

# CATALOGUE OF WORKS

STEPHANE DE GERANDO

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# **1. THE CATALOGS – STEPHANE DE GERANDO**

1.1 INSTRUMENTAL AND MIXED CATALOG

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1.3 PEDAGOGICAL CATALOG – CLASSIFIED BY CYCLE

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## 1.2 INSTRUMENTAL AND MIXED CATALOG

### Solo

- ***Lycromorphie I*** for piano (2013-2026)
- ***Chaotic Horizon 3***, version for solo double bass (2025)
- ***Morphilude PFS***, cycle version for flutes alone (2024)
  1. *Pic1-74* piccolo flute,
  2. *Traces in Ison* bass flute,
  3. *Chaotic Horizons C* flute,
  4. *Song of a Sign C* flute,
  5. *Enter II C* flute,
  6. *Travers 1 C* flute,
  7. *Arc H* bass flute,
  8. *Zero flute* bass flute,
  9. *Travers 2 C* flute,
  10. *Multiverse C* flute
  11. *Fibra II C* flute,
  12. *Contrepa II* bass flute or double bass,
  13. *Pic2-74* piccolo flute,
  14. *Travers 3 C* flute,
  15. *Let's leave traces of G* flute,
  16. *Eterno Ritorno* , C flute
- ***Forget***, version for solo piano, fragment of Terra incognita (2023)
- ***Chaotic Horizon 2*** version for solo guitar (also part of LDT) (2018)
- ***sixEXonePENsevenSIONfour*** for piccolo flute (2006)
- ***sixEXonePENsevenSIONfour - fragment 1*** (fast) for Bb clarinet (2006)
- ***sixEXonePENsevenSIONfour - fragment 4*** (fast) for bass clarinet (2006)
- ***sixEXonePENsevenSIONfour - fragment 7*** (fast) for double bass (2006)
- ***sixEXonePENsevenSIONfour - fragment 7*** (fast) for percussion (2006)
- ***sixEXonePENsevenSIONfour - fragment 7*** (fast) for trumpet (2006)
- ***From Meaning to Meaning*** for C flute (1994)
- ***Virtuality and awareness of emptiness*** for violin (fast) (1993)
- ***Virtuality and awareness of emptiness*** for cello (1993)
- ***Homage to Bach*** for Bb clarinet (1991)
- ***Metathesis*** for piano (1988)

### Solo with real-time electronics

- ***Chaotic Horizon 3***, for double bass and electronics (2026)
- ***Morphilude***, cycle for flutes, real-time electronics and fixed sounds (2024)
  1. *Chaotic Horizons II* , C flute and amplification
  2. *Song of a Sign*, fragment 2, C flute and amplification
  3. *Eterno Ritorno* , C flute and real-time algorithmic electronics
  4. *Song of a Sign*, fragment 1 , C flute and real-time algorithmic electronics
  5. Interlude 1, *Letter to MA* (fragment 1), fixed sounds
  6. *Arc H* , amplified bass flute
  7. *Interlude 2* , Theater of the Labyrinth, fixed sounds
  8. *Travers 1* , C flute
  9. *Let's make traces* , viola flute
  10. *Travers 2* , C flute
  11. *Travers 3* , C flute
  12. *Travers* , der uns selig macht, fixed sounds et bass flute
  13. *Zeroflute* , bass flute and real-time electronics
  14. *Entrails* , bass flute
  15. *Fibrane* , C flute and fixed sounds
  16. *Multiverse* , C flute amplified
  17. *Interlude 3* , Balle Istique, fixed sounds
  18. *Pic1-77* for piccolo flute superimposed on Interlude 4, Astrogrance, fixed sounds

19. *Contrepasse* , contrabass or bass flute and fixed sounds superimposed on Interlude 5, Lettre à MA fragment 2
  20. Interlude 6 *Desert hall* , fixed sounds, linked to Picc2-77, piccolo flute and superimposed on Interlude 7 Tremblement os qui perle, fixed sounds excerpt from LDT
  21. *Traces in Ison* , bass flute and real-time algorithmic electronics
- **Forget**, for piano, version with real-time electronics), fragment of Terra incognita (2023)
  - **Chaotic Horizon 2** , for guitar, real-time algorithm, real-time score and real-time electronics (also part of LDT) (2018)
  - **Chaotic Horizon 1** , for violin, real-time algorithm, real-time score and real-time electronics (also part of the cycle *Stellar wave* of the Labyrinth of Time), duration one to three minutes (2017)
  - **sixEXonePENsevenSIONfour for cello and electronics** (automated score-following Antescofo, MAX-MSP) (2015)
  - **Electrocors** for horn and real-time electronics (automated score-following Antescofo, MAX-MSP) (2015)
  - **sixEXonePENsevenSIONfour** - fragment 1 for piccolo flute and real-time electronics (MAX-MSP) (2006)
  - **sixEXonePENsevenSIONfour** for bass clarinet and real-time electronics (2006)

#### Solo with sound file

- **Punctus contra punctum**, fragment of Terra incognita, for piano and fixed sound (its shadow in ¼ tone) (2023)
- **M57** , 5-octave marimba amplified and quadraphonic sound file (also part of the *Stellar wave cycle* from *Labyrinth of Time* ), duration 3min07 (2017)
- **Floating Planet** , tuba and quadraphonic sound file (also part of the *Stellar Wave cycle* from *The Labyrinth of Time* ), duration 3min07 (2017)

#### 2 instruments

- **Punctus contra punctum** , version with two pianos (one tuned a ¼ tone apart) (2023)
- **sixEXonePENsevenSIONfour** for piccolo flute, bass clarinet (12 min maximum), fragment 7 (fast) / or fragments 1 and 7 (slow, fast) / or fragments 7, 4 (fast, fast) (2006)
- **sixEXonePENsevenSIONfour** for piccolo flute, double bass, fragment 7 (fast) /or fragments 1 and 7 (slow, fast) / or fragments 7, 4 (fast, fast) (2006)
- **sixEXonePENsevenSIONfour** for piccolo flute, trumpet (12 min maximum) (2006)
- **sixEXonePENsevenSIONfour** for piccolo flute, percussion (9 min maximum), fragment 7 (fast) / or fragments 1 and 7 (slow, fast) (2006)
- **sixEXonePENsevenSIONfour** for trumpet, percussion (9 min maximum), fragment 7 (fast) / or fragments 1 and 7 (slow, fast) (2006)
- **sixEXonePENsevenSIONfour** for double bass, percussion (12 min maximum), fragment 7 (fast) / or fragments 7 and 4 (slow, fast) (2006)

#### 2 instruments and electronics

- **sixEXonePENsevenSIONfour - fragments 6, 1, 7, 4 for piccolo flute, bass clarinet and sound file** (15 min maximum) (2006)
- **sixEXonePENsevenSIONfour - fragments 6, 1, 7, 4** for bass clarinet, keyboard (and computer), fragment 7 (fast) / or fragment 4 (slow, fast) / or fragments 7 and 4 (slow, fast) (15 min maximum) (2006)
- **sixEXonePENsevenSIONfour** for piccolo flute, keyboard (and computer), fragment 7 (fast) / or fragments 1 and 7 (slow, fast) (9 min maximum) (2006)
- **sixEXonePENsevenSIONfour** for trumpet, keyboard (and computer) fragment 7 (fast) / or fragments 1 and 7 (slow, fast) (9 min maximum) (2006)

#### 3 instruments

- **Lycromorphie II** , trio for piano, violin, cello (16 min) (2016-2023)
- **Virtuality and awareness of emptiness** , trio for violin, viola, cello, fragment 2 (trio) and/or fragment 1 (cello solo) (15 min) (1993)
- **sixEXonePENsevenSIONfour - fragments 6, 1, 7, 4** for piccolo flute, Bb and bass clarinet, percussion

- (15 min) (2006)
- *sixEXonePENsevenSIONfour - fragments 6, 1, 7, 4* for piccolo flute, double bass, percussion (15 min) (2006)
- *sixEXonePENsevenSIONfour for piccolo flute, trumpet, double bass* (15 min) (2006)

### 3 instruments with electronics

- *SixEXonePENsevenSIONfour - fragments 6, 1, 7, 4* for piccolo flute, clarinet (B-flat and bass), keyboard and computer
- *sixEXonePENsevenSIONfour - fragments 6, 1, 7* for piccolo flute, trumpet, percussion and computer
- *sixEXonePENsevenSIONfour - fragments 6, 1, 7* for piccolo flute, trumpet, keyboard and computer
- *sixEXonePENsevenSIONfour - fragments 7, 4* for double bass, percussion, keyboard and computer
- *sixEXonePENsevenSIONfour - fragments 7, 4* for double bass, percussion, keyboard and computer

### 4 instruments

- *Frapocalypse - fragments 1 and 2*, quartet for Bb clarinet, violin, cello and piano (7 min) (2016)
- *sixEXonePENsevenSIONfour - fragments 6, 1, 7, 4* for flute, trumpet, double bass, percussion (15 min) (2006)

### 4 instruments with electronics or sound file

- *Frapocalypse - fragments 1 and 2*, quartet for Bb clarinet, violin, cello and piano (7 min) (2016)
- *sixEXonePENsevenSIONfour - fragments 7, 4* for piccolo, double bass, keyboard and computer (2006)
- *sixEXonePENsevenSIONfour - fragments 6, 1, 7, 4* for piccolo, clarinet, percussion, keyboard and computer (2006)

### 5 instruments and electronics or sound file

- *Hyperson*, C trumpet (and bowl mute), 4 percussionists (2 large tam-tams, 3 low toms, one bass drum) and quadrasonic sound file (also part of the Stellar wave cycle from *Labyrinthe du temps*), duration 1 min 35 (2017)
- *sixEXonePENsevenSIONfour – fragments 6 1 7 4* for flute, trumpet, double bass, percussion, keyboard and real-time electronics (MAX-MSP) (15 min) (2006)

### 6 instruments

- *Music for church, sinner of love, Christ and me* for G flute, English horn, harp, vibraphone, clarinet in B, viola and hand reverberation (1991)

### 6 instruments with sound file

- *Granulaspac*, Bb trumpet, F horn, trombone, tuba and two percussionists and quadrasonic sound file (also part of the *Stellar wave cycle of Labyrinth of Time*), duration 5 min 51 (2017)
- *Ison*, low brass (2 horns, 2 trombones, euphonium, tuba), percussion (2 toms, bass drum and large tam) and quadrasonic sound file (also part of the *Stellar wave cycle of Labyrinthe du temps*), duration 1 m 34 (2017)

### 7 instruments

- *Things every corpse should know* for soprano, narrator, clarinet, trumpet, cello, percussion (amplification ad libitum depending on the context) (1996)

### 7 instruments with electronics or sound file

- *Strong interaction*, violin, trombone, Bb trumpet, euphonium, cello, piano, large tam and quadrasonic sound file (also part of the *Stellar wave cycle of Labyrinth of Time*)
- *Homometric attractors* n° 2 for real-time algorithm, dance, violin, viola, cello, double bass, flute, clarinet, saxophone and computer (2014)

### Orchestra and large ensemble

- *Katanga* for 15 brass and percussion instruments (2004)
- *Piece for string orchestra* (1996)
- *In you, with him, and in him* for 4 orchestral groups positioned around the audience (1992)

### Orchestra or large ensemble, with sound file / real-time electronics / video

- *Lycromorphie III*, for orchestra (2026)
- *The Wormhole Dance* , 4 groups of 3 percussionists, quadraphonic sound file (also part of the *Stellar Wave cycle* , cycle 9 of LDT), duration 7 min (2017)
- *From the kernel to the ash* , 2 Bb trumpets, 2 F horns, 2 trombones, tuba and euphonium, 5 percussionists (1/xylophone, triangle, 2/vibraphone, bass drum, struck cymbals, large cymbal on stand, 3/5 Chinese blocks, 4/snare drum, 2 bongos, 5/maracas, pedal timpani (low E -> B), large tam-tam and real-time electronics (also part of the *Stellar Wave cycle* by LDT) (2017)
- *Tempus is II for string orchestra and electronic bells* (5.1 sound file) (2016)
- *Tempus is I for a double wind orchestra and electronic bells* (5.1 sound file) (2016)
- *The Song of the STISMI* , for flute orchestra in C and real-time algorithmic electronics (MAX-MSP) (2015)
- *Remember* for children's choir and sound file 5.1 (in 16th tone) (2015)
- *Introit* for soprano, children's choir, orchestra, 5.1 sound and video file (2012)
- *The Ice Opera* for 2 solo sopranos, narrator, children's choir, 5.1 sound and video file (2011) (first version for three voices without soloist)
- *Intumescence* for orchestra (by one) and electroacoustic device (stereo sound file) (1997)
- *Since this is the case* for large orchestra and 8-track electroacoustic system (1990)

## 1.2 CATALOGUE - LABYRINTH OF TIME

Installation, performance, concerts, publications [...]: electroacoustic music, videos, virtual paintings, algorithmic installations, multidisciplinary installations, mapping, theatre and dance, major cycles

### Electroacoustic

High-definition 5.1 sound files

- *Crossroads* , algorithm of the *Labyrinth of Time* , electroacoustic work (long version and short version) (2025)
- *Falls* , electronic cycle, two sequences, Fall 1 and Fall 2, fixed sounds (2026)
- *Pleat* (The Smoothed Gate of Hell) (12 min 16 s) (2015)
- *The inferno gate* (20 min 24 s) (2014)
- *Labyrinthine Fragments* (long version: 3 min 55 s, short version: 49 s) (2014 - 2015)
- *Day of dead* (5 min 38 sec) (2013)
- *Timu* (Intumescence and Blue bird) (23 min 48) (2011)
- *Binaural 1* (slow) (5 min 33 s) (1999)
- *Binaural 2* (fast) (7 min) (1999)
- *Intumescence* (original stereo version: 9 min 45 s, short version: 2 min 42 s, fast ambisonic 5.1 version: 4 min) (1996)

### Electroacoustic - virtual meta-instrument

High-definition 5.1 sound file

- *Stop the war*, two movements, piano in 16th tones, meta-instrumental, fixed sounds (2026)
- *In memoriam*, meta-instrumental, fixed sounds (2026)
- *Fine-terre*, an electroacoustic meta-instrumental work in two movements (2023)
- *The Wormhole Dance* (5.1 sound file version) (spatialized percussion) (7 min) (2016)
- *A Day Will Come* (5.1 sound file version) (brass, harps and percussion) (5 min) (2016)
- *Cathétemps* (modified organ) (31 sec) (2015)
- *VoxNabuli* (voice) (2 min 58 s) (2014)
- *Spiralis or the madmen of the nave* (organ) (5 min 23 s) (2014)
- *Electropulse* (modified percussion) (1st version: 17 s, 2nd version: 3 min 11 s) (2013)
- *Pulse* (percussion) (1st version: 2 min 53 s, 2nd version: 3 min 10 s) (2013)

### Major cycle videos (screen or video projection)

"The major cycle videos" are still media created from the real-time recording of the main algorithm of the *Time Maze* , the one used for the production of the major cycles

- *Come Out from Within* , *Labyrinth of Time* , video and 5.1 sound (2025)
- *Cosmological love* (second version, July 2018) (first version, June 2018)

### Videos (combined) (screen or video projection)

- *Glopé* (26 s) (2015)
- *Memory entropic threshold* (5 min 44 s) (2015)
- *Théadula* (3 min 12 s) (2015)
- *Atomic space 1* (1st version: 16 min, 2nd version: 10 min) (2013)
- *Timu* (22 min) (2011)
- *Blue flash 2* (without sound) (short for Blue bird) (2nd version: 7 seconds) (2007-2015)
- *Blue flash 1* (with sound) (contraction of Blue bird) (2nd version: 41 s) (2007-2013)

### **Videos (original)** (screen or video projection)

- *The Labyrinth Theatre* (1st version: 8 min, 2nd version: 3 min 6 s) (2012-2015)
- *Video introit* (long version: 12 min) (2012)
- *The sphere circle* video version (1st version: 8 min, 2nd version: 3 min 6 s) (2012)
- *Binaural Fragment 2* (1st version: 6 min 12 sec, 2nd version: 1 min 50 sec) (2009)
- *Binaural Fragment 1* Space points (slow) (1st version: 6 min, second version: 6 min) (2009)
- *The Ice Opera* , video version (13 min 40 s) (2008)
- *Intumescence* (10 min) (2008)
- *Blue bird* (1st version: 13 min 42 s) (2007-2013)

### **Virtual paintings - still images** (screen or video projection)

- *The Book of the Labyrinth* , 71 paintings (2013)
- *Atomic space*, 7 paintings (2013)
- *Introit* , 8 tableaux (2012)
- *The Circle of the Sphere* , 5 paintings (2012)
- *Ice Opera*, 14 scenes (2008-11)
- *Intumescence* , 51 paintings (2008)
- *Self-portrait* , 1 painting (2007)
- *Totem* , 12 paintings (2007)
- *White interoir* , 6 paintings (2007)
- *Blue Bird* , 24 paintings (2007)

### **Algorithmic or mixed installation, real-time creation, from small-scale to large-scale**

- *Major cycle*, custom-made, mixed-media project possible with instruments, dance, video, theatre, real-time electronics

### **Real-time algorithmic visual and sonic installations (programs)**

- *Death of the Labyrinth*
- *Tropical fringes*
- *Granulaspeake*
- *LDT interaction 1*
- *The Hydra of the Labyrinth*
- *Infinity Passage*
- *The heart*
- *Will-o'-the-wisp*
- *Topos 1*
- *Veil - unveiled*
- *Collapse – suspension*
- *Traces in Ison*
- *Hyperspace*
- *Black lockdown*
- *7-pixel study*
- *The cube*
- *Homometric attractor 1*
- *Study of Platonic Objects*
- *Binaural - Fragments 2*
- *Binaural - Fragments 1*
- *CA - Creative algorithm*

### **Visual and/or sonic installation – LDT fixed supports controlled in real time by computer**

- *Fragmentation* (real-time control of all fixed media, videos, tables, texts)
- *Fixed* - slideshow of still images of the LDT (real-time control, no sound)

### **Real-time, multi-artistic installation, real-time score encompassing bodily, visual, musical, and electronic aspects.**

- *Maze completion*

### **Sound installation (controlled by LDT in real time – fixed support)**

- *Maze forest* (custom-made)

### **Creative, didactic and interactive digital pedagogical installations (LDT)**

- Didactic digital workshops
- Creative installation – augmented reality – remote gesture and facial control
- Installations, interactive games
- Real-time multi-artistic installation (for any instrument) – bodily, textual, musical, gestural, sonic and visual scores (algorithm of the LDT), real-time electronics

### **Monumental mapping**

- Custom-made for a specific location

### **Theater**

- *The theatre of the labyrinth. Typocrite of the sign*, labyrinthine book in permanent development, 3icar IcarEditions (since 2010).

### ***Maze Runner* book (screen, video surveillance, print or digital publication)**

- *The book of the Labyrinth of Time*, an art book with computer-generated images taken from the Labyrinth and poetic texts, 3icar IcarEditions, a new version reissued with each creation of the Labyrinth since 2010.

### ***Maze Runner* Manifesto**

- *The manifesto of the Labyrinth of time*, text translated into six languages, 3icar IcarEditions (2017)

### **Examples of LDT major cycles**

#### **Variable-size forces with dance, theater, video, music, electronics...**

- [04062017] *Cycle 10*, large screen video projection, dance, violin ad libitum, real-time algorithm, spatialized quadrasonic sound around the audience (indefinite duration with possibility of installation, 9pm-11:30pm performance) (2017)
- [18042017] *Stellar wave*, cycle 9, brass, percussion and quadrasonic sound files, spatialization around the audience - version 2 with video and real-time algorithm, approx. 50 min and indefinite duration if installed) (2017)
- [08042017] *Installation - Fragmentation*, cycle 8, fully computer-controlled installation, video projection, spatialized quadrasonic sound around the audience (indefinite duration) (2017)
- [5122015] *Meaning in the strange passage*, cycle 7 of the *Labyrinth of Time* for video projection, actors, contemporary dancers, percussion, horns, spatialized quadrasonic sound around the audience and real-time electronics, computer (30 min) (2015)
- [8112015] *The Strange Passage of the Senses*, cycle 6 of *The Labyrinth of Time* for video projection, 5.1 sound projection, theatre, contemporary dance, percussion, 5.1 sound, cello and real-time electronics,

- 2 horns and real-time electronics, computer (40 min) (2015)
- [04122014] *The Doors of the Labyrinth* , cycle 4 of *The Labyrinth of Time* , for actor, video projection and computer (2014)
  - [28112013] *Metal lit from my skull* , cycle 3 of the *Labyrinth of Time* for dancers, soprano, video actor, 5.1 sound and computer (2013)
  - [06122012] *The Circle of Sphere* , cycle 2 of *The Labyrinth of Time* for actor, video, 5.1 sound (approx. 8 min) (2012)
  - [16122011] *Timu* , cycle 1 of *The Labyrinth of Time* for video, soprano, actor/dancer, 5.1 sound (22 min) (2011)

## 1.3 TEACHING CATALOGUE CLASSIFIED BY CYCLE

Instrumental pieces with or without digital device

- **Children's choir, soloists and quadraphonic sound file**
  - *The Ice Opera* for 2 sopranos, narrator, children's choir, 5.1 sound and video file (2011)
- **Children's choir and quadraphonic sound file**
  - *Remember* for children's choir and quadraphonic sound file in 16th tone (2015)
- **1st cycle, horn and real-time electronics (automated score-following with Antescofo)**
  - *Electrocors* for horn and real-time electronics (Antescofo, MAX-MSP) (2015)
- **First cycle, flute ensemble and real-time electronics**
  - *The Song of the STISMI* for flute orchestra in C and real-time algorithmic electronics (MAX-MSP) (2015)
- **First cycle, flute ensemble and real-time electronics**
  - *Remember* for children's choir and sound file 5.1 (in 16th tone) (2015)
- **1st and 2nd cycle, brass, percussion and quadraphonic sound**
  - *Ison* , low brass (2 horns, 2 trombones, euphonium, tuba), percussion (2 toms, bass drum and large tam) and quadraphonic sound file (also part of the cycle *Stellar wave* , by LDT), duration 1 m 34 (2017)
- **Second cycle, violin and real-time electronics**
  - *Chaotic horizon* , real-time algorithm, real-time score, violin and real-time electronics (also part of the *Stellar wave cycle of Labyrinth of Time* ), duration one to three minutes (2017)
- **End of 2nd or 3rd cycle, chamber music and quadraphonic sound file**
  - *Strong interaction* , violin, trombone, Bb trumpet, euphonium, cello, piano, large tam and quadraphonic sound file (also part of the *Stellar wave cycle of Labyrinth of Time* ), duration 2min40 (2017)
  - *Floating Planet* , tuba and quadraphonic sound file (also part of the *Stellar Wave cycle* from The *Labyrinth of Time* ), duration 3min07 (2017)
- **2nd and 3rd cycle, percussion and quadraphonic sound file**
  - *The Wormhole Dance* , 4 groups of 3 percussionists and quadraphonic sound file (also part of the *Stellar Wave cycle* from The *Labyrinth of Time* ), duration 7 min (2017)
- **3rd cycle, trumpet, percussion and sound file**
  - *Hyperson* , C trumpet (and bowl mute), 4 percussionists (2 large tam-tams, 3 low toms, one bass drum) and quadraphonic sound file (also part of the *Stellar wave cycle* from *Labyrinthe du temps* ), duration 1 min 35 (2017)
- **3rd cycle, percussion and sound file quadraphonic or stereo**
  - *M57* , 5-octave marimba amplified and quadraphonic sound file (also part of the *Stellar wave cycle* from *Labyrinth of Time* ), duration 3 min 07 (2017)
- **3rd cycle chamber music**
  - *Frapocalypse* - fragments 1 and 2 quartet for Bb clarinet, violin, cello and piano (7 min) (2016)
- **3rd cycle, string orchestra and quadraphonic or stereo sound file**
  - *Tempus est II* for string orchestra and electronic bells (quadraphonic sound file) (2016)
- **3rd cycle, wind orchestra and quadraphonic sound file**
  - *Tempus is I* for a double wind orchestra and electronic bells (5.1 sound file) (2016)
- **3rd cycle, symphony orchestra, children's choir, soloists and quadraphonic sound file**
  - *Introit* for soprano, children's choir, orchestra, quadraphonic sound file and video (2012)
- **Music, dance, theater departments (cycles 1 to 3, poly-artistic and technological practices – with video, real time, etc.)**
  - The major cycles of the *Labyrinth of Time*

## 1.5 CHRONOLOGICAL CATALOGUE

1. *Lychromorphie III* , for orchestra (2026)
2. *Chaotic Horizons III* , double bass and electronics ad libitum (2026)
3. *Falls, electronic cycle, two sequences, Fall 1 and Fall 2*, fixed sounds (2026)
4. *Stop the war, two sequences* , piano in 16th tones, meta-instrumental, fixed sounds (2026)
5. *In memoriam*, meta-instrumental, fixed sounds (2026)
6. *Come Out from Within* , *Labyrinth of Time* , video and 5.1 sound (2025)
7. *Crossroads* , algorithm of the *Labyrinth of Time* , electroacoustic work (long version and short version) (2025)
8. *Morphilude* , cycle for flutes, real-time electronics and fixed sounds (2024)
9. *Morphilude* PFS, cycle for flutes alone (2024)
10. *Fine-terre*, an electroacoustic meta-instrumental work (2023)
11. *Punctus contra punctum* , fragment of Terra incognita, for piano and its shadow in  $\frac{1}{4}$  tone (several versions possible) (2023)
12. *Forget* , for piano (version possible with real-time electronics), fragment of Terra incognita (2023)
13. *Lycromorphie II* , for violin, cello piano (2022)
14. *Series of labyrinthine landscapes (3)*, *LDT Corridor*, real-time image and sound installation, LDT (2021)
15. *Series of labyrinthine landscapes (2)*, *Death of labyrinth*, real-time image and sound installation, LDT (2020)
16. *Entropic fringes*, real-time image and sound installation, LDT (2020)
17. *Black confinement*, real-time image and sound installation, LDT (2020)
18. *Study at pixels 7*, interactive real-time image and sound installation, LDT (2020)
19. *Granulaspeaker*, interactive real-time installation, LDT (2020)
20. *Completion*, for instrumental ensemble of variable size, real-time bodily and musical scores, real-time electronics, video and computer (2019)
21. *LDT interaction 1* , augmented reality, interactive real-time installation, LDT (2018)
22. *Chaotic Horizon 2* , for guitar, real-time algorithm, real-time score and real-time electronics, LDT (2018)
23. *The Hydra of the Labyrinth* , real-time image and sound installation, LDT (2018)
24. *Series of labyrinthine landscapes (1)*, *Infinity Passage* , interactive real-time image and sound installation, LDT (2018)
25. *The heart* , real-time image and sound installation, LDT (2018)
26. *Feut* , interactive real-time image and sound installation, LDT (2018)
27. *Topos 1* , interactive real-time visual installation, LDT (2018)
28. *Sailing* , real-time visual installation, LDT (2018)
29. *Collapse – suspension* , interactive real-time image and sound installation, LDT (2018)
30. *Traces in Ison* , interactive real-time image and sound installation, LDT (2018)
31. *Cosmological love* , video, LDT (2018)
32. [04062017] *Cycle 10* , large screen video projection, dance, violin ad libitum, real-time algorithm, quadraphonic sound, LDT (2017)
33. [18042017] *Stellar wave* , cycle 9, brass, percussion and quadraphonic sound files with video and real-time algorithm, LDT (2017)
34. [08042017] *Installation - Fragmentation* , cycle 8, installation, computer, video projection, quadraphonic sound, LDT (2017)
35. *Chaotic horizon 1* , for violin, real-time algorithm, real-time score and real-time electronics, LDT (2017)
36. *M57* , 5-octave marimba amplified and sound file quadraphonic, LDT (2017)
37. *Floating Planet* , tuba and quadraphonic sound file, LDT (2017)
38. *Granulaspacer* , Bb trumpet, F horn, trombone, tuba and two percussionists and sound file quadraphonic, LDT (2017)
39. *Ison* , low brass (2 horns, 2 trombones, euphonium, tuba), percussion and quadraphonic sound file, LDT (2017)
40. *The Wormhole Dance* , 4 groups of 3 percussionists, quadraphonic sound file, LDT (2017)
41. *Hyperson* , C trumpet, 4 percussionists and quadraphonic sound file, LDT (2017)
42. *Strong interaction* , violin, trombone, Bb trumpet, euphonium, cello, piano, large tam and quadraphonic sound file, LDT (2017)
43. *From Kernel to Ash* , 2 Bb trumpets, 2 F horns, 2 trombones, tuba and euphonium, 5 percussionists, LDT (2017)
44. *Frapocalypse* - fragments 1 and 2 quartet for Bb clarinet, violin, cello and piano (2016)

45. *Lycromorphie* II, trio for piano, violin, cello (2016)
46. *Tempus is* II for string orchestra and electronic bells (2016)
47. *Tempus is* I for a double wind orchestra and electronic bells (2016)
48. *The Wormhole Dance* , 5.1 sound file, LDT (2016)
49. *A day will come* , 5.1 sound file, LDT (2016)
50. *Frapocalypse* - fragments 1 and 2 quartet for Bb clarinet, violin, cello and piano (2016)
51. [5122015] *Meaning in the strange passage* , cycle 7 for video projection, actors, contemporary dancers, percussion, horns, quadraphonic sound and real-time electronics, computer, LDT (2015)
52. [8112015] *The strange passage of the senses* , cycle 6 for video projection, 5.1 sound projection, theatre, contemporary dance, percussion, 5.1 sound, cello and real-time electronics, 2 horns and real-time electronics, computer, LDT (2015)
53. *Plisse* , electroacoustic, LDT (2015)
54. *Labyrinthine fragments* , electroacoustic, LDT (2015)
55. *Cathétemps* , 5.1 sound file, LDT (2015)
56. *The Song of the STISMI* for flute orchestra in C and real-time algorithmic electronics (2015)
57. *Remember* for children's choir and sound file 5.1 (in 16th tone) (2015)
58. *sixEXonePENsevenSIONfour* for cello and electronics (automated score-following), LDT (2015)
59. *Electrocors* for horn and real-time electronics (automated score-following), LDT (2015)
60. *Glopé*, video, LDT (2015)
61. *Memory entropic threshold* , video, LDT (2015)
62. *Théadula* , video, LDT (2015)
63. *The Labyrinth Theatre* , video, LDT (2012-2015)
64. [04122014] *The Doors of the Labyrinth* , cycle 4 of the Labyrinth of Time, for actor, video projection and computer, LDT (2014)
65. *Homometric attractors* no 2 for real-time algorithm, dance, violin, viola, cello, double bass, flute, clarinet, saxophone and computer (2014)
66. *Homometric attractors* no 1 , real-time image and sound installation, LDT (2014)
67. *Study of Platonic Objects* , interactive real-time image and sound installation (2014)
68. *Le porte dell'inferno* , electroacoustic, LDT (2014)
69. *VoxNabuli* , 5.1 sound file, LDT (2014)
70. *Spiralis or the madmen of the ship* , 5.1 sound file (2014)
71. [28112013] *Metal lit from my skull* , cycle 3 for dancers, soprano, actor, video, 5.1 sound and computer, LDT (2013)
72. *Pulse* , 5.1 sound file, LDT (2013)
73. *Electropulse* , 5.1 sound file, LDT (2013)
74. *Lycromorphie* for piano (2013)
75. *Day of dead* , electroacoustic (2013)
76. *Atomic space 1*, video, LDT (2013)
77. *Blue Flash 1* , video, LDT (2007-2013)
78. *Blue bird*, video, LDT (2007-2013)
79. *The Book of the Labyrinth* , 71 digital paintings, LDT (2013)
80. *Atomic space* , 7 digital paintings, LDT (2013)
81. [06122012] *The Circle of Sphere* , cycle 2 of The Labyrinth of Time for actor, video, 5.1 sound, LDT (2012)
82. *Introit* for soprano, children's choir, orchestra, 5.1 sound and video file, LDT (2012)
83. *Introit* , video, LDT (2012)
84. *The circle of the sphere* , video, LDT (2012)
85. *Introit* , 8 digital paintings, LDT (2012)
86. *The Circle of the Sphere* , 5 digital paintings, LDT (2012)
87. [16122011] *Timu* , cycle 1 of the Labyrinth of Time for video, soprano, actor, dancer, 5.1 sound, LDT (2011)
88. *The Ice Opera* for 2 sopranos, narrator, children's choir, 5.1 sound and video file (2011)
89. *Timu* , electroacoustic, LDT (2011)
90. *Timu* , video, LDT (2011)
91. *Ice Opera* , 14 digital paintings, LDT (2008-11)
92. *Binaural Fragment 2* , video, LDT (2009)
93. *Binaural Fragment 1* , video, LDT (2009)
94. *The Ice Opera* , video, LDT (2008)
95. *Intumescence* , video, LDT (2008)
96. *Intumescence* , 51 digital paintings, LDT (2008)
97. *Self-portrait* , 1 digital painting, LDT (2007)

98. *Totem* , 12 digital paintings, LDT (2007)
99. *White interior* , 6 digital paintings, LDT (2007)
100. *Blue bird* , 24 digital paintings, LDT (2007)
101. *CA - Creative algorithm* , real-time image and sound installation (2007)
102. *sixEXonePENsevenSIONfour* – fragments 6 1 7 4 for flute, trumpet, double bass, percussion, keyboard and real-time electronics (2006)
103. *sixEXonePENsevenSIONfour* - fragments 7, 4 for piccolo, double bass, keyboard and computer (2006)
104. *sixEXonePENsevenSIONfour* - fragments 6, 1, 7, 4 for piccolo, clarinet, percussion, keyboard and computer (2006)
105. *sixEXonePENsevenSIONfour* - fragments 6, 1, 7, 4 for flute, trumpet, double bass, percussion (2006)
106. *sixEXonePENsevenSIONfour* - fragments 6, 1, 7, 4 for piccolo flute, clarinet (Bb and bass), keyboard and computer (2006)
107. *sixEXonePENsevenSIONfour* - fragments 6, 1, 7 for piccolo flute, trumpet, percussion and computer (2006)
108. *sixEXonePENsevenSIONfour* - fragments 6, 1, 7 for piccolo flute, trumpet, keyboard and computer (2006)
109. *sixEXonePENsevenSIONfour* - fragments 7, 4 for double bass, percussion, keyboard and computer (2006)
110. *sixEXonePENsevenSIONfour* - fragments 7, 4 for double bass, percussion, keyboard and computer (2006)
111. *sixEXonePENsevenSIONfour* - fragments 6, 1, 7, 4 for piccolo flute, Bb and bass clarinet, percussion (2006)
112. *sixEXonePENsevenSIONfour* - fragments 6, 1, 7, 4 for piccolo flute, double bass, percussion (15 min) (2006)
113. *sixEXonePENsevenSIONfour* for piccolo flute, trumpet, double bass (2006)
114. *sixEXonePENsevenSIONfour* - fragments 6, 1, 7, 4 for piccolo flute, bass clarinet and sound file (2006)
115. *sixEXonePENsevenSIONfour* - fragments 6, 1, 7, 4 for bass clarinet, keyboard (and computer), fragment 7 / or fragment 4 / or fragment 7 and 4 (2006)
116. *sixEXonePENsevenSIONfour* for piccolo flute, keyboard (and computer), fragment 7 / or fragments 1 and 7 (2006)
117. *sixEXonePENsevenSIONfour* for trumpet, keyboard (and computer) fragment 7 / or fragments 1 and 7 (2006)
118. *sixEXonePENsevenSIONfour* for piccolo flute, bass clarinet), fragment 7 / or fragments 1 and 7 / or fragments 7, 4 (2006)
119. *sixEXonePENsevenSIONfour* for piccolo flute, double bass, fragment 7 / or fragments 1 and 7 / or fragments 7, 4 (2006)
120. *sixEXonePENsevenSIONfour* for piccolo flute, trumpet (2006)
121. *sixEXonePENsevenSIONfour* for piccolo flute, percussion, fragment 7 / or fragments 1 and 7 (2006)
122. *sixEXonePENsevenSIONfour* for trumpet, percussion, fragment 7 / or fragments 1 and 7 (2006)
123. *sixEXonePENsevenSIONfour* for double bass, percussion, fragment 7 / or fragments 7 and 4 (2006)
124. *sixEXonePENsevenSIONfour* for piccolo flute (2006)
125. *sixEXonePENsevenSIONfour* - fragment 1 for Bb clarinet (2006)
126. *sixEXonePENsevenSIONfour* - fragment 4 for bass clarinet (2006)
127. *sixEXonePENsevenSIONfour* - fragment 7 for double bass (2006)
128. *sixEXonePENsevenSIONfour* – fragment 7 for percussion (2006)
129. *sixEXonePENsevenSIONfour* - fragment 7 for trumpet (2006)
130. *sixEXonePENsevenSIONfour* - fragment 1 for piccolo flute and real-time electronics (2006)
131. *sixEXonePENsevenSIONfour* for bass clarinet and real-time electronics (2006)
132. *Katanga* for 15 brass and percussion instruments (2004)
133. *Binaural 1* , electroacoustic, LDT (1999)
134. *Binaural 2* , electroacoustic, LDT (1999)
135. *Intumescence* for orchestra (by one) and electroacoustic device (1997)
136. *Intumescence* , electroacoustic, LDT (1996)
137. *Piece for string orchestra* (1996)
138. *What every corpse should know* for soprano, narrator, clarinet, trumpet, cello, percussion (1996)
139. *From Meaning to Meaning* for C flute (1994)
140. *Virtuality and awareness of emptiness* , trio for violin, viola, cello, fragment 2 (trio) and/or fragment 1 (cello solo) (1993)
141. *Virtuality and awareness of emptiness* for violin (1993)
142. *Virtuality and awareness of emptiness* for cello (1993)
143. *In you, with him and in him* for 4 orchestral groups spatialized around the audience (1992)

144. *Homage to Bach* for clarinet in B minor (1991)
145. *Music for church, sinner of love, Christ and me* for G flute, English horn, harp, vibraphone, clarinet in B, viola and hand reverberation (1991)
146. *Since this is the case* for large orchestra and 8-track electroacoustic system (1990)
147. *Metathesis* for piano (1988)

## **2. ADDITIONAL INFORMATION – LABYRINTH OF TIME**

- FOUNGING TEXTS OF THE LABYRINTH OF TIME AND LINKS
- DETAILED EXAMPLE OF A LABYRINTH OF TIME INSTALLATION
- SERIES OF READINGS ON THE LABYRINTH OF TIME

## 2.1 FOUNDING TEXTS OF THE LABYRINTH OF TIME AND LINKS

### GENERAL INTRODUCTION TO THE LABYRINTH OF TIME

- Short presentation and budgetary aspects

[http://www.degerando.com/wafx\\_res/Files/1.1%20GERANDO%20LDT%20Courte%20présentation%20et%20aspects%20budgétaires.pdf](http://www.degerando.com/wafx_res/Files/1.1%20GERANDO%20LDT%20Courte%20présentation%20et%20aspects%20budgétaires.pdf)

- General presentation and creation examples (100 pages)

[http://www.degerando.com/wafx\\_res/Files/1.2%20GERANDO%20LDT%20Présentation%20générale%20et%20exemples%20de%20création%20%28100%20pages%29.pdf](http://www.degerando.com/wafx_res/Files/1.2%20GERANDO%20LDT%20Présentation%20générale%20et%20exemples%20de%20création%20%28100%20pages%29.pdf)

- Manifesto of the Labyrinth (in six languages)

[http://www.degerando.com/wafx\\_res/Files/1.3%20GERANDO%20Manifeste%20du%20Labyrinthe%2019avril20171.pdf](http://www.degerando.com/wafx_res/Files/1.3%20GERANDO%20Manifeste%20du%20Labyrinthe%2019avril20171.pdf)

### HOW TO CREATE YOUR LABYRINTH AND ORDERING PROCESS

- Creating your Labyrinth (2023)

[http://www.degerando.com/wafx\\_res/Files/2.1%20GERANDO%20LDT%20Créer%20son%20Labyrinthe.pdf](http://www.degerando.com/wafx_res/Files/2.1%20GERANDO%20LDT%20Créer%20son%20Labyrinthe.pdf)

- Pre-order form (2016)

[http://www.degerando.com/wafx\\_res/Files/2.2%20GERANDO%20LDT%20Formulaire%20de%20pré-commande%2016mai2016.pdf](http://www.degerando.com/wafx_res/Files/2.2%20GERANDO%20LDT%20Formulaire%20de%20pré-commande%2016mai2016.pdf)

### MAPPING

- Example of monumental mapping IRAN (100 pages)

[http://www.degerando.com/wafx\\_res/Files/3%20GERANDO%20LDT%20Exemple%20de%20mapping%20monumental%20IRAN.pdf](http://www.degerando.com/wafx_res/Files/3%20GERANDO%20LDT%20Exemple%20de%20mapping%20monumental%20IRAN.pdf)

### DISK

- LDT discographic release, example of the Verticale Mémoire booklet (ACEL label)

[http://www.degerando.com/wafx\\_res/Files/4%20GERANDO%20LDT%20Sortie%20discographique%20du%20LDT%20exemple%20du%20livret%20de%20Verticale%20Mémoire.pdf](http://www.degerando.com/wafx_res/Files/4%20GERANDO%20LDT%20Sortie%20discographique%20du%20LDT%20exemple%20du%20livret%20de%20Verticale%20Mémoire.pdf)

### VIRTUAL REALITY (VR)

- Virtual Reality (VR) ZERO POINT, Press Release

[http://www.degerando.com/wafx\\_res/Files/5.1%20GERANDO%20LDT%20Réalité%20virtuelle%20%28VR%29%20ZÉRO%20POINT%20Communiqué%20de%20presse%20.pdf](http://www.degerando.com/wafx_res/Files/5.1%20GERANDO%20LDT%20Réalité%20virtuelle%20%28VR%29%20ZÉRO%20POINT%20Communiqué%20de%20presse%20.pdf)

- ZERO POINT Virtual Reality: User Guide and Presentation

[http://www.degerando.com/wafx\\_res/Files/5.2%20GERANDO%20LDT%20Réalité%20virtuelle%20Zero%20point%20Mode%20d%27emploi%20et%20Présentation.pdf](http://www.degerando.com/wafx_res/Files/5.2%20GERANDO%20LDT%20Réalité%20virtuelle%20Zero%20point%20Mode%20d%27emploi%20et%20Présentation.pdf)

### POLY-ARTISTIC PRACTICES DANCE, THEATER, MUSIC, TECHNOLOGY OF THE LDT

- Rules for interpreting dance, theatre, and music in The Labyrinth of Time

[http://www.degerando.com/wafx\\_res/Files/6%20GERANDO%20LDT%20Règles%20d%27interprétation%20dane%20théâtre%20musique%20du%20Labyrinthe%20du%20temps.pdf](http://www.degerando.com/wafx_res/Files/6%20GERANDO%20LDT%20Règles%20d%27interprétation%20dane%20théâtre%20musique%20du%20Labyrinthe%20du%20temps.pdf)

### THEATER AND POETIC TEXTS OF THE LDT

- Typocrite of the sign, text collection

[http://www.degerando.com/wafx\\_res/Files/7.1%20GERANDO%20LDT%20Typocrite%20du%20signe%20recueil%20de%20texte%20du%20LDT%2027aout2023.pdf](http://www.degerando.com/wafx_res/Files/7.1%20GERANDO%20LDT%20Typocrite%20du%20signe%20recueil%20de%20texte%20du%20LDT%2027aout2023.pdf)

- Poem Cycle 11

[http://www.degerando.com/wafx\\_res/Files/7.2%20GERANDO%20LDT%20Poème%20Cycle%2011.pdf](http://www.degerando.com/wafx_res/Files/7.2%20GERANDO%20LDT%20Poème%20Cycle%2011.pdf)

### INTERACTIVE REAL-TIME EDUCATIONAL FACILITIES

- Pedagogical installation, Radio-France 2023 example

[http://www.degerando.com/wafx\\_res/Files/8.1%20GERANDO%20LDT%20Installation%20pédagogique%20exemple%20Radio-France%202023.pdf](http://www.degerando.com/wafx_res/Files/8.1%20GERANDO%20LDT%20Installation%20pédagogique%20exemple%20Radio-France%202023.pdf)

- Pedagogical installations, general presentation

[http://www.degerando.com/wafx\\_res/Files/8.2%20GERANDO%20LDT%20Installation%20pédagogique%20présentation%20générale.pdf](http://www.degerando.com/wafx_res/Files/8.2%20GERANDO%20LDT%20Installation%20pédagogique%20présentation%20générale.pdf)

- Examples of interactive play installations

[http://www.degerando.com/wafx\\_res/Files/8.3%20GERANDO%20LDT%20Exemples%20d%27installations%20ludiques%20avec%20interaction.pdf](http://www.degerando.com/wafx_res/Files/8.3%20GERANDO%20LDT%20Exemples%20d%27installations%20ludiques%20avec%20interaction.pdf)

## EXAMPLES OF REAL-TIME VIRTUAL INSTALLATIONS

- Examples of real-time virtual installations (tables controllable by the audience, etc.)  
[http://www.degerando.com/wafx\\_res/Files/9%20GERANDO%20LDT%20Exemples%20d%27installations%20virtuelles%20temps%20récl.pdf](http://www.degerando.com/wafx_res/Files/9%20GERANDO%20LDT%20Exemples%20d%27installations%20virtuelles%20temps%20récl.pdf)

## RESEARCH

- Research space (list of publications with new research perspectives)  
[http://www.degerando.com/wafx\\_res/Files/10%20GERANDO%20LDT%20Espace%20recherche.pdf](http://www.degerando.com/wafx_res/Files/10%20GERANDO%20LDT%20Espace%20recherche.pdf)
- Introduction to the LDT  
[http://www.degerando.com/wafx\\_res/Files/10.2%20GERANDO%20Introduction%20au%20Labyrinthe%20du%20temps%20%282013%29.pdf](http://www.degerando.com/wafx_res/Files/10.2%20GERANDO%20Introduction%20au%20Labyrinthe%20du%20temps%20%282013%29.pdf)
- New poly-artistic practices  
[http://www.degerando.com/wafx\\_res/Files/2%20Gérando%20Pratique%20polyartistique%20LDT.pdf](http://www.degerando.com/wafx_res/Files/2%20Gérando%20Pratique%20polyartistique%20LDT.pdf)
- Sound virtuality and writing: towards an algorithmic creation of timbre  
[http://www.degerando.com/wafx\\_res/Files/10.4%20GERANDO%20Virtualité%20du%20son%20et%20écriture%20musicale%20.pdf](http://www.degerando.com/wafx_res/Files/10.4%20GERANDO%20Virtualité%20du%20son%20et%20écriture%20musicale%20.pdf)
- CA Creative algorithm  
[http://www.degerando.com/wafx\\_res/Files/10.4%20GERANDO%20LDT%20CA.pdf](http://www.degerando.com/wafx_res/Files/10.4%20GERANDO%20LDT%20CA.pdf)
- Homometric sets (micro-interval combinatorics)  
[http://www.degerando.com/wafx\\_res/Files/10.6%20GERANDO%20Ensembles%20homométriques.pdf](http://www.degerando.com/wafx_res/Files/10.6%20GERANDO%20Ensembles%20homométriques.pdf)
- Algorithmic invention of material (combinatorics and computing)  
[http://www.degerando.com/wafx\\_res/Files/4%20Gérando%20Louis%20Bigo.pdf](http://www.degerando.com/wafx_res/Files/4%20Gérando%20Louis%20Bigo.pdf)
- Fiber optic space  
[http://www.degerando.com/wafx\\_res/Files/10.8%20GERANDO%20Espace%20fibré.pdf](http://www.degerando.com/wafx_res/Files/10.8%20GERANDO%20Espace%20fibré.pdf)
- Relativistic artistic laws  
[http://www.degerando.com/wafx\\_res/Files/10.9%20GERANDO%20Cinq%20lois%20artistiques%20relativistes.pdf](http://www.degerando.com/wafx_res/Files/10.9%20GERANDO%20Cinq%20lois%20artistiques%20relativistes.pdf)
- Hypersphere of spectra  
[http://www.degerando.com/wafx\\_res/Files/10.10%20GERANDO%20Baroin%20Hypersphère%20des%20spectres%201.pdf](http://www.degerando.com/wafx_res/Files/10.10%20GERANDO%20Baroin%20Hypersphère%20des%20spectres%201.pdf)
- Reading: LDT or the power of questioning  
[http://www.degerando.com/wafx\\_res/Files/10.11%20GERANDO%20Conférence%20Le%20LDT%20ou%20la%20force%20du%20questionnement.pdf](http://www.degerando.com/wafx_res/Files/10.11%20GERANDO%20Conférence%20Le%20LDT%20ou%20la%20force%20du%20questionnement.pdf)
- Reading: LDT time space memory  
[http://www.degerando.com/wafx\\_res/Files/10.12%20GERANDO%20Conférence%20Temps%20espace%20mémoire%2014%20octobre%202022.pdf](http://www.degerando.com/wafx_res/Files/10.12%20GERANDO%20Conférence%20Temps%20espace%20mémoire%2014%20octobre%202022.pdf)

## EXAMPLES OF PUBLICATIONS

- Example of a book from the Labyrinth series  
[http://www.degerando.com/wafx\\_res/Files/11%20GERANDO%20Livre%20du%20LDT%20version%202016.pdf](http://www.degerando.com/wafx_res/Files/11%20GERANDO%20Livre%20du%20LDT%20version%202016.pdf)

## FLYER

- Labyrinth of Time flyer (2 pages)  
[http://www.degerando.com/wafx\\_res/Files/13%20GERANDO%20LDT%20Flyer%20A4%20Labyrinthe%20du%20temps.pdf](http://www.degerando.com/wafx_res/Files/13%20GERANDO%20LDT%20Flyer%20A4%20Labyrinthe%20du%20temps.pdf)

## EXAMPLES OF WRITTEN PROJECTS

- Radio-France
- CNSMDP
- Soulages Museum
- Tehran Museum of Modern Art
- The large Belfort underground (historic building)
- French Institutes in Morocco
- French Institute Argentina
- Collège des Bernardins (Paris)

## VIDEO LINKS ON THE INTERNET TO DISCOVER THE LDT

- Teaser

<https://youtu.be/6L6JAPqM4Xo?si=JPxFyRmKleaOLyr>

- Virtual reality, ZERO POINT (360° video)

[https://youtu.be/R6XVwkDYe-A?si=48fRCGUKZDP81t\\_K](https://youtu.be/R6XVwkDYe-A?si=48fRCGUKZDP81t_K)

- Virtual reality, installation (360° video)

[https://youtu.be/OMy6Uq7\\_x40?si=j-v9EFMPxCSV3LQq](https://youtu.be/OMy6Uq7_x40?si=j-v9EFMPxCSV3LQq)

- France Musique announcement: 10 hours of algorithmic installation, "Fine-terre 2023"

<https://youtu.be/sOhE5vmfinc?si=w9hrRa6sovlnrye>

- CD Verticale Mémoire, ACEL label 2022

<https://youtu.be/SmBKfXlsbdU?si=9ss70CCuemdAH99l>

- Monumental international mapping, Azadi Tower

<https://youtu.be/SmBKfXlsbdU?si=9ss70CCuemdAH99l>

## VR HEADSET – DEMONSTRATION AVAILABLE

### Fixed

1. Black: Black\_1ereSim-7k\_360.mp4
2. Geode: Geo 7k 360.mp4
3. North: North-6k-360.mp4
4. Red: Red-7k-360.mp4 (or Red-6k-360.mp4)
5. Zero point: Space 7k mono 64Mbs 360.mp4 (or Space 6kmono 50Mbs 360.mp4)

### Route (360)

1. Park-7k sound -360.mp4 (or Park-6k ST err 360.mp4, sPark-6k sound -360.mp4)

### Route.Flat

2. Park Flat-4K sound.mp4 (or Park Flat-8k.mp4)

### ShowRoom7K\_59\_360

3. ShowRoom7K\_59\_360.mp4

## 2.2 DETAILED EXAMPLE OF A LABYRINTH INSTALLATION

From the smallest form (for example a video projection) to a large-scale installation over an extended duration, with varied installations, labyrinthine routes, event planning, educational spaces, LDT concerts, an auditorium-style projection room, monumental mapping, interactive installations, the spectacular creation of a major LDT cycle, etc...

Define :

- the equipment that would be available, number of screens (digital kiosks), computer(s), sound system,
- a trajectory within the installation site,
- A first idea for a program for the public: planning events over the duration of the installation according to the twenty or so possibilities (see in this example below "sharing" of screens).

### *LDT Electroacoustics*

#### *Maze forest*

For example, in the vicinity outside the "building", we enter the *Labyrinth* of Time (LDT) without entering it, a discreet sonic shadow of the LDT that comes to us without imposing itself, like a discovery of what has always been.

*Technical note:*

*Simple to set up, a few outdoor PA speakers discreetly fixed to the ground or elsewhere in front of the "building", manual triggering of a CD or via a computer (and LDT program).*

### *LDT REAL-TIME INTERACTIVE PROJECTION*

#### *Entropic fringe*

Floor projection of a playful real-time algorithmic painting of the LDT, with the possibility of interactive control by the audience via tablet, iPhone...

These floor paintings come from the satellites of the LDT, like fringes of space-time creating their own spaces in real time, placed in a topological and multidimensional abyss.

*Technical Note:*

*Installation is very simple after a standard check.*

*The projector (Epson Laser EB-L30000U) can be placed at the top of the building or in a tower to the side (outdoors).*

*Control is very simple via a laptop or iMac and Wi-Fi network for interactive audience interaction (scan a QR code to access the control interface on your phone). Triggering can be automated or manual.*

### *LDT STILL IMAGES*

*(Screen 1)*

#### *Fixed*

##### *Slideshow controlled by LDT programs*

Like stopped and silent flashes of memory, present or absent memories of the thousands of images of the entire *Labyrinth*, these paintings offer a unique reading of the work, a counterpoint to four rhythmic voices distributed algorithmically in real time between still images, poetic texts of the *Labyrinth*, choreographic postures and the LDT Manifesto translated into six languages.

*Technical note (immediate installation):*

*A 27-inch screen computer, iMac type*

*or laptop with a 4K TV screen (with wireless network capability)*

*or video projection onto a wall or screen, screen at face height (standing audience)*

*Original LDT control interface (software provided is very easy to use)*

## LDT VIDEOS

(Screen 2)

### *Fragmentation*

*5.1 surround sound system and spectacular cinematic-style visuals*

*Large screen, comfortable seating for the audience (e.g., auditorium)*

*Computer-controlled installation in real time*

Memory intersects, intertwines, and diverges: over 90 minutes of videos from the Labyrinth, *Fragmentation* is a journey through a symphony of forms, sounds, and colors, a slow memorization process for the audience and a high-speed fragmentation, alternating between combined videos and silent tableaux bordering on stillness (playing on the differential thresholds of perception). The installation is controlled by an algorithm so that the sequence of videos remains unpredictable for the audience, creating different trajectories within the *Labyrinth*.

*Technical note (immediate installation):*

*Simple technical installation and automatic operation, "one-click" start*

*Video projection onto a wall or screen / or large 4K TV screen*

*Latest generation computer such as an iMac (Apple) with at least 16 MB of RAM*

*LDT control interface (software provided)*

*Sound card and 5.1 sound system (minimum 4 speakers around the audience)*

*Comfortable seating for the public*

## LDT REAL-TIME ALGORITHMIC TABLETS (1)

(Screen 3 or screen sharing 3)

### *The heart - algorithmic table 1*

Automatic or at the audience's choice.

The words of the *Labyrinth*, at the heart of a rotating translucent cube, resonate to the rhythm of an ever-changing score created in real time and played by a crotale in quarter tones. These melodies, devoid of repeated pitches or intervals, are applied in real time, inversely symmetrically to the nuances and rhythms, all combined with the infrasonic tremor of the heart, its size coupled with the intensity of the bass. The crotale's sound echoes from prehistory and the Bronze Age to ancient Greece and Egypt, Tibetan, Chinese, and African cultures, creating a meditative, spiritual soundscape akin to a ritual.

### *The Hydra of the Labyrinth - Algorithmic Table 2*

The *hydra* escapes from a center by following a visual and sound trajectory calculated mathematically according to "Bernoulli's lemniscate", a figure-eight curve symbolizing infinity and traversing space according to a process of iteration, creating tableaux, unique and erased moments.

### *Infinity passage - algorithmic table 3*

The sound algorithm draws on ideas of auditory illusions, and more specifically the Shepard-Risset glissando, playing on the ambiguity between pitch and spectral quality. The real-time imagery is taken from other videos of *The Maze of Time (Fragmentation)*: thanks to a combination of matrices and unpredictable 3D movement patterns, you enter the heart of the *Maze images*, a new labyrinthine experience that is nonetheless quite familiar!

### *Veils unveiled - algorithmic table 4*

The first series of *Labyrinthine Topos*, *Topos 1*, is inspired by a trefoil clover modeled by a mathematical formula, silent like a dance... In a duet, a counterpoint to the movement of this clover is displayed a creation of surfaces using a mathematical model called NURBS (Non-Uniform Rational B-Spline). These arbitrary and unpredictable forms evoke the face of a "Sail – unveiled".

### *Topos 2 - Algorithmic Table 5*

A visual and sonic algorithmic space, spiraling, starry, colorful, with continuous, interlocking deformations...

### *Corridor - algorithmic table 6*

"LDT Corridor" is a fully automated real-time creation, a sensation of extreme speed in a corridor made of moving cubes (under development in 2021).

### *Materials for these six paintings (immediate installation)*

*A 27-inch iMac computer - minimum i7 processor, 32 MB RAM*

*(with, depending on the context, a large 4K TV screen or video projection onto a wall or screen, preferably quadrasonic sound system, but stereo, headphones, or network sound are also possible)*

*(Screen 4 or screen sharing 3)*

*Death in the Labyrinth – an infinite algorithmic landscape*

One of the last satellites of the LDT, *The Death of the Maze* is a dynamic landscape that invents itself in real time, creating constantly renewed synthetic images and sounds towards what has always been – “the same and the different”.

*Equipment (immediate installation)*

*A 27-inch iMac computer - minimum i7 processor, 32 MB RAM*

*(with, depending on the context, a large 4K TV screen or video projection onto a wall or screen, preferably quadraphonic sound system, but stereo, headphones, or network sound are also possible)*

## **LDT REAL-TIME PARTITION: BODILY, TEXTUAL, VISUAL, MUSICAL, ELECTRONIC LDT**

*(Screen(s) 5 or screen 4 depending on previous sharing)*

*Labyrinthine Completion:*

Real-time polyartistic score, participatory installation by the public (musicians of all types and levels, with real-time electronics)

A virtual score that is at once visual (images of the Labyrinth), musical - electronic, corporeal and textual is invented in real time and displayed continuously on one or more computers (3 maximum).

Participatory and multi-artistic, this installation is animated by the public (bring any type of instrument) including dancers and actors - amateur or professional.

A sound is transmuted "in the moment" into body movement, image, declaimed text...: it is a writing of completion, prehistory of a new labyrinthine dimension.

*Material*

*Maximum 1 to 3 networked computers (e.g., iMac), screen projection possible.*

*RME Fireface 802 sound card, at least 4 professional speakers with 1 subwoofer,*

*Professional microphones if required (real-time instruments)*

*Configurable LDT control interface (software provided is very easy to use)*

## **LDT: A FUN, INTERACTIVE AND CREATIVE EDUCATIONAL SPACE**

*Options for five digital terminals or scheduling from a single terminal according to different days or times of day*

From one screen (with sharing) to five screens

### *1. Discovery workshops of the LDT*

Interactive and playful installation, exploring sound, light, programming, etc.

*(Screen 6 or screen 5 with split)*

New for 2021-22 from the LDT, currently in the pedagogical experimentation phase in conservatories (first version), these thirty or so interactive and fun digital workshops, chosen by the user (from a menu), are open to all audiences from 10 years old, exploring sound, light, ear tests and timbre recognition, discovering programming and the issues of chance/determinism, real-time virtual scores, real-time sound and image transformation, etc.

### *2. Star heads, augmented reality*

A playful and creative interactive installation, augmented reality, remote control of the audience's hands and faces

*(7-inch screen or 5-inch screen with split)*

Facing the audience, a screen and two speakers: your image appears on the screen with 11 translucent objects floating in front of you at the bottom. A virtual star-shaped headset automatically detects and surrounds your head. Using hand movements, you mix 11 sound tracks represented by these 11 objects. In addition to hand position, facial movements, symbolized by the movements and colors of the star-shaped headset, control real-time sound transformations—lateral and horizontal movement of the mouth and head, and eyebrow positioning.

Hand and head movements

Slowly turn your head to the left, the music gradually slows down.

Slowly turn your head to the right, the music speeds up.

Raise your head very slowly, the music gradually becomes higher and higher-pitched (filtering).

Open your mouth slowly, the music "resonates": reverberation.

One more thing: the movement of the eyebrows changes the color of the star and the central sphere.

Hand movements

11 rectangles at the bottom of the screen = 11 different pieces of music taken from *The Labyrinth of Time*.

The further you move a rectangle up the screen with your hand, the louder the corresponding music becomes (mixing of the 11 tracks).

### 3. *Quadrature*

*(8-inch screen or 5-inch screen with split)*

Via the computer screen, the public invents in real time moving visual and sound tableaux taken from the satellites of the Labyrinth - Boréal, Homometric attractor and Floating Planet, Plisse, Remember.

### 4. *Granulaspeaker*

*(Screen 9 or screen 5 with split)*

You type a text in the Labyrinth of Time using a computer keyboard.

Thanks to the control of *Granulaspeaker*, a kind of talking robot, you hear your text within the Labyrinth, fragmentation of the text down to the spatialized granulation of the sound.

### 5. *Choice*

*(10-inch screen or 5-inch screen with split)*

*Collapse – suspension*

500 colored spheres collapse, a transition from noise to silence. Then, one by one, the audience throws the colored spheres, which collide in a space almost suspended before falling. Each sphere represents a partial of an inharmonic timbre, a mutation of an original noise into a melody-timbre.

*Particles hand*

Density and size of a cloud controlled remotely by hand.

*Will-o'-the-wisp*

Clap your hands and observe the movement of the will-o'-the-wisp... Create a rhythmic sequence to create the will-o'-the-wisp dance!

*Duo curved dance*

One audience starts dancing, creating imaginary curves with their bodies; another audience responds by drawing curves in real time on a large screen.

*Traces in Ison*

Through vocal improvisation between breath (noises) and sound, you create your visual traces, ephemeral digital paintings.

*Pixel Study #7*

The space is composed of colored points (pixels) (amplitudes and frequencies of a sound spectrum) whose trajectories are controlled automatically or by the audience. A real-time score is displayed, offering possibilities for mixed creations for a musical audience (see image at the beginning of the chapter).

## LDT GRAND CYCLE

*Spectacular monumental real-time performance*

### *Grand cycle of the LDT*

A Grand Cycle of the Labyrinth of Time (GCLDT) is a spectacular installation managed and created in real time by the entire set of algorithms of the Labyrinth of Time, real-time sound and visual creations, combined, forgotten, fragmented memories at very high speeds from the different installations of the Labyrinth - chaotic memory games and combinatorial invention.

This installation is intended either for one (or more) event evenings, with the possibility of associating performers via a specific order (number to be determined): musical with real-time electronics and/or theatrical and/or related to dance.

### *Material*

- *Two latest-generation iMac-type computers with a minimum of 16 MB of RAM on a network (sound and image), then, for example, depending on the order, one computer per interpreter*
- *monumental projection on wall or large screen*
- *video projector with a minimum of 15000 lumens (laser, in the dark),*
- *RME Fireface 802 sound card, at least 4 professional speakers with subwoofer,*
- *Professional microphones, if required, for real-time instrument processing.*
- *Allow a morning for installation and testing.*

## LDT MAPPING MONUMENTAL

### *Monumental projection of the Labyrinth* *Exterior/interior buildings/natural sites*

Monumental projection of the Labyrinth outdoors or indoors (new images of the Labyrinth can be created for a specific site),  
Possibility of a mixed creation, with musicians, actors, dancers,  
Example: event, party, 8pm - midnight.

#### *Material*

- *iMac-type computer(s),*
- *Fireface 802 type sound card,*
- *Professional speakers surrounding the audience*
- *Laser projectors with 40,000 lumens and more*
- *LDT networked software*

## LDT EDUCATIONAL WORKSHOPS AND CONFERENCES

### *Readings*

"The challenges of artistic and technological creation in the 21st century: the labyrinth of time"  
Duration: approx. 2 hours or several sessions

Scientific readings – universities, elite schools

Target audience: Department of musicological humanities open to the humanities (philosophy, history, etc.), Departments of mathematics, physics, and computer science

Technology workshops based on the experience of the time maze

Real-time algorithmic invention of sound and image, MAX-MSP-JITTER (beginner level post-bac to engineer)

Duration: from 2 hours to one year of course.

Master classes of the *Labyrinth*

- Digital composition and creation of image and sound
- Instrumental classes - performance of the music of the Labyrinth
- Theater
- Dance

### *Workshops*

Multidisciplinary and technological workshops

Audience: 16 years and older, including adults, dancers, musicians, and actors

Duration: from 2 to 6 workshops of 2 hours each, for example

Real-time visual and sound algorithmic creation workshop

Target audience: 11-15 years old (1) and from 16 years old and adults (2)

Duration: 2 to 6 workshops of 1.5 hours each, for example

Digital sculpture workshop on an indoor building or extruded polystyrene with visual projection - 3D mapping

Audience: 16 years and older and adults (2)

Duration: from 2 to 6 workshops of 1.5 hours each, for example

Real-time workshops for instrumentalists

1. Chaotic Horizons: Writing (or "guided improvisation" for instrumentalists from oral cultures) small labyrinthine fragments with a discovery of the real-time electronic interactions of the labyrinth (from a beginner level)
2. The labyrinth of time and real time, reading real-time scores or improvisation with electronics (for experienced instrumentalists),

Duration: from 1 to 6 workshops of 2 hours each, for example

Dance workshops

"The Dance of the Labyrinth" (two possible groups: 11-15 years and from 16 years), possibility of collaborations with a professional dancer of the Labyrinth or professional dancer or company linked to the host country.

Theatre workshops

The labyrinth theatre (two possible groups: 11-15 years and from 16 years), possibility of collaborations with an actor from the labyrinth or professional company linked to the host country.

Writing workshops

Based on Locquin's archetypal phonemes and other labyrinthine writing processes. (Ages 11-15 and 16+)

## LDT DIGITAL SCULPTURES

The 3D models of the images of the Labyrinth echo the possibility of creating 3D sculptures of all dimensions, Several techniques are possible:  
3D mapping on shapes cut from extruded polystyrene (simple techniques to implement regardless of dimensions), possibility of recycled materials or holographic projections.  
Custom-made creation based on a specific location.

*Material*

- *iMac-type computer(s),*
- *Fireface 802 type sound card,*
- *Professional speakers surrounding the audience,*
- *Video projectors and polystyrene sculptures,*
- *Or holographic technique.*

## LDT THE BOOK OF THE LABYRINTH

*Limited edition publication - book or catalogue of the Labyrinth*

Publication (paper version) of the book of the Labyrinth or catalogue of a creation of the Labyrinth,  
Images and texts published in limited editions for each event.  
Book in digital format (can be displayed on a computer screen).

*Material*

- *iMac-type computer with a large screen for the digital version*

## LDT GENESIS AND DEVELOPMENT OF THE LABYRINTH

*History of the Labyrinth, research and creation challenges*

Five chapters to immerse yourself in the genesis and development of the Labyrinth of Time, concert videos, photos of creations, conferences, research articles and world premieres, institutional collaborations, development prospects.

1. Concepts and development for 15 years
2. Scientific research and world firsts
3. Catalogue of creations
4. Educational activities
5. The future of the Labyrinth
6. Readings

*Material*

- *An iMac-type computer positioned at the eye level of the standing audience.*
- *2 small professional speakers /or stereo headphones*
- *LDT consumer user interface (software release)*

## LDT CYBERLAB

Interactive visit of the LDT on the internet  
Event broadcast live on the dedicated website of the Labyrinth, audience interviews, conferences, online educational workshops, educational database etc....

## 2.3 SERIES OF READINGS ON THE LABYRINTH OF TIME

*The Labyrinth of Time: 2023 Review, Challenges and Prospects of a 21st Century Creation*

### Summary

Through more than 15 years of creation, research and world firsts, technological development, experimentation, installation, immersion, Stéphane de Gérando takes stock in 2023 of the artistic, historical and aesthetic, scientific, technological, educational, institutional and even economic challenges of a work in progress creation like the Labyrinth of Time.

### Lecture series or seminar

Lecture 1: The "origins"

Reading 2: From the definable to the indefinable

Reading 3: Artistic achievements

Reading 4: Scientific developments

Reading 5: Technological developments

Lecture 6: Instrumental and mixed writing

Lecture 7: Electroacoustics and meta-instrumental writing

Reading 8: Real-time algorithmic creation and major cycle

Lecture 9: Poetic texts

Lecture 10: Virtual paintings

Reading 11: Poly-artistic dimension, dance, theater, music, technologies

Reading 12: Pedagogical dimension

Lecture 13: Complex n-dimensional polysensory objects

Lecture 14: Virtual reality

Reading 15: Scientific perspectives

Reading 16: Artistic perspectives

Reading 17: Institutional perspectives

Lecture 18: "I have a dream"

### **3 ADDITIONAL INFORMATION**

- DISCOGRAPHY
- PUBLICATIONS – ARTICLES AND BOOKS
- BIOGRAPHIES
- ABOUT GÉRANDO
- INTERNET LINKS

### 3.1 DISCOGRAPHY, 75 TITLES

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- **Crossroads** , electroacoustic work (long version), *Labyrinth of time* , fixed sounds, UPC EAN 199199795900, 2025
- **Morphilude**, cycle for flutes, real-time electronics and fixed sounds, ACEL 2024
  1. *Chaotic Horizons II* , C flute and amplification
  2. *Song of a Sign, fragment 2* , C flute and amplification
  3. *Eterno Ritorno* , C flute and real-time algorithmic electronics
  4. *Song of a Sign, fragment 1* , C flute and real-time algorithmic electronics
  5. *Interlude 1, Letter to MA* (fragment 1), fixed sounds
  6. *Arc H* , amplified bass flute
  7. *Interlude 2* , Theater of the Labyrinth, fixed sounds
  8. *Travers 1* , C flute
  9. *Let's make traces* , viola flute
  10. *Travers 2* , C flute
  11. *Travers 3* , C flute
  12. *Travers* , der uns selig macht, fixed sounds et bass flute
  13. *Zeroflute* , bass flute and real-time electronics
  14. *Entrails* , bass flute
  15. *Fibrane* , C flute and fixed sounds
  16. *Multiverse* , C flute amplified
  17. *Interlude 3* , Balle Istique, fixed sounds
  18. *Piccl-77* for piccolo flute superimposed on *Interlude 4, Astrogrance*, fixed sounds
  19. *Contrepasse* , contrabass or bass flute and fixed sounds superimposed on *Interlude 5, Lettre à MA fragment 2*
  20. *Interlude 6 Desert hall* , fixed sounds, linked to *Piccl2-77*, piccolo flute and superimposed on *Interlude 7 Tremblement os qui perle*, fixed sounds excerpt from LDT
  21. *Traces in Ison* , bass flute and real-time algorithmic electronics
- **Oublier**, for piano and real-time electronics, a satellite of the new major cycle *Terra incognita* from *Labyrinthe du Temps* , a tribute album to Catherine Collard by Damien Michel, ACEL 2023
- **Punctus contra punctum**, satellite of the new great cycle *Terra incognita* of the *Labyrinth of Time* , tribute album to Catherine Collard by Damien Michel, ACEL 2023
- **Fine-terre** (two movements), meta-instrumental work, UPC EAN 198025688911, 7/18/2023
  - Movement 1 (duration 12:16)
  - Movement 2 (duration 22:09)
- **Lychromomorphia II** (three movements, duration 16:00), meta-instrumental version for violin, cello, piano, UPC EAN 198015007180, 11/15/2022 (creation of the instrumental version at Présences 2023 at Radio-France)
  1. Intricacy
  2. Last song
  3. Calypse
- **Vertical Memory** (14 tracks), electroacoustic cycle of the *Labyrinth of Time* , with Virginia Guidi mezzo-soprano, Nicholas Isherwood bass baritone, Emmanuel Meyer narrator, Label ACEL, with the support of the National Music Centre, Maison de la Musique Contemporaine, the International Institute for Innovation, Artistic Creation and Research, 2022.
  1. *The mic*,
  2. *Chaotic horizon*
  3. *Day of the Dead*
  4. *Fluid eternity*
  5. *Let's leave traces.*

6. *Homometric attractor 2,*
7. *Brown Hyalite,*
8. *Reconstituted pistill,*
9. *Trace en Ison,*
10. *My name is,*
11. *Labyrinthine fragments,*
12. *Labyrinth Theatre,*
13. *Macrobotics: Point Zero*
14. *Large Algorithmics*

- **Electroacoustic 1** (7 titles), UPC EAN 198003576506, 2022

1. *Stellar Wave,*
2. *Homometric Attractor 1,*
3. *Ashy boreal,*
4. *The Song of the Labyrinth,*
5. *The Gates of Hell,*
6. *Intumespeed,*
7. *Atomic Space*

- **Meta-instrument 1** (13 titles), UPC EAN 198003568464, 2022

1. *Solar Wave,*
2. *The song of the Stismi,*
3. *Cosmic rustling,*
4. *Cathedral of Time*
5. *Introit,*
6. *Floating Planet,*
7. *Intumescence,*
8. *Ison,*
9. *Pulse,*
10. *Spiralis,*
11. *Tempus Est,*
12. *Titan*

- **Imaginary Dialogue** (book-disc and digital version) , Inactuelles edition, Radio-France, MFA

1. *Katanga* , 15 brass and two percussionists, ensemble of the Radio-France Philharmonic Orchestra, conducted by Stéphane de Gérando, Innouvelles MFA Radio-France disc
2. *6ex1pen7sion4 IV* , bass clarinet and real-time electronics, Aurélien Cescousse, clarinet, Inactuelles MFA Radio-France disc
3. *6ex1pen7sion4 II* , piccolo flute and real-time electronics, Gilles Burgos flute, Inactuelles MFA Radio-France disc
4. *Intumescence* , 15 instruments and band, Orchestre Philharmonique de Radio-France, direction Tsung Yeh, disc Innouvelles MFA Radio-France
5. *Virtuality and Awareness of Emptiness* , String Trio, Sona Kochafian, Pascal Robault, Pierre Strauss, Inactuelles MFA Radio-France album
6. *Binaural* , electronic study, Inactuelles MFA Radio-France disc
7. *6ex1pen7sion4 III* , flute, clarinet and computer, Aurélien Cescousse, clarinet, Gilles Burgos, flute, icarStudio, Inactuelles MFA Radio-France disc
8. *From Meaning to Meaning* , for flute, Pierre-Yves Artaud, flute, Inactuelles MFA Radio-France album

- ***The Ice Opera*** , DVD, CHAM Bordeaux Aquitaine, conducted by Stéphane de Gérando, icarEdition
- ***Piece for string orchestra, sextet for flute, English horn, harp, vibraphone, B-flat clarinet, viola and obbligato reverberation,*** UPC EAN 198003503557, 1996  
***In You with Him and in Him*** , a piece for four orchestras spatialized around the audience, Days of Composition, Conservatoire National Supérieur de Paris, 1992
- ***Music for church, Sinner of Love, Christ and I, sextet for G flute, English horn, harp, vibraphone, B-flat clarinet, viola and obbligato reverberation,*** UPC EAN 198003503557, 1991  
***Metathesis***, work for piano (1987), Damien Michel, UPC EAN 198003413139, 1991

## 3.2 PUBLICATIONS – ARTICLES AND BOOKS

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### Books

- *The Labyrinth of Time* (art book, computer graphics and texts by Stéphane de Gérando), Paris, 3icar/icarEditions, 2013, 78 p.
- *Contemporary work put to the test of the concept*, preface by Paul Méfano, afterword by Jean-Yves Bosseur, Paris, L'Harmattan with the support of the CNRS, 2012, 227 p.
- *Imaginary dialogues. Experiencing contemporary creation and research*, Paris, Inentreprises, 2010, 300 p. – English version Julien Elis. CD with Radio-France, MFA, 3icar – icarEnsemble, Innouvelles, 2010.
- *Imaginary Dialogues. An experience of contemporary creation and research*, Paris, Inactuelles, 2010, 300 p. Book accompanied by a monographic disc, in collaboration with Radio-France, MFA, 3icar – icarEnsemble, Inactuelles, 2010.
- *Oblique Trajectory*, 3icar icarEditions, 2006, 140 p.
- *Contingency and procedural determinism applied to computer sound synthesis and musical writing*, Villeneuve d'Ascq, Septentrion - Presses Universitaires, 1998, 470 p.

### Items

- Stéphane de Gérando, Gilles Baroin, *Sound and Visual Objects (SVO) in n Dimensions in the Labyrinth of Time*, International Conference on Mathematics and Computation in Music MCM, Springer 2026
- Gilles Baroin, Stéphane de Gérando, *When Virtual Reality Helps Fathom Mathematical Hyperdimensional Models*, International Conference on Mathematics and Computation in Music MCM 2022: Mathematics and Computation in Music, Springer 2022, pp. 86–98
- From artistic creation to entrepreneurial spaces: plebiscite for a new world, publication of a speech by Stéphane de Gérando at the French Institute of Agadir in Morocco, Paris, 3icar /icarEditions, 2016, 13 p.
- Tempus est and Le Chant des STISMI, from the algorithmic invention of the material to the creation of the musical work. Series all intervals in an octave and in zigzag (STIOZ), series all intervals nested in a micro-interval series (STISMI), with Louis Bigo (computer scientist), Paris, 3icar /icarEditions, 2016, 13 p.
- Fiber space and sound and visual composition. From the simple element to hidden and entangled dimensions, with Christophe Mourougane (mathematician, researcher at the mathematical research institute of Rennes), Paris, 3icar /icarEditions, 2015, 13 p.
- Five relativistic artistic laws. From the concept of space-time in astrophysics to sound and visual invention, with Jérôme Pétri (Strasbourg Astronomical Observatory), Paris, 3icar /icarEditions, 2015, 17 p.
- Euclidean Geometry and Sound and Visual Artistic Creation, with Athanase Papadopoulos (CNRS), Paris, 3icar /icarEditions, 2015, 11 p.
- Homometric ensembles and contemporary sound and visual creation, with Franck Jedrzejewski (CEA), Paris, 3icar /icarEditions, 2014, 12 p.
- Alain Bancquart or the work as ethical and political expression, Paris, 2014. Speech published by Mediapart on November 8, 2014 and delivered by Stéphane on November 6, 2014 on the occasion of Alain Bancquart's eightieth birthday at the invitation of the Centre for Documentation of Contemporary Music in Paris.
- Twelve challenges for artistic creation in the 21st century. What science could contribute to the imagination, Paris, 3icar /icarEditions, 2014, 5 p.
- Compose? Paris, 3icar /icarEditions, 2014, 8 p.
- Introduction to the Labyrinth of Time, Paris, 3icar /icarEditions, 2013, 18 p.
- “The act of creating or delaying death. Based on an interview with Alain Bancquart”, Musical Education no. 576, Vernon, Musical Education, 2012, 7 p.
- Stéphane de Gérando / Gilles Baroin, “Sounds and visual representation in hyperspace: the hypersphere of spectra”, Les Cahiers de l'Institut International pour l'Innovation, la Création Artistique et la Recherche, Paris, 3icar /icarEditions, 2012, 15 p.
- “Presence and absence of creation”, The 3icar journal, Paris, 3icar /icarEditions, 2012, 18 p.
- Stéphane de Gérando – IDEAT CNRS / Athanase Papadopoulos – IRMA CNRS UDS, “Introduction to topological art. Mathematical concepts and musical creation or poly-art”, Les Cahiers de l'Institut International pour l'Innovation, la Création Artistique et la Recherche, Paris, 3icar /icarEditions, 2011, 13 p.
- “CA – Creative Algorithm – real-time interactive virtual artwork”, Bordeaux, 3icar IcarÉditions, 2007 –

- 2nd edition 2010, 10 p.
- “Non-repetition and contemporary musical work. Based on the work for piano by Arnold Schoenberg”, Vernon, Musical Education No. 507/508, 2006, 10 p.
- “The notion of apogee in Brian Ferneyhough’s Lemme-Îcône-Epigramme”, The apogee – Notebooks of the Multidisciplinary Laboratory of Research on the Imaginary applied to Literature (LAPRIL), Bordeaux, Eidolon, 2005, 18 p.
- “Musical creation, research, new digital technologies and institution”, Les cahiers d’ARTES, Bordeaux, CAPCB, 2005, 8 p.
- “The Notion of Borders in Musical Works After 1945: Reality or Utopia? – Examples from Ikhoor by Iannis Xenakis, Anahit by Giacinto Scelsi, and 4’33” by John Cage,” Frontiers and Thresholds – Laboratory Notebooks
- Multidisciplinary Research on the Imaginary Applied to Literature (LAPRIL), Bordeaux, Eidolon, 2004, 15 p.
- “On the work for tape alone and the musical writing of Jean-Claude Risset” (1), Musical Education no. 507/508, Vernon, L’Éducation Musicale, 2003, 4 p.
- “On the work for tape alone and the musical writing of Jean-Claude Risset” (2), Musical Education no. 509/510, Vernon, L’Éducation Musicale, 2004, 4 p.
- “Virtuality of sound and musical writing: towards an algorithmic creation of timbre”, Musical Analysis no. 48, Paris, ADAM, 2003, 15 p.
- “Computer sound synthesis models - Presentation of digital synthesis techniques and introduction to an aesthetic of synthetic timbre”, Musical Analysis no. 47, Paris, ADAM, 2003, 13 p.
- "Presence of the popular repertoire in Western art music - Reference points concerning the contemporary period", Musical Education no. 499, Musical Education, Vernon, Musical Education, 2003, 6 p.
- “Four variations on a death foretold - Thinking about the existence of contemporary opera after 1978”, Musical Analysis no. 46, Paris, ADAM, 2003, 10 p.
- “Separating to discover an imaginary – The experience of a musical writing”, Imaginary and unconscious no 8, journal of psychotherapeutic studies, Bègles, L’Esprit du Temps - Presses universitaires de France, 2002, 6 p.
- Dictionary of Music and Dance, Paris, Larousse – Bordas, 1999, 10 p.

## Readings

- *The Labyrinth of Time or the Power of Questioning* , Contemporary Spring Festival, Paris, June 4, 2022.
- International conferences, The labyrinth of time in Tehran, University of Tehran, technological workshops, Iran Music Museum in Tehran, invitation from the Embassy of France in Iran, from 15 to 17 July 2018.
- *From artistic creation to entrepreneurial spaces: a plebiscite for a new world* , symposium on the Art of Entrepreneurship, conference at the French Institute of Agadir in Morocco, May 25, 2016.
- *The creation in question* , conference at the new auditorium of the Henri Dutilleux conservatory in Belfort, May 4, 2016.
- *Tribute to Pierre Boulez* , conference at the new auditorium of the Henri Dutilleux conservatory in Belfort, January 6, 2016.
- *Introduction to the Labyrinth of Time* , conference as part of the Innovation Creation Festival 2015, auditorium of the conservatory of the 5th arrondissement of Paris, December 5, 2015.
- *Automated score tracking and cycle 6 of the Labyrinth of Time* , international symposium on digital technology Ariane 1, conference with José Echeveste - Collège de France /IRCAM, October 8, 2015.
- *Alain Bancquart or the work as ethical and political expression* , colloquium on Alain Bancquart, CDMC Paris, November 6, 2014.
- Presentation and signing of two works by Stéphane de Gérando: *L’œuvre musicale contemporaine à l’épreuve du concept* and *Dialogues imaginaires* , Librairie l’Harmattan, Paris, Thursday, February 21, 2013.
- *The Hypersphere of Spectra* , conference with engineer Gilles Baroin (University of Toulouse), MaMuX seminar (mathematics and music) at IRCAM, May 4, 2012.
- *Interview with Jean-Pierre Derrien* , presentation and signing of the book and monographic disc Imaginary Dialogues, Tschann Bookstore, Paris, May 3, 2011.
- *Music and topology of space* , symposium on mathematics and music, Institute for Advanced Mathematical Research, University of Strasbourg CNRS, October 2, 2010.
- Since 2006, every year, conferences as part of the Innovation and Creation Festival, presentation of the CA project, creative algorithm, educational activities... (lists and videos 3icar.com)

- *Musical creation, research, new digital technologies and institution* , international symposium ARTES University Bordeaux III on The 1970s, Museum of Contemporary Art of Bordeaux (CAPC), January 2003.
- *The notion of apogee in Brian Ferneyhough's Lemme-Icone-Epigram* , international colloquium: The Apogee, Multidisciplinary Laboratory for Research on Literary Imagination - University of Bordeaux III, March 4, 5 and 6, 2004.
- *The notion of frontier in musical works after 1945: reality or utopia? Ikhoor by Iannis Xenakis, Anahit by Giacinto Scelsi and 4'33" by John Cage* , international colloquium Frontiers and thresholds organised by the Multidisciplinary Laboratory for Research on Literary Imagination - University of Bordeaux III, March 27, 28 and 29, 2003.
- *From serial music to spectral music* , Musée d'Aquitaine, museum lecture series, April 7, 2005.
- *Mauricio Kagel* , round table discussion with the composer present, organized by the Bordeaux Regional Conservatory. Moderators: JY Bosseur, JL Portelli, S. de Gérando, January 28, 2005.
- *Major aesthetic movements in the 20th century* , continuing education for library and record library managers (local government employees), Centre for Local Government Training (CNFPT), Angers, November 25 and 26, 2004.
- *Introduction to new technologies of the 21st century* , continuing education in Aquitaine: lecture series 2000-2005.
- *Writing for piano and new technologies* , preparation for the Certificate of Aptitude (CA) for piano teachers (training organized by the Ministry of Culture and the Conservatoire de Région d'Aubervilliers), April 5, 1998.
- *Musical coherence, writing techniques and new technologies* , lecture series for composition students, Conservatoire National Supérieur de Musique de Paris, November 1996.
- *Computer Sound Synthesis and Musical Composition* , IRCAM – Lecture given in collaboration with scientist Laurent Pottier, IRCAM Projection Space, January 1993 – IRCAM recording

## Tutorials

- Video title: Algorithmic creation of memories  
Levels 1 and 2, duration: 16 min  
Software used: MAX MSP  
Summary: Stéphane de Gérando offers two examples of "memories" creation in the MAX programming environment (coll and histo), simple examples which show how to store or analyze data for reuse in the context of deterministic (combinatory) and probabilistic (random) type algorithmic compositional writing.
- Title: A Study of Platonic Objects  
Level 2, duration: 8 min  
Software used: MAX MSP JITTER  
Summary: Stéphane de Gérando proposes to create a "Euclidean" mapping between the real-time control of Platonic solids associated with the automated control of a synthesizer.
- Title: Introduction to Audacity Software - Part 1, Recording  
Level 1 (initiation), duration: 7 min 30 s  
Software used: Audacity® is a free software (MAC and PC) for recording and editing sounds.  
Summary: Stéphane de Gérando shows how to make a recording in Audacity using the internal resources of a computer (MAC), emphasizing the checks to be made before running any software involving audio.
- Title: Introduction to Audacity Software - Part 2: Editing, Processing, Analysis  
Level 1 Tutorial (Beginner) Duration: 16 min 46 sec  
Software: Audacity® is a free and open-source software (MAC and PC) for recording and editing sounds.  
Summary: From the recording of a short sequence made at the beginning of the video, Stéphane de Gérando shows how to use the main functions of Audacity (introductory basic concepts with notions of electroacoustic editing).
- Title: Invention of sound material by filtering  
Level 1 (initiation), duration: 5 min 47 s  
Software: AudioSculpt is software for visualizing, analyzing and transforming sounds (IRCAM).

Summary: Using an example from his piece *Le porte dell'inferno*, Stéphane de Gérando shows how to create sound material from a simple and common technique in electroacoustics, a bandpass filtering with the AudioSculpt software.

- Title: Space Composition, SPAT (FLUX) Software  
Level 2, duration: 14 min 33 s  
Software: SPAT (IRCAM Tools from FLUX)
- Summary: As a first introduction to the SPAT spatialization software, Stéphane de Gérando shows, using one of his works in progress, how to configure Protools and work on sound spatialization (example in 5.1).
- Title: Binaural encoding tool, "Hear" plug-in (FLUX)  
Level 1 Video length: 6 min 59 s  
Summary: Stéphane de Gérando demonstrates the characteristics of a binaural mix, then, using the example of one of his works in progress (originally in 5.1), *Le porte dell'inferno*, the composer offers a comparative application between the "Hear" plug-in from FLUX and a "classic" stereo mix.

### 3.3 RESEARCH AND CREATION – CLASSIFICATION AND SUMMARY

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The research of Gerando and scientific collaborators is here classified into four categories directly or indirectly related to the work of The Labyrinth of Time (with summaries of publications and internet links):

- 1/ Theoretical and applied research on the LDT
- 2/ Theoretical research, to be implemented in the algorithm of the LDT
- 3/ General musicology – historical, aesthetic, analytical, didactic, institutional reflections.
- 4/ Other reflections

Combined with phases of work-in-progress experimentation, there is also a significant and ongoing component of technological development specific to LDT and its creations (see 100-page document). Examples include the grand cycle algorithm which operates on a network with several computers, real-time polyartistic scores, the specific score player for the *Chaotic Horizons series*, real-time algorithmic tables, and, in the educational field, interactive installations, for example in augmented reality with remote gesture and facial control or other didactic installations, and since 2022-2023 with Gilles Baroin, the development of the Labyrinth in VR.

#### Theoretical and applied research (labyrinth of time)

***Tempus est and Le Chant des STISMI, from the algorithmic invention of the material to the creation of the musical work. Series of all intervals within an octave and in a zigzag pattern (STIOZ), series of all intervals nested within a micro-interval series (STISMI)***

With Louis Bigo, Senior Lecturer in Computer Science, University of Lille 3, 3icar /icarEditions, 2016

Following the composition of two new works by Stéphane de Gérando, *Tempus est* (premiered in 2015) and *Le Chant des STISMI* (premiered in 2016), one for two wind orchestras and electronic bells, the other for a flute orchestra and real-time electronics, we present two new compositional materials invented for the occasion and calculated algorithmically: series of all intervals within an octave and in a zigzag pattern (STIOZ) and series of all intervals nested within micro-interval series (STISMI). The search algorithms for these series were programmed in Java by Louis Bigo, and the compositional algorithms were developed by Stéphane de Gérando in MAX-MSP-JITTER.

*The result of this research is now part of the algorithm of the "grand cycle" of the LDT. Like homometric sets, one of the next steps of this research is the invention of singular trajectories within this double vertical/horizontal combinatorics, moving from notions of timbre space to melodic combinatorics, as well as the use of the result of distance calculations to invent in real time intricate and singular sonic and visual objects.*

Internet link (French): <https://hal.science/hal-01802209v1>

#### ***Homometric ensembles and contemporary sound and visual creation***

With Franck Jedrzejewski (researcher at the Atomic Energy Commission), Paris, 3icar /icarEditions, 2015, 5 p.

Homometric sets are mathematical constructions whose main property is to preserve their interval structure. These sets are found in crystallography, where they were studied as early as the 1930s, but also in music, where they first appeared under the specific name of "Z relation." Among these sets, some are trivial, while others, like the multiplets that interest us here, involve deeper singularities that mathematicians are currently trying to characterize. Counting them presents numerous difficulties. In the specific case of the abelian group formed by the first 24 numbers, we propose here an exhaustive list of 5136 classified sets and we link the analysis of these sets to a first artistic realization, *Homometric Attractors 2*, for main computer, instrumental ensemble, and dance, a work created in Paris on December 16, 2014, and for which we present the programming process and an initial critical assessment.

*Since 2014, the date of this world first, these homometric sets have also been part of the algorithm for the Grand Cycle of the Labyrinth of Time (real-time creation). We continued the theoretical research with the mathematician Christophe Mourougane to imagine singular trajectories within these set classes*

*(summarized below in the following paragraph; the result remains to be implemented in the Grand Cycle algorithm). Furthermore, it would be conceivable, for example, to invent homometric and sonic holographic forms.*

Internet link (French): <https://hal.science/hal-02943258>

### ***CA – Creative Algorithm – Real-time interactive virtual artwork***

Bordeaux, 3icar IcarEditions, 2007, 10 p.

*CA – Creative Algorithm* – is a research project that is simultaneously scientific, technological, and artistic, later becoming an algorithmic composition project for the creation of a new satellite of the *Labyrinth of Time*, or currently (2023) partially integrated into the algorithm of the grand cycle of the LDT. At the heart of CA lies the (classic) idea of a unified, multisensory whole emerging from a microcosm, here in the image of "elementary impulses," quanta of time, or the birth of vertically synchronized/desynchronized timelines that allow for the control of intricate sonic and visual polymorphisms. The interplay of both probabilistic and deterministic formalisms is central to the generation of data for controlling synthesis or programs for transforming material. Under the scientific direction of Stéphane de Gérando, the programming of CA began in June 2007 in partnership with the National Graduate School of Electronics and Computer Science of Bordeaux and the International Institute for Innovation, Artistic Creation and Research. Let's revisit this first phase of development, which at the time included a description of the scientific and artistic challenges, a general presentation of the computer programs (synthesizers and then synthesis control processes), and an initial critical assessment.

*This period of 2007 heralds the emergence of The Labyrinth of Time, with 16 years later one of the most current issues that remains to be developed, the passage from an algorithmic invention of the microcosm to the macrocosm of a work, in a form of assumed continuity/discontinuity.*

Internet link (French): <https://hal.science/hal-02943287>

### ***Virtuality of sound and musical writing: towards an algorithmic creation of timbre***

Musical Analysis, No. 48, Paris, ADAM, 2003, 15 p.

This article outlines the stages of our research, which focuses on the creation of synthetic timbre through the control of a primarily additive synthesis model. An experimental phase demonstrates the implications of the relationship between synthesizer design, control, perception, and the creation or invention of timbre beyond predetermined natural and instrumental acoustic references (Chapters II and III). Our initial findings are currently leading us toward a more "efficient" and vertical control of the synthesis (Chapter III), while also introducing a general issue related to the "all-algorithmic" approach.

Two levels of reading are offered: the main text summarizes the conditions under which this research was conducted (material and conceptual aspects), while the appendices precisely illustrate the results of experimental research on the control, writing, and invention of timbre. Rather than describing the synthesis control programs, we have chosen to present the results of the automated timbre control processes in the form of files as they appear on the computer.

*In 2003, I discussed my experience with the algorithmic creation of timbre since my doctoral thesis (1992) using the Csound and Patchwork software (Lisp, delayed time), research and experimentation that would later prove important for programming the algorithm of the grand cycle of the Labyrinth of Time using MAX-MSP-JITTER. Even then, I described my interest in additive synthesis, the notion of unpredictability, and the act of imagining what I cannot imagine.*

Internet link (French): <https://hal.science/hal-02935086>

## Theoretical research and proposals for integration within the labyrinth of time algorithm

### ***Fiber optic space and sound and visual creation. From the simple element to hidden and intertwined dimensions.***

With Christophe Mourougane, mathematician, University Professor, researcher at the Rennes Institute of Mathematical Research, 3icar /icarEditions, 2017

Using a geometric language, we propose to introduce a general model of sound and visual composition that could help to renew compositional problems, with complex notions appearing as hidden and intertwined dimensions. We define seven different spaces, from artistic creation to composition. The ECOMP compositional space is itself composed of four fundamental spaces linked by applications. We then define simple sonic and visual objects, which can be enriched into complex sonic and visual objects through the concept of a fiber. The compositional space then becomes a fiber-based space over the space of simple objects. Considering time makes it a fiber-based space over a spacetime continuum. The next objective is to define a metric structure on the compositional space, offering the prospect of inventing singular compositional trajectories within this initial space. To imagine our formal space, we begin with a singular analysis of homometric modulo-24 sets (intervallic metascale or metamode) combined with the calculation of distances (Hausdorff distances) within the same fiber or between OSVCs.

*The research conducted in 2015 with mathematician Christophe Mourougane allowed us to take a further step: the invention of trajectories within homometric sets. The result of this theoretical research remains relevant: it would now be necessary to implement and test it within the algorithm of the LDT.*

Internet link (French): <https://hal.science/hal-02928963>

### ***Five relativistic artistic laws. From the concept of space-time in astrophysics to sound and visual invention***

With Jérôme Pétri, astrophysicist and research professor at the Strasbourg Astronomical Observatory, 3icar /icarEditions, 2015

From Aristotle to Einstein, we recall important milestones in the evolution of the concepts of space and time. Then, by analogy and using appropriate terminology, we define five relativistic artistic laws designed to enrich the invention and creation of a contemporary sound and/or visual work.

*Another research that would be important to integrate into the algorithm of the LDT is the result of a collaboration with researcher Jérôme Pétri (Strasbourg Astronomical Observatory) on the relativistic notion of sound and visual spacetime.*

Internet link (French): <https://hal.science/hal-02928940>

### ***Sounds and visual representation in hyperspace: the hypersphere of spectra***

With Gilles Baroin, Les Cahiers de l'Institut International pour l'Innovation, la Création Artistique et la Recherche, Paris, 3icar /icarEditions, 2012, 15 p.

We propose a visual representation model for music or sounds, which we call the hypersphere of spectra. We consider the entire audible sound spectrum and project it onto a spiral on the surface of a hypersphere in a four-dimensional space. This yields a continuous general model for visual and sonic representation. This model allows us to visualize both pitches and spectra. Several questions arise, such as the choice of analogies between sonic and visual parameters, the mathematical modeling of the issues, the computer graphics representation of the data, and the potential applications of this model. To make this presentation relevant to both musicians and mathematicians, we have included some basic background information from both disciplines.

Internet link (French): <https://enac.hal.science/hal-02942200>

General musicology (historical, aesthetic, analytical, didactic aspects)

About the labyrinth of time

***The Labyrinth of Time - time, space, memory***

Paris, 3icar-IcarEditions, 2023

The question of time in *The Maze Runner* does not respond to the usual practices of invention. Arrowed time or absence of direction, smooth and striated, absence-presence, time dilated and accelerated to the limit of perception, entanglement of time, time outside of time, world firsts on new combinatorics of distance, the time of words and the importance of gesture..., here we travel into the origins of memory, of language.

Article taken from a conference on 12/10/2022 at 5:00 PM Léon-Deubel Library Place du Forum, Belfort.

***Twelve challenges for artistic creation in the 21st century. What science could contribute to the imagination.***

Paris, 3icar /icarEditions, 2014, 5 p.

Building on research conducted over the past twenty years and the practice of contemporary composition—whether purely sonic, multisensory (sound and visual), or multi-artistic (dance, theater, video, music)—we propose to introduce twelve examples of key issues in the challenges of writing and creating artwork in the 21st century. While not initially abandoning a diachronic reading of art history, which is necessarily underlying this presentation, we define these artistic challenges by drawing primarily on the disciplines of mathematics, astrophysics, epistemology, and cognitive science.

Internet link (French): <https://hal.science/hal-02931387>

***Introduction to the Labyrinth of Time and proposal for scientific collaborations***

Paris, 3icar /icarEditions, 2013, 18 p.

The Labyrinth of Time is a multifaceted object with multiple ramifications between concept, artwork (technological, multi-artistic, and multi-media), research, pedagogy, communication, and institutions. Echoing contemporary intellectual issues, The Labyrinth aims, in particular, to foster new forms of scientific collaboration and to explore unique creative perspectives, both conceptual and related to the realization of a work—a work in continuous progress. One of the trajectories of The Labyrinth tends toward an attempt at unifying the whole, the search for a multifaceted metalanguage capable of unifying the expression of meaning and artistic practices.

Stéphane de Gérando discusses the first steps in this Labyrinth of Time and proposals for scientific collaborations, presented on September 28, 2013 at the Institute for Advanced Mathematical Research (IRMA) in Strasbourg, during the 92nd meeting between mathematicians and theoretical physicists on the theme of entropy.

Internet link (French): <https://hal.science/hal-02934085>

Works

***Contemporary art put to the test of the concept***

Preface by Paul Méfano, afterword by Jean-Yves Bosseur, Paris, L'Harmattan (IDEAT Paris I CNRS), 2012, 227 p. (drawn from the habilitation thesis to supervise research)

Contemporary musical creation is approached from various angles. Each chapter of this work is illustrated by a unique issue, ranging from a definition of chance and determinism in music to an attempt to write non-repetition, from the presence of opera to a critical use of computer sound synthesis models. Simultaneously with this initial exploration, Stéphane de Gérando connects listening to contemporary works with a definition of seven concepts: boundary, apogee, non-repetition, presence, chance/determinism, and ultimately, the concept of creation. The author envisions an absolute limit

toward which creation tends asymptotically and utopically. This trajectory simultaneously defines the presence and absence of the work.

***Imaginary Dialogues: An Experience in Contemporary Creation and Research***  
***Imaginary dialogues. Experiencing contemporary creation and research***

Paris, Inactuelles, 2010, 300 p. Book accompanied by a monographic disc, in collaboration with Radio-France, MFA, 3icar – icarEnsemble, Inactuelles, 2010.

Imaginary dialogues. Experiencing contemporary creation and research, Paris, Inentreprises, 2010, 300 p. – English version Julien Elis. CD with Radio-France, MFA, 3icar – icarEnsemble, Inacteurs, 2010.

In the first part of these *Imaginary Dialogues – The Imaginary in Question*, I evoke my experience as a composer by analyzing the stages that contribute to the imaginary and the writing of a work.

The second part of this work, "Thinking about Creation," refers to a portion of my research activities. Here, I present a summary of publications on the concept of creation. Supplementary documents, such as a biography, catalogues of works, articles, and books, are provided in the appendix.

This book accompanies a disc containing recordings covering a period from 1992 to 2008.

Internet link (in French): <https://hal.science/hal-05096208>

Internet link (in English): <https://hal.science/hal-05096205>

***Oblique Trajectory: Towards an Experience of Musical Writing and Research***

3icar IcarEditions, 2007

Stéphane de Gérando shares his experience of musical composition and research. What characterizes the author's thought and musical project is his desire to push the boundaries of the imagination—the emergence of uncertainty—by fostering forms of perceptible unpredictability initially unimaginable. If the stage of recognition were to prevail, de Gérando would question, more generally, our actual capacity to create in the face of the existence of time and memory. Presented as a journal in the form of an "open" book, *Trajectoire oblique (Oblique Trajectory)* addresses diverse subjects such as the description of the processes involved in the act of writing and reflections on the relationship between new technologies and musical composition. The multiplicity of approaches leads to an assessment of research on the very notion of creation. Several levels of reading are offered, with the possibility of approaching the chapters independently according to the reader's desires and specific knowledge.

Internet link (in French): <https://hal.science/hal-02937367>

***Contingency and procedural determinism applied to computer sound synthesis and musical composition***

Villeneuve d'Ascq, Septentrion - Presses Universitaires, 1998, 470 p.

The first chapter situates the musical problem historically, partially substituting it for the interpretation of a broader intellectual context. Mathematical and physical sciences serve as guiding threads for an analysis that underscores the hegemonic nature of determinism throughout history, despite a profound shift in thought at the beginning of the 20th century. This reminder exposes a conditioning of understanding and sensibility that will explain, in a third chapter, the difficulty of grasping the musical outcome of a dialectic of contingency. The aim is not to establish a catalog of works dealing with chance, but rather to demonstrate, through multidisciplinary examples, how ideological advances and artistic achievements find points of convergence. To this end, we emphasize the essence of the work by distinguishing the compositional techniques employed from sensory perception.

The second chapter describes an awareness of sonic potential and its physical and perceptual specificities, as well as computer synthesis models. Historical, technical, musical, and experimental aspects justify a position regarding synthesis in general and our specific problem. This reflection projects the future of electronic music toward a formal abstraction of design: signifying spaces are multiplied tenfold, we enter the heart of the "elementary matter" (sinusoidal wave) in order to better invent and control the sonic phenomenon in its entirety.

The third chapter presents a musical contextualization of the ideas previously stated. Three examples of works are progressively developed, each representing an increasing complexity of the instrumental and material setup. A monophonic piece—*Du sens au sens (From Meaning to Meaning)*—precedes a polyphonic piece—*Ce que tout Cadavre devrait savoir (What Every Corpse Should Know)*—before

concluding with an electroacoustic work. The instrumental forces guide the reflection toward new constraints; the experience gradually acquired is reintroduced to each time deepen the relationship to the composition. Initially, the most appropriate formalism for considering the notion of unpredictability is randomness, or the equiprobable random selection of elements. Even if the formal and computer-based transcriptions of this randomness are constructively criticized by a researcher like I. Eklund, the module commonly called random in computer environments remains the most effective current tool for generating "logical randomness." Based on a random selection, we react progressively. A paradox emerges, however: the more complex the formalism, a result of acquired experience, becomes, the more we reaffirm the importance of conscious intuition. Can we reasonably conceive of intuition, sensitivity, or even invention through calculative processes?

Isn't the composer an indispensable intermediary between the conceptual and then sonic propositions of the machine and formalism, pending hypothetical thinking, autonomous, conscious, and automatic mechanisms? The algorithmic approach brings together two essentially contradictory principles of composition: techniques considered deterministic and probabilistic or stochastic principles. The term "stochastic" already implies a deterministic control of randomness. The line between a deterministic process tinged with randomness and a random system associated with determinism is thin, and it seems pointless to provoke aesthetic battles over tools capable of producing the same effects. This is why we prefer to use the term "procedural determinism," which more broadly expresses an awareness of composition as a relationship between a flowchart or sequence of operations and its musical application. It remains to be seen what the consequences of research that aims to encourage a language devoid of predictable and determining formal and memory-based conventions will be. The experiments (on the perception of durations and timbre) as well as the works analyzed are recorded and presented on compact disc: *From Meaning to Meaning*, created by Pierre-Yves Artaud in Darmstadt in 1994, *What Every Corpse Should Know*, created by the 2E2M ensemble at the Centre Pompidou in 1996, *Intumescence*, piece for orchestra and tape, created on February 20, 1997 at Radio-France by the Ensemble of the Philharmonic Orchestra.

## Items

### ***Sound and Visual Objects (SVO) in nDimensions in the Labyrinth of Time***

Stéphane de Gérando - Gilles Baroin

In book: *Mathematics and Computation in Music* springer 2026

This research explores a component of the Labyrinth of Time (LDT), a poly-artistic work by composer-researcher Stéphane de Gérando. The LDT integrates collaborations into its theoretical and experimental development phases, including work with Franck Jędrzejewski and Christophe Mourougane (homometric sets), Jérôme Pétri (relativistic spacetime), Louis Bigo (STIOZ, STISMI), and Gilles Baroin (hypersphere of spectra). Several of these collaborations have led to world premieres. To broaden the perceptual and compositional horizon, de Gérando introduces the concept of the n-dimensional polysensory hyperobject (HOPS), defined both mathematically and perceptually through control parameters engaging the five senses within an interactive immersive space. These hyperobjects encompass sound and visual objects (SVO), the main challenge being to compose n correlated or decorated dimensions. This article provides an overview of this research since 2014 (*Homometric Attractors*). Subsequently, de Gérando restates the definitions of HOPS and SVO, and Baroin presents perspectives on transposing SVO into virtual reality within a four-dimensional geometric space.

### ***When Virtual Reality Helps Fathom Mathematical Hyperdimensional Models***

Gilles Baroin – Stéphane de Gérando

In book: *Mathematics and Computation in Music* (pp. 86-98), 2022

Mathemusicians have always produced models for understanding, analyzing or computing music. We are used to visualize some of them on paper, in a theater or on a computer screen. Even if they refer to multidimensional spaces (3D-4D), while displaying these models on a computer screen the viewer ends up with a 2D picture, or a movie. Planar projection...

Internet link (English):

[https://www.researchgate.net/publication/361057202\\_When\\_Virtual\\_Reality\\_Helps\\_Fathom\\_Mathematical\\_Hyperdimensional\\_Models](https://www.researchgate.net/publication/361057202_When_Virtual_Reality_Helps_Fathom_Mathematical_Hyperdimensional_Models)

### ***32 reasons to repeat***

Paris, 3icar-IcarEditions, 2020, 1 p.

Why is it so difficult to fight against eternal repetition or to create?

Internet link (French): <https://hal.science/hal-02931390>

### ***The human brain and creativity: an incompatible pair?***

Paris, 3icar-IcarEditions, 2019, 2 p.

Following up on Sébastien Bohler's analysis of what he calls the human bug related to brain function, we ask the question of our capacity to create.

Internet link (French): <https://hal.science/hal-02931390>

### ***From artistic creation to entrepreneurial spaces: a plebiscite for a new world***

Paris, 3icar-IcarEditions, 2016

We are publishing a speech by Stéphane de Gérando, invited on May 25, 2016, within the framework of relations between France and Morocco by the French Institute of Agadir and its director, Franck Patillot, organizer of an event on the theme of The Art of Entrepreneurship supported by the French Embassy and the French Consulate General in Agadir, the Wilaya and the Regional Council of the Sous-Massa region, the municipality of Agadir and also by many local actors including the CGEM, the ENCG, the Ibn Zohr University etc...

Through ten analogies between artistic creation and entrepreneurship, Stéphane de Gérando defines lines of thought aimed at energizing a common space, or even reinventing new worlds. To undertake in the 21st century is to create (1), redefine contexts (2), learn to define objectives (3), invent the indefinable (4), communicate differently (5), reinvent new socio-economic spaces and times (6), flee illusion to rebuild our dreams (7), encourage initiative and risk-taking (8), restore meaning to the notion of responsibility (9), and engage in a recursive process of self-modification of objectives and activity (10).

Internet link (French): <https://hal.science/hal-02934086>

### ***Euclidean geometry and sound and visual artistic creation***

With Athanase Papadopoulos, Research Director at the CNRS, Advanced Mathematical Research Institute (IRMA), University of Strasbourg /UMR 7501 CNRS, 3icar /icarEditions, 2015

We explore the links between Euclidean geometry and sound and visual creation. After a brief review of the fundamental concepts related to this geometry, we introduce a critical commentary before problematizing the use of Euclidean transformations within the framework of contemporary creation.

Internet link (French): <https://hal.science/hal-02929406>

### ***Compose?***

Paris, 3icar /icarEditions, 2014, 5 p.

What does it mean to become a composer, to compose, to create?... It is not a question here of answering in a few pages a problem which could in itself be a subject of research, but we propose avenues of reflection, often in reference to the French musical context.

Internet link (French): <https://hal.science/hal-02931389>

### ***Presence and absence of creation***

Paris, 3icar /icarEditions, 2012, 16 p.

Originally, this reflection was part of one of the research themes presented during a viva to become empowered thesis director in France (2005) and had the following premise: contemporary musical creation cannot be confused with the presence or existence of the piece. To think creation through, I avoided the iterative idea of the piece on the piece by using an element which is exterior to the work: concept. The six chosen concepts did not belong to traditional musicological and analytical language, to "shatter the impulse of a reflex expression" and to "destroy within the non-debated convictions", as Bachelard would say (*La psychanalyse du feu*, p. 186). Following "The contemporary musical work put to the test of the concept", this article is divided into three parts: "Variation on a binary theme: Frontier and Apogee then, Coda: Non repetition" (I), "Three variations on a single concept: Presence" (II), "Variation on a binary theme: Chance and Determinism" (III). The conclusion is entitled "Variation of the variation – Introduction to the concept of creation". This article is a summary of a French book published in 2012, *L'œuvre musicale contemporaine à l'épreuve du concept*.

Internet link (English): <https://hal.science/hal-02943728>

### ***The act of creating or delaying death. Based on an interview with Alain Bancquart***

Musical education n°576, Vernon, Musical Education, 2012, 7 p.

Revisiting themes developed in Alain Bancquart's work, *Musique : habiter le temps* (Music: Inhabiting Time), Stéphane de Gérando questions the composer, particularly on his work and especially on writing in micro-intervals, the text-music relationship, the question of influences, the use of anamorphosis... Moreover, through his career and institutional experiences, Alain Bancquart shares his thoughts on the state of contemporary music in France, the place it is given, the process of learning composition, and concludes with "the act of creation." This article, adapted for *Les Cahiers de 3icar*, was written based on an interview conducted on October 15, 2006, during the Festival of Innovation and Creation organized by the International Institute for Innovation, Creation and Research (3icar) at the Museum of Modern and Contemporary Art in Toulouse. Alain Bancquart reviewed the interview in January 2012.

Internet link (French): <https://hal.science/hal-02936522>

### ***Introduction to topological art. Mathematics and musical creation, or "poly-art"***

With Athanase Papadopoulos, Research Director at the CNRS, Advanced Mathematical Research Institute (IRMA), University of Strasbourg /UMR 7501 CNRS, 3icar /icarEditions, 2011

We describe connections between concepts from topology and contemporary creation, particularly in the field of music, with perspectives for enriching the imagination that this can offer, especially in connection with a "poly-art".

Internet link (French): <https://hal.science/hal-02943266>

### ***Non-repetition and contemporary musical work. Based on the piano work by Arnold Schoenberg***

Musical Education No. 507/508, Vernon, Beauchesne, 2006, 10 p.

Some reminders concerning the specificities of information theory and analytical remarks about Schoenberg's work for piano imply a general question intrinsically linked to writing: can we consider the existence of the musical work without the notion of repetition?

Internet link (French): <https://hal.science/hal-02935190>

### ***Musical creation, research, digital technologies and institution***

ARTES notebooks no. 1, 2004, 10 p.

Thinking about the relationship between research and creation, considering its legitimacy, its reality, we

This indirectly refers to the history of the link between new technologies and the institution. Following remarks differentiating between technological potential and musical work, we question the role of IRCAM, an institutional research and creation project born in the 1970s.

Internet link (French): <https://hal.science/hal-02935107>

### ***The concept of apogee in Brian Ferneyhough's Lemma-Icon-Epigram***

The apogee, Notebooks of the Multidisciplinary Laboratory for Research on the Imaginary Applied to Literature (LAPRIL), Bordeaux, Eidolon, 2004, 18 p.

We listen to Lemma-Icon-Epigram, a work composed in 1981 by Brian Ferneyhough, questioning the definition, presence, or absence of the concept of apogee. A review of the contemporary musical historical context allows us to evoke the concept of the apogee work, Lemma-Icon-Epigram occupying a special place in contemporary piano composition. Then, starting with an analysis of the work by Richard Toop in 1988, we study the relationships between the notion of apogee in this work, its initial sonic material, and more broadly, its form.

Internet link (in French): <https://hal.science/hal-02935185>

### ***The notion of border in musical work after 1945: reality or utopia? - Examples of Ikhoor by Iannis Xenakis, Anahit by Giacinto Scelsi and 4'33 by John Cage***

Frontiers and thresholds, Notebooks of the Multidisciplinary Laboratory for Research on the Imaginary applied to Literature (LAPRIL), Bordeaux, Eidolon, 2004, 15 p.

We consider three interpretations of the idea of a musical boundary, each illustrated by the choice of a contemporary work. Based on an auditory commentary on Iannis Xenakis's string trio *Ikhoor* (1978), we present the boundary as a place of passage, a transition or bridge contributing to the work's coherence. The second example, *Anahit* (1965) by Giacinto Scelsi, introduces the concept of a "boundary work," a space enclosed by an indivisible perception of the work. The "boundary work" displaces the concept of a boundary outside the work itself. The final example—John Cage's *4'33* (1952)—symbolizes a continuum between existence and art: it is the "boundaryless work."

Without claiming to define a typology of musical boundaries, we are more interested in the sometimes ambiguous aesthetic relationship between boundary and work.

Internet link (French): <https://hal.science/hal-02935091>

### ***About the work for tape alone and the musical writing of Jean-Claude Risset (1/2) On the work for solo tape and musical writing of Jean-Claude Risset (2/2)***

Musical Education No. 507/508, Vernon, Beauchesne, 2003, 10 p.

Musical Education No. 509/510, Vernon, Beauchesne, 2004, 4 p.

The starting point for these two articles is an interview with Jean-Claude Risset about his work for tape. Based on elements of analysis, Jean-Claude Risset responds according to an organization in eleven chapters: titles of the works and thematic classification (1), chronology (2), observations on the overall duration of the works (3), number of tracks – technological potential (4), Little Boy (5), acoustic determinism and writing, synthesis techniques and evolutions (7), forms and segmentation of time (*Mutation 1*, *Electron-Positron*, *Echo for John Pierce*, *Avel*) (8), Invariants and novelty (9), memory in question (10), the search for "an elsewhere" (11).

Internet link (French): <https://hal.science/hal-02943721>

### ***Computer sound synthesis models – Presentation of digital synthesis techniques and introduction to an aesthetic of synthetic timbre***

Musical Analysis No. 47, Paris, ADAM, 2003, 13 p.

We will present the main sound synthesis models, simplifying the technical explanations to better illustrate the paradigm of timbre creation. We will then introduce a critical perspective on the musical use

of synthesis models and their scientific developments (JIM 2002), as the different models do not offer the same advantages for the composer concerned with inventing (and not transforming) timbre in relation to the composition of the work.

The 1970s saw the emergence of systematic thinking linking harmony and timbre. Today, in the field of digital sound, the issue seems to be evolving towards the concepts of model, paradigm, representation, and timbre control. The conclusion already heralds a new era of thought and creation, less constrained by paradigmatic frameworks, as if the idea of a meta-model represented by the simple question of digital sound control could make us forget the question of model choice. The introduction to an aesthetics of synthetic sound, rather than describing compositional archetypes, would ultimately be oriented towards the study of the essential relationship between composition and the imagined world of the work.

Internet link (French): <https://hal.science/hal-02934963>

#### ***Four Variations on a Death Foretold - Thinking about the Existence of Contemporary Opera after 1978***

Musical analysis no. 46, Paris, ADAM, 2003, 10 p.

Following the predicted demise of opera, simply noting that more than 150 operas have been written since 1978 is insufficient to describe a revival of the genre or even its continued existence. The question of the presence of contemporary opera serves as a guiding thread, and we ultimately introduce an approach that can contribute to a more in-depth analysis of this subject. Three distinct yet complementary sections inform this reflection. A brief historical overview, extending to the treatment of the voice before 1978, reveals a musical landscape rich in potential. We then present four operas by European and American composers belonging to major, unique aesthetic movements: John Cage's *Europera 5* (1991), Hugues Dufourt's *Dédale* (1995), John Adams's *El Niño* (2000), and Helmut Lachenmann's *Das Mädchen Mit Den Schwefelhölzern* (1996). After a personal interpretation of the operas of Cage (absence) and Dufourt (separation), we discuss the projects of a director, Peter Sellars ("dialogue"), and a composer, Lachenmann ("totality"). The final section introduces a distortion of the initial commentary through the introduction of two aesthetic conceptions of musical history. From progress in art (Theodor W. Adorno) to the metamorphosis of a genre (Danielle Cohen-Levinas), we conclude with yet another perspective that sheds light on the issues raised.

Internet link (French): <https://hal.science/hal-02943718>

#### ***The presence of popular repertoire in Western art music – Key points concerning the contemporary period***

Musical Education No. 499, Vernon, Beauchesne, 2003, 6 p.

In common parlance, the term "popular" implies a diversity and richness of meaning, reflecting notions of belonging to a people, lineage, use by the people, or creations that appeal to or please the widest possible audience. The relationship between the generic definition of the word "repertoire" and the more precise definition of "Western music" highlights a vast, multidisciplinary field that ranges from popular culture in its broadest sense to purely musical creation (and never the other way around). However, the opposition between the terms "popular" and "classical" does not appear in the wording of the topic. The attached list of contemporary works confirms the influence of the popular repertoire on specifically classical Western music. Moreover, these works go beyond the scope of a study of "transcriptions and recordings of music from oral traditions that inspired the composers of that era" (the subtitle of the CAPES exam topic).

Terminological ambiguities, epistemological positions, different perspectives (analyst, composer, historian), and the coherence of choices all contribute to a multiplicity of approaches, both in form and content. Beyond questions relating to the subject itself, we have chosen to present points of reference that establish a connection between types of popular influence and examples of contemporary scholarly works (nineteen listening sessions accompanied by discographical references).

Internet link (French): <https://hal.science/hal-02935083>

#### ***Separating to discover an imaginary world – The experience of musical writing***

Imaginary and unconscious no. 8, journal of psychotherapeutic studies, Bègles, L'Esprit du Temps, 2002, 6 p.

The author presents a reflection on his research directions in musical composition, research linked to a desire to break free from the expression of his initial emotions and from a general cultural—historical, aesthetic, and technical—constraint. He wishes to foster the emergence of unimaginable and unpredictable emotional openings and to discover new facets of himself through his creative process. This article retraces a stage in his journey and the questions he has been asking.

Internet link (French): <https://hal.science/hal-02934969>

***Dictionary of Dance - Bussotti, Carter, Janacek, Jolivet, Kodaly, Part, Schaeffer, Schnittke, Varese, Zimmermann***

Editor, Larousse, 2008

Dance in the West, from the Renaissance to the 20th century, is the subject of this book. In 4,000 entries, this dictionary reflects the diversity of the choreographic adventure and gives ample space to Baroque and Classical dance, as well as contemporary dance and modern jazz. It also considers the cinematic dimension of dance. It is composed of three parts, organized alphabetically: - The world of dance (choreographers, performers, composers, librettists, set designers, painters and visual artists, authors of treatises, teachers, institutions and companies, filmmakers, etc.) - Choreographic works (on stage and screen) - The language of dance (aesthetic concepts, social dances, choreographic genres, styles and movements, movement notation, professional terms, etc.). For both the selection of entries and the writing process, it draws upon French and international specialists in the fields of dance history, movement analysis, music, visual arts, and more. Diverse in its scope, it provides access to various forms of dance and ways of understanding choreographic creation in its multiple dimensions: the body, notation, space, scenography, and so on. The Dictionary of Dance, enriched by more than 500 illustrations, is intended for students, teachers, and specialists alike.

Internet link (French): <https://hal.science/hal-02935075>

**Other thoughts**

***"Remember"***

Press article. 3icar IcarEditions 2020

A teacher beheaded: once again, it takes the confrontation with death to stir emotion over a situation that is commonplace in some educational settings in France: does the freedom to teach truly exist? "REMEMBER"

***The observer's position, or humanity in crisis. The importance of the multiple and the simultaneous.***

Press article. 3icar IcarEditions 2018

Based on an interpretation by Samuel Hayat (a political science researcher at the CNRS) of the events experienced in France at the end of 2018, Stéphane de Gérando recalls notions that seem essential to him to promote exchange, such as taking into account the "position of the observer", the notion of universalism, the importance of "the multiple and the simultaneous".

Internet link (French): <https://hal.science/hal-02934087>

***I stand, you stand... Wandering, higher education and research in France***

3icar IcarEditions 2011-2023, 7 p.

For years, it has been troubling to see testimonies of dysfunction emerging in relation to student training and the recruitment of teacher-researchers, up to and including court rulings against universities that seem not to shake a well-entrenched system. Far from reproving the precious work of teacher-researchers as a

whole, and the individual courage of some, we question the silence of “the field”: the University is clearly not a domain of excellence when it comes to ethics. Here are a few echoes from a brief wandering...

## 3.4 BIOGRAPHIES

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### DETAILED BIOGRAPHY

#### Composer

Admitted first-named to the composition class at the Conservatoire National Supérieur de Musique et de Danse de Paris in 1987, Stéphane de Gérando received a first prize first-named in Composition in 1993. He studied notably with Alain Bancquart in composition, Michel Philippot in writing and analysis, Gérard Grisey in orchestration, Tristan Murail in computer music, and Guy Reibel in electroacoustics. He was subsequently admitted first-named to the 3rd cycle of composition at the CNSMDP in 1994, where he attended master classes with Pierre Boulez, Karlheinz Stockhausen, Franco Donatoni, Emmanuel Nunes, and Henri Dutilleux. He was awarded the international prize at the Darmstadt contemporary music festival (1994), the prize of the association of alumni and students of the Conservatoires Nationaux Supérieurs de Musique et d'Art Dramatique de Paris (1991), the academic prize of the Sacem (1995), and was laureate of the Sasakawa Foundation in 1993 and 1994.

He is the composer of orchestral works premiered at Radio France in Paris, such as *\* Puisqu'il en est ainsi\**, for symphony orchestra and eight-track tape; *\* En toi, avec lui et en lui\**, for four orchestral groups positioned around the audience; *\* Intumescence\**, a commission from Radio France, premiered by the Orchestre Philharmonique de Radio France in co-production with the Ina-Grm for the electroacoustic component; *\* Katanga\**, a work for fifteen brass instruments and two percussionists, commissioned by Radio France... – other examples of works: *\*Virtualité et conscience du vide\** for string trio, premiered at the CNSMDP; *\* Hommage à Bach\** for clarinet; *\*Metathesis\** for piano, premiered at Radio France; *\* Pièce pour cordes\**, commissioned by the Orchestre Philharmonique de Montpellier; *\*Ce que tout cadavre devrait savoir\**, commissioned by the ensemble 2e2m, premiered at the Centre Pompidou in Paris; *\* Du sens sens\**, for flute, premiered by P.Y. Artaud at the Internationale Ferienkurse für Neue Musik de Darmstadt, *6ex1pen7sion4*, a state commission for ensemble and real-time electronics, premiered in Paris by Ensemble 2e2m; *L'opéra de glace (The Ice Opera)*, for youth choir, computer, and video, a state commission, premiered at the Cité de la Musique in Paris; *Introït (Introit)*, for soloist, choir, orchestra, and electronics, commissioned by CMA19; *Remember*, for children's choir and electronics in 16ths of a tone; *Spiralis ou Les fous de la nef (Spiralis or The Madmen of the Nave)* for meta-organ; *Frapocalypse* for clarinet, violin, cello, and piano; *L'étrange passage des sens (The Strange Passage of the Senses)*, cycle 7 of *Le Labyrinthe du temps (The Labyrinth of Time)* for actors, dancers, and horn with real-time electronics, video, and 5.1 sound; *La danse du trou de ver (The Wormhole Dance)* for four spatially arranged percussion groups around the audience, electronics, and video; *Un jour viendra (A Day Will Come)*, an excerpt from cycle 8 of *Le Labyrinthe du temps* ...

In permanent development since 2006, *The Labyrinth of Time* is today a monumental work that is both technological and polyartistic, controlled and invented in real time by algorithms: sound invention, visual, museum installations, large screen projections, monumental mapping, concerts, performances... (see chapter on the Labyrinth and list of latest creations).

Director of the icarEnsemble, Stéphane de Gérando notably conducts the Radio France Philharmonic Orchestra and his own ensemble for the recording of a monographic CD with incurrent editions with the support of Radio-France, MFA and 3icar.

#### Poly-artistic and technological creations

In 2006, Stéphane de Gérando collaborated with Pierre Chaveau (first version of Binaurale), a painter who developed “light writing” — moving painting through the projection of primary colors onto his canvases and control of the intensity of three light beams, enabling recomposition through additive synthesis of the chromatic spectrum (Musée d'Aquitaine, Festival de l'Innovation et de la Création 2007). Since that time, Stéphane de Gérando has created “virtual paintings” — digital paintings playing on differential thresholds of perception.

In 2007, at the Musée d'Art Moderne et Contemporain of Toulouse – Les Abattoirs, Stéphane de Gérando presented “CA”, Creative Algorithm, a program generating in real time (Max/MSP programming) an interactive work of synthesized image and sound. Since 2006, his works such as *Blue Bird*, *Binaural*, and *Intumescence* have been the subject of monumental projections in national museums. In 2010, Stéphane de Gérando began *Labyrinthe du temps (The Labyrinth of Time)*, a poly-artistic and technological work of a new kind.

## *The Labyrinth of Time*

Virtual tableaux in computer-generated imagery, interactive digital sculptures, large-screen projection, monumental mapping, dance performances, theatre, music, the book of the Labyrinth, the theatre of the Labyrinth, interpretation masterclasses, scientific, artistic and educational research, this technological and poly-artistic work is conceived as "a whole" associated with an attempt to invent a poly-sensory metalanguage.

Stéphane de Gérando explains that it is a journey: "through different scales of representation of time, in the image of quantum, macroscopic and cosmological scales, an interior journey, a chaotic play of memorial fragmentation between the composition of "satellites" (installation exhibition) and "grand cycles" (concert-performance) (recomposed satellites). The interplay of chance and determinism lies at the heart of the Labyrinth's writing project, returning us to a simultaneous feeling of presence and absence: absence of intentionality, of finality, chance and contingency of encounters (...), presence of causal relationships, determinism of trajectories, finalism (...)". Composed of cycles and satellites, works interwoven from the microcosm to the macrocosm of the *Labyrinth*, the memory of the material proliferates until oblivion, search for origins, mythical or precognitive questions, as for satellite 2 created at the 2011 Innovation Festival in Paris with Corinne Hurtu (dance), Mayuko Yasuda (soprano), Emmanuel Meyer (actor).

In 2011, the satellite *l'Opéra de glace* was created at the Cité de la musique in Paris, a version for children's choir, adolescent choir, two mezzo-soprano soloists, narrator, computer, video and real-time processing (5.1 broadcast).

In addition to the music, Stéphane de Gérando creates the videos and writes the texts.

In the circle of the sphere, a new satellite for actor and then video, presented and premiered on December 6, 2012 in Paris, the rules of theatrical performance are inspired by the writing of images, "a score for four independent rhythmic voices" (program of the 3icar Innovation and Creation Festival 2012):

1. The actor plays with space (based on the movement of the sphere) - first rhythmic score;
2. Regardless of the (agodic) flow of the text (retrograde movement of the sphere) – second rhythmic score;
3. Text that tells another story – third rhythmic score;
4. Even as the nuances structure a fourth rhythmic score.

If the invention of the *Labyrinth* goes so far as to form a restructuring of language from archetypal phonemes listed by Locquin, theatrical writing becomes ever more complex, the 50,000 images of the Labyrinth referring us to polymorphic writings, like the creation of the Gates of the Labyrinth, for actor, video and 5.1 sound - Festival of Innovation and Creation 2014.

In the same way in the context of dance, the choreography of the *Labyrinth* involves the use of static and dynamic processes listed in relation to the image and 3D volumes, with the control of dissociated speeds taken from the Labyrinth (cf. Rules of writing or improvisation theatre and dance of the Labyrinth of Time, published by 3icar in 2014).

Furthermore, according to a 2014 program note, "the poly-sensory, protean and multi-platform universe aims at labyrinthine realizations scattered across the four corners of the planet and connected by network. In an unpredictable movement of expansion/contraction, the material of the work pursues an existence that will lead it simultaneously toward infinite development as well as toward its own end, the collapse of the *Labyrinth*".

In 2015, with *The Strange Passage of the Senses* and the creation of a new cycle, the material undergoes very strong accelerations of time in addition to matrix combinations. Loss of information, perceptual illusions, fragmentations and contrasts leading to chaos, this 5th cycle plunges into parallel spaces and times, a kind of pluriverse that opens up new rhizomatic and labyrinthine perspectives.

The year 2017 marks a new stage in the real-time and infinite algorithmic control and invention of the Labyrinth, with possibilities for interaction during performances.

Cycle 8, entitled "Installation — Fragmentation," was created from 8 April to 10 June 2017 during the exhibition "Le chant des terres" — exhibition curator Sylvie Perrin, Gantner multimedia art center in Bourgne.

This installation of the *Labyrinth* is fully automated and controlled in real time by an algorithm, the acronym "LDT" appearing to designate this work (to learn more, refer to the interview with Stéphane de Gérando conducted by Fabien Vélasquez, media librarian at Espace multimédia Gantner, on May 10, 2017).

At the same time, Stéphane de Gérando wrote *\* Le manifeste of the Labyrinth du temps\**, a poetic text translated into six languages. Iranian composer Karan Salajegheh, along with composers Kaori Tsutsui, Sejin Goossens Jung, Davit Pivazyan, and Zhe Zeng, presented this manifesto on April 22, 2017, in Paris. This reading was followed by an interview with Stéphane de Gérando by Karan Salajegheh, featuring a preview of excerpts from Cycle 9.

Cycle 9 is composed for large-screen video projection, real-time algorithm for image and sound spatialized around the audience, contemporary dancer and violinist with real-time electronics.

In this cycle, the algorithms compose scores in real time (read on computer), sonic or visual sequences through combinations across all parameters of the SOV (sonic and visual objects), or electronic transformation of sounds managed through a matrix of more than 120 inputs and outputs.

More broadly, using three networked computers, the algorithms control:

- virtual paintings (still images),
- moving pictures (video, HD screen, no sound),
- texts from the Labyrinth Theatre,
- videos, with spatialized sound around the audience
- simple or combined videos,
- algorithmic satellites,
- real-time image and sound computer programs
- bodily and textual scores for dance and theatre,
- real-time algorithmic partitions and electronics,
- electroacoustic satellites, 5.1 spatialized sound files,
- virtual instruments, spatialized sound files in 5.1.

The programs compose, “in the moment,” unpredictable trajectories within the infinite possibilities of LDT.

This cycle 9 was created twice in the same city in June 2017, with Marie-Pierre Jaux, contemporary dancer, and Olivier Compagnon, young violinist. The first performance took place at the international FIMU festival, on June 4, 2017, at the Granit national stage. The second creation was a nocturnal outdoor event, in the courtyard of the Citadelle de Belfort, on June 9, 2017 (cf. first part 37, second part).

From 16 to 30 April 2018, during the digital week at the historic monument of the Citadelle de Belfort, the public constructed its own Labyrinth of Time with the creation of Cycle 11, by piloting and interacting in real time with the work at both sound and image levels... Eight interactive play situations allow the audience to create their own labyrinth of time: remote gestural control, real-time voice processing in relation to the image, augmented reality, etc. (“Let yourself be guided by chance,” press article by Jordan Muzycza, L’Est Républicain, Wednesday April 18, 2018).

International event with the support of the French Embassy in Iran, new creation of the Labyrinth of Time: monumental mapping on the Azadi Tower in Tehran (45 meters high, 5-hectare square), on 19 July 2018 at night, lecture at the University of Tehran on 15 July 2018, technology workshops at the Museum of Music of Iran in Tehran on 16 and 17 July 2018.

### **Research and creation**

His research training began in 1991-1992 with selection to the long-course curriculum in computer music at the Ircam, which he extended through advisory work within the institution. Stéphane de Gérando subsequently obtained degrees from the École des Hautes Études en Sciences Sociales associated with the École Normale Supérieure, the Ircam and the CNRS (DEA in Music and Musicology of the 20th century), from the Université Paris-VIII (doctorate in "Aesthetics, Sciences and Technology of the Arts" in 1996, Contingency and Procedural Determinism Applied to Computer Sound Synthesis and Musical Writing), and from the University of Rouen, doctoral school Savoirs, Critique et Expertises, Music and Musicology — Habilitation to Supervise Research, Contemporary Musical Works in Question.

His publications address the creation and digital invention of image and sound (cf. Dialogues imaginaires, une expérience de la création contemporaine et de la recherche, Paris, Tschann, coll. Inactuelles, 2010).

Stéphane de Gérando connects, for example, the listening experience of contemporary works with a definition of the concepts of boundary, apex, non-repetition, presence, chance/determinism and the concept of creation. The researcher envisages an absolute limit toward which creation tends asymptotically and utopically. This trajectory simultaneously defines the presence and absence of the work (excerpt from the book: *Contemporary musical work tested by the concept* ).

In the field of new technologies, his research reflects concerns that are both theoretical and technical: the relationship between imaginary chance and determinism, the question of the entirely algorithmic, the connections that may exist between the projection, at different scales of representation, of musical visual objects (MVO) and current conceptions of space/time.

With Athanase Papadopoulos, Research Director at the CNRS and researcher at the Advanced Mathematical Research Institute (IRMA, CNRS UMR 7501), they describe connections between concepts drawn from topology and contemporary creation, particularly in the musical field, with perspectives for enriching the imagination that this may offer. In a new article three years later (see list below), they explore possible links between Euclidean geometry and sonic and visual creation, links rendered delicate especially due to the loss of a common frame of reference.

On 4 May 2012, at the Mathematics and Music seminar at the IRCAM in Paris (MaMux), Stéphane de Gérando presented with Gilles Baroin (PhD engineer) the hypersphere of spectra, an original model for representing the sound spectrum projected onto a spiral on the surface of a hypersphere in 4-dimensional space.

In December 2014, Franck Jedrzejewski and Stéphane de Gérando achieved a world first with the enumeration and artistic and algorithmic use of 5,136 sets cataloged in homometric classes (modulo 24), homometric sets being mathematical constructions whose main property is to preserve their intervallic structure. On this occasion, Stéphane de Gérando composed *Homometric attractors* . Let us quote the program notes from the premiere concert on December 16, 2014: "In a certain way, in this world of 'attractors,' there would no longer be a composer, no more written scores, no more definitively fixed works. The composer (or even the conductor) is here 'replaced' by a computer or an algorithm that decides, according to the same rules of composition, on a dance, instrumental, and electronic work. Each time different, and therefore unique and ephemeral, the work invents itself in an unpredictable and polymorphic way, as if to better escape the power of the sign and memory. Within the framework of this performance, we are witnessing a world premiere, the result of research undertaken on homometric ensembles with Franck Jedrzejewski, a researcher at the French Alternative Energies and Atomic Energy Commission (CEA), a mathematician, and also a musicologist and philosopher. These ensembles reveal 'hidden' structures of matter at the atomic scale, as in crystals, notably taking into account questions of distance and therefore interval." (here in micro-interval, "modulo 24"). The next step in the development of the algorithm will see the integration of homometric sound and visual hybrids (NURBS)".

In March 2015, with Jérôme Pétri, astrophysicist at the Strasbourg Observatory, they defined five relativistic artistic laws contributing to a definition of the concept of space-time for sonic and visual composition. They laid the foundations for a relativistic artistic revolution associated with the definition of a specific vocabulary.

In August 2015, with Christophe Mourougane, mathematician and researcher at the Mathematical Research Institute of Rennes, Professor at a University, they proposed introducing a general model of sonic and visual composition that could help renew compositional problems, complex notions appearing as hidden and entangled dimensions. They define seven different spaces, from artistic creation to composition, with "Ecomp" itself composed of three fundamental spaces — the formal, physical and perceptual spaces — connected by mappings. They then define simple and complex sonic and visual objects through the concept of "timbre fiber," for example. The compositional space then becomes a fiber of a fiber bundle over a space-time. The next objective is to define a fibered metric space capable of translating distances, offering the prospect of inventing singular compositional trajectories in this initial space. To design this formal space, Stéphane de Gérando and Christophe Mourougane begin from an analysis of homometric sets (meta-mode) combined with the calculation of distances (Hausdorff distances).

In 2015, as part of a Franco-German partnership (120 musicians) commissioned by the Belfort Agglomeration Community, *Tempus est*, for wind orchestra and electronic bells spatialized around the audience, sounds like a giant solo bell within which a double wind orchestra placed on stage acts as a mirror, like a diffracted shadow of the same space. The timbral harmonies of these bells were composed from singular pitches, a particular case of so-called "all-interval" series calculated algorithmically for the occasion through the scientific collaboration of Louis Bigo, a computer science researcher. Following in the footsteps of the works of Schoenberg, Berg, Messiaen, Nono, and Stockhausen, for example, the composer's aim here was to compose using rare material, with a dual

potential that is both spectral and melodic (excerpt from *Tempus est*, 3icar edition, 2015).

For this world premiere and the algorithmic invention of this material, Louis Bigo and Stéphane de Gérando coined two acronyms:

- STIOZ or all-interval series within an octave and in zigzag
- STISMI or all-interval series embedded in micro-intervallic series.
- For this other commission written in 2016, *Le chant des STISMI64* for a flute orchestra and real-time electronics, Stéphane de Gérando uses the result of these calculations (STISMI) to algorithmically control the sonic transformations in real time.

### **Administrative career**

After directing the School of Music and Dance of Vaucresson, he was appointed Pedagogical Director of the music department at the Center de Formation Supérieure des Enseignants de la Danse et de la Musique d'Aquitaine (Cefedem), tasked by the Ministry of Culture with restructuring the curricula and restarting training for the State Diploma.

He was then appointed Director of the university department at the Center de Formation de Musiciens Intervenants of the University of Strasbourg (Cfmi), also responsible for the validation of prior learning (VAE) and continuing education programs.

He is responsible for organizing examination boards for the State Diploma, the Musician Speaker diploma, and has been invited by the Ministry of Culture to state commission committees and to the jury for the Certificate of Aptitude.

In addition to the restructuring of Cefedem and Cfmi, he was called upon to create the composition–new technologies class at the new Henri Dutilleux Conservatoire in Belfort and a composition–new technologies curriculum within the Paris conservatoire network, a curriculum for which he is responsible.

Stéphane de Gérando is also the founder of the Festival of Innovation and Creation, supported by the Sacem since 2006.

He is regularly invited by prestigious institutions, training establishments and cultural organizations to discuss his various professional experiences, as for example his lecture at the Center de la Musique Contemporaine in Paris on 6 November 2014, on the occasion of Alain Bancquart's eightieth birthday, an address linking ethics and creation published on the front page of Médiapart on 8 November 2014.

In the same way in 2016, invited to speak in the context of French-Moroccan relations and an event on the art of entrepreneurship at the Institut Français d'Agadir, Stéphane de Gérando outlined, through ten analogies, the importance of evolving the very notion of entrepreneurship: "entrepreneurship in the 21st century means: creating (1), redefining contexts (2), learning to define objectives (3), inventing the undefinable (4), communicating differently (5), reinventing new socio-economic space-times (6), escaping illusion to rebuild our dreams (7), encouraging initiative and risk-taking (8), restoring meaning to the notion of responsibility (9), engaging in a recursive process of self-modification of objectives and activity (10)."

### **Teaching career**

From his studies at the Paris Conservatoire, the EHESS and the IRCAM onward, he spent nearly ten years developing cultural and pedagogical initiatives across the Paris academic district, notably in connection with schools classified as Priority Education Zones (ZEP) and centers of excellence such as the Lycée Henri IV.

He is invited as a pedagogue at numerous institutions: universities, university teacher training institutes — training for the aggregation and the CAPES — university institutes of technology, music schools, the National Higher Conservatory of Music and Dance of Paris, the national center for territorial civil service, heads of continuing education programs in higher education, and training for the Certificate of Aptitude, State Diploma, and University Diploma of Musicien Intervenant.

He teaches musical composition, history and analysis (particularly of the 20th and 21st centuries), ensemble music conducting, computer music, orchestration, the history of French institutions, pedagogical texts (Ministries of Culture and National Education), preparation for interviews for the competitions of the Centre for Territorial Public

Service, having been responsible for teaching internships in the territory for eight years.

Stéphane de Gérando has also supervised fifty research dissertations.

He is also responsible for numerous internships with major schools such as Sciences Po or engineering schools (National School of Electronics, Computer Science and Radio Communications of Bordeaux, Telecom Lille 1...), master internships under agreement with the Sorbonne, Reims, Bordeaux, Toulouse: LEA management and intercultural negotiations, professional master's degree in multimedia creation, master's degree in mathematics and information and communication sciences and technology, Paris School of Computer Science – Electronics – Automation, European School of Management and Business Strategy, European Higher Institute of Management.

## BIOGRAPHICAL NOTE

**Artistic Career.** First Prize and 3rd Cycle first-named in composition from the National Conservatory of Music of Paris in France, international awards including the Darmstadt Festival in Germany. More than 90 works including museum installations, international collaborations with the support of the Embassy of France, poly-artistic creations with dance, theater, digital arts and computer graphics, orders from the French state, orders from Radio-France [...]. Stéphane de Gérando also founded the Festival of Creation and Innovation. He directed the Radio-France Philharmonic Orchestra for his latest monographic record at Innouvelles (Radio-France, MFA) and he directs the icarEnsemble, a poly-artistic and technological ensemble dedicated to the research and interpretation of the Labyrinth.

**Scientific course.** Expert in new technologies related to the artistic creation, Doctor of universities, Authorized to lead research, former trainee then consultant at IRCAM in Paris, former director of university department and teacher training center linked to the Ministry of Education culture in France, professor of composition - new technologies, works, dictionaries, numerous articles and world firsts with collaborators from CNRS, CEA, universities, great schools, research laboratories.

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**Artistic career.** First Prize and 3rd Cycle first-named in composition at the Conservatoire National Supérieur de Musique de Paris, international awards including the Darmstadt Festival, more than 90 works including museum installations, international collaborations, poly-artistic creations with dance, theater, digital arts and computer-generated imagery, state commissions, Radio France commissions [...]. Stéphane de Gérando also founded the Festival de la Création et de l'Innovation. His latest monographic recording is published by Inactuelles éditions (Radio France, MFA), and he is the author of the publication "Dialogues imaginaires. Une expérience de la création contemporaine et de la recherche" (Imaginary Dialogues: An Experience of Contemporary Creation and Research). He is notably a professor of composition and new technologies in Paris and Belfort.

**Scientific career.** Expert in new technologies related to artistic creation, Doctor of Universities, Habilitation to Supervise Research, intern then consultant at IRCAM, former director of university department, higher education center for teachers linked to the Ministry of Culture in France and conservatory, books, dictionaries, numerous articles and world firsts with collaborators from the CNRS, the CEA, grandes écoles, research laboratories.

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**پیشینه هنری-** جایزه نخست و منتخب اول آهنگسازی از کنسرواتوار ملی پاریس در فرانسه، برنده جوایز بین المللی از جمله جایزه فستیوال دارمشتات در آلمان. دارای بیش از نود اثر شامل چیدمان های موزه ای، همکاری های بین المللی با حمایت سفارت فرانسه، خلاقیت های چند استغفان دوژراندو همچنین بنیان [ .... ] [هنری با رقص، تئاتر، هنرهای دیجیتال، تصاویر با سنتز، سفارش ها از دولت فرانسه و رادیو فرانسه همچنین رهبر و گزار فستیوال خلاقیت و نوآوری است. او ارکستر فیلامونیک رادیو فرانسه را برای اجرای آخرین ضبط رهبری کرده است. اختصاص دارد. است. آنسامبلی چند هنری و تکنولوژیک که به تحقیق و تفسیر بر روی هزارتو icarensemble

**پیشینه علمی-** متخصص در زمینه تکنولوژی های نو در ارتباط با خلاقیت هنری، دکترای دانشگاهی، راهنمای تحقیقات، کارآموز سابق و سپس پاریس، مدیر سابق دپارتمان دانشگاهی و مرکز آموزش عالی مدرسان وابسته به وزارت فرهنگ فرانسه، استاد آهنگسازی، IRCAM مشاور در ، دانشگاه ها، مدارس عالی، مراکز تحقیق (مراجعه به فصل ارجاع ها). CEA ، CNRS ،the تکنولوژی های نو، خالق کتاب From

## PRESS BIOGRAPHY



Stéphane de Gérando initially received a dual training as a composer and researcher, at the Conservatoire National Supérieur de Musique et de Danse de Paris (First Prize and 3rd cycle first-named in composition), at university (doctorate, habilitation to supervise research) and at the IRCAM (computer music curriculum). He won the international Stipendianspreis 1994 at the Festival für Neue Musik in Darmstadt, the Prize of the Association of Alumni and Students of the Conservatoires Nationaux Supérieurs de Musique et d'Art Dramatique de Paris (1991), the Academic Prize of the SACEM (1995), and was laureate of the Sasakawa Foundation in 1993 and 1994.

His catalogue includes more than 140 works, from solo instrument to orchestra with or without electronics, digital installations, monumental projections, virtual paintings, polyartistic creations theatre – dance music digital technologies.

Since 2007, he has devoted himself primarily to the Labyrinth of Time, a multi-platform work that is both polyartistic and technological. With international support from France, one of the latest monumental projections of the Labyrinth of Time was on the Azadi Tower in Tehran on July 19, 2018 (numerous television reports, press agency photos, front pages, articles).

Books, articles, dictionary, Gérando's publications deal on the one hand with historical, aesthetic, pedagogical and institutional questions related to the notion of creation and on the other hand with algorithmic problems (world firsts) or more broadly related to digital technologies, with scientific collaborators such as Athanase Papadopoulos, Franck Jedrzejewski, Christophe Mourougane (mathematicians), Jérôme Pétri (astrophysicist), Louis Bigo (computer scientist), Gilles Baroin (doctor of engineering).

### Selected discography

- *Morphilude* , cycle for flutes, real-time electronics and fixed sounds, ACEL 2025
- *Verticale Mémoire* (14 tracks), electroacoustic cycle of the Labyrinthe du temps, Centre National de la Musique, Maison de la Musique Contemporaine, Institut International pour l'Innovation, la Création Artistique et la Recherche, 2022
- *Electroacoustic 1* (7 titles), UPC EAN 198003576506, 2022
- *Meta-instrument 1* (13 titles), UPC EAN 198003568464, 2022
- *Imaginary Dialogues* (9 tracks), Mfa, Radio-France, 3icar, Inactuelles Tschann Paris, 2010 (Gérando monographic CD)

### Extracts from publications

- *The Labyrinth of Time* (art book, computer graphics and texts by Stéphane de Gérando), Paris, 3icar /icarEditions, 2013.
- *Contemporary work put to the test of the concept* , preface by Paul Méfano, afterword by Jean-Yves Bosseur, Paris, L'Harmattan with the CNRS and Paris I, 2012.
- *Imaginary Dialogues. An Experience of Contemporary Creation and Research* , Paris, Inactuelles, 2010 (English version Julien Elis).

### 3.5 ABOUT GÉRANDO

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In his work, *Musique contemporaine. Aide-mémoire - exemples et définition*, published by Durand (p. 98), Bruno Giner classifies Stéphane de Gérando among a new generation of composers who "demonstrate a prolific, intense activity".

Alain Bancquart, professor of composition at the Conservatoire National Supérieur de Musique et de Danse de Paris and Academic Advisor, described as early as 1992 the "ambitious" work of Stéphane de Gérando: "a very personal imagination, whose boldness and perspicacity are strikingly interesting." "Each of his scores demonstrates a genuine power of conception."

Paul Méfano, composer, conductor, founder of the ensemble 2e2M, former professor at the Paris Conservatoire and director of the Versailles Conservatoire, describes (ISBN 9782296562837, pp.7-8) the research and compositional work of Stéphane de Gérando as "an attempt at the unification of the whole." Stéphane de Gérando "combines the telluric force of a Varèse with the meticulous and objective cruelty of Pierre Boulez, recapturing the essence of a powerful breath." Paul Méfano describes an illuminating junction between Gérando's musical language and reflection: "one finds there diversity, originality and a unifying harmony."

Jean-Yves Bosseur, composer, researcher and director of research at the CNRS, highlights the dual approach — as both researcher and composer — of Gérando, which combines in an "unquestionably fruitful manner," also recalling the results of Gérando's research on the concept of creation: "a double movement in opposition: on one side an absence, the work tending asymptotically toward an absolute it could never reach; on the other a presence offering the possibility of anticipating such a movement, during the concrete manifestation of the act of creation." Jean-Yves Bosseur announces that this is "a fundamental issue that Stéphane de Gérando fully assumes, both in his thinking and in his practice" (ISBN 9782296562837, pp.179-181).

Costin Miereanu, composer and Professor of Philosophy, Aesthetics and Sciences of Art at the Université Paris I, describes a "monumental" work, an "original research of high musical and scientific level," "a different perspective," "conceptually three-dimensional and topological in approach to composition and musical reception," important milestones in the establishment of a "poietics."

Jean-Pierre Armengaud, pianist, former artistic director of the Radio France "Présences" festival, Professor at the University of Évry-Val d'Essonne, highlights a "titanic enterprise," a "surreal thinking," a "volcanic model," a "creative energy" "with the ever-further drive to push beyond limits, the confrontation between the control of parameters and the contingent violence of a white-hot material, the intrusion of the beyond-time, the beyond-logic into a parameterization nonetheless held with an iron fist." "At the paroxysm of gesture and the cry of material, Stéphane de Gérando adds distance, questioning, a nagging reassessment — in short, an almost ontological doubt."

More recently, in his article entitled "*The Labyrinth of Time and the Azadi Tower : A Work by Stéphane de Gérando*" (published in *\*La revue de Téhéran\**, an Iranian cultural monthly in French, no. 154, see external links), Arash Khalili describes *\*The Labyrinth of Time\** as a visual and sonic spectacle, a journey through different scales of time. He explains that *\*The Labyrinth of Time\** is a work in constant development, comprising major "cycles" and "satellites" with a proliferation of techniques, distortion or invention through superimposition, algorithmic processes, artistic presentation of the concept of absence/presence, and fragmentation of memory. He emphasizes that this work also aims to foster new forms of scientific collaboration in order to consider original perspectives of creation (of a conceptual nature and linked to the realization of a work): "one of the trajectories of the Labyrinth tends towards an attempt to unify the whole, the search for a metalanguage capable of unifying the writing of meanings and artistic practices."

From 2007, with the development of Stéphane de Gérando's digital paintings, the national and international press highlights "an original concept," "a hybrid work where image, sound and technology combine" (Christy Granja, *Art et Decoration* n° 436, September 2007), works displayed "on a flat screen hung on the wall like a virtual painting in constant motion" (François Bliss de la Boissière, *Les ans laser* n°134 — September 2007), an association between "art and high tech" (Clément Pétreault, *Ecran Plat* magazine n°8 — August-September 2007), the creation of virtual paintings where "the artwork is no longer fixed," "metamorphoses itself," "suspended between a design object and a reinvented creation" (Giorgia Vaccari, *Tutto digitale* n° 45, July 2007).

Another press article highlights the evolution of the Labyrinth, entitled *Letting Chance Guide You* (Est républicain, April 18, 2018 p. 23) (Citadelle de Belfort, April 18 and 19, 2018), Jordan Muzyczka describes an audience of all ages interacting in real time with the visual and sound work via remote gestural or sound control, "letting chance guide them".



### 3.6 FROM GERANDO, FOR MORE INFORMATION, INTERNET LINKS [...]

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#### "Authority notice"

- Authority records: Virtual International Authority File  
<http://viaf.org/viaf/29785025>
- International Standard Name Identifier  
<http://isni.org/isni/0000000003190840>
- National Library of France  
<http://catalogue.bnf.fr/ark:/12148/cb14616743m>  
data <http://data.bnf.fr/ark:/12148/cb14616743m>
- French University Documentation System  
<http://www.idref.fr/085802514>
- HAL Archive  
[https://hal.archives-ouvertes.fr/search/index?q=stephane+de+gerando&authIdHal\\_s=stephane-de-gerando#](https://hal.archives-ouvertes.fr/search/index?q=stephane+de+gerando&authIdHal_s=stephane-de-gerando#)
- Library of Congress  
<http://id.loc.gov/authorities/n2012032419>
- WorldCat
- <http://www.worldcat.org/identities/lccn-n2012-032419>
- Music resource: BRAHMS  
<http://brahms.ircam.fr/stephane-de-gerando>

#### Biographical details, catalogs of works and publications

- "Biography and publications", HAL archive  
<https://cv.hal.science/stephane-de-gerando>
- "Biography and publications, website of L'Harmattan publishing house (books, articles)"  
[https://www.editions-harmattan.fr/index\\_harmattan.asp?navig=auteurs&obj=artiste&no=22200](https://www.editions-harmattan.fr/index_harmattan.asp?navig=auteurs&obj=artiste&no=22200), on [www.editions-harmattan.fr](http://www.editions-harmattan.fr)
- Contemporary Music Documentation Center (CDMC), portrait, biography  
<http://www.cdmc.asso.fr/fr/ressources/compositeurs/biographies/gerando-stephane-1965>

#### Interviews – book signings

- Interview France Bleu 2023, composition class and Radio-France 2023 installation  
<https://youtu.be/l8npTgXyDj4>
- Interview with Jean-Pierre Derrien for the presentation and signing of the book and monographic disc *Imaginary Dialogues*, Tschann Bookstore, Paris, May 3, 2011.  
<https://www.youtube.com/watch?v=UrRP8ZukcQU>
- The In Situ Library No. 31, interview with Stéphane de Gérando by Fabien Vélasquez for the creation of the Installation - Fragmentation, cycle 8 of the Labyrinth of Time, April 8 to June 10, 2017 during the exhibition "The Song of the Lands" - curator Sylvie Perrin, Gantner Multimedia Art Center in Bourogne  
<https://youtu.be/EammCmDmYY8>
- Presentation and signing of two works by Stéphane de Gérando: *L'œuvre musicale contemporaine à l'épreuve du concept* and *Dialogues imaginaires*, Librairie l'Harmattan, Paris, Thursday, February 21, 2013.  
[https://youtu.be/YJLmbD\\_pYJg](https://youtu.be/YJLmbD_pYJg)

#### Readings (excerpts)

- Conference, The Hypersphere of Specters, with Gilles Baroin IRCAM Centre Pompidou Paris, seminar (MaMux)  
<https://youtu.be/7R3U7OI2UZU>
- Ariane 1 International Symposium, conference on October 8, 2016, José-Manuel Echeveste (IRCAM, Paris) and Stéphane de Gérando, Antescofo, or the contribution of real-time monitoring, from creation to pedagogy  
<https://www.youtube.com/watch?v=rg2p25yZCO0>

## Excerpts from works (creations, CDs)

### *Katanga*

#### **Brass and percussion**

Radio France Philharmonic Orchestra

Director: Stéphane de Gérando

CD Inactuelles recording Radio-France - MFA

<https://www.youtube.com/watch?v=t8OM5Qs9ot4>

### *Virtuality and awareness of emptiness*

#### **String trio**

Incurrent CDs Radio-France MFA

[https://www.youtube.com/watch?v=J8Yp3\\_3W5tw](https://www.youtube.com/watch?v=J8Yp3_3W5tw)

### *The Ice Opera*

#### **Soloists, children's choir, electroacoustic (5.1 file, computer playback), video**

Live recording – Cité de la Musique Paris

<https://www.youtube.com/watch?v=jXVe4b3A2Pk>

### *Tempus is*

#### **Two wind orchestras and electronic bells**

Franco-German Orchestra, Belfort and Leonberg

Mock-up with score

<https://www.youtube.com/watch?v=ZJTmYwwhAHk>

Creation

<https://www.youtube.com/watch?v=HbvxlcnrU3c>

### *Introit*

#### **Soloist, children's choir, orchestra, 5.1 sound file and monitoring on computer and video**

Extract *Requiem for a child*

Mock-up with score (new version)

<https://www.youtube.com/watch?v=lq73E1YI6GY>

First version, creation of the Introit in 2012 in Paris

<https://www.youtube.com/watch?v=lq73E1YI6GY>

### *sixEXonePENsevenSIONfour - fragment 3*

#### **Ensemble and real-time electronics (excerpt)**

CD Incurrents Radio-France MFA 3icar

<https://www.youtube.com/watch?v=2tza8lmizww>

### *Intumescence*

#### **Orchestra and computer**

Radio France Philharmonic Orchestra and computer

Incurrent CDs Radio-France MFA

<https://www.youtube.com/watch?v=c0pUrFKHAJI>

### *From meaning to meaning*

#### **For transverse flute (excerpt)**

CD Incurrents Radio-France MFA 3icar

<https://www.youtube.com/watch?v=acFjh-R6pPc>

*6ex1pen7sion4*

**Bass clarinet and real-time electronics (excerpt)**

CD Incurrents Radio-France MFA 3icar

[https://www.youtube.com/watch?v=n8DwViAmk\\_Y](https://www.youtube.com/watch?v=n8DwViAmk_Y)

*Things every corpse should know*

**Narrator, soprano, instrumental ensemble**

Live recording – Center Pompidou Paris

[https://www.youtube.com/watch?v=YflFb\\_9m1fo](https://www.youtube.com/watch?v=YflFb_9m1fo)

*Homometric attractors*

**Real-time algorithm, instrumental ensemble and dance**

Director: Stéphane de Gérando

Live recording – Paris

First part: instrumental ensemble. Second part: real-time algorithm and dance

Third part: instrumental ensemble, real-time algorithm and dance

<https://www.youtube.com/watch?v=hkqv8GXjYHQ>

*The song of the STISMI*

**Flute orchestra and real-time electronics**

<https://www.youtube.com/watch?v=eJIWnFIN5d8>

### **Book signings – readings**

*Book and monographic CD signing for "Imaginary Dialogues"*

**Interview in French with Jean-Pierre Derrien (Paris)**

<https://www.youtube.com/watch?v=UrRP8ZukcqU>

*Conference, The Hypersphere of Specters, with Gilles Baroin*

**IRCAM Centre Pompidou Paris, seminar (MaMux)**

<https://www.youtube.com/watch?v=Qe0HESXt1nM&index=3&list=PLj4OxLr0wh1h5NmhwEsbz8YmlvUMFXDv1>

*3icar Innovation and Creation Festival, Museum of Contemporary Art of Toulouse*

**Creation of 6ex1pen7sion4 (trailer)**

Presentation and direction of the icarEnsemble by Stéphane de Gérando

<https://www.youtube.com/watch?v=ChGXagOA7I0&index=5&list=PLj4OxLr0wh1h5NmhwEsbz8YmlvUMFXDv1>

### **3icar innovation research creation festival**

3icar Innovation Creation Festival, Toulouse Museum of Contemporary Art: Creation of 6ex1pen7sion4 (trailer)

<https://youtu.be/ChGXagOA7I0>