



Simone Pappalardo

# Fields

An orchestra of DIY electromagnetic instruments

## Workshop and performance

FONDAZIONE CRT

Studi  
Um



POLITECNICO  
DI TORINO



Conservatorio Statale "Giuseppe Verdi" Torino  
Istituto di Alta Formazione Artistica e Musicale



Simone Pappalardo

## Fields. An orchestra of DIY electromagnetic instruments. Workshop and performance

The workshop focuses on the use of electromagnetism to create sounds, musical instruments and interactive controllers. During the workshop some instruments based on cheap electronics will be designed and manufactured, mostly based on electromagnetism and electromagnetic feedback, by recycling and scavenging electromagnetic components and parts from everyday objects, no longer functional household appliances, radios etc. Electromagnetic feedback can create complex and unconventional forms of sound synthesis, which can be integrated into interactive systems and/or used in the composition process. The workshop will therefore have as its natural conclusion a collective performance entitled "Fields". In the performance, a small orchestra based on DIY electronic instruments will be coordinated by means of a "conduction", i.e. an improvisation driven by a set of signs that to be introduced in the previous days. The workshop is thus split into two parts:

### 1. **Generating sounds through electromagnetic feedback**

Design of some of the most common analog effects, audio controllers and circuits, that make use of electromagnetic fields. Implementation of some of these circuits starting from salvaged everyday objects (radios, motors, light bulbs, speakers and anything with usable components and/or enamelled copper wire). We will discuss and implement circuits for generating complex electromagnetic waves and their acoustic transduction, the use of Arduino with respect to electromagnetic fields, and we will build some devices: electromagnetic kazoos, electromagnetic feedback network synths, electromagnetic feedback network radios, no-output mixers, transducing circuits.

### 2. **Setup for the performance *Fields***

Introduction to the timbral context and the vocabulary of sounds and signs required for improvisation.

*"Fields. Conduction for electronic instruments, sounds from residual objects and electromagnetic fields. Fields is a study on the timbre of electronic residual objects and electromagnetic interferences. Fields is a small orchestra that starts from "wasted" sounds, interference of various kinds and electronic objects, that are recycled and reinvented. The sounds of these residual objects flow all from the unseen world of electromagnetic fields. A group of musicians, builders of their instrument, is coordinated live by means of a gestural technique for improvisation, a conduction. Gestures for this conduction are designed specifically in relation to the instruments used in the performance."*

During each phase of the workshop theory and practice are strongly connected, in a climate of mutual learning.

Requirements to attend the workshop are a computer with Max/MSP installed and some discarded electronic objects, such as electric motors, light bulbs (also exhausted), old power supplies and anything else from which electronic components and enamelled copper wires can be scavenged.

The concluding performance "Fields" will be at Superbudda, with free admission.

The workshop will be preceded by a conference on free admission in which Simone Pappalardo will discuss his work as an artist from an aesthetic and technological perspective.

## Venues

*Conference:* Aula Magna del Rettorato, via Verdi 8, Torino.

*Workshop:* Conservatorio "G. Verdi" di Torino, Aula 40, via San Francesco da Paola 27.

*Performance:* Superbudda, via Valprato 68.

## Scheduling

- Wednesday 16/12/2015  
2pm-4pm: Conference (Aula Magna del Rettorato)  
5pm-6.30pm workshop (Aula 40).
- Thursday 17/12/2015  
10am-1pm and 2pm-6pm workshop (Aula 40).
- Friday 18/12/2015
  - 10am-1pm: workshop (Aula 40)
  - 3pm-6pm: setup performance (Superbudda)
  - 9pm: performance (Superbudda)

## Participation

The workshop is aimed at students of the Conservatorio di Torino, Dams/Università di Torino, Ingegneria del Cinema e dei Mezzi di Comunicazione del Politecnico di Torino. External participants will be admitted depending on the availability. The number of active members is limited to 20. Any listeners will be admitted according to availability. The opening conference is with free admission. The concluding performance at Superbudda is open with free admission.

## Registration

Send a short CV to [andrea.valle@unito.it](mailto:andrea.valle@unito.it). Deadline: 11/12/2015.

Info: [formazione@officinesintetiche.it](mailto:formazione@officinesintetiche.it)

Simone Pappalardo ([vimeo.com/user10515354](https://vimeo.com/user10515354)) graduated in Electronic music at Conservatorio Santa Cecilia in Rome. Since many years, he has created electronic compositions and interactive sound installations. He currently teaches Electroacoustic music composition at Conservatorio di L'Aquila and Computer music at Conservatorio di Latina.

His works have been performed and staged in many international festivals: festival Musicacoustica Beijing, Romanian Academy, the American Academy during the various editions of the Festival of Nuova Consonanza, Macro Museum in Rome, Teatro del Globo in Buenos Aires, Artefiera, Emufest, Museum collezione Manzù in Ardea, Auditorium Parco della Musica in Rome, MAXXI Museum of XXI Century Arts, Festival of Digital Life at Fondazione Romaeuropa. With the composition *Hyde, for prepared piano urged by electromagnetic pulse* he won a special mention at the National Prize of the Arts.

Officine Sintetiche -Interactive Media Art and Digital Creativity- presents in 2015 a series of lectures, workshops and demonstrations of great prestige achieved thanks to the contribution of the Fondazione CRT, the support the Dipartimento Studi Umanistici, DAMS and CIRMA (Università di Torino) and in collaboration Ingegneria del Cinema e dei Mezzi di Comunicazione (Politecnico di Torino) and Conservatorio di Torino.

Materials for Simone Pappalardo's workshop:



Logistic support:



Founded in 2006, Officine Sintetiche is a platform that develops and promotes artistic works stimulated by innovative forms of Digital Creativity (in particular in the field of digital interactivity). Officine Sintetiche aims at providing an integrating framework for new skills (from theater to music professionals, from performers to computer programmers). It includes professionals, artists, teachers, researchers and students. Officine Sintetiche combines research, training, production, live events in an international open framework involving business partners, universities, educational institutions, organizations, and public and private institutions. [www.officinesintetiche.it](http://www.officinesintetiche.it).