



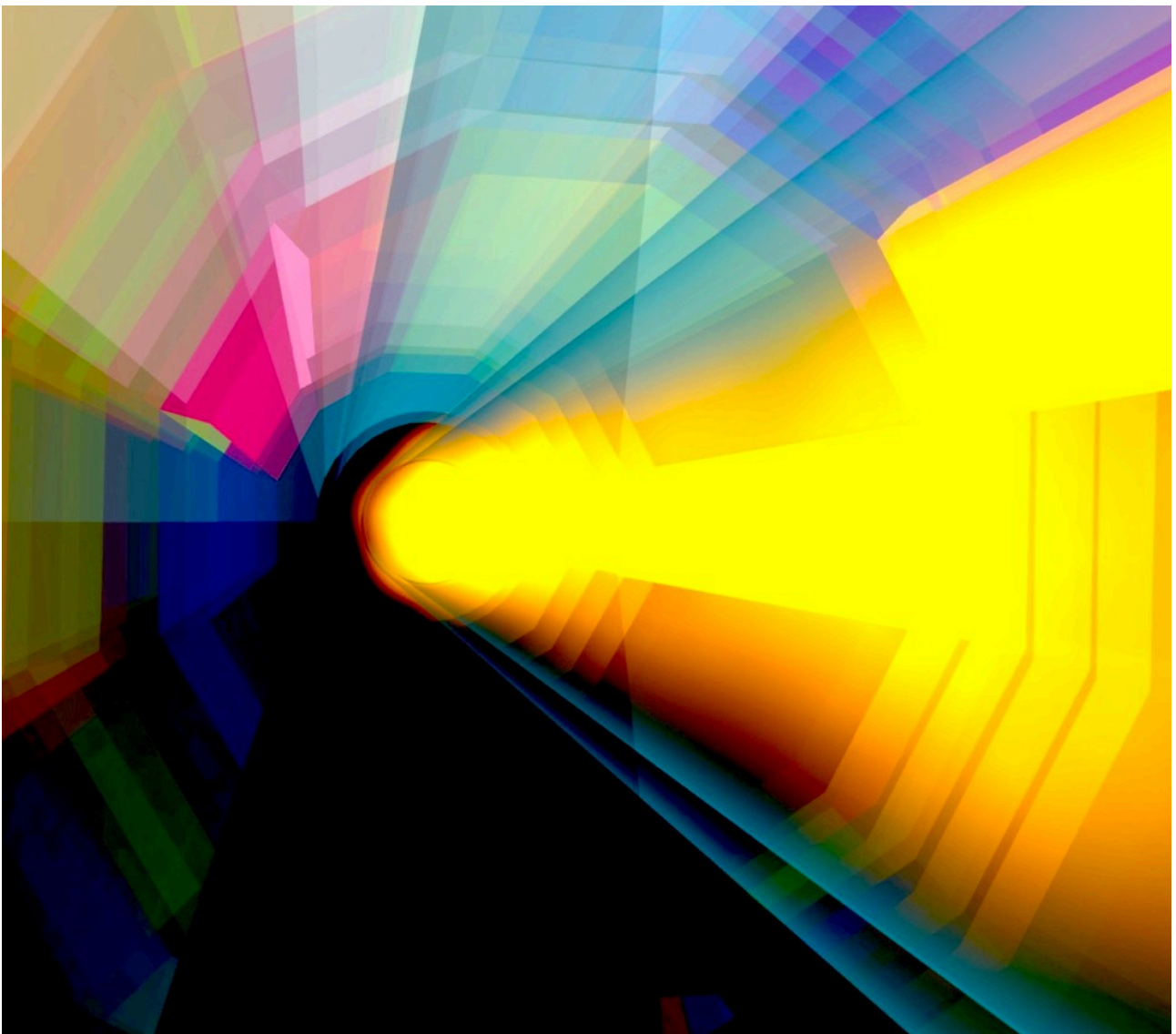
Les Atomes dansants

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present

Subatomic Desire



Editorial

Les Atomes dansants (The Dancing Atoms)

This cultural association founded in September 2016 has given itself the mission to go back to the origin of things with the ingenious idea of discovering, and bringing to light, the point of convergence that brings together seemingly distant domains.

At the heart of the team, two artists, the Swiss composer Alexandre Traube and the Genevan video-performer Silvia Fabiani, who have been working together closely since 2012. In 2017, the association produced the musical and multimedia show *Rose incandescente*, which was received and applauded enthusiastically by the public and was a great success during the Agapé Festival of Geneva (where it was scheduled the same day as Jordi Savall) as well as to the prestigious Cernier Musical Gardens.

The aim of this first production was to establish a dialogue between Eastern and Western cultures, as well as between present and tradition, through artistic creation.

With Subatomic Desire (their project for 2018-19), *Les Atomes Dansants* tackles the link between artistic culture and the scientific world.

The new project of *Les Atomes dansants*: Subatomic Desire



Subatomic Desire is a musical, dance and multimedia show entirely created by *Les Atomes Dansants*. It draws directly from the scientific data of the Compact Muon Solenoid (CMS), one of the collision points of CERN's particle accelerator. The structure of the original musical composition and the animated images projected during the execution of the work, are based on the paths of the subatomic particles emitted during the collisions. Both composer and the video-performer are assisted by CERN physicists Michael Hoch and Chiara Mariotti. The premiere of the show, performed by exceptional artists, takes place in the Globe of Science and Innovation and is broadcast live, on Youtube and in the *Fêtes de la Musique* of Neuchâtel. Other performances are organized in Geneva and Neuchâtel.

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Project summary

Event type	Musical, dance and multimedia show
Theme	Artistic creation meets particle physics.
Dates	June 21st, 22nd and 26th 2019, September 14th 2019.
Sites	Upper Room of the Globe of Science and Innovation (in front of CERN). Upper hangar of CMS site, Cessy. <i>live</i> diffusion on the web and at Fête de la musique in Neuchâtel. Salle Centrale (Geneva). Théâtre de la Poudrière (Neuchâtel).
General project	Created by the Swiss composer Alexandre Traube, the Geneva-based video-performer Silvia Fabiani and the rapper David Charles, <i>Subatomic Desire</i> is directly inspired by the scientific data of the Compact Muon Solenoid (CMS), one of the collision points of the CERN large particle collider. The structure of the original musical composition and the animated images, projected during the execution of the work, are based on the paths of the subatomic particles emitted during the collisions. The work is performed by the creators themselves, surrounded by a cast of 5 exceptional performers, and broadcast live via the internet. A tour is also planned in Ghent (Belgium).
Interest	The work is weaving links between two apparently different domains such as artistic creation and particle physics. By uniting talented performers from a wide range of backgrounds, it creates and builds bridges between seemingly opposing areas, such as Persian singing and rhythmic rap lyrics, classical instruments and contemporary digital arts technologies, within an original creation. It emphasizes the power of dialogue and collaboration, creating encounters between specialists from different fields.
Goals	Inspired by the notion of beauty adopted by the scientific world, to bring forward and underline this notion in the artistic field; at the same time, to rely on scientific models in order to foster creation. To demonstrate fertility and the innovative strength of difference and contrast. To value improbable sites like the CMS hangar for artistic purposes; to use the particular characteristics of each of these places in order to enrich the show.
Themes	<ul style="list-style-type: none"> • Music, • video performance, • texts, inspired by the quest for origin, the Big Bang, the scientific process, the trajectories of particles, the birth of matter, the unlikely encounter.
Collaborations	CMS Laboratory, Chiara Mariotti and Michael Hoch (particle physicists at CERN). Globe of Science and Innovation. Fêtes de la musique of Neuchâtel, Geneva, Fribourg. CERN Media Service..
Public cible	Spectators of the Fêtes de la musique. Lovers of contemporary music and digital art, spectators of all ages curious of novelty, Internet users, fans of rap. To facilitate access to the Globe to the "all-comers" public in Geneva, an evening for CERN employees is organized on 26 June at the CMS site.
Tickets	Globe and CMS events are free. At the Poudrière we expect ~180 spectators, prices of tickets: adults 25 CHF, reduced 2.0 CHF.

The Association *Les Atomes dansants*



Les Atomes dansants

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The non-profit cultural association Les Atomes Dansants was founded in September 2016. In a short time, the association has already produced several shows. Over the years, the original core has been organized and enriched by professionals with specific skills.

The artistic direction of the projects is provided by the Welsh-Swiss composer Alexandre Traube. In addition to her video performance activity, Genevan artist Silvia Fabiani is responsible for some of the communication work, which includes the regular updating of web pages.

The committee ensures the organization and running of the association by the respective competencies of its members, on an annual basis.



The association was born under the sign of diversity, in tune with the cultural situation of Geneva, an international city. Its mission can be summarized as follows: go back to the origin, to discover the point of convergence; through artistic creation, weave links between seemingly opposed domains.

In 2017, *Les Atomes dansants* produce *Rose incandescente*, a musical and multimedia show, which was hailed by a long standing ovation at the Agapé Festival in Geneva (where it was scheduled the same day as Jordi Savall) and a large crowd of an enthralled audience at the prestigious *Jardins musicaux de Cernier*. This first work responds to the need to bind Mediterranean cultures (which historical and political circumstances have divided), through the development of common traditions. Red thread of this research, the theme of the rose, common to the Arab and Italian poetry of the Renaissance.

With Subatomic Desire (their project for 2018-19), Les Atomes Dansants tackles the link between artistic culture and the scientific world.

Subatomic Desire

La physique chante, les particules dansent



At the origin of this project are two creators-performer: the Genevan video-performer Silvia Fabiani and the Swiss composer Alexandre Traube.

These two artists coming from different horizons already have several successful collaborations to their credit: in 2012, the composer Alexandre Traube created the musical show *Rodolphe de Neuchâtel, troubadour and rapper*, while Silvia Fabiani directed the teaser. Alexandre Traube and Silvia Fabiani, after collaborating in 2014-2015 around the work *Christus Rex*, have combined their talents and their respective skills in 2017, to create the musical and multimedia show *Rose incandescente*. Currently, in close collaboration, they are working at Subatomic Desire, a musical and multimedia work inspired by particle physics. In this creation, music, text and animated images (projected during the performance) form an organic whole.

For the execution of the work, the duo of the creators were accompanied by the Welsh rapper David Charles (who will write a text and create a choreography), the Persian singer Taghi Akhbari, the soprano Marie-Najma Thomas, the drummer Louis Poupelin, plus violinist Mohummad Ghosheh, and a Swiss break dancer. One of the outstanding features of this work is that Alexandre Traube's composition involves improvisational spaces, controlled by musical structure and atomic equations. All interpreters thus benefit from a certain liberty, in spite of being determined and framed by the composition.

The Compact Muon Solenoid or CMS, one of the key points of CERN's large particle accelerator (LHC), is the exploration ground of *Les Atomes dansants*. The adventures of physical and artistic matter blend in this space; the enthralling combination of several very different artistic forms (rhythmic speech, contemporary music, oriental song and video-performance) generates new forms, as the collision of elementary particles generates new particles. The scientific and experimental aspect, with its search for symmetries immediately broken, joins the search for harmony and beauty of the artistic approach.

Approach

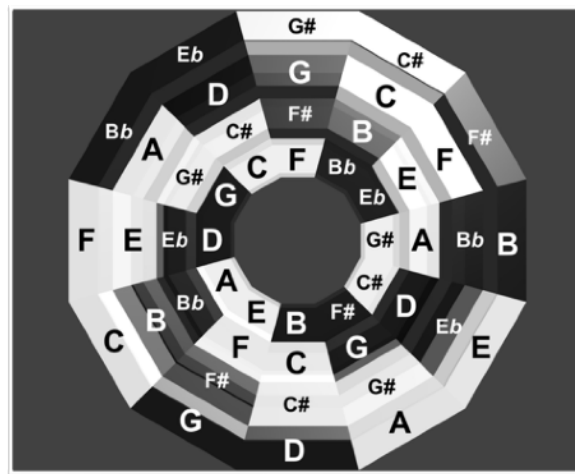
Subatomic particles are the basis and origin of everything around us ... and of course of ourselves. Science explores this mystery of origins; art can put in scene, in images, sounds, movements and rhythms: in a scientifically informed and artistically liberating manner.

To represent the quest for the origin, the life of the universe at the time of the Big Bang, the artists have a kaleidoscopic approach.

The work, like the dodecagon of the CMS sensors, consists of 12 symmetrically convergent panels, such as two protons accelerated in opposite directions, towards the center of this one: the Dance of the atoms. At the end, the original Big Bang and the Reverse universe, final implosion leading to a long silence inhabited by all that preceded. A Desire section and a Subatomic section represent two facets of scientific research: in these sections, various paintings such as Cathedral of Science, Particle Conflict, Super Sidera or Magnets and Lovers. Over the course of this series of paintings, the clash between the different artistic forms will put the spectator himself in motion, in acceleration.

The music and images will be magnified and finalized by Alexandre Traube and Silvia Fabiani in a process of close collaboration, where the two approaches are interdependent and feed each other.

Composer Alexandre Traube's note of intent

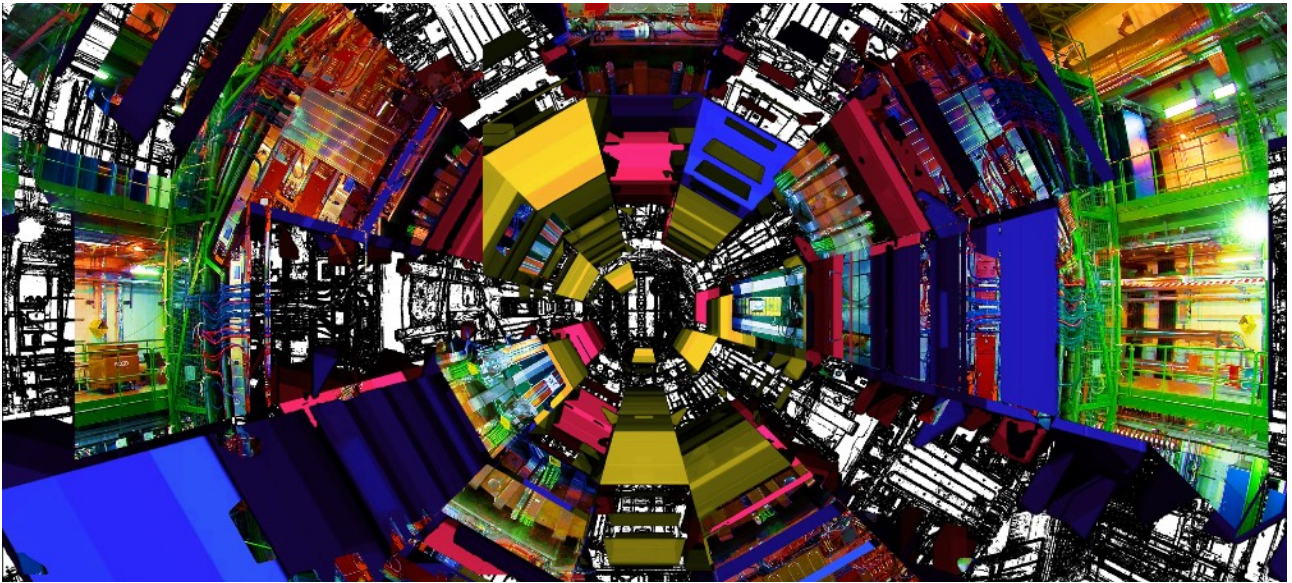


The trajectories of a set of particles make it possible to identify the parent particle from which they come. The basic musical idea of the project is to represent these trajectories by a musical "field", in the same way that the famous newly discovered Higgs boson creates a field that gives each particle of the universe its mass, its existence. For this musical field, both melodic - tetrachord - and rhythmic, we draw on ancient Greek music, taken up in all the music of the Mediterranean basin.

The equations that regulate these disintegration experiences provide a structural basis for the composer, within which artists can improvise according to their know-how.

The panels are strongly contrasted, through a constantly changing combination of speakers very different from each other. They present two main musical scales representing the world as it is perceived every day and as it is, unveiled little by little by the scientific experience and the spirit.

Video-performer Silvia Fabiani's note of intent



For its part, the device designed for video performance starts from the dodecagon (the CMS form) to deploy in a system of variations, around the fixed point which is the origin, a fundamental notion of scientific research but also of any personal research.

Thanks to Millumin2 software (that was developed by Philippe Chaurand and Adrien Mondot) and further to the GLSL / ISF programming language, digital data from CMS experiments can be integrated, in real time, into the source code of the animated image. The variations of these numerical values thus generate forms in perpetual motion. The animated image does not illustrate the scientific phenomena: it converts them into colors and motion.

The mapping of the image (adaptation to multiple and unconventional projection surfaces) is reconstituted specifically to each new representation space.

In the CMS hangar, lighting conditions and the size of the surface to be covered require the use of a particularly powerful beamer (20000 AnsiLumen), supplied by Lumens8.

Note: excerpts from the animations can be viewed on the pages

https://www.instagram.com/silvia_fabiani_artiste/
<https://www.silviafabiani.com/interactive-shader-format> et
<https://www.interactiveshaderformat.com/u/sf>

Rapper David Charles

For Subatomic Desire, he writes most of the texts, following equations and names of particles: with humor and poetry, David Charles will exalt the magnetic love that animates the particles, the machines that measure them, and the humans who make these machines live. Then, the texts are rhythmic and sung according to rap techniques; David Charles brings in a breakdancer at times, with a choreography inspired by the dance of particles. The rapper's movements in robotics evoke the complex machinery of CERN.

The artists

Alexandre Traube

As ensemble leader, he recently filled with enthusiasm the audience of the Festival of Music of Geneva (concert of June 22 at the Temple of the Madeleine, see Article of the Tribune de Genève, weblink:

<https://m.tdg.ch/articles/5b2e0426ab5c375767000001>).

As a composer, Alexandre Traube, who is also fascinated by ancient and modern music, is always looking for the source. His goal is to create links: between East and West; between a deeply rooted past and a free and living contemporary creative act.

Since his encounter with the Genevan video-performer Silvia Fabiani he developed a curiosity and decided to intricately explore the link between musical composition and digital image. He took over the direction of the ensemble of dancing Atoms with which he interprets his masterpiece: incandescent Rose.

His training course led him to further deepen his interest and exploring of both the scientific field and the musical field. Parallel to his studies of mathematics and philosophy, a compelling need for music leads him to study composition (in Neuchâtel) and choral direction and ancient music (State Council prize at the HEM of Geneva); then he obtains a master's degree with distinction in medieval music under the direction of Francis Biggi.

He studied traditional music and singing of several countries. He founded *In illo tempore* choir and *Flores harmonici* ensemble with which he explores his favorite repertoires. After these fifteen years of studying tradition he returned to composing, further enriched with knowledge and tools.

In addition to *Rose incandescente*, he has oratorio *Christus Rex* to his credit; he is working at a musical comedy.



Silvia Fabiani

The video-performer and developer David Lublin has recently dedicated a page to her work on his official website VDMX <https://vdmx.vidvox.net/blog/isf-from-silvia-fabiani>

She directed the animations for the video-performance of the work *Rose incandescente*, using the already known techniques of 3D animation; but with a much more recent and innovative programming language, GLSL (in the Interactive Shader Format developed version), which allowed Silvia Fabiani to animate the images in real time and create her contribution to the Subatomic Desire project.



Born into a family of scientists, Silvia Fabiani discovered CERN in 2007; fascinated, she has continued to be passionate about this powerful international organization and its discoveries. She has collaborated several times in the organization of the *Cinéglorie* festival and directed short documentaries about CERN.

In recent years, she has directed the video sets of many shows, such as *Ivan the Terrible* (Grand Theater of Geneva, Beaulieu Theater), *Music for a Merchant* (performed in Geneva, Basel, Venice, Turin, Catania, Toronto), *Spiritual Délire* (performed in Switzerland and Mexico), *Dédoublement* (in 4 Swiss cantons, then Uruguay and Peru).

David Charles <https://www.mcroger.com>



David Charles has created this year a one man show represented 12 times in French-speaking Switzerland and 20 times at the Festival d'Avignon.

He was born on February 16, 1981 in Neuchâtel, Switzerland. In the early 90s, he began breakdancing and participated in several competitions on the international level. With his crew Deep Trip, he became the e Swiss champion from 2002 to 2005 and ranked third in the world championship. In 2003, he became a professional dancer for musicals "The Ten Commandments" in France and Italy and "Tabaluga & Peter Maffay" in Germany.

The following year, he created the band D-Verse City. He participated in , and won, the televised contest called "Mobilact Unsigned" on ProSieben. D-Verse City signed a contract with Universal Music and performed in various festivals throughout Switzerland. The band then released four singles and an album.

David Charles becomes one of the main actors and singers of the spot TV Coop in 2012. The title « J'aime » eaned him a golden award and the song remained number 1 in the charts for a week. In 2015, David Charles released his first solo album entitled "Rendez-vous". He played the role of the wolf during the musical tour "Monster High" in Germany in 2016. The same year, he released his first song in Italian entitled "Basta che si sta bene" and will be soloist in the show "Christmas Moment" in Germany. In 2017, he released an EP called «A contre-courant » with 4 songs and imagined a new funny and endearing character named MC Roger. On a delirium, he staged it in musical parodies, such as "Racler comme jamais" and "C'est l'apéro" and provoked a buzz on social networks.

Pierre Audétat

Pierre Audétat, born in 1968 in Lausanne, is a man with multiple talents. A pianist of live sampling in concert ("Silent Majority"), a jazz pianist playing with high-class instrumentalists such as Erik Truffaz, a club musician or a member with Christophe Calpini of the hit duo "Stade", he works with a lot of inventiveness. to the most diverse musical researches. Whether developing at IRCAM in Paris a graphic representation of the modes and scales or by mounting on his Odeta.TV channel humorous soundings illustrating videos of amateurs, Pierre Audétat is laureate of the 2018 Swiss Music Prize.



Taghi Akhbari

He played a leading role in the vocal ensemble conducted by Alexandre Traube, who recently delighted and impressed audiences at the Geneva Music Festival. (Article of the Tribune <https://m.tdg.ch/articles/5b2e0426ab5c375767000001>). Also one of the pillars of *Rose incandescente*, Taghi Akhbari is a traditional Persian singer and physicist.

He was introduced to the refinements of Persian singing at the age of 20 in Tehran, Iran. He dreamed of musical encounters between East and West. In 1980, he moved to France and discovered Western vocal technique, which he combined with his oriental sensitivity. Since his meeting with the Ensemble Douce Mémoire in 2007, programs were created mixing Baroque music with that of Iran. Since then, Taghi Akhbari has been working on different "modes" and musical traditions. His voice joined forces with the flamenco of Inès Bacan, made Bartabas horses rear and dance, shot with the dervishes staged by Robert Wilson, mingled with the rock accents of an album of the guitarist Noir Désir, wove his passionate technique with that of the Italian Renaissance or found unheard echoes in the Gregorian Beatus ensemble.



Mohammad Ghosheh

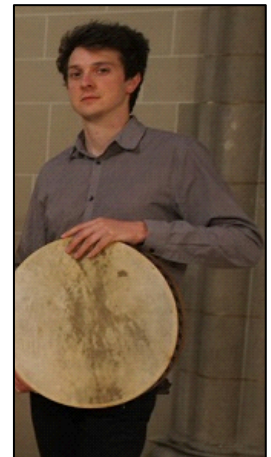
Violinist from Mazaj Ensemble, who has recently performed in Geneva with great public acclaim. Leading instrumentist in *Rose incandescente*. Trained at the Jerusalem Conservatory and the Geneva High School of Music. As comfortable in traditional and modal music as in classical and modern, western and oriental music.

Louis Poupelin, drummer

He works with Kenneth Weiss and Gabriel Garrido. His curiosity regularly drives him to explore new musical experiences, including jazz and African music. He also conveys his passion through teaching drums in various music schools.

Born in Paris in 1988, Louis Poupelin began percussion at CRR Cergy-Pontoise, in the class of Alain Huteau, then studied with teachers specialized in the work of orchestral music, such as François Desforges, Nicolas Martyniow, Emmanuel Curt, Frédéric Macarez and Eric Sammut.

He returned in 2012 to the HEM of Geneva in the class of Yves Brusteaux, Philippe Spiesser and Christophe Delanoy and obtained a Bachelor in 2015. It is in Geneva that he broadened his repertoire by learning Baroque music through various projects with the Old Music Center.



Marie-Najma Thomas, chanteuse

Light coloratura soprano. Although blind, she developed the exceptional gift of reading music and score only by the ear. She has a master's degree with honors in baroque singing at the HEM where she finishes a master's degree in harpsichord. The extraordinary qualities of her voice mixed with the very original technique of Taghi Akhbari were much admired at the Festival of Music in Geneva in June 2018, raising the standing ovation of spectators present..

Sites of the performance

The Globe of Science and Innovation, formerly Palais de l'Equilibre at Expo 2002, is located in the town of Meyrin and efficiently reached by line 18. This is an extraordinary place by its architecture , its permanent exhibitions and its geographical situation (in front of CERN). The upper hall can accommodate 250 spectators.

The **Théâtre de la Poudrière in Neuchâtel** has already hosted nearly half a thousand cultural events and more than 30,000 spectators. In almost twenty years, the industrial wasteland has become a performing theater with great visibility. It is also a high place of conviviality, which brings together spectators of one evening and festival-goers, friendships and passionate exchanges, where one lingers gladly after the performances.

The **Fêtes de la Musique of Geneva** provide the ample and prestigious space of the Central Hall, which is equipped with a large screen and projector.

In addition to this, les Atomes dansants (in collaboration with CERN) are organizing a live broadcast: at the Fêtes de la Musique of Neuchâtel, Fribourg, Lausanne, and other Swiss cities; on the internet, via a Youtube event (platform on which rapper David Charles has 25'000 subscribers and several million views).



The Association and the artists on social networks

Les Atomes dansants <https://www.atomesdansants.com>

Les Atomes dansants, page social <https://www.facebook.com/AtomesDansants/>

Sur Instagram <https://www.instagram.com/lesatomesdansants/>

Teaser de Rose incandescente,
dernière collaboration <https://www.youtube.com/watch?v=LBLNa3BCY6g>

Teaser de Rodolphe,
première collaboration du groupe https://www.youtube.com/watch?v=o_XCX7w2cD4

Alexandre Traube, compositeur

Site web www.alexandretraube.ch

page social <https://www.facebook.com/alexandre.traube>

videos <https://www.youtube.com/user/AlexandreTraube>

Silvia Fabiani, video-performer

site <https://www.silviafabiani.com>

page social <https://www.facebook.com/sfSilviaFabiani/>

Compte Instagram https://www.instagram.com/silvia_fabiani_artiste/

David Charles, rappeur

site <https://www.mcroger.com/>

page social <https://www.facebook.com/david.haeberli>

une video <https://www.youtube.com/watch?v=P1LXeJamrLk>

Pierre Audétat, musicien, compositeur, spécialiste musique électronique

site <http://pierreaudetat.com>

une video https://www.youtube.com/watch?v=Mr0-e9ti_Dc

Chiara Mariotti, prix Noether European Physical Society

https://www.eps.org/page/distinction_prize_en?fbclid=IwAR0yXpkAlHD2iDL0EXoZ5vEn_eeY_PSLYuQ3OigoEaiAe3zDn6rKUu-ls3o

Communication Strategy

The communication campaign is carried out by the communication service of The Globe of Science and Innovation, which in turn exploits CERN's powerful and prestigious communication channels:

- webpages,
- Instagram account,
- Facebook events (co-hosted by Atomes dansants social network page),
- diffusion to municipalities of Meyrin, Satigny, Dardagny, Vernier (CH), Thoiry, St-Genis-Pouilly, Ferney-Voltaire, Prévessin-Moëns, Gex, Sergy, Cessy
- posters.

Target audiences :

The association *Les Atomes dansants* welcomes both music lovers and the general public. The association is always looking to expand its audience.

- The general public
- Music enthusiasts
- The scientific community
- Rap lovers

	Audience: music	Audience: culture
Type	Contemporary music	Culture and art lovers who are eager for novelty
Age	Any age	20-55
Place of residence	Switzerland and regions of France near Geneva	Geneva, Meyrin, Neuchâtel, Fribourg, Lausanne, and regions of France near Geneva
Expectations	Novelty	Artistic quality of the proposed events
	Audience: dance (David Charles)	Audience: science
Type	Lovers of break dance and hip-hop	Students (young or university), trainees, enthusiasts, attendees of events like La Nuit des chercheurs or La nuit des musées.
Age	20-40	Any age
Place of residence	Geneva, Meyrin, Switzerland and regions of France near Geneva	Geneva, Meyrin, Neuchâtel, Fribourg, Lausanne, and regions of France near Geneva
Expectations	To discover a different side of David Charles' personality and abilities	To discover humorous and creative aspects of their own works

