## **Output Details**

It is advisable to fill this form out electronically. The boxes below will auto-expand as you type in more text.

1.	/our name
Dr (	arl Faia

2. Title

Therpopatch

#### 3. Brief description of the output (one line only)

Computer music design, creating the Therpopatch for the new instrument, the Oliotherpe, with Patricia Dallio.

# **4.** Type of output – please click on the words 'Choose an item' below, then click the arrow to select an item

Software

#### 5. Venue(s)

Various.

#### 6. Date or Year of first performance

January 20, 2016.

#### 7. ISBN (if book)

#### 8. Number of additional authors/creators

Patricia Dallio (performer and composer)

### 9. Additional information: Research content/process (300 words in total)

Examples of descriptions of outputs submitted to the previous REF2014 can be viewed at: <u>https://results.ref.ac.uk/(S(jzxyolmc2xxcis14efynkltk))/Results/ByUoa/35</u> (e.g. see outputs from Roehampton and Southampton)		
9a. What was the aim of the research/research question(s)?	This project involves digital lutherie, computer music design and collaborative creation to develop a bespoke instrument, adaptive to any creative or performance situation, using sensors to capture gestures and integrating overlapping technologies (software and hardware-based), all run from a Max patch. A matrix enables the combination of any input with any output and vice versa. The modular design allows for complex evolving multi-layered effects unique to the instrument.	
9b. What was the research process / methodology?	The research methodology was established in my PhD thesis, <i>Collaborative computer music composition and the emergence of the</i> <i>computer music designer</i> . <u>https://bura.brunel.ac.uk/handle/2438/11917</u> As a keyboard performer, composer and improviser Patricia Dallio wanted to augment her instrument and our discussions led to a system of gestural sensors with real-time treatment though Max. Research focused on gesture capture and interactive live electronics, the development of protocols for inter-application communication, and the creation of a stable and dependable platform for live performance. There were also exchanges with the designer of the physical instrument. Dallio evolved a series of projects, each with a new iteration of the instrument, with consequent advances in the bespoke framework that contains the hardware and in the integration of the various sensors and controllers.	
9c. What were the insights / findings at the end of the research process?	The development of the Therpopatch demonstrates the potential of an open-ended approach to modular interdisciplinary collaboration. The flexibility of the software environment enables the addition of new modules to the patch, most recently physical modelling resonances and wireless controllers communicating through OSC (Open Sound Control) and physical computing boards for a new work, <i>la risée des Augures</i> . Newly integrated modules are edited after each performance and the patch can be up-dated to be compatible with new operating systems and applications. Intercommunication with other artists' workstations on stage has also been facilitated though the integration of networked computer protocols.	
9d. When and how did dissemination of the research happen? (e.g. public performance, CD release, score publication)	A short documentary is available (with English subtitles): <u>https://vimeo.com/226204446</u> There are further examples of work made with the instrument at: <u>http://patriciadallio.com/posts/view/13/I-</u> <u>olitherpe?PHPSESSID=c33ada50a6b332c366b544f2754d95b1</u>	