

STUDY DAY / JOURNÉE D'ÉTUDE

**INVENTING GESTURES:
NEW APPROACHES TO MOVEMENT,
TECHNOLOGY AND THE BODY IN
CONTEMPORARY COMPOSITION
AND PERFORMANCE**

INVENTIONS DU GESTE MUSICAL

Monday, June 8, 2015 / Lundi 8 juin 2015

IRCAM, Paris, France

Study day organized as part of the GEMME project (2012-2016)
funded by the Agence Nationale de la Recherche.

Journée d'études organisée dans le cadre du projet GEMME (2012-2016)
financée par l'Agence Nationale de la Recherche (ANR-12-BSH3-0007-01).



Monday, June 8, 2015

Lundi 8 juin 2015

IRCAM, Paris, France

INVENTING GESTURES / INVENTIONS DU GESTE MUSICAL

Inventing Gestures: New Approaches to Movement, Technology and the Body in Contemporary Composition and Performance

In recent years, musicological study of gesture has become an important emerging field of inquiry. Video and motion capture technologies, modes of analysis borrowed from other arts (such as the Laban method for movement analysis in dance) as well as new systems and notations for describing the movement of performers, have allowed a wide variety of approaches to study the structure and expressive potential of gesture. In parallel, the study of composer-performer collaboration has become a leading research field, with musicologists, performers and composers all contributing multiple perspectives with the aid of modern ethnographic techniques.

What can our study of collaborative processes reveal about the creation of new approaches to gesture? Featuring artists and researchers examining the performance of canonical works as well as examining the creation of new works today, this symposium explores whether the precise mode and location of the genesis of new gestural approaches can be identified. The use of technology to both augment the composition and allow the performer new methods of control, the integration of elements of theatre and dance and the exploration of new extended techniques will all be particular foci for the presentations. By examining collaborative approaches to gestural innovation, a deeper understanding of both fields can be uncovered, opening new avenues of artistic and musicological research.

Inventing Gestures: New Approaches to Movement, Technology and the Body in Contemporary Composition and Performance is organized by:

Zubin Kanga (University of Nice-Sophia Antipolis, CTCL laboratory)

Nicolas Donin (IRCAM-CNRS-UPMC, STMS laboratory)

All informations:
manifeste2015.ircam.fr
geste.hypotheses.org

PROGRAM

► 9:30

Nicolas Donin and Zubin Kanga

Introduction

► 9:45

David Gorton (Royal Academy of Music, London)
and Stefan Östersjö (Malmö Academy of Music)

Composer/performer explorations towards a gesture-based understanding of musical composition and performance

► 10:45

Jean-François Trubert (University of Nice-Sophia Antipolis)

Fitting of the music to the action: Wilhelm Bruck and the instrumental theatre

11:35 - Break

► 11:55

Neil Heyde (Royal Academy of Music, London)

Controlling gesture: an exploration of shared responsibilities in translating notation into plastic terms

12:45 - Lunch

► 14:15

Jesper Nordin (ManiFeste featured composer) and Marc Desmons (conductor, Ensemble TM+) in conversation with Zubin Kanga (University of Nice-Sophia Antipolis)

Sculpting the Air: a conversation with Jesper Nordin on building and performing gestural instruments

► 14:50

Lauren Redhead (Canterbury Christ Church University)

Journey forms: from semiotics to gesture in the interpretation and performance of open notation for organ and electronics

15:40 - Break

► 16:00

Zubin Kanga (University of Nice-Sophia Antipolis)

Building virtual instruments: case studies of gestural innovation in works for piano and electronics

► 16:50

Nicolas Donin (IRCAM) and Michelle Magalhaes (IRCAM)

Performers' idiomatic playing techniques and composers' work notions: exploring varieties of creative collaboration in the 21st century

17:40 - Roundtable Discussion

Composer/performer explorations towards a gesture-based understanding of musical composition and performance

David Gorton (Royal Academy of Music, London) and **Stefan Östersjö** (Malmö Academy of Music)

This presentation outlines a series of collaborative explorations of gesture in the respective practices of the two authors: a guitarist and a composer. First we discuss how, in *Go To Hell* (a multi-media work set in a decommissioned nuclear reactor), the choreography, musical materials, video works and a sound- and light installation were all created from the movement data in a performance of Rolf Riehm's *Toccata Orpheus* for guitar. The second and third examples explore the generation of instrumental techniques from the starting point of an instrument's inherent physical and spatial configuration in two works by David Gorton: *Capriccio* for solo cello and *Forlorn Hope* for eleven-string alto guitar. The final example considers the role of gesture in the communication of structure, shape, and expression in a performance of David Gorton's *Austerity Measures I* for ten-string guitar. A performance of this piece requires increasing amounts of material to be replaced with silence across a number of repetitions, resulting in shifting structural functions of the composed material. Hence, in a performance, the structural shaping is highlighted. In a study of qualitative and quantitative data, together with researchers from IPEM in Gent, we identify strong links between physical gesture and musical structures. The presentation will include a live performance of the piece by Stefan Östersjö.



David Gorton's music has been performed throughout Europe and America, and in China and Vietnam. He has worked with ensembles that include the BBC Symphony Orchestra, the London Sinfonietta, Hermes Ensemble, Ensemble Exposé, and the Kreutzer Quartet. He is the Associate Head of Research at the Royal Academy of Music.



Stefan Östersjö is a leading classical guitarist. Since his debut CD (Swedish Grammy in 1997) he has recorded extensively and toured Europe, the US and Asia. His special fields of interest are interaction with electronics, experiments with stringed instruments other than the classical guitar and collaborative practices, also between different cultures. As a soloist he has cooperated with conductors such as Lothar Zagrosek, Peter Eötvös, Pierre André Valade, Mario Venzago, Franck Ollu and Andrew Manze.

Fitting of the music to the action: Wilhelm Bruck and the instrumental theatre

Jean-François Trubert (University of Nice-Sophia Antipolis)

Considering scholarly methods of investigation about contemporary music, there are some areas of this repertoire that remain unclear, especially because the score does not provide a perfect mirror of the final performance. This is the case in Mauricio Kagel's instrumental theatre. Though the composer is well known for his extreme mastery of details and his mixing of theatre, action, music and non-musical sounds is explored in his writings, any prospective performer is still confronted with many questions on being confronted by the score: how do I play these specific techniques? Why did he write such a difficult movement to execute? What particular gesture is intended here?

Research has to challenge these questions by using ethnographic inquiries about previous performances. But gaining any insight into the intended use of gesture can not be done without contact with those who performed and created these pieces. This presentation will present some recordings made during a journey in Cologne, where I met Wilhelm Bruck, who performed many of Kagel's early pieces. During this interview, we discussed his work on numerous scores including *Zwei-Mann Orchester*, *Sonant* and *Staatstheater*. From these discussions, I present some preliminary approaches of the question of gesture and performance in Kagel's music.



Jean-François Trubert is Professor in Music at the University of Nice, and head of the Music Department. He is also associate coordinator of the ANR project GEMME, hosted by IRCAM and directed by Nicolas Donin. He is working on new music theatre and contemporary Instrumental theatre and on music and dramaturgy in the 20th century.

Controlling gesture: an exploration of shared responsibilities in translating notation into plastic terms

Neil Heyde (Royal Academy of Music, London)

I said somewhere that it was not enough to hear music, but that it must also be seen.... An experienced eye follows and judges, sometimes unconsciously, the performer's least gesture. From this point of view one might conceive the process of performance as the creation of new values that call for the solution of problems similar to those which arise in the realm of choreography.

Igor Stravinsky (1940)

Stravinsky's claim that performance calls for the 'solution of problems similar to those which arise in the realm of choreography' has been surprisingly little explored by musicologists. This presentation will explore the notion of responsibility in relation to developing choreographic 'solutions', revealing some of the 'problems' that arise in Stravinsky's own *Three Pieces for String Quartet* (1914) and Ligeti's *String Quartet No. 2* by critiquing the Kreutzer Quartet's DVD recording (*Quartet Choreography*, 2012). The idea that these kinds of 'problems' are subject to detailed imaginative responses by composers and performers alike will be explored through a reading of a composer's imagined rehearsal of a solo cello piece by Justin Connolly, conducted in 1995 and documented in the form of an extended letter. The session will end with a performance of David Gorton's *Capriccio* (2009), especially written to explore the physical choreography of both player and instrument.



As a soloist and chamber musician, Professor **Neil Heyde** has commissioned and premiered many new works and appeared throughout Europe, the USA and Australia. He is the cellist of the Kreutzer Quartet and is Head of Postgraduate Programmes at the Royal Academy of Music, where his work focuses on the relationships between performers and composers - past and present. He is currently working on the volume of Debussy's sonatas for the *Œuvres Complètes de Claude Debussy*.

Sculpting the Air: a conversation **with Jesper Nordin and Marc Desmons on building** **and performing gestural instruments**

Jesper Nordin (ManiFeste featured composer) and **Marc Desmons** (conductor, Ensemble TM+) with **Zubin Kanga** (University of Nice-Sophia Antipolis)

In this conversation led by Dr Zubin Kanga, Swedish composer, Jesper Nordin and French conductor, Marc Desmons discuss their collaboration on Nordin's new work *Sculpting the Air*, to be premiered by Ensemble TM+ at ManiFeste on 13 June. The work is a concerto for conductor, featuring several technological approaches (both mechanical and electronic) to harnessing Desmons' conducting gestures in order to create sounds that extend and rival the sounds of the ensemble. The discussion will also focus on Nordin's gesture-controlling programs "Gestruiment" and "ScaleGen", that make gesture-controlled electronics possible on a phone or tablet as well as Desmons' wide ranging work as a performer and collaborator with other innovative composers.



The music of **Jesper Nordin** is broadcast and performed throughout the world by major soloists, ensembles and symphony orchestras. Recent events include premieres by conductors like Kent Nagano and Daniel Harding as well as a four day portrait festival by the Royal Stockholm Philharmonic Orchestra. He has also had huge success with his iOS apps Gestruiment and ScaleGen that are based on his own composition technique.

www.jespernordin.com & www.gestruiment.com



Marc Desmons is a multi-award winning violist and conductor. Since 1992, he has been second viola soloist in the Orchestre de l'Opéra de Paris, and since 2010, principal viola in the Orchestre Philharmonique de Radio France. As conductor, he works regularly with the Ensemble TM+ and recently conducted an *Alla Breve* broadcast recording on France Musique for the composer Stefano Bulfon, with the Orchestre Philharmonique de Radio-France. He teaches at the Paris Conservatory.

Journey forms: from semiotics to gesture in the interpretation and performance of open notation for organ and electronics

Lauren Redhead (Canterbury Christ Church University)

Nicholas Bourriaud's 'journey form' and auto-ethnographic observation are both employed to analyse my performances of open notation scores for organ and electronics in this presentation. Examples are drawn from my own works and collaborative work with composer Caroline Lucas and visual- and sound artist R. Armstrong. Graphic and text scores, their notation, and my performances, will be examined from a composer-performer perspective.

Bourriaud (2010) identifies the creative artist as a 'semionaut' and contemporary artistic forms as 'journey forms' that both internalise and externalise an experience of movement, displacement and crossing. Within the interpretation of graphic notation, and within this context, I am conscious of creating a tangible link between notation and performance. I have also sought ways of enabling non-organ performances of these works which retain the 'journey form' of the work and reflect on the way that notation might have a gestural relationship with the sound of the work. In this way, a gestural approach to performance is understood as a conceptualisation of the sound, notation and performer in space and territory. This, then, suggests a process of which the compositional act, notation, and all subsequent performances are single iterations or points. It posits gestural relationships in performance as inherent to the structure of the relationships that form this music gesture as an integral aspect of the 'journey form' of the work.



Lauren Redhead is an internationally performed composer and a performer of experimental music for organ and electronics. Her musicological work examines the aesthetics and socio-semiotics of late 20th and 21st century music. She is Subject Lead for Music at Canterbury Christ Church University.
laurenredhead.eu

Building virtual instruments: case studies of gestural innovation in works for piano and electronics

Zubin Kanga (University of Nice-Sophia Antipolis)

This presentation examines three works for piano and electronics, recently performed by Zubin Kanga, a concert pianist that feature diverse approaches to composition as 'building an instrument' (following Lachenmann's definition of composition). In *Piano Hero* (2012) by Belgian composer, Stefan Prins, the performer uses a keyboard to control a video avatar of a pianist, creating gestural complexity from the contrast between the live performer's gesture and the resultant 'performing' video. Australian composer Benjamin Carey's work *_derivations* (2013) is a program that functions as a duetting partner for an improviser. This software functions as a creative environment that directs the performer towards specific types of musical and gestural material, creating play in the ambiguity between embodied and disembodied sound. British composer, Patrick Nunn wrote *Morphosis* (2014) in close collaboration with Kanga using 3D sensors attached to his hands to control the electronics and extend the relationship between the performer's gestures and resulting sounds.

Using interviews, score excerpts and video documentation of workshops, Zubin Kanga will examine how a score, a piece of technology and the gestural language of the performer are formed simultaneously and symbiotically. These systems function as virtual instruments that foster new approaches for gestural approaches to music, while also imposing their own new limitations. The presentation concludes with a performance of Patrick Nunn's *Morphosis*.



Pianist, **Zubin Kanga** has recently performed at the BBC Proms, Aldeburgh, Mars aux Musées and Borealis festivals and appeared as soloist with the London Sinfonietta and the Melbourne Symphony Orchestra. He has collaborated with many of the world's leading composers including Thomas Adès, Michael Finnissy and George Benjamin. He is a Postdoctoral Researcher at the University of Nice-Sophia Antipolis and IRCAM and a Research Fellow at the Royal Academy of Music.

www.zubinkanga.com

Performers' idiomatic playing techniques and composers' work notions: exploring varieties of creative collaboration in the 21st century

Nicolas Donin (IRCAM) and Michelle Magalhaes (IRCAM)

There are no fixed rules in the composer/performer collaborative work. Proposition and transformation are two interchangeable processes, which constitute the basis of this dialogue. As part of the GEMME [Musical Gesture: Models and Experiments] project, we have been studying several cases of composer/performer collaboration. We will concentrate on two instances involving a project for solo string instrument: *Parlando* (2009), written by Georges Aperghis (*1945) for double-bassist Uli Fussenegger, and *The spider as an artist* (2014) written by Franck Bedrossian (*1973) for cellist Séverine Ballon. In the first piece, writing procedures typical of Aperghis (such as the accumulation and variation of small cells) are amalgamated with the instrumental techniques proposed by Uli Fussenegger. In the most virtuosic preparatory session for that piece, the double-bassist transformed the original proposition to assert his interpretation of the composer's idea. In the second piece, the main challenge is how the composer can appropriate the idiosyncratic sound material introduced by the performer. Bedrossian, by incorporating in his piece some of Ballon's specific preparation techniques, assumed the constraint of searching for a timbral development of this material, then challenging his initial compositional stakes. We will contrast different aspects of the Fussenegger/Aperghis and the Ballon/Bedrossian project, search for their common features, and question their degree of novelty with respect to older examples of composer/performer collaboration in contemporary music.



Nicolas Donin is head of the Analysis of Musical Practices research group at IRCAM. His recent work focuses on contemporary composition and performance, using methodologies from musicology, social sciences and cognitive studies. He is Principal Investigator of the GEMME project (2012-2016), funded by the Agence Nationale de la Recherche.



Michelle Agnes Magalhaes had her first contact with composition in lessons with Hans J. Koellreutter. Since then, she searches for deep listening experiences, composing, improvising and writing about music. In 2013, she joined the IRCAM's Musical Practices Analysis team with a project on Luigi Nono. One year later, she began working on the GEMME Project.

GEMME

Musical Gesture: Models and Experiments

Teams Involved: Analysis of Musical Practices, Sound Music Movement Interaction

Funding: ANR, Department of Humanities and Social Sciences

Calendar: November 2012 – June 2016

Partners: University of Nice-Sophia Antipolis (CTEL: Centre transdisciplinaire d'épistémologie de la littérature)

Coordinator: IRCAM

Since the beginning of the 21st century, gesture has become a significant means of interaction with technology for the general public, and also within the musician community. While musical writing has put a strong emphasis on deconstructing and reshaping the acting body of the musician-performer for nearly 50 years, it is interesting to note that for the past 10 years there has been a strong multidisciplinary convergence on this research/creation topic, drawing the attention of composers, performers, and computer scientists as well as the domains of engineering, psychology, physiology, biomechanics, and cognitive sciences. This concept of gesture, commonly used in numerous domains, notably in the performing arts such as theater and dance, has only been the subject of embryonic research in the domain of musicology. The GEMME project offers an analysis of theoretical texts and musical works, and also carries out investigations before and after the premiere of a score: what theoretical and technical possibilities of the formalization of gestures are available to composers? What gestural procedures can they test on paper and during the performance of a work? What means of transmission of the gestural information are created not only during the collaboration between composer and performer, but also when the performance of the work is taught? This project endeavors to answer these questions via four main themes:

1. Tacit Theories of Gesture: genealogy of the compositional notion of gesture, its categorizations and periodization, the current state of the art
2. Gesture and Stage: study of a paradigmatic method—that of Kagel—where the musical idea is connected to its staged expression in the framework of musical and instrumental theater
3. Gesture and Instrument: study of a contrasting paradigmatic method—that of Lachenmann—where the composition calls upon a breakdown of the organological possibilities of sound production in relationship with a political and social criticism of expressive conventions
4. Gesture and Technology: a series of musical analyses of a group of seminal scores, from Ferneyhough's *Time and Motion Study II* to *Luna Park* by Aperghis, that offer a variety of technical and computing paradigms that formalize and/or accompany instrumental gesture.

GEMME

Geste musical : modèles et expériences

Équipes concernées: Analyse des pratiques musicales,

Interaction son musique mouvement

Financement: ANR, programme Blanc SHS

Période de réalisation: novembre 2012 - juin 2016

Partenaires extérieurs: université de Nice Sophia Antipolis (CTEL: Centre transdisciplinaire d'épistémologie de la littérature)

Coordinateur: Ircam

Au cours des années 2000, le geste est devenu un moyen privilégié d'interaction avec les technologies, auprès du grand public comme au sein de la communauté des musiciens. Si l'écriture musicale dématérialise, décompose et reconstruit le corps du musicien-interprète depuis presque cinquante ans, on observe plus particulièrement, depuis une dizaine d'années, une forte convergence interdisciplinaire sur cet objet de recherche/création intéressant compositeurs, interprètes et informaticiens, mais aussi sciences de l'ingénieur, psychologie, physiologie, biomécanique et sciences cognitives. Or, cette notion de geste, par ailleurs couramment employée dans nombre de domaines, notamment, depuis longtemps, dans les arts du spectacle (théâtre, danse, performance...), n'a encore fait l'objet que d'embryonnaires recherches en musicologie.

Dans ce contexte, le projet GEMME propose une analyse serrée de textes théoriques et d'œuvres musicales, mais aussi mène des enquêtes sur l'amont et l'aval de la partition: de quelles possibilités théoriques et techniques de formalisation du geste disposent les compositeurs? Quelles procédures gestuelles expérimentent-ils sur le papier et lors de la réalisation pratique de l'œuvre? Quelles modalités de transmission de l'information gestuelle s'élaborent non seulement dans la collaboration entre compositeurs et interprètes, mais aussi dans l'enseignement de l'interprétation? Autant de questions auxquelles ce programme se propose de répondre à travers quatre chantiers principaux:

- 1) *Théories implicites du geste* (généalogie de la notion compositionnelle de geste, avec ses catégorisations et ses périodisations, et son état de l'art actuel);
- 2) *Geste et scène* (étude d'une démarche paradigmatique, celle de Kagel, où la notion musicale se noue à son expression scénique, dans le cadre du théâtre musical et instrumental);
- 3) *Geste et instrument* (étude d'une démarche paradigmatique contrastante, celle de Lachenmann, où la composition interroge le détail des possibilités organologiques de production du son en relation avec une critique politique et sociale des conventions expressives);
- 4) *Geste et technologie* (série d'analyses musicales d'un ensemble de partitions de référence, de *Time and Motion Study II* de Ferneyhough jusqu'à *Luna Park* d'Aperghis, qui déclinent plusieurs paradigmes techniques et informatiques formalisant et/ou accompagnant le geste instrumental).

IRCAM

Institut de recherche et coordination acoustique/musique

IRCAM, the Institute for Research and Coordination in Acoustics/Music, is one of the world's largest public research centers dedicated to both musical expression and scientific research. A unique location where artistic sensibilities collide with scientific and technological innovation, Frank Madlener has directed the institute since 2006, bringing together over 160 people.

IRCAM's three principal activities – creation, research, transmission – are visible in IRCAM's Parisian concert season, in productions throughout France and abroad, in a new rendezvous created in June 2012, ManiFeste, that combines an international festival with a multidisciplinary academy.

Founded by Pierre Boulez, IRCAM is associated with the Centre Pompidou, under the tutelage of the French Ministry of Culture and Communication. The mixed STMS research lab (Sciences and Technologies for Music and Sound), housed by IRCAM, also benefits from the support of the CNRS and the University Pierre and Marie Curie, as well as Inria (team-project MuTant).

Ircam

Institut de recherche et coordination acoustique/musique

L'Institut de recherche et coordination acoustique/musique est aujourd'hui l'un des plus grands centres de recherche publique au monde se consacrant à la création musicale et à la recherche scientifique. Lieu unique où convergent la prospective artistique et l'innovation scientifique et technologique, l'institut est dirigé depuis 2006 par Frank Madlener, et réunit plus de cent soixante collaborateurs.

L'Ircam développe ses trois axes principaux - création, recherche, transmission - au cours d'une saison parisienne, de tournées en France et à l'étranger et d'un nouveau rendez-vous initié en juin 2012, ManiFeste, qui allie un festival international et une académie pluridisciplinaire.

Fondé par Pierre Boulez, l'Ircam est associé au Centre Pompidou sous la tutelle du ministère de la Culture et de la Communication. L'Unité mixte de recherche STMS (Sciences et technologies de la musique et du son), hébergée par l'Ircam, bénéficie de plus des tutelles du CNRS et de l'université Pierre et Marie Curie, ainsi que, dans le cadre de l'équipe-projet MuTant, de l'Inria.

IRCAM TECHNICAL TEAM

Pascale Bondu, Technical Manager

Éric de Gélis, Technical Manager (Stravinsky Room)

PROGRAM

Olivier Umecker, Graphic Designer

L'Ircam est associé au Centre Pompidou sous la tutelle du ministère de la Culture et de la Communication. L'Unité mixte de recherche STMS (Sciences et technologies de la musique et du son), hébergée par l'Ircam, bénéficie de plus des tutelles du CNRS et de l'université Pierre et Marie Curie, ainsi que, dans le cadre de l'équipe-projet MuTant, de l'Inria.

PARTENAIRES

Athénée Théâtre Louis-Jouvet
« Bien Entendu ! Un mois pour la création musicale », une manifestation de Futurs Composés, réseau national de la création musicale
CDC Atelier de Paris-Carolyn Carlson
JUNE EVENTS

Ensemble intercontemporain - ensemble associé de l'académie
Institut français

L'Institut français est l'opérateur du ministère des Affaires étrangères et du Développement international pour l'action culturelle extérieure de la France

Le CENTQUATRE-PARIS

Les Spectacles vivants-Centre Pompidou

Mairie du 4^e arrondissement de Paris

Maison de la musique de Nanterre

Maison de la Poésie

Nouveau théâtre de Montreuil

Philharmonie de Paris

Radio France

Studio-Théâtre de Vitry

Théâtre des Bouffes du Nord

Toneelhuis

SOUTIENS

FCM-Fonds pour la création musicale

Fonds franco-allemand pour la musique contemporaine/Impuls neue Musik

Mairie de Paris

Pro Helvetia, Fondation suisse pour la culture

Réseau ULYSSES,

subventionné par le programme Culture de la Commission européenne

SACD

Sacem

Société des auteurs, compositeurs et éditeurs de musique

PARTENAIRES PÉDAGOGIQUES

Conservatoire national supérieur de musique et de danse de Paris

Internationale Ensemble Modern Akademie

Orchestre Philharmonique de Radio France

ProQuartet-Centre européen de musique de chambre

PARTENAIRES MÉDIAS

France Culture

France Musique

Le Monde

Télérama



athénée • théâtre Louis-Jouvet



L'ÉQUIPE

DIRECTION

Frank Madlener

COORDINATION

Suzanne Berthy

Juliette Le Guillou, Natacha Moëgne-Loccoz

DIRECTION R&D

Hugues Vinet

Sylvie Benoit, Nicolas Donin

COMMUNICATION & PARTENARIATS

Marine Nicodeau

Mary Delacour, Marion Deschamps,

Alexandra Guzik, Deborah Lopatin,

Claire Marquet, Delphine Oster, Caroline Palmier,

Anne Simode

PÉDAGOGIE ET ACTION CULTURELLE

Andrew Gerzso

Murielle Ducas, Cyrielle Fiolet, Florence Grappin

PRODUCTION

Cyril Béros

Julien Aléonard, Melina Avenati, Pascale Bondu,

Raphaël Bourdier, Jérémie Bourgogne,

Sylvain Cadars, Cyril Claverie,

Christophe Da Cunha, Éric de Gélis,

Agnès Fin, Anne Guyonnet, Jérémie Henrot,

Aurélia Ongena, Maxime Robert, Clotilde Turpin,

Frédéric Vandromme et l'ensemble des équipes

techniques intermittentes

CENTRE DE RESSOURCES IRCAM

Nicolas Donin

Chloé Breillot, Sandra El Fakhouri,

Samuel Goldszmidt

RELATIONS PRESSE

OPUS 64/Valérie Samuel, Claire Fabre



