

## France Jobin + Markus Heckmann

France Jobin and Markus Heckmann started working together in 2019 on their first DUO collaboration with sound artist Richard Chartier. DUO was presented at Mutek in 2019 and at the Prextce Festival in South Korea. In 2021, Markus and France collaborated on a new audiovisual project, Entanglement.

Entanglement is an artistic project at the crossroads of scientific research inspired by the concept and properties of quantum entanglement and quantum field theory. The sources of inspiration for France Jobin and Markus Heckmann are based on the two current dominant theories explaining quantum entanglement: the Copenhagen interpretation and the multiverse<sup>141</sup> (quantum decoherence). To these two theories are added the fluidity of time and the principle of quantum entanglements. The Entanglement performance, the XR and the dome versions are inspired by the same theories; an ambitious immersive experience presented as a world premiere during the 22nd edition of MUTEK.

Bios France Jobin p.11 and Markus Heckman p.13

To see DUO - [here](#)

To see Entanglement (except) - [here](#)

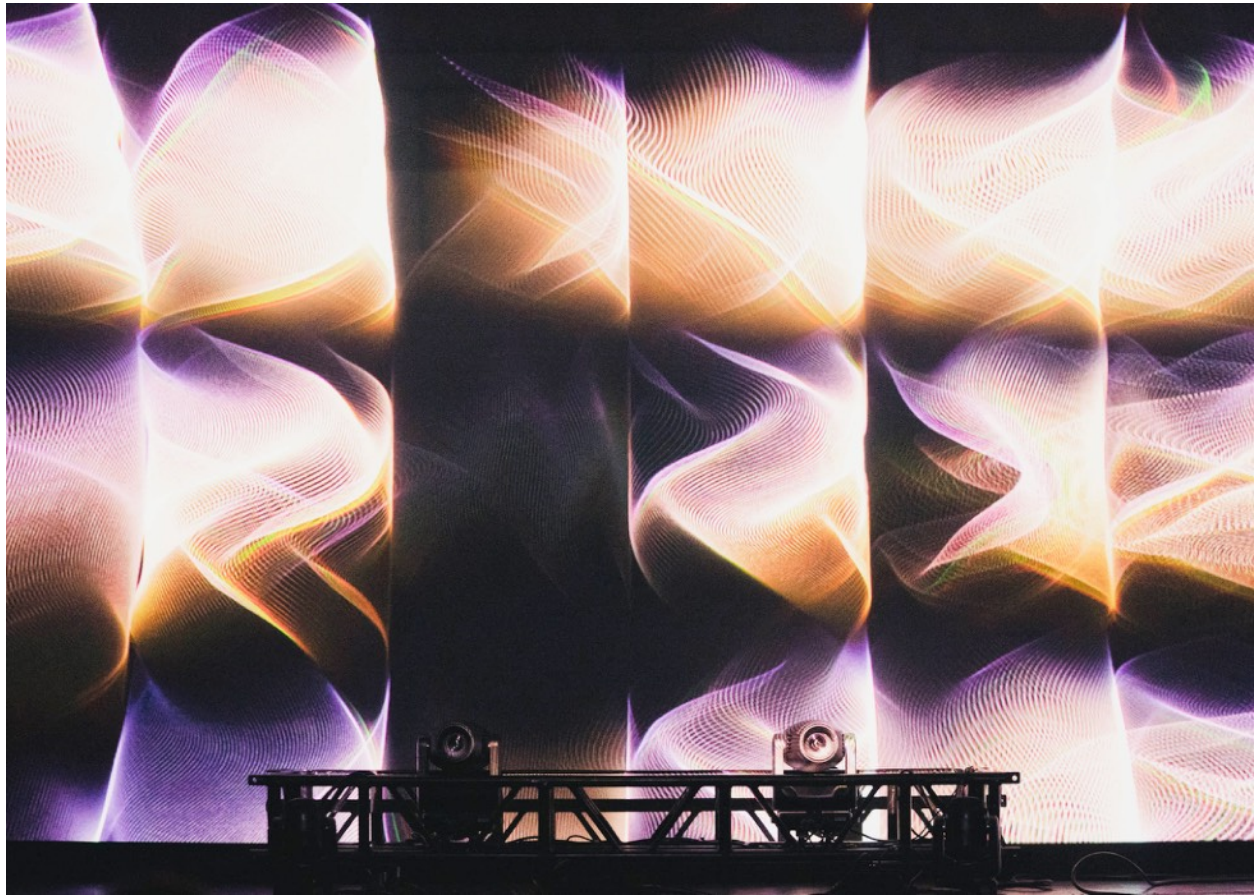
To see Entanglement XR- [here](#)

To note: Entanglement XR is an extended reality project - viewing the trailer does not convey the full immersive experience of the Oculus headset,

To see Entanglement dome (except) - [here](#)

### **Entanglement AV**

2023	New Now Festival, Essen, Germany	Entanglement A/V
2022	Mutek JP edition 7, Tokyo, Japan	Entanglement A/V
	Mutek MX edition 18, CDMX, Mexico	Entanglement A/V
	Hellerau Hybrid Biennale, Dresden, Germany	Entanglement A/V
	Göteborg Sound Art Sounds 2022, Sweden	Entanglement A/V
	INDEX-Biennale media arts - Braga	Entanglement A/V
	Mutek ES -Barcelona	Entanglement A/V
2021	Mutek Montreal Edition 22	Entanglement A/V



Entanglement - Photos by Bruno Destombes



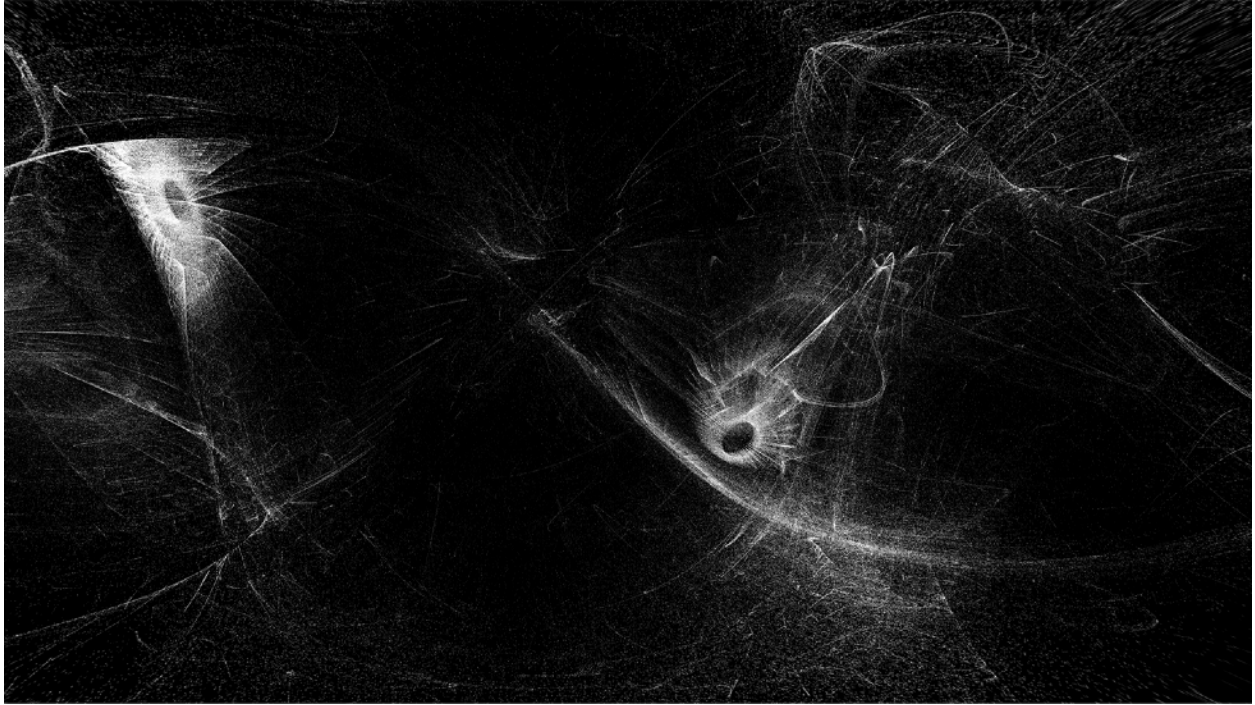


**Entanglement XR**

Comment from Mr Sebastián Duque Mesa - MSc in physics, on one of the photos of Entanglement XR I posted on IG , this is before I met him and we have been collaborating since.: *"If looking for a "feeling" of quantum, Entanglement XR is by far the best shot to picture it. Simply beautiful!"*

2024	QHack - Xanadu Toronto Quantum Hackathon	Entanglement XR
2023	Konttejnér festival	Entanglement XR
2023	Ars Electronica	Entanglement XR
2023	Sónar, Barcelona	Entanglement XR
2022	World Premiere - Mutek Montreal Esplanade Tranquille Aug 23-28.2022	Entanglement XR
	Mutek MX -	Entanglement XR
	Mutek JP -	Entanglement XR
	Beyond the Frame Festival- JP	Entanglement XR
	Immersive Tech Week - Rotterdam	Entanglement XR
	Magnetic Fields Festival, Inde	Entanglement XR





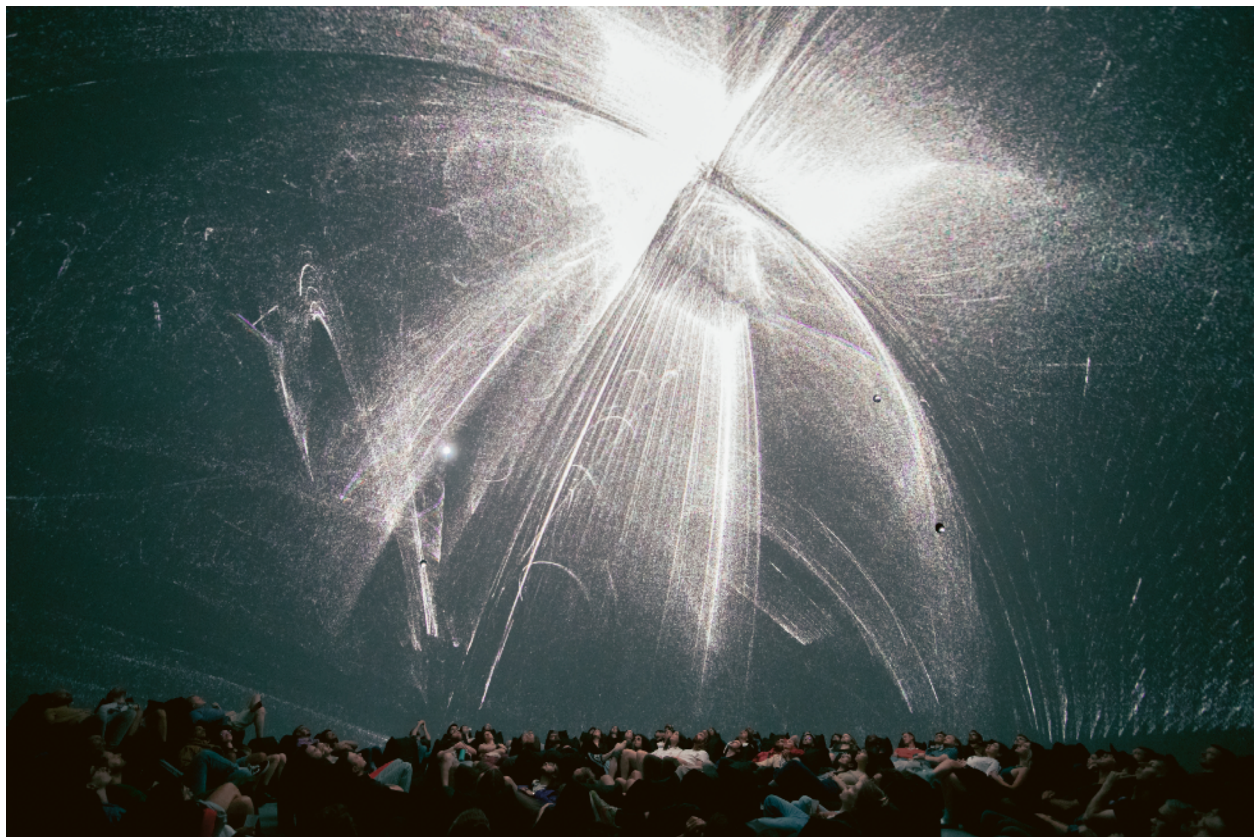
***Entanglement Dome***

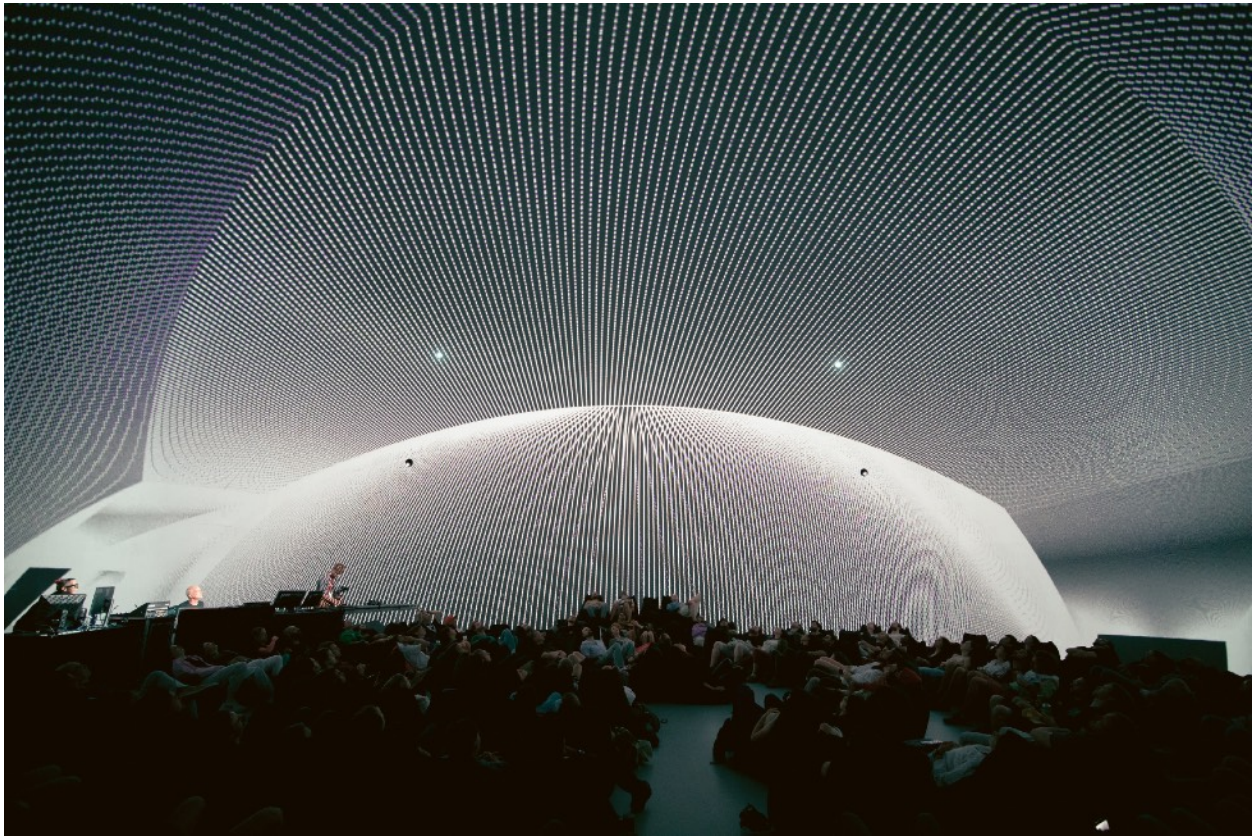
2023

Zeiss Planetarium, Berlin, Germany  
Mutek, Montreal,

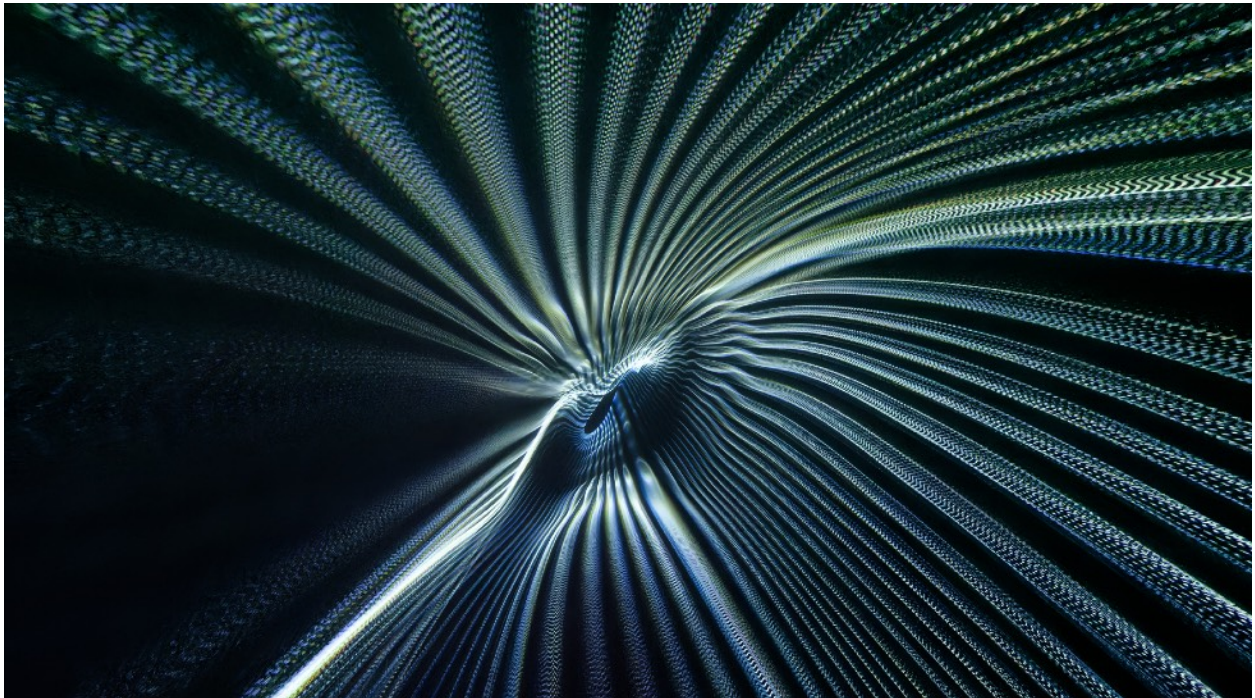
Entanglement Dome  
Entanglement Dome

Entanglement dome at SAT Montreal

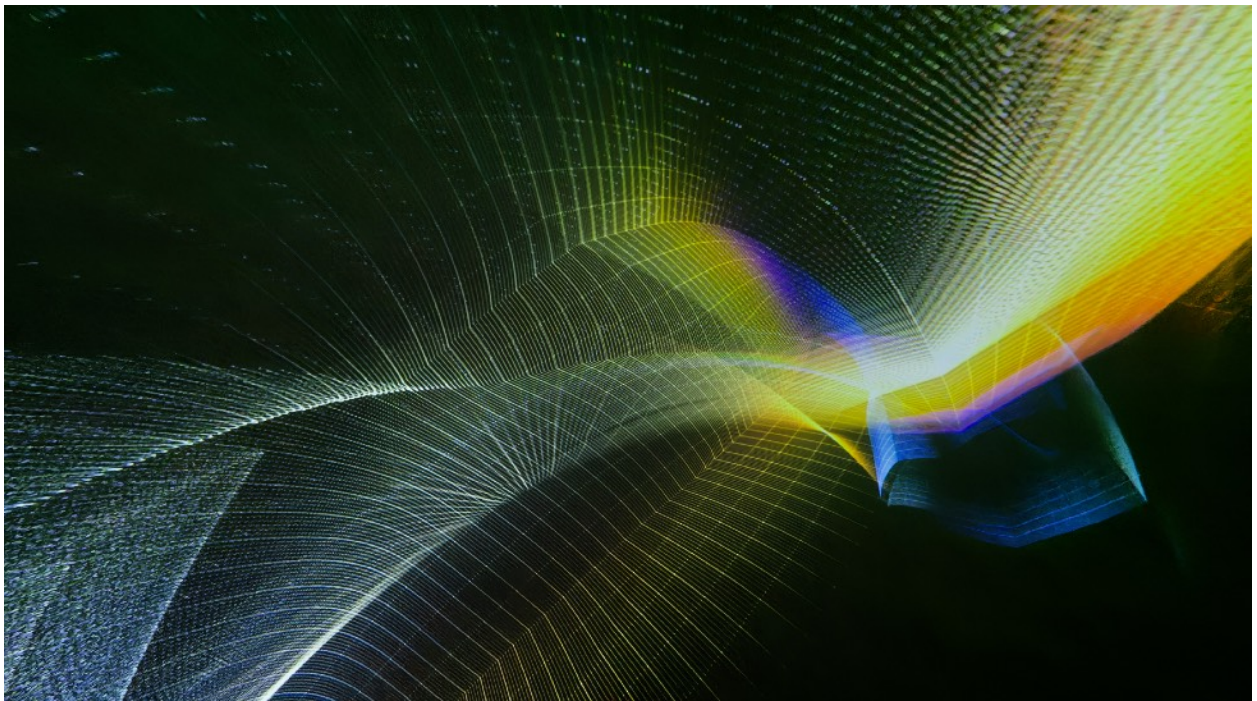
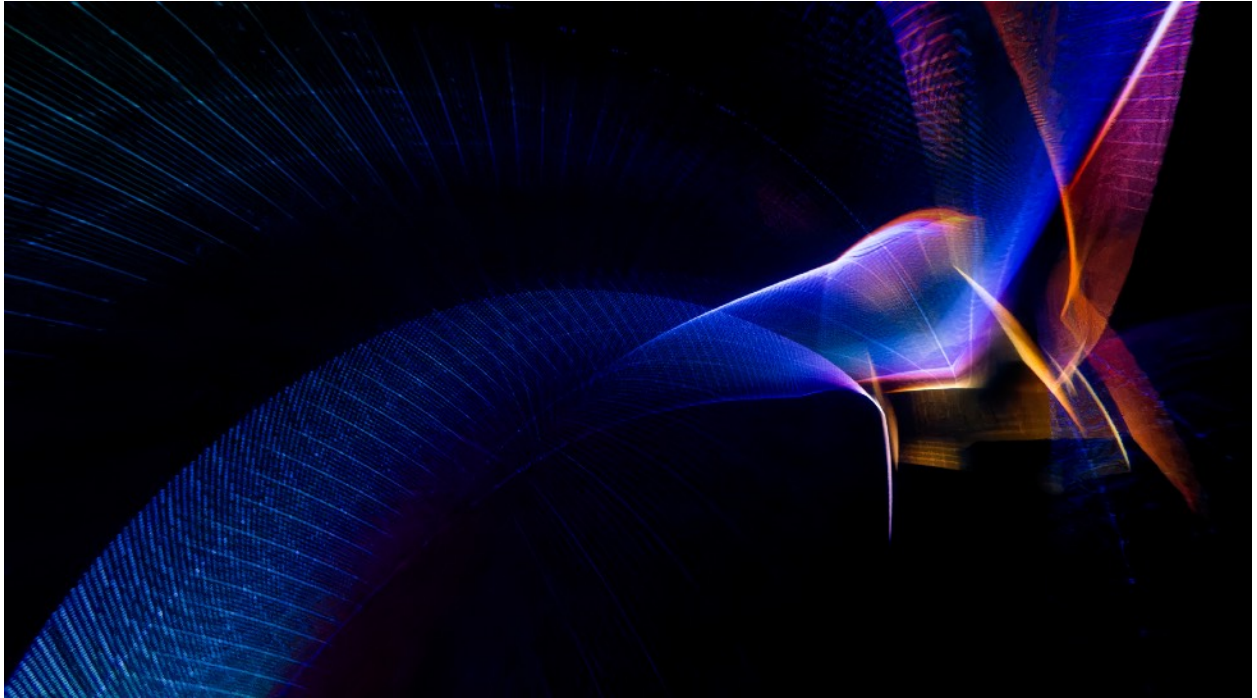




Entanglement Dome at the Zeiss Planetarium, Berlin - Photos by Udo Siegfried







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**BIOS:**

**France Jobin** is a sound / installation / artist, composer and curator residing in Montreal, Canada. Her audio art can be qualified as "sound-sculpture", revealing a minimalist approach to complex sound environments where analog and digital intersect. Her installations express a parallel path, incorporating both musical and visual elements inspired by the architecture of physical spaces. Her works can be "experienced" in a variety of unconventional spaces and new technology festivals across Canada, the United States, South America, South Africa, Europe, Australia, Japan and South Korea. Since 2009, her focus has been related to Quantum mechanics. Many of her projects are inspired by theories related to topics such as vacuum decay, string theory and more recently, what she feels to be the most perplexing phenomenon in the world of the quantum, entanglement resulting in a first presentation, *Entanglement A/V*, with visual artist Markus Heckmann, which delves into the realms of quantum physics premiered at Mutek Mtl 2021.

Jobin has created solo recordings for Editions Mego (AT), No-ware (CL-DE), Silent Records (USA), popmuzik records (JP), bake/staalplaat (NL), ROOM40 (AU), nvo (AT), DER (US), ATAK (JP), murmur records (JP), Baskaru (FR) and the prestigious LINE label (US). Jobin's sound art is also part of countless compilation albums, notably on the ATAK (JP), bremsstrahlung (US), Mutek (CA), murmur records (JP), and/oar (US), tsuku boshi (FR), everest records (CH), and Contour Editions (US) labels. She is also featured in the influential book and recording, *Extract, Portraits of Soundartists* (book + 2 cd), released on the nonvisualobjects label (AT). The collaborative album *ligne*, created with sound artist Tomas Phillips, was released on the ATAK label (JP) and her recent collaboration with acclaimed artist Richard Chartier, *DUO*, is released on the mAtter label in Japan.

Her latest project *Entanglement*, is related to quantum physics and the first iteration is *Entanglement AV*, an audio visual live performance created with visual artist Markus Heckmann. It was premiered at Mutek Montreal in August 2021. Since the premiere, they have presented it at Mutek ES in March 2022, at INDEX - Biennale of media arts in Braga Portugal, at GAS festival in Göteborg, Sweden, Mutek MX and Mutek JP. An XR version has also been created and has been touring worldwide since the launch of the Mutek Immersive Collection in August 2022. A third iteration - *Entanglement dome* - was presented at SAT Montreal and at the Zeiss planetarium in Berlin in 2023.

Her installations and screenings have been shown internationally at museums and festivals. Her work *P Orbital* released on LINE (Valence, LINE054) was presented in the context of *ESCUCHAS*, a first sound art exhibit for the Museum of Modern Art in Medellin, Colombia. *P Orbital* was also presented at *CONTEXT-ing / Listening as CONTEXT* at the Miami Art Fair in Florida, *Call & Response*, London Uk as well as at the *Haunted formalism* exhibit in LA curated by Volume. An invitation to the AIR Artist-In-Residence program in Krems, Austria enabled her to create *und transit*, a sound installation set in the MinoritenKirche cloister in Stein (AT) and *und transit.03* has been presented in the sound art exhibit "*Dock*" at the Ancien Palais de Justice in Liège, Belgium.

Her two collaborations with visual artist Cédric Eymenier (FR) have resulted in *EVENT HORIZON*, an audio/video piece, and *The Answer*, a movie, with the soundtrack by France Jobin and Stephan Mathieu. *EVENT HORIZON* was screened in Paris (2010), at the Venezuela Biennale in Merida state (2010) and was performed live at the Torrance Art Museum in Los Angeles (2010) and ISEA RUHR 2010 (DE). *The Answer* was screened at IAC, Villeurbanne, France in March - May 2016. In 2011, Jobin was one of five international artists selected to present her sound installation, *Entre-Deux*, in the new media exhibit Data/Fields, curated by Richard Chartier at Artisphere in the Washington, DC area, along with Ryoji Ikeda, Mark Fell, Caleb Coppock, and Andy Graydon. Her proposition received critical acclaim from the national press. *Entre-Deux* was presented at N38E13 in Palermo, Sicily (2017).

She premiered the audio visual performance of "*intrication*" at Mutek AR 2018 with the Argentinian visual duo prifma. Her audio visual collaboration: "*Mirror Neurons*" with sound artist Fabio Perletta (IT) and xx+xy visuals (IT) was screened as a world premiere at A x S / ak-sis / FESTIVAL 2014 | CURIOSITY as part of the Synergetica Screening in Los Angeles in September 2014. In October 2015, France was invited to take part in an artist residency at EMPAC (Troy, NY) which resulted in the creation of a new light sound work entitled 4.35 - R0 - 413, a collaboration with Alena Samoray, lighting designer.

Her sound installations, 'Inter/sperse' and 'Entre/temps' both premiered in Italy. 'Inter/sperse' is a site specific installation created in the context of an international residency organized by Museolaboratorio, LUX and farmacia901. It opened May 27 2017 at Museolaboratorio, Città Sant'Angelo Italy. 'Entre/temps' is a site specific installation commissioned by Enzo De Leonibus, artistic director of the EaRrEt-Mel festival which opened in Palena, Italy, June 4 2017.

She has also participated in numerous music and new technology festivals such as Mutek (Montreal, 2001, 2004 - 2009, 2014, 2017, 2019 AR 2018), Festival Novas Frequencies (Rio, Brazil, 2019) Prectxe (South Korea, 2019), Interference (Austin, 2019), Suoni Per Il Popolo (Montreal 2019), EM15 (Montreal 2014), EMPAC (US 2011, 2015), roBOT 8 (Italy 2015) Angelica Festival (Italy 2016), Portobeseno (Italy 2014), Interferenze - Liminaria (Italy 2014), Fluss Media Arts Festival (Italy 2014), FIMAV, SEND + RECEIVE (Winnipeg, 2003, 2005), Club Transmediale (Berlin, 2004), Shut up and Listen (Vienna, 2009), ISEA RUHR 2010 (Germany), the surface tension tour (Japan, 2012) and the Symétrie tour (Japan 2016).

"*immersound*" is a concert event/philosophy concept initiated by Jobin, which proposes the creation of a dedicated listening environment by focusing on the physical comfort of the audience within a specifically designed space. The premise of "*immersound*" is to seek out/explore new perceptions in and experiences of the listening process by pushing the notion of "immersion" to its possible limits. She created and produced "*immersound*" from 2011 to 2015 at Oboro in Montreal.

Jobin's work continues to evolve as technologies enable her to create new environments.

France Jobin is published by Touch Music/Fairwood Music UK Ltd

**Markus Heckmann** was born 1977 in Leipzig, GDR. He attended the University Ilmenau and Bauhaus University Weimar studying Media-technology. He left university in January 2006 to work as a Technical Director with Derivative, the makers of TouchDesigner, in Toronto, Canada.

Heckmann's inspiration to work with light-based media stems from the abundance of imagery in the club scene of the late 90s and early 2000s. Being exposed to the possibilities of generative and manipulative languages like director lingo, Heckmann started on the path of generative image creation and manipulation which to the day can be found in his professional and artistic works.

After a 9-month internship with Derivative and a 6-month journey through history as the video jockey for Canadian Rock legends RUSH, Heckmann switched Universities from Ilmenau to now attend Bauhaus Weimar and shape his experimental practice and previously gained experience under the direct influence of MX-Zehn's Stefan Kraus.

With Derivative offering a position as a Technical Director in early 2006, Heckmann embarked on the permanent resettlement to Toronto where he has since lived and worked. As part of Derivative, Heckmann works on commercial and artistic projects alike which span major theme park attractions to public video installations and the development of fully fledged control applications like WhiteVoid's KinetiCLights. Work on the winch and light control application culminated in a much-savoured project - GRID - for Christopher Bauder and Robert Henke at Lyons 2013s edition of Nuit Blanche. The work with Robert Henke can be seen exemplary for Derivative's relationship to some of the music industry's leading figures and the ongoing effort to serve this community well. Apart from project and development work, Heckmann is active promoting TouchDesigner and teaching its uses in the fields of art and technology to the interested public at festivals and conferences around the world.

In 2008 raster-noton and Derivative joined forces for a unique collaborative project which focused on the realization of the label artists' visual presentation during their audio-visual live shows on the basis of Derivative's TouchDesigner software. The work for Carsten Nicolai's univres eventually evolved into Heckmann working on 3 further large-scale multiscreen installations: unidisplay, unicolor and most recently unitape.

Heckmann's personal endeavours have always tended to combine the aesthetic aspects of generative computer graphics with the almost physical aspects of light. Feeling very comfortable in a club setting, he started performing as a vj under the moniker "Farbraum Lenkungs Aktiv" at parties in his hometown of Leipzig and continues this practise, while now less frequent, under the name "Wüstenarchitekten" in Toronto. A collaboration with electronic musician Matt Thibideau in 2014 resulted in "reclusion", an AV show presented at Mutek's AVisions series as well as at the inaugural "Day For Night 2015" Festival in Houston, Texas. A further A/V show with Matt and Mark Thibideau called "Timbre" was part of Mutek's 2017 program. For the 20<sup>th</sup> edition of Mutek in 2019, Heckmann accompanied France Jobin and Richard Chartier for the DUO AV performance which was subsequently also shown at the inaugural PRECTXE festival in Seoul 2019. Most recently Heckmann was invited by France Jobin to collaborate on her live performance "entanglement" revolving around the concept and properties of entanglement in quantum physics and quantum fields theory.

A collaboration with Olaf Bender saw the presentation of the A/V show "Pilot "at 2017s LEV Festival in Gijon. After a collaboration with Toronto based painter Rui Pimenta which was selected for the 2010 25fps Festival in Zagreb, a series of works in Pimenta' s Gallery as well as at Pimenta' s initiated Art Spin events had Heckmann explore the possibilities of installation based art. Aside from a collection of fake information visualizations and a singular experiment in interactivity the presented work more and more dealt and deals on the intersection of analog / physical objects or spaces and generated graphics or controlled light with a focus on the light and its presence in space.