

My full CV - [Here](#)

### France Jobin

[Podcast](#): FRANCE JOBIN: THE SONIC, THE ARCHITECTURE AND THE QUANTUM PHYSICS

My most extensive interview related to Quantum Physics.

### DISCOGRAPHY (selection related to science)

2024	Infinite Probabilities (Particle 2) <a href="#">Listen</a>	CD	ROOM40 (AUS)
2020	Death is perfection, everything else is relative <a href="#">Listen</a>	Vinyl	Editions Mego (AT)
2018	Intrication <a href="#">Listen</a>	CD	No-ware (CD-DE)
2016	Singulum <a href="#">Listen</a>	CD	LINE (USA)
2014	The illusion of infinitesimal <a href="#">Listen</a>	CD	Baskaru (FR)
	Quark - How Does The Invisible Sound <a href="#">Listen</a>	DIG	901 Editions (IT)
2012	Valence <a href="#">Listen</a>	CD	LINE (US)
2008	$10^{-33}$ cm <a href="#">Listen</a>	DIG	ROOM40 (AUS)

### PERFORMANCES (live)

2023	Entanglement Dome w Markus Heckmann	Zeiss Planetarium, Berlin -
2023	Entanglement Dome w Markus Heckmann	SAT - Montreal -
2023	Entanglement for Deep Space w Markus Heckmann	Ars Electronica - Deep Space -
2022	Entanglement AV w Markus Heckmann	Mutek JP edition 7, Tokyo, Japan -
2022	Entanglement AV w Markus Heckmann	Mutek MX edition 18, CDMX, Mexico -
2022	Entanglement AV w Markus Heckmann	Hellerau Hybrid Biennale, Dresden, Germany
2022	Entanglement AV w Markus Heckmann	Göteborg Sound Art Sounds 2022, Sweden
2021	Entanglement AV w Markus Heckmann	Mutek Edition 22, Montreal, Canada
2018	Intrication with Prifma <a href="#">View</a>	Mutek Buenos Aires (AR)
2015	4.35 - R0 - 413 Rennselaer polytechnique institute <a href="#">View</a>	EMPAC - Concert Hall, Troy, NY (USA) 24 speakers

Press releases (related to science)

## 2024

### Infinite Probabilities (Particle 2) CD Released on ROOM40 (AUS)

Quantum mechanics unfolds an intricate realm of limitless possibilities and probabilities, eluding easy definition. It paints a picture of the universe vastly different from our perceptible reality. What captivates me is the lens through which I perceive sound, akin to the principles of quantum physics—I don't merely hear the audible, but rather, I extract elements to construct novel auditory experiences.

My profound interest in science, particularly quantum mechanics, originates around 2008-2009 during a resurgence of enthusiasm for string theory, (10-33cm released on ROOM40) hinting at the prospect of a comprehensive theory of everything. The notion of existing within 11 dimensions, as opposed to our familiar four, held a mesmerizing allure.

Lacking a background in quantum mechanics intensified the challenge of my exploration, yet I stayed attuned to emerging theories, albeit at a surface level due to time constraints. The advent of the pandemic granted me the opportunity to immerse myself in the intricacies of quantum mechanics, with a particular focus on the bizarre phenomenon of quantum entanglement, which stands as one of the most enigmatic aspects of modern physics, alongside gravity.

Embarking on this intellectual journey presented a steep learning curve, leaving me in a state of bewilderment for the initial six months. Yet, amid the confusion, I gleaned a profound insight: the intrinsic nature of probabilities within quantum mechanics means that feeling adrift and perplexed isn't a hindrance but rather an advantage. It becomes a preparation for the myriad possibilities and uncertainties that define this captivating and eccentric realm.

Moving forward to 2021 brings me to the four sources of inspiration for the Entanglement project: the fluidity of time, the principle of entanglement, the Copenhagen interpretation and many worlds interpretation. Three iterations have been created so far with visual artist Markus Heckmann: Entanglement AV, Entanglement XR, Entanglement Dome and finally, a fourth one, a series of four albums entitled "Entangled quantum states".

Finally, I leave you with this quote : ""Bohm believed the reason subatomic particles are able to remain in contact with one another regardless of the distance separating them is not because they are sending some sort of mysterious signal back and forth, but because their separateness is an illusion."

## 2020

### Death is perfection, everything else is relative Vinyl Editions Mego (AT)

The last two years have seen me maintaining an association with an unusual bedfellow, death. The loss of Mika Vainio, as well as three members of my own family, has had a profound effect on me and spurred a lengthy reflection on life, death, and everything in between.

Parallely, while studying the philosophy of science, I came across shadow photons:

"Tangible photons are the ones we can see or detect with instruments whereas shadow photons are intangible (invisible) detectable only indirectly through the interference effects on the tangible photons.

There is no intrinsic difference between tangible and shadow photons: each photon is tangible in one universe and intangible in all the other parallel universes.

Shadow photons would go entirely unnoticed, were it not for this phenomenon and the strange pattern of shadows by which we observe it.

They travel at the speed of light, bounce off mirrors, are refracted by lenses, and are stopped by opaque barriers or filters of the wrong colour. Yet, they do not trigger even the most sensitive detectors. The only thing in the universe that a shadow photon can be observed to affect is the tangible photon that it accompanies. This is the phenomenon of interference.

Thus the existence of a seething, prodigiously complicated hidden world of shadow photons has been inferred."\*

I have drawn a parallel between shadow photons and death. The interference phenomena, parallel universes, and how shadow photons affect tangible photons they accompany, offer, in my opinion, similarities, an unknown universe which is death and how we, remaining tangible human beings, are affected. This quest has led me to be more willing to accept chaos in my life and to conclude that Death is perfection, everything else is relative.

\*The fabric of reality, David Deutsch, Penguin Press 1997.

## **2018**

Intrication CD No-ware (CD-DE)

No. welcomes Canadian France Jobin to the label.

The Montreal based artist will release her 9th album on No.. With her release entitled 'Intrication', she grapples with some truly cosmic concepts involving Quantum Entanglement (go on, Google it..) amongst other truly magical ideas which physics tend to invent these days.

Musically the release can be described as 'microsound ambient' but we think it's much larger than that. It is at once comprised of microscopic sonic particles yet combines that with the warmth we know and love from the 'Ambient' cosmos.

Whilst the sub atomic particles of noise bounce around your mind, the total work weaves a warm blanket of audio enjoyment on both the micro and macroscopic levels revealing a world at once both too tiny to comprehend and too large to grasp. Presented here as No. 916 for your scientific scrutiny.

## **2016**

Singulum      CD      LINE (USA)

Quantum physics inspires me to draw a parallel between the fundamental building blocs of physics, sounds and music. I put field recordings through a series of editing and manipulation processes which result in very different sounds from their origins. These manipulations affect time, timbre, harmonics and the essence of each sound, whereas composition influences how they relate to each other.

Singulum represents an unattainable goal, the process of decay while conserving a continuation of information.

**2014**The illusion of infinitesimal      CD      Baskaru (FR)

«The Illusion of Infinitesimal represents another chance to refine the unique essence of each sound and composition, in an effort to better communicate intent without influencing its unfolding, a delicate balance between perfection and detachment.

A parallel could be drawn from particles of matter, which, "as far as we know, are infinitesimal points of zero size, yet they have measurable amounts of angular momentum. Does the concept of rotation even make sense for a featureless speck? Angular momentum seems to be a more foundational concept than rotation itself. The angular momentum, or spin, of a single particle is restricted in strange ways. It can have only certain values, and not all values are allowed for all particles." (1)

Perfection and uncertainty.»

(1) Collage of quotes from Jim Pivarski, "Spin", Symmetry Magazine, March 2013.

**2014**Quark - How Does The Invisible Sound      DIG      901 Editions (IT)

"Art does not reproduce what is visible, it makes things visible" Paul Klee

Quark: How Does The Invisible Sound? is a media project born with the specific intent of exploring the possible inter-relationship between sound and the invisible, strictly related to science and physics. It relies on monthly digital releases and a MaxMSP custom software called Cconfin, inspired by elementary particles interactions and a physical phenomenon known as Colour Confinement.

The software allows the artists and musicians involved to seek and discover their own vision of the invisible through sound by treating and processing audio files via custom algorithms. Presented as a collection of digital graphic cards and heterogeneous sound art pieces, the research aims to find a deep connection as close as possible to the boundary of knowledge. An attempt at quantum sound in a not-visible yet perceptible world.

**2012**Valence      CD      LINE (US)

"Valence is inspired by both the valence bond (VB) and molecular orbital (MO) theories.

An atomic orbital is a mathematical function that describes the wave-like behavior of either one electron or a pair of electrons in an atom. This function can be used to calculate the probability of finding any electron of an atom in any specific region around the atom's nucleus. The term may also refer to the physical region defined by the function where the electron is likely to be. Often, my compositions start with a feeling or emotional state. There is a likelihood of finding a certain emotion in a piece, but it is not guaranteed, nor do I know exactly when or where I will find it. The act of looking for that emotion in of itself will distort it. Although one would think experimental music grants complete freedom, when composing, I feel constrained by both my mental state and the way in which I build the piece.

I find an unlikely parallel in quantum theory and composing. The electron that can exist on a different orbital plain can never have it's velocity measured or even its exact location known, due to the intimate connection between particles and waves in the wacky world of subatomic dimensions."

## **2009**

10<sup>-33</sup> cm      DIG      ROOM40 (AUS)

I8U's 10-33 cm is a audio work of varied proportion and calculated shape. Based on the ideas associated with String Theory, this latest offering from Canada's France Jobin is a compelling meditation on the nature of sound in time.

"10-33 cm is the theoretical size of the strings that makes up the universe." Jobin explains, "Resonance is the vibrational pattern, which determines what kind of particle the string is, and thus the type of particle is the movement of the string and the energy associated with this movement."

With 10-33 cm, Jobin creates a shimmering mirror that reflects on our somewhat limited understanding of these strings as they slip in and out of the dimensions we are aware of. More so, each of the pieces suggest a visionary 'vibration chart', that explores the possible resonances of these theoretic discourses. Through sound, I8U's explorations of String Theory are made almost tactile - a refined bridge between rhetoric and creation.

