New Interfaces for Musical Expression

NIME 06

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Welcome to NIME 06 at IRCAM

Unique par l'ampleur de ses domaines réunissant la création musicale, la recherche et la transmission, l'IRCAM est l'un des rares lieux où l'intuition artistique, la formalisation scientifique et l'expérimentation technologique se confrontent et avancent ensemble. L'histoire riche de l'IRCAM n'est pas qu'une succession d'œuvres paradigmatiques, de noms de chercheurs pionniers ou de développements de logiciels utilisés par une vaste communauté d'artistes. Cette histoire tumultueuse qui est celle du développement du matériau sonore et de la pensée musicale, repose sur l'effervescence intellectuelle, expérimentale et artistique de l'institution. Les œuvres de Pierre Boulez, fondateur de l'IRCAM, d'Emmanuel Nunes, de Philippe Manoury, de Georges Aperghis, de Jonathan Harvey et de compositeurs plus jeunes sont nées de l'échange intense entre la singularité artistique et les avancées scientifiques dans les domaines de la synthèse sonore, du temps réel, de la lutherie numérique, de la composition assistée par ordinateur, de la spatialisation, de l'acoustique…

Si l'histoire de l'Ircam est saisie par le concept d'écriture autour duquel se noue l'intrigue entre le compositeur, l'assistant musical et la communauté des chercheurs, la présence d'artistes inclassables de l'ère digitale constitue une provocation stimulante ! Tout à la fois improvisateurs, « performeurs », inventeurs d'une nouvelle lutherie, expérimentateurs des technologies numériques, ces artistes repoussent les distinctions entre ce qui est prémédité et composé, et font de l'interaction leur principal credo. Ce champ dynamique, fécond dans le spectacle vivant, est appelé à s'étendre dans les années qui viennent. Les créations de l'Ircam sur les plateaux du théâtre, de l'opéra, de la danse, rencontrent les questions soulevées par cette édition du NIME. L'avenir de l'IRCAM du reste, appelle la mobilité de tout le dispositif technologique, le renouvellement des présences créatrices, la convergence entre création vécue et prospective. Entre le chercheur qui vise des valeurs de connaissance, l'artiste qui pose un monde et des problèmes neufs, et le dispositif technique, le terrain de rencontre privilégié reste le surgissement d'une œuvre. L'ampleur tumultueuse de l'Ircam qui entrechoque deux temps divergents, l'acte qui fulgure et la construction minutieuse qui formalise, l'impatience de ce qui va émerger et la lenteur de ce qui couve, l'intempestif et la fonction, cette ampleur, une synthèse disjonctive et électrisante, constitue la singularité et l'originalité présente de l'IRCAM.

Nous sommes très heureux d'accueillir à Paris les participants de la sixième édition du NIME au moment de l'ouverture d'Agora et des Rencontres Résonances, qui donne l'occasion de discuter, d'échanger, d'expérimenter mais aussi de vivre la création musicale au cours du festival de l'Ircam.

Unique for the scope of its activities that bring together musical creation, research, and transmission, Ircam is one of the rare places where artistic intuition, scientific rationality, and technological experimentation intersect and advance together. Ircam's rich history is not simply a succession of paradigmatic works, of the names of pioneering researchers, or of software developments used by a vast community of artists. Its eventful history, which has led to advancement in both sound material and musical thought, is the result of the intellectual, experimental, and artistic effervescence of the institution. The works of Pierre Boulez (Ircam's founder), Emmanuel Nunes, Philippe Manoury, Georges Aperghis, Jonathan Harvey, and other younger composers were born of the intense exchange between artistic originality and scientific progress in the fields of sound synthesis, real-time, digital instrument-making, computer-assisted composition, spatialization, and acoustics, among others.

If Ircam's history can be captured in the image of a composer, a musical assistant, and the community of researchers working together to write music, the presence of outstanding artists from the digital era represents a stimulating challenge! Improvisers, performers, instrument inventers, and experimenters in digital technology, these artists push the limits of what is planned and what is composed, and make "interaction" their principal credo. This dynamic field, so fruitful in the context of live performance, should expand in the coming years. Ircam creations for the theater, the opera, and dance are often faced with the same questions being addressed this year at NIME. For the rest of Ircam's activities, the future calls for technological mobility, the renewal of creative participation, and the convergence between past and potential creations. For the researcher who values knowledge, the artist who proposes new worlds and new problems, and the technical aspects, the preferred meeting place is still the production of a work. Ircam's cacophonous range of activities, which forces together two diverging tempos—the act that dazzles and the meticulous construction that formalizes it, the impatience of what will emerge and the slow progress of gestation, the incompatible and the functional—this range, a disjointed and electrifying synthesis, constitutes the uniqueness and the originality of Ircam today.

We are very happy to welcome the participants of the sixth installment of NIME to Paris just as Agora and Résonances open their doors, creating a unique opportunity for discussing, exchanging, experimenting, and sharing the experience of musical creation throughout the Ircam festival.

Frank Madlener
Director

Introduction

We are proud to present the 6th edition of NIME, hosted by IRCAM – Centre Pompidou. Entering the sixth year of NIME we sense maturity and ongoing enthusiasm. We are pleased to base NIME 06 on the acquisitions of an exceptional and dedicated community of scientists, technologists, and artists grown over the past few years.

The response to the NIME 06 call for participation was overwhelming: We received 197 paper and poster submissions as well as 99 performance and 44 installation proposals. To accommodate this expansion, this year we have extended the conference to include three and a half days of paper, poster, and demo sessions as well as five concerts, composing a rich and balanced program of 88 papers and posters, 25 performances, and 9 installations.

The significant increase in the number of submissions made the selection process more complex and difficult than ever before. Both selection committees - scientific and artistic – rose to the challenge and ensured an efficient and fair selection process. We feel that this year's program is a compelling manifestation of the conference's maturity and the result of the continuing fertile creativity of research and artistic work in this field. We would like to thank the authors for the impressive quality of their submissions and the reviewers for their excellent insight as well as their active participation in and contribution to this community.

Our commitment as organizers is to compose a program that best reflects the multitude of complementary and multidisciplinary aspects involved in NIME. In this spirit, several focused events have been created in collaboration with various partners.

We are honored to welcome several guest speakers and performers to NIME 06. George Lewis, composer, improvising musician, professor for American music at Columbia University, theorist, and historian, is the ideal speaker to lead a discussion on the field. We have also invited William Gaver, researcher and teacher at Goldsmiths College to provide a complementary perspective, based on human-computer interaction and the applications that concern everyday life. George Lewis and William Gaver will give the two keynote addresses on the first two days of the meeting.

The special session on *Digital Interfaces for the Violin Family* to be held on the fourth day of the meeting brings together the NIME community around a single, specific topic. The papers presented at the special session were subjected to the same peer-review process as the other NIME 06 paper submissions. The plenary presentations are open to the public and are accompanied by a few additional presentations that are not included in these proceedings.

We thought that the violin was the perfect centerpiece for such a session as it articulates both the future and the past of the ongoing avant-garde experimentation in lutherie with new materials and techniques dedicated to human expression and poetry. As a composer and performer who has branched out from the traditional violin repertoire to embrace the world of interactive computer music, our invited guest Mari Kimura personifies this idea for NIME 06.

The violin also strongly evokes the notion of virtuosity, which we would like to emphasize this year. Michel Waiswisz, who has been working with electrical and sensor-based musical instruments since the 1960's, will lead a panel discussion of NIME performers on virtuosity in live electronic music on the third day of the meeting.

Finally, NIME 06 will host three workshops on topics of increasing pertinence: *Improvisation and Computers*, *Motion Capture and Analysis for Dance*, and *Network Performance*.

NIME has the unique opportunity this year of taking place within the broader context of the Agora/Résonances 2006 festival at IRCAM. We have endeavored to bring NIME to a wider audience by creating free access to the special session, the keynote addresses, and the panel discussion. Meanwhile, we introduce NIME delegates to the very active local Parisian scene by arranging studio tours and events in independent venues throughout the city. A Special Guests concert curated by IRCAM embodies the synergy between NIME and Agora.

These proceedings comprise the papers and posters from the conference, as well as an overview of the artistic program and its concerts, installations, club, and gallery events. Further documentation of the artistic program and demonstrations, in the form of recordings and video, as well as electronic versions of the scientific program, will be made available online after the conference.

The monumental task of organizing a conference would not have been possible if it were not for the support of IRCAM and the other partners of NIME 06. We would like to thank very warmly all the people involved and give particular thanks to Emmanuel Fléty and Sylvie Benoit, our closest collaborators in the NIME 06 adventure.

We hope that NIME 06 represents another milestone in the development of the diverse, original, and open NIME community.

Enjoy NIME06!

Norbert Schnell, Frederic Bevilacqua, Michael Lyons, and Atau Tanaka

NIME 06 Artistic Program – a Rough Guide

We saw an unprecedented number and diversity of submissions for the NIME 06 artistic program, creating for the first time, to my knowledge, a situation where no single review committee member was able to view and evaluate every submitted work. We endeavored to break out of the coldness of score-ranking on the online review system by engaging in subjective discussion, and by asking ourselves hard questions about the musical tenets at the basis of NIME, putting to task its history, and hopefully identifying potential new directions. We attempted to put in place programming that matched this approach and the body of work selected, by at once bringing to Ircam works that otherwise may not have been heard in the Espace de Projection, and at the same time taking NIME out into the city of Paris to independent galleries, clubs, and performance venues.

After making an initial selection, we sought to identify emerging themes in the works, and to create strong concert programs revolving around them, matched to the nature of the venues in question. It should be noted that the themes were not pre-determined, but coalesced out of the body of work submitted. In this way, we feel that it is an interesting indicator of the directions that NIME artists are taking us.

For Monday's NIME Performances, the committee focused on Do-It-Yourself (***DIY***) instruments. This, in our view, is a new turn for the NIME community, and will be an interesting - if not controversial - topic of debate. During this evening, no pieces make use of traditional musical instruments. This decision did not come without soul-seeking on the part of the committee, and is a questioning that we hope will continue in inspired discussion during and after NIME 06.

Tuesday's program, "Special Guests" is the only program in the week not culled from the call for proposals. Instead, it is curated by IRCAM, and serves as a bridge to the Agora/Résonances festival within which NIME 06 takes place. Here we find the material that is at the foundation and history of NIME – extended acoustic instruments, responsive machines, and sensor-instruments. Two of us on the committee were happy to be invited to this program, putting to rest any conflict of interest issues.

With *Club NIME*, we hoped to create an official part of the NIME 06 artistic program that nonetheless kept the freshness of the alternative scene. The four Club programs take us to three of Paris' interesting independent venues and in doing so give us a tour of some of the dynamic neighborhoods of the city.

Monday at the Triptyque is an evening of ***hacks*** – be they hacked videogames, circuit-bending, or turntables turned upside down. We are very happy to have eRikm as headliner for the opening evening of Club NIME. His sonic explorations have broken out beyond the local scene, and beyond the turntable in his sonic explorations.

On Wednesday, Club NIME takes us up the Canal St. Martin to the Point Ephémère, a former concrete warehouse along the canal docks that was taken over by a group of artists in the 1990's who then transformed the space into artists' studios. The new venue marks a coming of age of the alternative scene in the form of a subsidized arts center complete with concert, gallery, and artists' residency spaces, restaurant, and café. It is here that Club II presents a unique evening of ***objects*** as instruments electronically re-piped trombones, huge glass disks, and responsive networked tables.

A gallery event on Thursday afternoon scales things back a bit. Ars Longa, partner in the Club NIME organization, is a multifaceted arts non-profit connecting community action and digital art. The gallery setting offers the intimacy to focus on ***acoustics***, be they the resonances of Tibetan bowls, a drum-playing robot, or the Doppler effects of spinning, unamplified mobile phone handsets.

The final program Thursday night brings us back to the Point Ephémère to close with a program that highlights the active ***local*** Parisian scene. From a technology standpoint, France represents for NIME an intense concentration of sensor interface and instrument developers. In Paris we count no less than four outfits - studios, companies, garage operations - creating interfaces for artists projects. This interest and activity in the area extends to local artists who create algorithmic sound/image systems, or who blend active careers in pop music with a taste for interaction.

I would like to thank the Performances and Installations review committees for their energy, through the occasionally grueling discussions, and for the host and partner organizations for making this very full artistic program possible. We hope that the NIME 06 artistic program will be stimulating and memorable. For those who want more, there's always the rest of Agora/Résonances!

Atau Tanaka
NIME 06 Performances and Installations Chair

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