



Jean-Claude Risset: 70th Birthday  
Celebration  
with Mari Kamura



## PROGRAM

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Jean-Claude Risset

**Variants I** *for violin and Signal Processing* (1994 version)  
Jean-Claude Risset

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Jean-Claude Risset

### *Intermission*

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## PROGRAM NOTES

### **Partita No.3, "Prelude"**

Johann-Sebastian Bach

Bach wrote the Six Sonatas and Partitas in 1720, during his appointment as a conductor and the director of chamber music at the court of Prince Leopold of Anhalt-Cothen. Much of Bach's music was ignored for a long period of time; it is now well known that the manuscript of the Six Sonatas and Partitas for solo violin were discovered in 1814 in St. Petersburg among a stack of old paper ready to be used as wrapping papers in a butter shop. This joyous and brilliant Preludio is perhaps one of the most virtuosic movements among the set. Preludio was also transcribed by Bach for solo organ, oboes, trumpets and strings in the opening sinfonia of Cantata BWV 29 in D major.

### **Subharmonic Partita (2005)**

Mari Kimura

Subharmonic Partita is my dedication to the first movement of J.S. Bach's E major Partita, "Preludio". I use the key motives from "Prelude" as well as some structural progressions, adding extreme leaps and Subharmonics as embellishment. "Prelude" has been used as a theme before by violinists/composers such as Eugene Ysayë in his Solo Violin Sonata No.2, "Prelude, Obsession". This was something I wanted to do as a violinist/composer following the tradition. Subharmonic Partita includes not only the most extreme violin technique, such as very fast 5 octave arpeggios from Subharmonic pitches and up, but also to search for the new sonority; to use the low notes as a base of a harmony, supporting the upper sounds of the violin. Personally, I enjoyed composing Subharmonic Partita, as well as practicing; obviously it is extremely challenging to play, and helps me towards perfecting the technique as well as incorporating Subharmonic technique in the context of composition for the violin.

### **Songes for synthesized sound (1979)**

**Jean-Claude Risset**

Songes, for 4-track magnetic tape, was realized at IRCAM with a variant of the MUSIC V program. The original program, de-

signed by Max Mathews has been augmented by John Gardner and Jean-Louis Richer so as to enable it to process digitized sounds as well as to synthesize sounds. The original version of *Songes* is for 4-track tape; it uses some of the sound material of *Mirages*, a piece for 16 instruments and tape, commissioned by the Festival of Donaueschingen (1978). The elaboration of this sound material took advantage of David Wessel's programs for mapping timbral spaces.

The title suggests the dreamlike character of adventures taking place on different stages - adventures of sound figures coming from an unreal, imaginary world. The identity of sonic beings which occasionally escape material constraints gets dissolved in the continuity of textures, the flux of movements and evolutions. Yet how can we be sure to distinguish illusion and reality, insofar as our experiences all come through our perception, our conscience? Couldn't our dreams ("*songes*") be dreams of a dream?

At the beginning of the piece, one hears instrumental sounds (0 s to 1 mn 30 s). These sounds have been mixed, tiled with the computer from motives recorded by instrumentalists (each one of the five motives, lasting from two to five seconds, has been recorded separately by instrumentalists of the Ensemble Intercontemporain). In addition to mere mixing, the instrumental sounds have been slightly altered, in particular to introduce space effects. The harmonic structures presented at the beginning permeate the whole development: the motives, initially repeated in quasi-obsessional fashion, are reflected in the synthetic tones, first as clouds of high-order harmonics (20 s to 50 s), later as inharmonic tones (1 mn 35 s to 5 mn 40 s). The components of these tones can, depending upon their temporal envelopes, fuse into bell-like tones (1 mn 40 s or 5 mn 10 s) or dissolve into fluid textures emphasizing different components at different times (3 mn 30 s to 4 mn 50 s). The inharmonic tones accumulate in the form of nested chords, reproducing between them the frequency ratios which exist within them between their components (5 mn 35 s to 6 mn 40 s). While the beginning of the piece was confined around medium frequencies, the accumulation just mentioned gives rise to a crescendo filling the frequency space from low to treble. The long coda (6 mn 30 s to 9 mn) only keeps low and high frequencies. Long sustained pedals remind of tonic-dominant relationships; the low tones undulate because they are superposed onto themselves with variable time delays, like echoes from a moving wall. Above these low pedals, high tones are widely modulated: their frequencies

follow supple curves defined mathematically and attempting to merge discontinuous steps and continuous glides. These tones are spatialized, using the techniques developed by John Chowning (the sound source appears to recede far away when it gets lost in the reverberation): they seem to travel like imaginary birds.

*Songes* was awarded the first prize for digital music in 1980 and the "Euphonie d'or" in 1992 at the Bourges International Electronic Music Competition. It appears on CD, Wergo 2013-50 (Digital Music Digital, Jean-Claude Risset) together with *Passages*, *Little Boy* and *Sud*. Excerpts of *Songes* were published in IRCAM's first recording: "IRCAM - un portrait", and in the *Computer Music Journal*. The piece is discussed by Lev Koblyakov ("Jean-Claude Risset : *Songes*, 1979") in *Contemporary Music Review*, 1 n. 1: *Musical Thought at IRCAM* (1984), pp. 183-185. One can also find an analysis by Marta Grabocz in *Musicworks* 51, 47-50, 1991, a diagram in *Musicworks* 52, 63, 1991, and comments by Curtis Roads, *Computer Music Journal* 5 n. 3 (1981) p. 16, and Simon Emmerson, pp. 153-159, in "Acoustic/Electroacoustics : the relationship with instruments", *Journal of New Music Research* 27 (1998) n. 1-2, pp. 146-164.

### **Variants I** for violin and Signal Processing (1994 version)

Jean-Claude Risset

*Variants I* is dedicated to violinist and composer Mari Kimura. A first version was realized in 1994, calling for a digital processing unit (Mari's Ensoniq DP4) to add echoes or harmonize the live sound of the live violin. Mari Kimura created the piece at the 1994 Helsinki Festival. She later wrote Max/MSP patches to implement the live transformations on a computer.

This version should now be called *Variants I*. A second, somewhat fuller version was realized in 2007. *Variants II*, akin to a quartet for the number of voices (although the solo violin is fully leading the game). Mari Kimura created the piece at the Tokyo Summer Festival, Suntory Hall 2007, when Jean-Claude Risset was the Festival theme composer. (On this occasion, Mari also premiered Risset's concerto for violin *Schemes*). The piece takes advantage of Mari Kimura's extraordinary skills, in particular the extension of the pitch range which she pioneered: thus sounds lower than the G of the G string can be

heard toward the beginning. Producing such sounds demands an extremely precise control. The title refers to the transformations of violin sounds produced in real-time by digital processing, but also to certain processes of variations within the violin part. For instance the timing intervals of melodic groups, causing so-called stream segregation, are echoed as mere rhythms. Digital transpositions, echoes and reverberation build up a contrapuntal and harmonic fabric which extends the violin melodies.

### **Three Etudes** *Duet for One Pianist* (1991)      Jean-Claude Risset

These études resort to a novel process: the pianist has a "partner" - but an invisible, virtual one. A computer program "listens" to what the pianist plays, and instantly adds its own musical part on the same piano: this part is not a mere recording, it depends upon what the pianist plays and how he or she plays. Hence we have a genuine duet: the pianist's partner, although unreal and computerized, is sensitive and responsive.

This process was first implemented in my Eight sketches: duet for one pianist, realized in the Media Laboratory at M.I.T. in 1989, with the invaluable help of Scott Van Duyne. It requires a special piano - a Yamaha Disklavier - equipped with MIDI input and output. On this piano, each key can be played from the keyboard, but it can also be activated by electrical signals: these signals trigger motors which actually depress or release the keys. Each key also sends out information as to when and how loud it is played. The information to and from the piano is in the MIDI format, used for synthesizers. A Macintosh computer receives this information and sends back the appropriate signals to trigger the piano playing: the programming determines in what way the computer part depends upon what the pianist plays. The present études were realized in the Laboratoire de Mécanique et d'Acoustique, C.N.R.S. Marseille. The programs were implemented with MAX, a powerful graphical software environment written by Miller Puckette at IRCAM.

The études explore three rather simple kinds of live interaction between the pianist and the computer:

**Echo:** The computer echoes the pianist - not as a mere repetition: the echoes are transposed in pitch and in tempo, and they can occur with

different delays with respect to the original utterance. This etude takes advantage of the resonances on the same soundboard of notes played by either the pianist or his virtual partner.

**Narcisse:** Here the relation is akin to a mirror reflection: the pitch intervals are inverted a fifth upward and is reflected into a fifth downward and vice-versa. The center of symmetry is a note of the keyboard which varies throughout the piece. The reflection can also be retarded with different delays.

**Mercure:** In this kind of scherzo, the pianist triggers arpeggios at different speeds. The speed is set either by the tempo of certain patterns played by the pianist, or by the pitch he plays, or by the loudness. The arpeggios move through pitch space somewhat like shapes in a kaleidoscope.

The processes of interaction are described in the article "J.C. Risset & S.C. Van Duyne (1996), (with sound examples on attached CD), *Computer Music Journal*, 20 n° 1, 62-75". The three études are dedicated to Georges Pludermacher. Performed by Jean-Claude Risset, they appear on the CD INA GRM C1019, "Elementa". The composer would like to thank Rob Hamilton for his generous help updating the patches and Chryssie Nanou for her interest in this "Duet for one pianist".

## "Cadenza" for Jean-Claude Risset's Violin concerto (2007)

Mari Kimura

When Jean-Claude told me that he has decided to let me write my own Cadenza for his concerto, my biggest challenge was to create a Cadenza worthy of his monumental work. Also, as a violinist composing my own cadenza, she/he needs to showcase her/his ability, as a kind of 'signature' as the soloist having the honor of premiering a violin concerto. I thought it would be particularly important when the concerto is featuring my 'signature' technique, Subharmonics. I approached my creative process by making two lists: the first was the list of what I want to showcase, such as double stops with very wide intervals, and Subharmonic 3rd and its double-stops, all of which have never been possible before. The second list was the compositional materials I decided to pick out from the concerto. When I combined these two lists, I pretty much had put together the Cadenza. The Cadenza is also a collection of homages to Jean-Claude. There is an emulating of the Shepard Tone: the use of so-called "un-ending glissandi" in his

compositions, by creating an extremely long glissando from one octave below open G (cello's G), sliding up six octaves up on the E string while switching the fingerings seamlessly as possible. The *Candenza* ends with another homage to the melodic segregation technique in Risset's compositions, playing a rhythmic segregation technique: pizzicato plucking in '4' with the right hand, while plucking in '3' with the left hand on the fingerboard (4 vs. 3).

### **Phantom** with IRCAM's *Augmented Violin System* (2009)

Mari Kimura

"Phantom" is a solo violin version of a work-in-progress: a collaborative project I am currently involved with media artist Toni Dove entitled "Lucid Possessions". The full multi-media version, which received the first "work-in-progress" performance at the Culturemart '09 Festival at [here.org](http://here.org) in NYC, involves a spoken narrative, robot, interactive video as well. "Phantom" is my first work using spoken texts as one of the musical materials. I am using a bowing sensor called *Augmented Violin System*, developed by the Realtime Musical Interaction Team at IRCAM in Paris. The *Augmented Violin* is a motion sensing device attached near the 'frog' of the bow. It analyzes and sends the bowing motion data in real-time via wireless Ethernet to the computer. For this concert I am wearing an *Augmented Violin Glove* on my right hand, which I custom-fitted to a lace glove for easier wearability and elasticity. The *Augmented Violin Glove* allows me to play an acoustic violin, and a virtual plucked/bowed instrument at the same time. Max, an interactive computer music program, listens and interacts with the violin and the *Augmented Violin*, processing, creating and sampling sounds in real-time. I would like to thank the Realtime Musical Interactions and Analysis/Synthesis Teams at IRCAM for their technical support.

### **Polytopia** for *Violin and Interactive Computer* (2003)

Mari Kimura

"Polytopia" is a work for violin and live signal processing, controlled by an interactive music software Max/MSP. The work starts out with a single pizzicato by the solo violin, which gets processed as a strumming drone while the violinist goes on to start the opening

melody. Throughout the piece, the violin is pitch-shifted, delayed and panned, becoming a virtual sextet, creating an illusion of the six string instruments all freely playing around in the virtual sound space. However, at all times the live solo violin is the only sound source; there is no pre-recorded material in this work. *Polytopia* was commissioned by Harvestworks with funds provided by the New York State Council on the Arts.

**Toccata for Violin and Player Piano (1937)** Conlon Nancarrow

Conlon Nancarrow's "Toccata" for violin and player piano is a more conventional work than many of his player piano studies, works for which he is best known, although nonetheless extremely difficult. It is particularly successful because of its unrelenting rhythmic energy. Nancarrow came to consider the piano part impossible to play at the tempo he wanted, so in the 80's, spurred by requests for live music, he punched a roll of the piano part. The player piano part in this recording was recorded by Nancarrow himself. Nancarrow was born in the United States in 1912, living mostly in Mexico City until his death in 1997. In 1937 he fought as a member of the Abraham Lincoln Brigade in the Spanish Civil War. Due to his relationship with the Communist Party, the United States government refused to renew his passport and Nancarrow decided to emigrate to Mexico. He lived in Mexico in relative obscurity for a number of years, finding international recognition rather late in his career, and eventually being recognized by awards from the Guggenheim and MacArthur Foundations.

## ABOUT THE ARTISTS

### Jean-Claude Risset

Born in 1938, Jean-Claude Risset studied piano, harmony, counterpoint, and composition with André Jolivet, and mathematics and physics at the Ecole Normale Supérieure. While he always wrote works for instruments, from his 1963 *Prélude* for orchestra to *Filtres* for two pianos, *Phases* and *Escalas* for large orchestra, and *Schemes*, a concerto for violin and orchestra

dedicated to Mari Kimura (2007), (commissioned by Musica Viva, the Bayerischer Rundfunk and the Suntory Foundation), he is known as one of the main pioneers of computer music, together with Max Mathews and John Chowning. In the sixties, he realized at Bell Laboratories, imitations of instruments and acoustic illusions, analogous to the visual illusions that can be seen in etchings by Escher, for instance sounds which glide up endlessly, or which go down the scale but end up at a higher pitch. He implemented in Orsay the first system in Europe for sound synthesis. At the inception of IRCAM, Pierre Boulez asked him to head the computer department.

In works such as *Little Boy*, *Mutations*, *Songes* or *Sud*, Jean-Claude Risset takes advantage of synthesis to sculpt the sound, to inject expressivity and musicality into it - to composing the sound itself, beyond composition with sounds, and to play with time within the sound rather than arranging sounds in time. He has realized a number of mixed works in which synthetic sounds are tightly woven with instruments and voices: *Dialogues*, *Inharmonique*, *Passages*, *Voilements*, played by soloists such as Irène Jarsky, Jane Manning, Linda Hirst, Michel Oudar, Jean-Claude Pennetier, Georges Pludermacher, Mari Kimura, Roberto Fabbriciani, Pierre-Yves Artaud, Robert Aitken, Katrin Zenz, Michel Portal, Daniel Kientzy, and Pilar Jurado. As composer in residence at Media Laboratory, M.I.T., he implemented in 1989 the first *Duet for one pianist*, in which the pianist is accompanied on the same piano by a virtual partner sensitive to his or her playing.

He pursues research on computer music at the Laboratoire de Mécanique et d'Acoustique of CNRS in Marseilles. Among other awards, he received the Ars Electronica Prize (1987), the Grand Prix National de la Musique of France (1990), the Ars nova Prize from Prague (1976), the EAR Prize from Budapest (1997), the Magisterium Prize from Bourges (1998), the Gold Medal of CNRS (1999). His works appear on thirty compact disks, notably the monographic CDs INA C1003, WERGO 2013-50,G MEM EI-06 and INA C1019.

## **Mari Kimura**

Hailed by The New York Times as "a virtuoso playing at the edge". Composer/violinist Mari Kimura is widely admired for her revolutionary extended technique – "Subharmonics" - and for the solo performances of diverse programs including her works with

interactive computer music. She has won numerous awards both in her native Japan and in the U.S., and has been invited to international festivals around the world in more than 20 countries including Spring in Budapest, Other Minds Festival in San Francisco, International Bartok Festival, Cervantino Festival in Mexico, ISCM World Music Days, and at IRCAM, Paris, among others. In 2007, Ms. Kimura gave the world premiere of Violin Concerto, written for her by Jean-Claude Risset with her own Cadenza, performing with the Tokyo Symphony at Suntory Hall. Her numerous radio and TV appearances include CNN's *Headline News*, NY1 News, NHK radio in Japan, WNYC-FM's *Around New York*. Described as the "Plugged-in Paganini for the Digital Age's" (All Music Guide), Ms. Kimura recently released her highly acclaimed solo album for solo violin and electronics *POLYTOPIA* from Bridge Records. Ms. Kimura's works have been supported by grants including the New York Foundation for the Arts (NYFA), Jerome Foundation, Arts International, Japan Foundation, Meet the Composer and the New York State Council on the Arts (NYSCA). Ms. Kimura holds a doctorate in performance from Juilliard, and gives lectures in universities and conservatories throughout the world. Since 1998, Ms. Kimura has been teaching a graduate class in Interactive Computer Music Performance at The Juilliard School. [www.marikimura.com](http://www.marikimura.com)

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