

# Interfacing Techniques

Introductory Lecture

By:

Dr. Wasel Ghanem

# 3-D Printing

Thingiverse: <http://www.thingiverse.com/>

- ▶ Digital designs for real, physical objects. A Universe of Things!
- ▶ <http://www.thingiverse.com/popular>

**3<sup>rd</sup> Industrial Revolution by  
Economies Magazine**

# Open Source Hardware

- ▶ Is the next revolution!!!!

The printer is open source : the hardware and the software are available

- ▶ <http://www.thingiverse.com/thing:17175>



# Arduino

- ▶ Heart of this printer is Arduino
- ▶ <http://www.arduino.cc/>
- ▶ Pet-fooder
  
- ▶ All the design of the Arduino is available

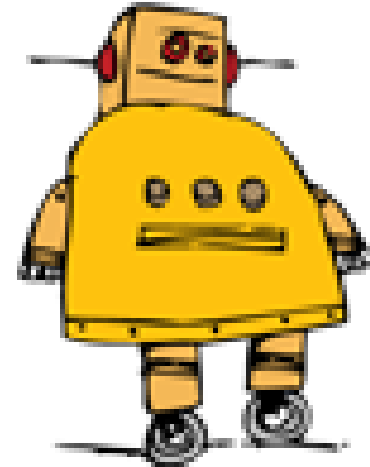
Make magazine  
:Technology on your Time

<http://makezine.com/>



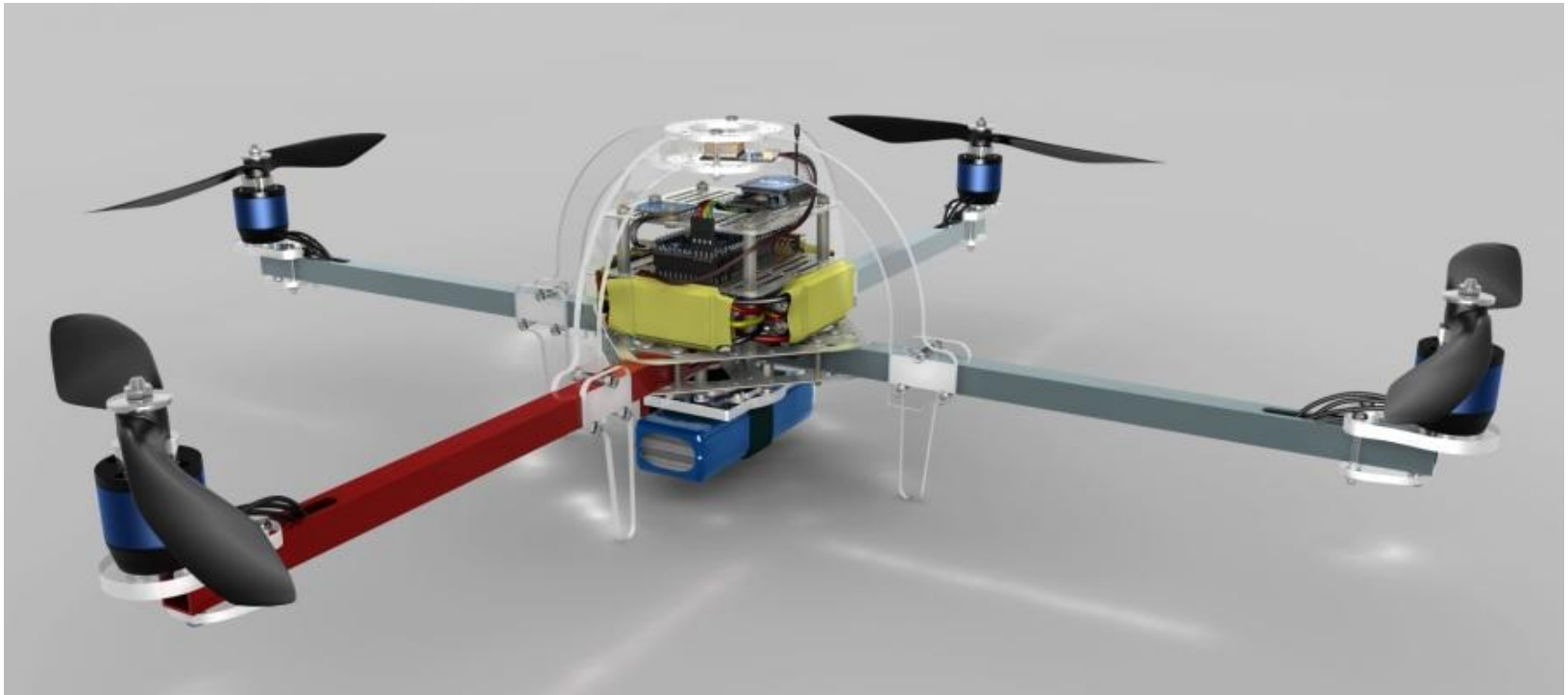
# Instructable

- ▶ Instructable website
- ▶ <http://www.instructables.com/>
- ▶ Share What You Make



# Arducopter

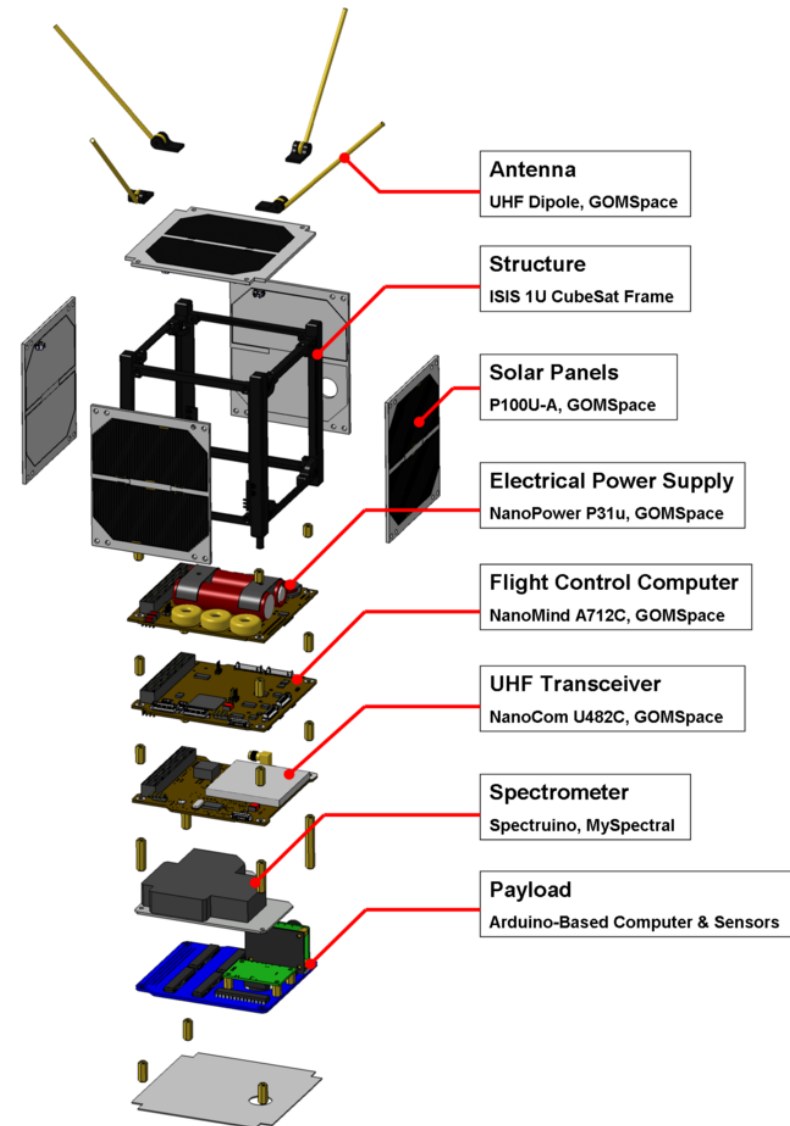
<http://code.google.com/p/arducopter/>



# ArduSat

## Your Arduino Experiment in Space

- ▶ <http://www.kickstarter.com/projects/575960623/ardusat-your-arduino-experiment-in-space>



# The Enough Already

- ▶ <http://creativity-online.com/work/matt-richardson-the-enough-already/24181>



# Otto

▶ <http://www.lucaderosso.com/expo/>

was an investigation into musical interfaces and on how to design new interfaces and hardwares for techniques generally used on the software side and then controlled by mouse and keyboard or universal MIDI controllers. The research was then applied to the development of a musical instrument for realtime and manual beat slicing — a well-developed technique which has never had a dedicated hardware interface.



# Botanicals

▶ <http://www.botanicals.com/about/>

**Botanicals** opens a new channel of communication between plants and humans, in an effort to promote successful inter-species understanding.

The Botanicals project is fundamentally about communication between plants and people. We are empowering both by inventing new avenues of interaction. Plants that might otherwise be neglected are given the ability to call and text message people to request assistance. People who are unsure of their ability to effectively care for growing things are given visual and aural clues using common human methods of communication.

