

WORLDWIDE

AWARD  
2015

**FAUST**

AWARD  
2015

# FAUST OPEN SOURCE SOFTWARE COMPETITION 2015

---

GRAME – Centre National de Creation Musicale

April 11, 2015

LINUX AUDIO CONFERENCE 2015 – JG|U, MAINZ

AWARD  
2015

Promote innovative high-quality free audio software developed with Faust programming language.

Promote innovative high-quality free audio software developed with Faust programming language.

- Award attributed to the best submission by an international committee of leading experts in the field.

AWARD  
2015

Promote innovative high-quality free audio software developed with Faust programming language.

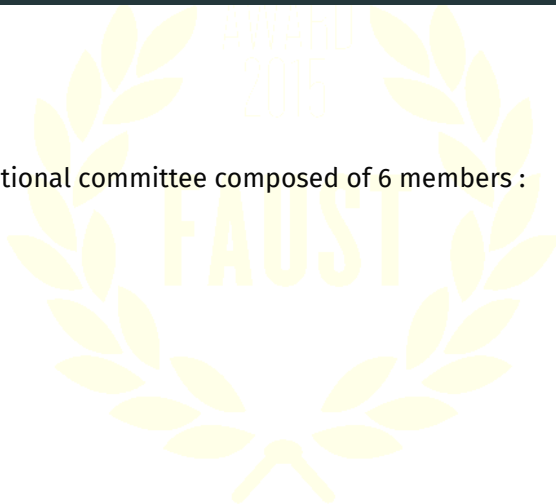
- Award attributed to the best submission by an international committee of leading experts in the field.
- The winning project receives a 2000€ price to support its development.

AWARD  
2015

Promote innovative high-quality free audio software developed with Faust programming language.

- Award attributed to the best submission by an international committee of leading experts in the field.
- The winning project receives a 2000€ price to support its development.
- Sponsored by Grame – Centre National de Création Musicale.

An international committee composed of 6 members :



An international committee composed of 6 members :

- **Albert Graef** (Johannes Gutenberg U., Mainz, Germany)



AWARD  
2015

An international committee composed of 6 members :

- Albert Graef (Johannes Gutenberg U., Mainz, Germany)
- Pierre Jouvelot (Ecole des Mines, Paris, France)

AWARD  
2015

**An international committee composed of 6 members :**

- **Albert Graef** (Johannes Gutenberg U., Mainz, Germany)
- **Pierre Jouvelot** (Ecole des Mines, Paris, France)
- **Victor Lazzarini** (Maynooth U., Maynooth, Ireland)

AWARD  
2015

**An international committee composed of 6 members :**

- **Albert Graef** (Johannes Gutenberg U., Mainz, Germany)
- **Pierre Jouvelot** (Ecole des Mines, Paris, France)
- **Victor Lazzarini** (Maynooth U., Maynooth, Ireland)
- **Yann Orlarey** (Grame, Lyon, France)

AWARD  
2015

**An international committee composed of 6 members :**

- **Albert Graef** (Johannes Gutenberg U., Mainz, Germany)
- **Pierre Jouvelot** (Ecole des Mines, Paris, France)
- **Victor Lazzarini** (Maynooth U., Maynooth, Ireland)
- **Yann Orlarey** (Grame, Lyon, France)
- **Laurent Pottier** (U. Jean Monnet, Saint Etienne, France)

AWARD  
2015

## An international committee composed of 6 members :

- Albert Graef (Johannes Gutenberg U., Mainz, Germany)
- Pierre Jouvelot (Ecole des Mines, Paris, France)
- Victor Lazzarini (Maynooth U., Maynooth, Ireland)
- Yann Orlarey (Grame, Lyon, France)
- Laurent Pottier (U. Jean Monnet, Saint Etienne, France)
- Julius Smith (Stanford U., Palo Alto, USA)

AWARD  
2015

FAUST

The selection process:

AWARD  
2015

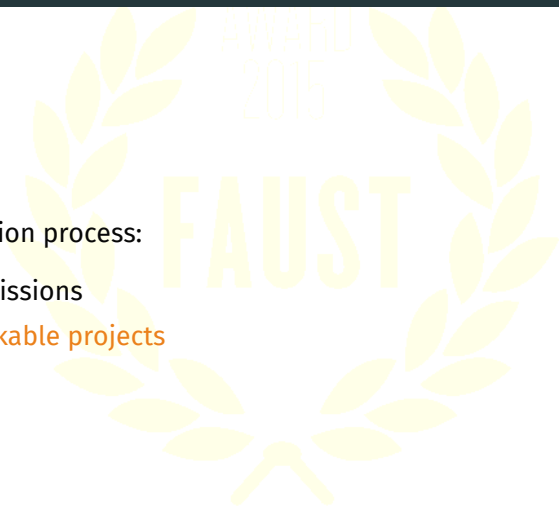
FAUST

The selection process:

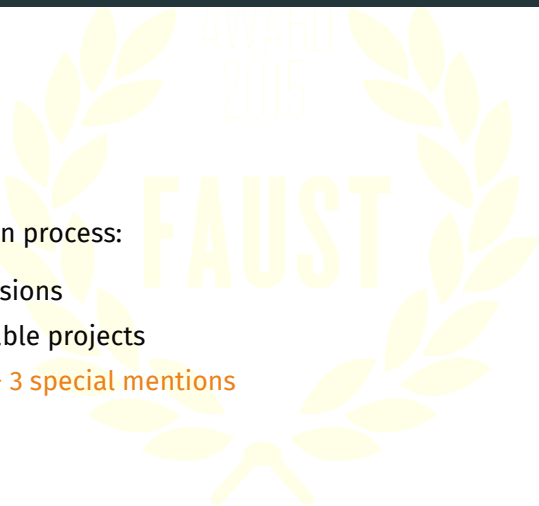
- 13 submissions

The selection process:

- 13 submissions
- 4 remarkable projects







The selection process:

- 13 submissions
- 4 remarkable projects
- **1 winner + 3 special mentions**

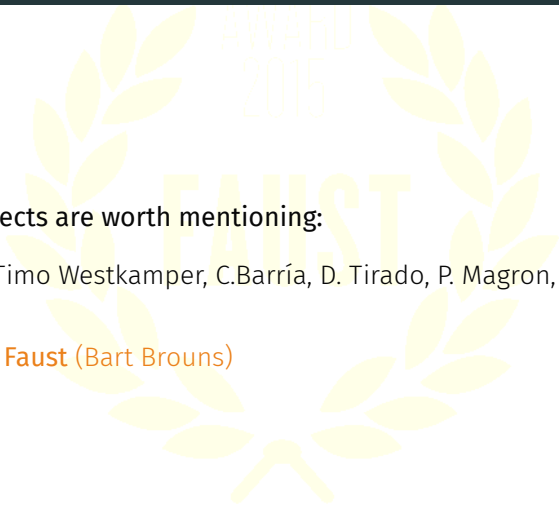
AWARD  
2015

FAUST

Three projects are worth mentioning:

Three projects are worth mentioning:

- **Flauta** (Timo Westkamper, C.Barría, D. Tirado, P. Magron, P. de la Cuadra)



Three projects are worth mentioning:

- **Flauta** (Timo Westkamper, C.Barría, D. Tirado, P. Magron, P. de la Cuadra)
- **Voice of Faust** (Bart Brouns)

Three projects are worth mentioning:

- **Flauta** (Timo Westkamper, C.Barría, D. Tirado, P. Magron, P. de la Cuadra)
- **Voice of Faust** (Bart Brouns)
- **PMix** (Oliver Larkin)

AWARD  
2015

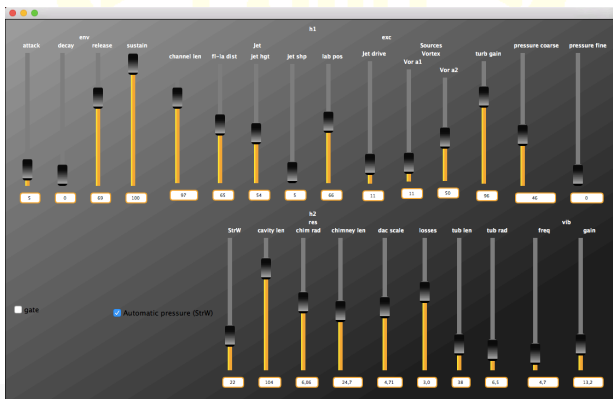
**FLAUTA**

---

FAUST



*Flauta is a Waveguide based flute model.* Copyright (C) 2011 Timo Westkämper, Carlos Barría, Daniel Tirado, Paul Magron and Patricio de la Cuadra.



Flauta main components:

- flauta.dsp - main module, includes resonator
- excitation.dsp - excitation
- constants.dsp - constant declarations
- params.dsp - variable parameters
- utils.dsp - utilities



AWARD  
2015

## Flauta main links:

- source: <https://github.com/timowest/flauta>
- archive: <https://github.com/timowest/flauta/archive/f5248a8cb2c31a38fb943cfd55ec3828f5bf9dbc.zip>
- demo: <https://soundcloud.com/asilva1928/aurelio-silva-s-ez-signos-i>
- demo:  
<https://ccrma.stanford.edu/~cc/pub/mp3/of.mp3>
- demo: [http://ccrma.stanford.edu/~pdelac/Ouldemes\\_video.avi](http://ccrma.stanford.edu/~pdelac/Ouldemes_video.avi)

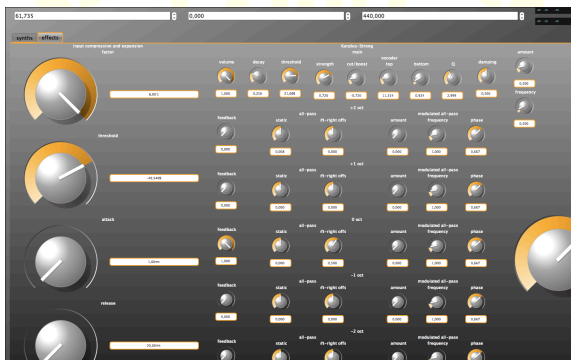
AWARD  
2015

**VOICEOFFAUST**

---

FAUST

VoiceOfFaust: a voice synthesizer/effects machine. It is partly a port of VocSynth to Faust with some new additions.



### Currently VoiceOfFaust consists of:

- pitch tracker,
- compressor/expander,
- normal vocoder with a "super-saw" that can be cross-faded to a "super-pulse",
- filter-free vocoder based on PAF oscillators,
- filter-free vocoder based on FOF oscillators,
- FM with modulation by the voice,
- ring-modulation with an emulation of Casio CZ-oscillators,
- Karplus-Strong used as an effect,
- phase modulation used as an effect.

AWARD  
2015

### VoiceOfFaust main links:

- source: <https://github.com/magnetophon/VoiceOfFaust>
- installer: <https://github.com/magnetophon/SynthSinger>
- demo 1: [http://magnetophon.nl/sounds/magnetophon/DemoSynths\\_H246.mp4](http://magnetophon.nl/sounds/magnetophon/DemoSynths_H246.mp4)
- demo 2: [http://magnetophon.nl/sounds/magnetophon/DemoFX\\_H246.mp4](http://magnetophon.nl/sounds/magnetophon/DemoFX_H246.mp4)

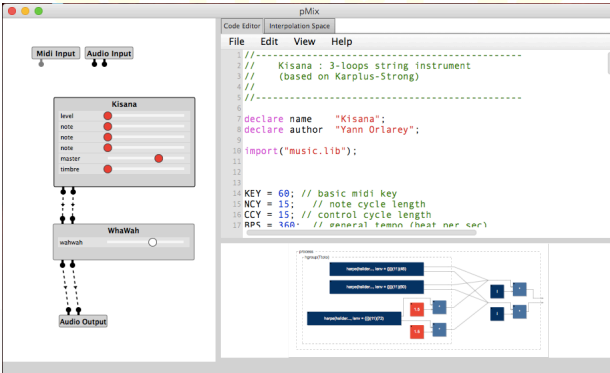
AWARD  
2015

PMIX

---

FAUST

Graphical patcher and preset interpolator for Mac, (and eventually) Linux and Windows. A node could be a VST, AU, LADSPA plugin or a JIT compiled FAUST program. An integrated code editor and SVG display makes pMix a nice environment for development and pedagogy with Faust.



The screenshot displays the pMix application window, which is divided into two main sections: a graphical patcher on the left and a code editor on the right.

**Graphical Patcher (Left):**

- At the top left, there are two input nodes: "Midi Input" and "Audio Input".
- The signal path flows through a "Kisana" node, which has several control knobs for "level", "note", "note", "note", "master", and "timbre".
- Below the "Kisana" node is a "WhaWah" node with a "wahwah" control knob.
- The signal path ends at an "Audio Output" node at the bottom.
- Connections between nodes are shown as dashed lines with arrows.

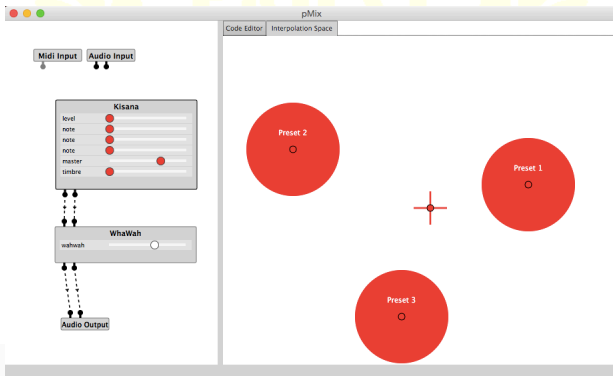
**Code Editor (Right):**

- The code editor has a menu bar with "File", "Edit", "View", and "Help".
- The code is written in a comment style, with green text for comments and red text for declarations and imports.
- The code defines a "Kisana" instrument and includes various parameters and imports.

```
1 //-----  
2 //   Kisana : 3-loops string instrument  
3 //   (based on Karplus-Strong)  
4 //  
5 //-----  
6  
7 declare name   "Kisana";  
8 declare author "Yann Orleary";  
9  
10 import("music.lib");  
11  
12  
13  
14 KEY = 60; // basic midi key  
15 NCY = 15; // note cycle length  
16 CCY = 15; // control cycle length  
17 RPC = 3KA; // general tempo (beat per sec)
```

Below the code editor, there is a small SVG diagram showing a network of nodes and connections, representing the internal structure of the patcher.

*pMix* is written using C++ and the JUCE framework. In order to integrate FAUST's LLVM compiler, a JUCE module was developed so that other JUCE users can also easily integrate FAUST into their projects.





**pMix** main links:

- source: <https://github.com/CMRCYork/pMix2>
- source: [https://github.com/CMRCYork/juce\\_faustllvm](https://github.com/CMRCYork/juce_faustllvm)
- source: <https://github.com/CMRCYork/pMixFaustNodes>
- binary: <https://github.com/CMRCYork/pMix2/releases>
- demo: <https://vimeo.com/122268573>

AWARD  
2015

AND THE WINNER IS...

---

FAUST

AWARD  
2015

**AND THE WINNER IS... GUITARIX**

---

FAUST

# GUITARIX: HERMANN MEYER AND ANDREAS DEGERT (1/3)

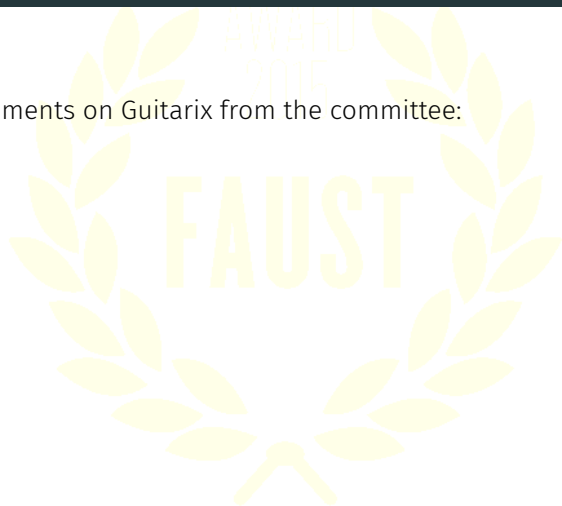
*Guitarix, a virtual guitar amplifier.* The input signal is processed by a main amp and a rack-section. More than 25 built-in modules are provided, from a simple noise gate to modulation f/x like flanger, phaser or auto-wah.



### Guitarix main links:

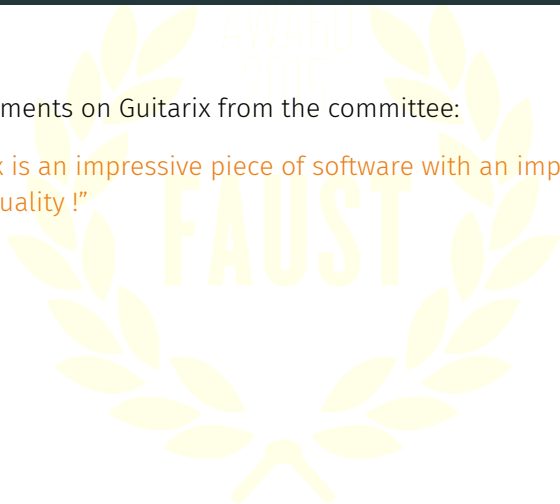
- website: <http://guitarix.sourceforge.net/>
- source: <http://sourceforge.net/p/guitarix/git/ci/master/tree/trunk/>
- demo: [https://www.youtube.com/watch?list=PLBgpFfz1Uca1JDiVf9E\\_AX06VMtzDb\\_lr&t=26&v=t91xJUos10A](https://www.youtube.com/watch?list=PLBgpFfz1Uca1JDiVf9E_AX06VMtzDb_lr&t=26&v=t91xJUos10A)

Some comments on Guitarix from the committee:



Some comments on Guitarix from the committee:

- "Guitarix is an impressive piece of software with an impressive sound quality!"



Some comments on Guitarix from the committee:

- "Guitarix is an impressive piece of software with an impressive sound quality !"
- "The maturity, both at the artistic, user-interface and technological levels, of the Guitarix project makes it a top contender for the 2015 Faust Open Source Software Competition."



Some comments on Guitarix from the committee:

- "Guitarix is an impressive piece of software with an impressive sound quality !"
- "The maturity, both at the artistic, user-interface and technological levels, of the Guitarix project makes it a top contender for the 2015 Faust Open Source Software Competition."
- "Guitarix software platform impresses with its intimate knowledge and use of the Faust environment features."

Some comments on Guitarix from the committee:

- "Guitarix is an impressive piece of software with an impressive sound quality !"
- "The maturity, both at the artistic, user-interface and technological levels, of the Guitarix project makes it a top contender for the 2015 Faust Open Source Software Competition."
- "Guitarix software platform impresses with its intimate knowledge and use of the Faust environment features."
- "It is an impressive project that uses Faust for production-grade software, and it is not only a fine piece of work, but also the best demonstration of how useful Faust can be for developers."

Some comments on Guitarix from the committee:

- "Guitarix is an impressive piece of software with an impressive sound quality!"
- "The maturity, both at the artistic, user-interface and technological levels, of the Guitarix project makes it a top contender for the 2015 Faust Open Source Software Competition."
- "Guitarix software platform impresses with its intimate knowledge and use of the Faust environment features."
- "It is an impressive project that uses Faust for production-grade software, and it is not only a fine piece of work, but also the best demonstration of how useful Faust can be for developers."
- "I can say that I have a high opinion of the guitarix work."

AWARD  
2015

FAUST

**CONGRATULATIONS TO GUITARIX !**

---



**GUITARIX**