

# ***20 Years of Faust Projects at UJM***

Laurent Pottier

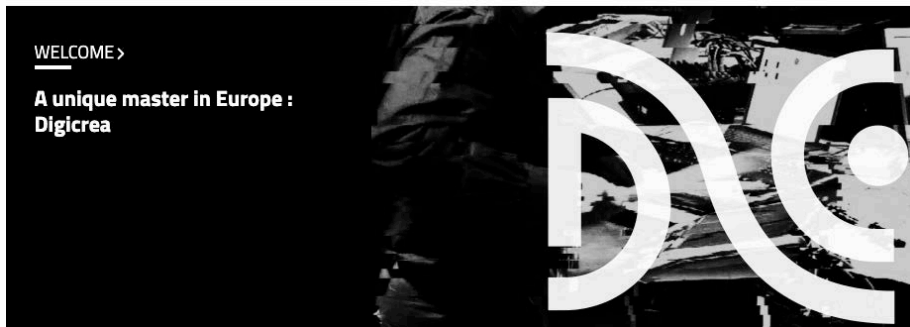
Professeur émérite des Universités, musicologie et technologies numériques  
Laboratoire ECLLA - Université Jean Monnet de Saint-Etienne

### UJM - Music Department:

- A cursus in computer technologies displayed in each of the 6 semesters of the **Musicology Licence/Bachelor**.
- Professional **RIM Master Degree** (Computer Music Producer, Music & Technology).  
(since 2011) (combined with digital art master)
- International **EMJM Art & Science DIGICREA Master Degree** with portugal and poland (2 options Music / Image)
- PhD (including « composition » and « performers » *Research&Practice* with CNSMD-Lyon)  
*Topics: Electroacoustic composition, computer programming, sound synthesis, signal processing, sound engineering, real-time devices...*



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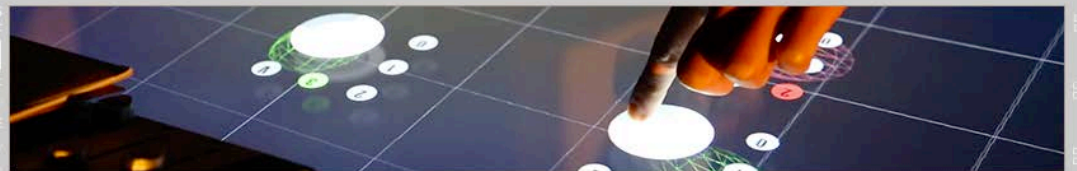


<https://master-digicrea.univ-st-etienne.fr/en/index.html>

<https://musinf.univ-st-etienne.fr/index.html>

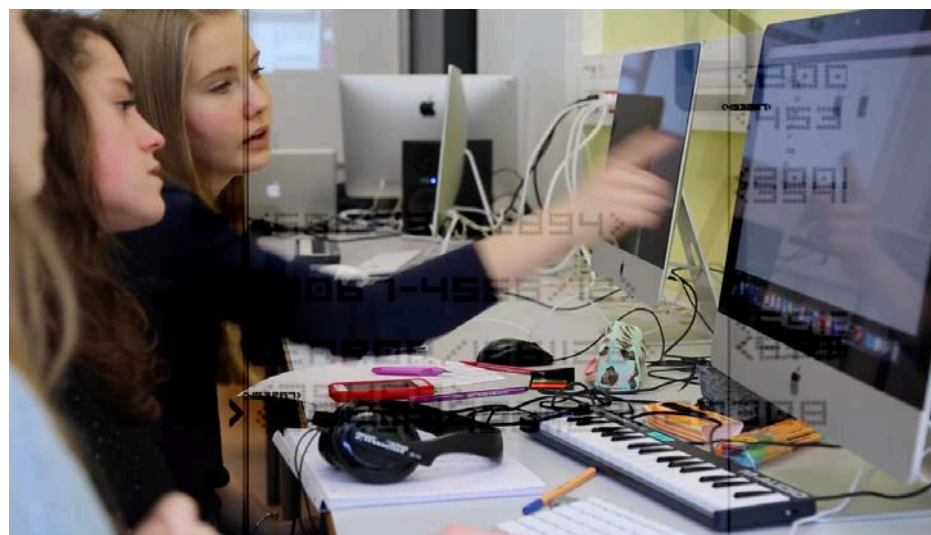
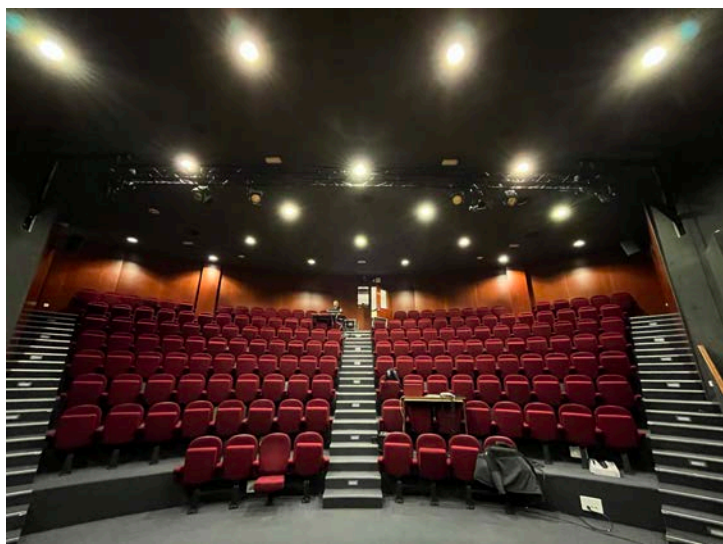
### Master Contemporary Creation and New Technologies Digital Arts / Computer Music

MASTERS PROFESSIONNELS  
RIM//RAN  
RÉALISATEUR EN  
INFORMATIQUE MUSICALE  
RÉALISATEUR EN  
ARTS NUMÉRIQUES





4 studios – a concert hall – 3 computer rooms for teaching with midi keyboards and all AV équipements



## Pedagogy

- 1<sup>st</sup> : Reaper/Musescore basis of computer music MIDI
- 2<sup>nd</sup> : Reaper-Super collider basis of computer music AUDIO
- 3<sup>rd</sup> : discovering a specialised language for real time sound processing (Faust / Max / supercollider)
- 4<sup>th</sup> : Musical creation with tools built during the previous semester
- 5<sup>th</sup> : acoustique, sound analysis, sound synthesis
- 6<sup>th</sup> : history of electronic music and electronic instruments

### 4) S3-S4

Some instruments  
made with faust :  
IDE

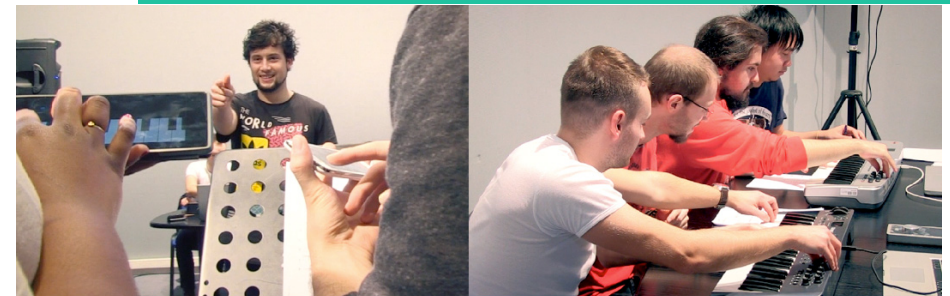
- WindMgCr.dsp
- Organ2E.dsp
- Synth12c9.dsp



### Creation



First prize for **Music Education** in  
the category  
"Technological innovation for  
music education »  
February 7, 2016  
Musicora  
Grande Halle de la Villette,  
awarded by  
the French Music Publishers  
Association  
for a project carried out with  
students during the year  
2014/2015.



MUSIQUE ELECTRONIQUE LIVE  
AVEC FAUST ET SMARTPHONES



## S5

- Risset : Bells
- Risset : Endless sounds

The screenshot shows the 'endlessRisset\_LP2' interface with the following parameters:

- ecart**: 0.05
- moy**: 0.5
- period**: 120
- sens**: (empty box)
- volume**: 0

# IFC 2026

International FAUST Conference 2026

## S6

<https://musinf.univ-st-etienne.fr/SiteRisset/index.html>

- CageElectroPhon1+2.dsp

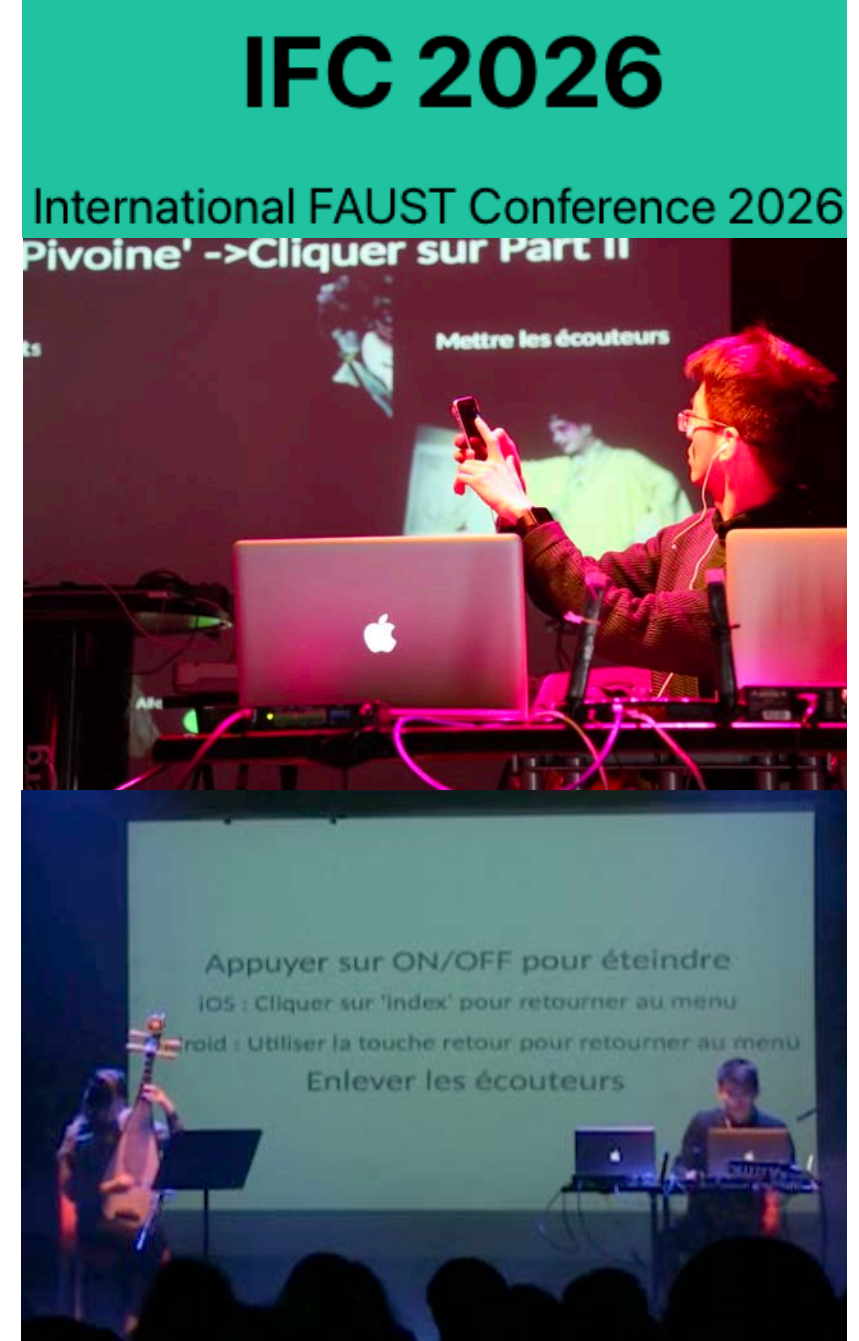
The screenshot shows the 'CageElec12' interface with the following parameters:

- gate**:
- switchfreq**:  84,  427,  1000
- speed**: 33,00
- gain**: 0,94
- pan**: 0,50
- Two color-coded progress bars (green, yellow, orange, red) are visible at the bottom.

## Master CCNT RIM

Yann Orlarey / Stéphane Letz / Christophe Lebreton  
/ Romain Michon

- Allen Weng 2016-2017 + Visiting researcher in 2024 in partnership with the company Lisilog
- Shihong Ren 2018-2019 + phd thesis conducted with Michel Buffa “Creating an Online Platform and Tools for Real-Time Music Composition and Signal Processing” 2024 April 19th

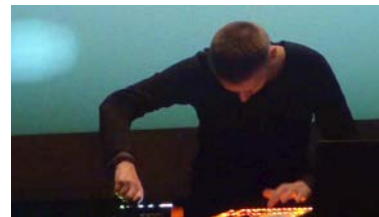


## Creation

RIM and RAN Masters : <https://musinf.univ-st-etienne.fr/>

Personal projects presented in public at the end of the first semester.

Example: Augier, Théo...



# International EMJM Master DIGICREA

Art & Science



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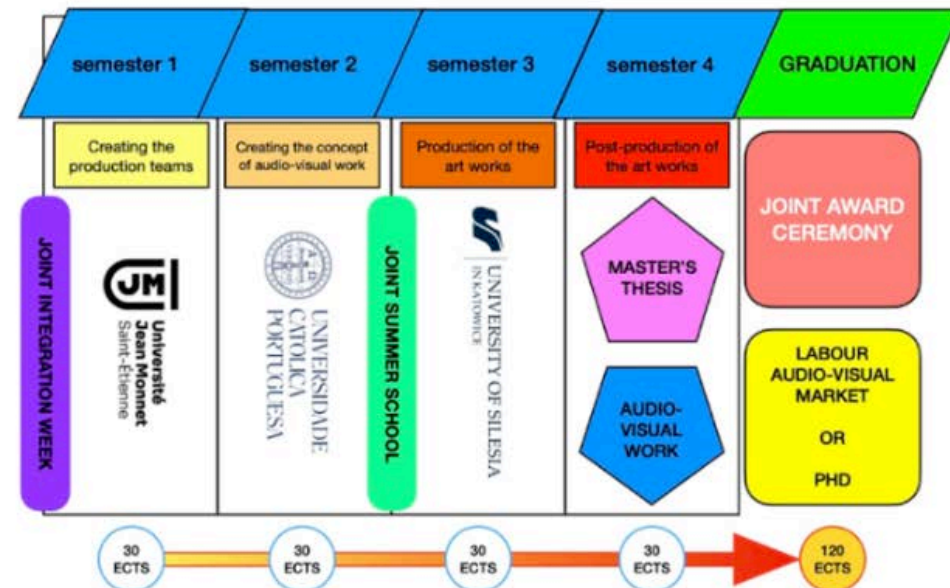
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- THE DIGICREA CONSORTIUM
- THE DIGICREA TEAM

## DIGICREA : AN INNOVATIVE ERASMUS MUNDUS PROGRAM

A unique master in Europe

Mobility



Pierre Cochard /  
 Stéphane Letz /  
 Romain Michon /  
 Michel Buffa

## Research : Projects

GRAME, Centre National de Création Musicale in Lyon and UJM (CIEREC and Music Department) are very long-time close partners, thanks in particular with two successive ANR projects (ASTREE 2007-2011) and FEEVER (2013-2017) and now a technology transfer project in collaboration with the SATT PULSALYS (Société d'Accélération du Transfert de Technologies).



**MUSIQUES EN SCÈNE  
JOURNÉES GRAME**

**TRANSMISSION  
ÉDITIONS**



**CENTRE  
NATIONAL  
DE CRÉATION  
MUSICALE**

Rechercher 

QUI SOMMES-NOUS?

**CRÉATION  
SAISON 17-18**



**LABO  
RECHERCHE**

## Research : Projects

In parallel with educational activities, the CIEREC research laboratory (Interdisciplinary Center for the Study and Research of Contemporary Expression) and, starting in 2011, the ECLLA laboratory (Study of the Contemporary in Literature, Languages, and the Arts) have developed research areas focused on digital media: the “EFORME ” project 2010–2022, followed by the “Creations – Technologies – Imaginaries” research axis at the ECLLA laboratory. Two ANR projects were thus secured (ASTREE – 2007–2011 – and then FEEVER – 2013–2017), based on research into the FAUST language, in collaboration with GRAME in particular and other partners, which enabled the creation of innovative tools and works. These projects will also be presented during the conference.

### ANR projects ASTREE / FEEVER

2018-2026 Main level researcher in the ANTONY research project with CNSMD Paris, IRCAM Paris about collaborative archiving and creative preservation of computer music works.

2013-2017 Main level researcher in the **FEEVER** (Faust Environment Everywhere) ANR research project with GRAME-Lyon, Mines ParisTech, INRIA-Rennes.

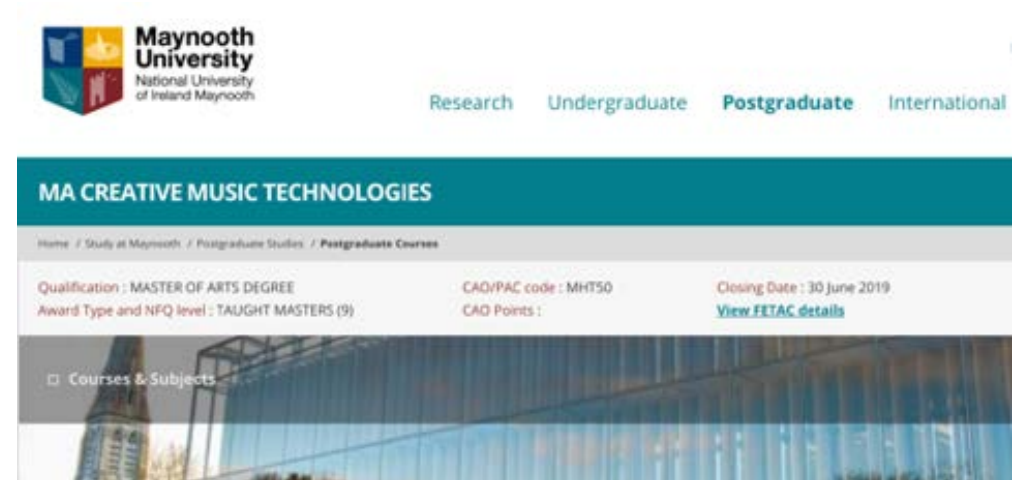
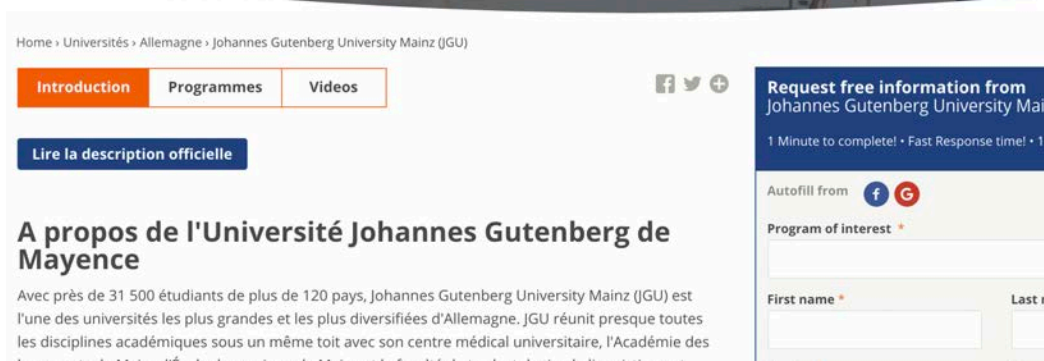
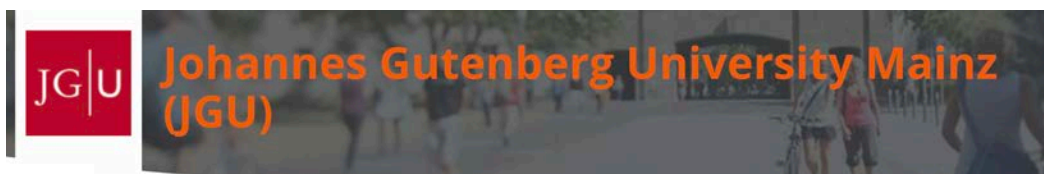
2007-2011 Main level researcher in the **ASTREE** ANR research project for the preservation of real time digital sound systems, with Ircam-Paris, GRAME-Lyon, Mines ParisTech.

## Collaborators

The main partners we have at the UJM are the CCRMA at Stanford University, the Music Department of NUI University in Maynooth, Ireland, and the Music-Informatics Department at Johannes Gutenberg University (JGU), University of Mainz, Germany.

Specificities :

- Stanford: physical models
- Maynooth: Faust - Csound (ERASMUS)
- Mainz: Faust - Pure data (Guest Prof.)
- Saint-Etienne: Faust-Web and Faust-Max

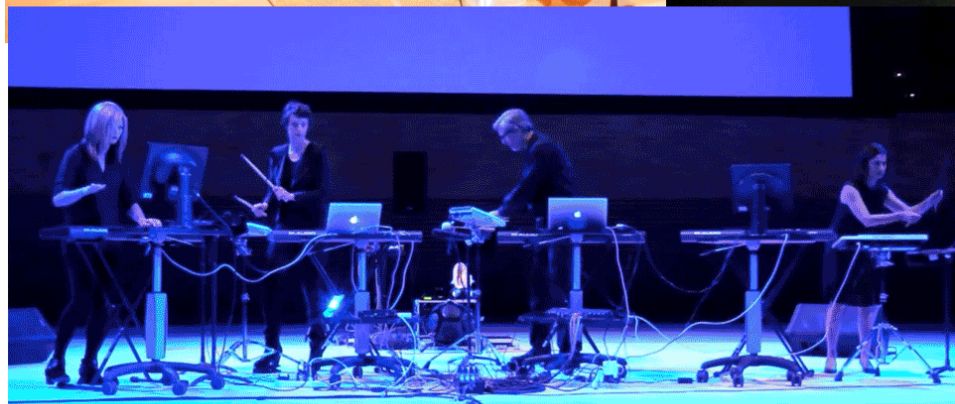


## Research & Creation

### *Turenas*

(1972 Chowning)

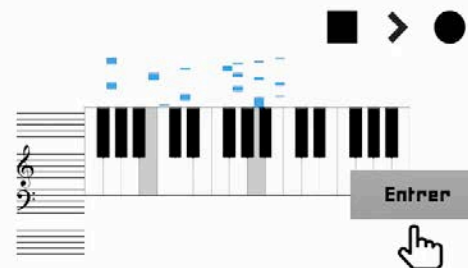
(2011 Pottier arr.)



**Accueil**

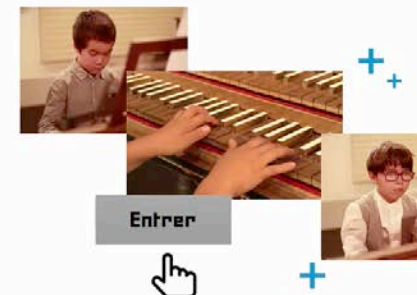
Jouer +  
**UN CLAVECIN VIRTUEL** Ecouter

Comprendre le son du clavecin +



Ecouter +  
**LES VIDÉOS DU CAA** Voir

Des vidéos de pièces interprétées par des élèves du cons



Harpisichord installation  
 Musée d'art et d'industrie  
 de Saint-Etienne -  
 exposition permanente

**Jouer de l'instrument**

Vous pouvez jouer, vous enregistrer et écouter ce que vous avez joué.



**Ecouter une pièce**

Vous pouvez écouter des morceaux de musique préenregistrés et joués en direct sur l'instrument.

La Folia + partition [Voir la partition](#)



Clavecin "virtuel", un synthétiseur imitant les sons du clavecin, dont vous pouvez jouer à partir du clavier.

Les sons sont produits en direct par synthèse numérique en utilisant une technique dite "par modèles physiques".

[ Procédé de synthèse par guide d'ondes ]

