in 2003 he gave the Australian premiere of Brian Ferneyhough's *Terrain* with the Elision Ensemble. Mr. Jennings lives in San Francisco.

John MacCallum is a composer based in Oakland. A self-trained computer programmer, his compositional work relies heavily on technology, both as a compositional tool and as an integral aspect of performance. His works often employ carefully constrained algorithms that are allowed to evolve differently and yet predictably each time they are performed.

Dr. MacCallum was educated at the University of the Pacific (B.M.), McGill University (M.M.), and UC Berkeley (Ph.D.). He currently works as a Musical Applications Programmer at the Center for New Music and Audio Technologies (CNMAT) and is a Lecturer in Composition at UC Berkeley.

The **Eco Ensemble**, under the direction of David Milnes, is a new group of leading Bay Area musicians dedicated to exploring and sharing the work of adventurous composers. Its mission is to bring exciting, contemporary music to both experienced audiences and new listeners.

David Milnes serves as Music Director of the Eco Ensemble, Berkeley's professional new music ensemble in residence, as well as Music Director of the UC Berkeley University Symphony Orchestra since 1996. In his early years, he studied piano, organ, clarinet, cello and voice, and briefly entertained a career as a jazz pianist, appearing with Chuck Mangione, Gene Krupa, Billy Taylor and John Pizzarelli. After receiving advanced degrees in conducting from SUNY Stony Brook and the Yale School of Music, and studying with Otto-Werner Mueller, Herbert Blomstedt, Erich Leinsdorf and Leonard Bernstein, he won the prestigious Exxon Assistant Conductor position with the San Francisco Symphony, where he also served as Music Director of the highly acclaimed San Francisco Symphony Youth Orchestra, which he led on its first European tour in 1986.

Mr. Milnes has conducted frequently in Russia and the Baltics, serving as Music Director of the Riga Independent Opera Company and as a principal guest conductor of the Latvian National Symphony. Recent engagements have included appearances at the MANCA Festival in Nice, France, with the Philharmonic Orchestra of Nice; in Mexico, at the International Festival "El Callejón del Ruido" with the Guanajauto Symphony Orchestra; and in Russia, with the Novosibirsk Symphony Orchestra. He has collaborated in performances with Frederica von Stade, Dawn Upshaw, Bill T. Jones, Paul Hillier, James Newton, David Starobin and Chanticleer, and has appeared at the Santa Fe, Tanglewood, Aspen and Monadnock music festivals.

A dedicated proponent of new music, from 2002 to 2009 Mr. Milnes was Music Director of

the San Francisco Contemporary Music Players, with whom he commissioned and premiered many new works from around the world. He has made recordings of music by John Anthony Lennon, James Newton, Edmund Campion, Jorge Liderman and Pablo Ortiz.

Oboist and composer **Kyle Bruckmann**'s work extends from a Western classical foundation into genre-bending gray areas encompassing free jazz, electronic music and post-punk rock. His appearances on more than 50 recordings have garned critical acclaim for his improvisations, extended techniques and artistic flair.

Since moving to San Francisco in 2003, Mr. Bruckmann has performed with the San Francisco Symphony and most of the area's regional orchestras. He is a member of Quinteto Latino, the Stockton Symphony and the acclaimed new music collective sfSound. From 1996 until his westward relocation, he had been a fixture in Chicago's experimental music underground; long-term affiliations include the electroacoustic duo EKG, the "rock" monstrosity Lozenge and the quintet Wrack.

Mr. Bruckmann earned undergraduate degrees in music and psychology at Rice University in Houston. He completed his master's degree in 1996 at the University of Michigan, Ann Arbor, where he studied oboe performance with Harry Sargous and contemporary improvisation with Ed Sarath.

Peter Josheff, clarinetist and composer, is a founding member of Earplay and a member of the Paul Dresher Ensemble, the Empyrean Ensemble and the Berkeley Contemporary Chamber Players. He performs frequently with the San Francisco Contemporary Music Players, Melody of China, Ensemble Parallele and Composers Inc. He has performed on many commercial recordings.

Mr. Josheff's recent works include *Caught Between Two Worlds, Three Poems by Dorothy Cary* (2009); *Inferno* (2008), a chamber opera; *INFERNO Instrumental Suite* (2009); and *Viola and Mallets* (2007). A longtime collaboration with poet Jaime Robles has seen the creation of a number of works for voices and instruments, including *Diary* (2002), *3 Hands* (2003), *House and Garden Tales* (2006) and *Inferno*. His work has been performed by the Laurel Ensemble, Earplay, the Empyrean Ensemble, San Francisco Cabaret Opera, and on his own Sonic Harvest concert series. He is currently writing a work for the Laurel Ensemble and is planning a new opera, *Keeping Vows*, with novelist Dorothy Bryant.

David Granger received his B.M. in 1973 and his M.M. in 1975 from the Manhattan School of Music in New York. He joined the faculty of UC Berkeley in 2000. Mr. Granger was principal bassoonist of the Sacramento Symphony from 1981 until 1996. In 1983, he began teaching at UC Davis and, in 1985, he became coordinator of the music department's student chamber music program. Mr. Granger works as a freelance musician performing in orchestras throughout northern California. He currently holds positions as principal bassoonist of the Sacramento Philharmonic, the Napa Valley, Modesto and Fremont symphonies, and is a member of the Oakland-East Bay and Marin symphonies. Mr. Granger attended Indiana University's Early Music Institute and received a performer diploma in Baroque bassoon in 2004. He is director member of Passamezzo Moderno, an early music instrumental ensemble specializing in the music of the 17th century.

Alicia Telford, a California native, is an alumnus of the San Francisco Conservatory of Music, San Francisco State University and the Tanglewood Festival. Currently, she is on the teaching faculty of UC Berkeley and Los Medanos College. Ms. Telford is a well-known freelance musician and instructor of horn in the Bay Area. Her performing credits include: extra horn with the San Francisco Symphony, Opera and Ballet orchestras; a Brazilian tour with the Women's Philharmonic; a national tour of the Broadway musical *Les Misérables*; a five-year run of *The Phantom of the Opera*; and quite a few shorter runs of touring Broadway musicals in San Francisco over the past 18 years. In addition, she is a member of the Oakland-East Bay Symphony, the San Francisco Chamber Orchestra and the West Bay Opera Company, as well as performing with many of the regional orchestras in the Bay Area. Her greatest enjoyment comes from playing and coaching chamber music, which she does regularly, performing with the Golden Gate Brass Quintet, the Bellavente Quintet and coaching at the Humboldt Chamber Music Workshop every summer in Arcata, California. When not performing on the horn, Ms. Telford enjoys reading, traveling, gardening and running in the hills behind her home in Berkeley with her musician husband, Jeff, and their two mutts.

Principally committed to influencing and expanding the repertoire for solo percussion through commissions and premieres, percussionist **Christopher Froh** collaborates with leading composers as a member of the San Francisco Contemporary Music Players, Empyrean Ensemble and San Francisco Chamber Orchestra. His solo performances stretch from Rome to Tokyo to Istanbul and are recorded on the Albany, Bridge, Equilibrium and Innova labels. He is currently on the faculty at UC Davis.

Percussionist **Loren Mach** is passionate about the arts as they relate to our 21st-century world and all who inhabit it. A graduate of the Oberlin and Cincinnati conservatories of music, he has premiered countless solo, chamber and orchestral works. Mr. Mach is a member of ADORNO, the San Francisco Chamber Orchestra, Worn Chamber Ensemble and co-founder of Rootstock Percussion, a new collaboration with Daniel Kennedy and Christopher Froh. He often performs with the San Francisco Symphony, many of the Bay Area's regional symphony and opera orchestras, or in the orchestral pit of the hit Broadway show *Wicked*. But Mr. Mach prefers making new music in more intimate settings with groups like San Francisco Contemporary Music Players, Left Coast Chamber Ensemble, Empyrean Ensemble, Earplay, sfSound and Berkeley Contemporary Chamber Players. In recent summers, he has performed at the Cabrillo Festival of Contemporary Music and was guest artist with Dawn Upshaw and eighth blackbird at the Ojai Music Festival.

Dan Levitan was chosen to be the Principal Harpist of Santa Rosa Symphony after auditioning for the position April 2010. He holds contracts as the Principal Harpist with four professional orchestras: Marin Symphony (since 1984), Symphony Silicon Valley (newly formed to replace the San Jose Symphony, where he was Principal Harpist from 1978 until its disbanding in 2002), Ballet San Jose Silicon Valley (since 1985) and now the Santa Rosa Symphony. Mr. Levitan has served as the "first call" harpist with San Francisco Opera for two years; in an emergency situation, he was invited to perform as the principal harpist for the remainder of the 2010 summer series—two performances of Wagner's *Die Walküre* and three performances of Puccini's *La Fanciulla del West*, as well as rehearsals and a concert at Stern Grove on the Fourth of July. In fall 2010, for all of *Werther* and the first series of rehearsals and performances of *Aida*, he also performed as Principal Harpist. He continues for a fourth consecutive season as Acting Principal Harpist with the California Symphony. In addition to having performed with the San Francisco Symphony and San Francisco Ballet Orchestra, he is sought after as a soloist with orchestras, choirs and other ensembles throughout northern California.

Pianist **Ann Yi** is an active soloist and chamber musician in the Bay Area with a broad range of musical interests, ranging from Baroque to contemporary music. As a solo, chamber and collaborative artist, Ms. Yi has appeared at new music festivals such as the 30th MANCA new music festival in Nice, France (2009), Primavera Italiana: The Spring Festival of Italian New Music in San Francisco (2008), the Sacramento State University 31st Annual Festival of New American Music (2008), and at numerous venues in San Francisco, including ODC Theatre,

Herbst Theatre, Yerba Buena Center for the Arts, Old First Church and San Francisco Conservatory of Music. Recent performances include György Ligeti's Chamber Concerto with sfSound and Brian Ferneyhough's *Flurries* with the San Francisco Contemporary Music Players. Ms. Yi received a D.M. and M.M. in piano performance at Indiana University and a B.M. at San José State University. Her recordings are featured on the Innova and Tzadik labels.

Icelandic violinist **Hrabba Atladottir** studied in Berlin, Germany, with Axel Gerhardt and Tomasz Tomaszewski. After finishing her studies, Ms. Atladottir worked as a freelance violinist in Berlin for five years, regularly playing with the Berlin Philharmonic Orchestra, Deutsche Oper and Deutsche Symphonieorchester. Ms. Atladottir also participated in a world tour with the Icelandic pop artist Björk and a German tour with violinist Nigel Kennedy. In 2004, Ms. Atladottir moved to New York and continued to freelance, playing on a regular basis with the Metropolitan Opera, New York City Opera, Orchestra of St. Luke's and New Jersey Symphony Orchestra, among other orchestras. She also played with the Either/Or ensemble in New York in close collaboration with Helmut Lachenmann. Since August 2008, Ms. Atladottir has been based in Berkeley, where she has been performing as a soloist and with such ensembles as the Berkeley Symphony Orchestra, the Left Coast Chamber Ensemble, the Empyrean Ensemble and the Berkeley Contemporary Chamber Players, to name a few. She teaches violin at UC Berkeley.

A champion of contemporary music in the United States and abroad, violist **Ellen Ruth Rose** has performed extensively throughout Europe and America. Ms. Rose holds degrees in viola performance from the Juilliard School and the Northwest German Music Academy in Detmold, Germany, as well as a B.A. with honors in English and American history and literature from Harvard University. Her teachers have included Heidi Castleman, Nobuko Imai, Marcus Thompson and Karen Tuttle. Ms. Rose serves on the instrumental faculties of UC Davis and UC Berkeley.

Cellist **Leighton Fong** holds degrees from New England Conservatory and the San Francisco Conservatory. He also studied at the Royal Conservatory of Music in Copenhagen, Denmark, and the Music Conservatory in Bern, Switzerland, with grants from the Beebe Foundation and the American Scandinavian Foundation. He performs regularly with the Left Coast Chamber Ensemble and the Empyrean Ensemble and is currently principal cellist of the California Symphony.

The **UC Berkeley Center for New Music and Audio Technologies** (CNMAT) houses a dynamic group of educational, performance and research programs focused on the creative interaction between music and technology. CNMAT's research program is highly interdisciplinary, linking all of UC Berkeley's disciplines dedicated to the study or creative use of sound. CNMAT's educational program integrates a Music and Technology component into the Department of Music's graduate program in music composition and also supports the undergraduate curriculum in music and technology for music majors and nonmusic majors. Learn more at www.cnmat.berkeley.edu.