



### Mission

Conceive, develop and fly aerial vehicles featuring extreme synergy between pilot and machine, provide scientific and artistic expressivity in sky

### Vision

Cognitive embodying

### Keywords and by-products

Human machine interface, master slave system, cognitive embodying, bioengineering, exoskeleton, telepresence, augmented reality, virtual reality, remote piloted vehicles (RPV), visual arts. Data suits for virtual reality, wearable control interfaces for PC and PC games, remote control of machinery, wearable control interface for R/C aircrafts, telepresence hardware. RPV for environmental/geological/scientific monitoring, innovative ultralight aircrafts (piloted). Contemporary Dance-Theatre.

### Method

Operator and machine are conceived as a master-slave system : action and sensorial pathlines are transposed ergonomically and in real time between the two entities : a functional and stable mapping is generated.

By using the system (reiteration of feedback control), mapping is implicitly absorbed by the operator : this incorporates functionally and cognitively the machine to the operator.

Existing machinery can be transposed upon operator body by an appropriate ergonomics realised via sensorial and motorial interface exoskeletons

New machines can be developed upon innovative architectures, functionalities and ergonomics.



### Main Project

Masterblaster strap-on aerial vehicle [http://www.karenfuxia/projects/mb\\_sq.htm](http://www.karenfuxia/projects/mb_sq.htm)

### Funding

Personal. Commerce of articles/spin off products. Partnership offers

### Facts

- § Activity Feb-May 2007 : development and test flying of R/C prototypes featuring specific aerodynamic architectures and control configurations, development and flight test of a prototype exoskeleton for bilateral R/C control, development of innovative articulations based on shear-stress mechanics (tendons, rotulas)
- § Previous activity : see [www.karenfuxia.com](http://www.karenfuxia.com)
- § U.S. Patent 6,273,371 « Method for interfacing a pilot with the aerodynamic state of the surfaces of an aircraft and body interface to carry out this method » : pending « Method and device for integral motorial and sensorial interface between a pilot and an aerial vehicle, architecture of an aerial vehicle »

### Who

Marco Testi, 5 years experience in robot prototyping, bachelor degree in Physics (Pisa, Italia), master degree in Cognitive Science (ENS, Paris, France), private pilot licence, hang gliding licence, classical music studies (piano, cello) <http://www.karenfuxia.com/publishing/mrkcvcv.pdf>