

Nicola Mereu Personal Projects

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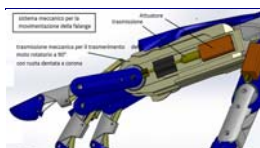
- [Robot Hand 9 D.O.F \(abstract\)](#)



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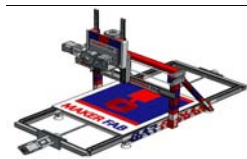
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Mereu Nicola

Via San Cristoforo, 71

09032, Assemini (CA), ITALY

Phone nr. (mobile): +39 349 3740 916

Email: nico_mereu@yahoo.it

Nationality: Italian

Personal Statement:

I'm passionate about robots. I create everything using common materials. I decided to make a homepage to show to everybody who has the same interests.

Creating doesn't need high technology, because we are just the technology. In our minds there are every solutions for many problems.

When I was a child, I watched in TV the film Short circuit.

In that film I saw a robotic hand. in that moment I decided to build myself something similar, I could built only mechanical structure by simple materials like metal wire. I could not find dc geared motors, so that little dream didn't go on.

During my high school studies I could make a mechanical hand by 4 standard servos. Thanks that I could to move each fingers by 1 servo.

But it was not like I wanted to do.

I studied many many many years engineering and in the same time I improved my skills by personal experiments and talking everyday with researchers.

I could assist a professor in his laboratory. In that place I learnt many useful things.

I'm strongly motivated to follow my passion, even if there is not a good ground where I can to move.

Work Experiences**From February 2014 to October**

Occupation: **Mechanical disegner and maker**

FabLab Sardegna Ricerche,

Employer: Località Piscinamanna
09010 Pula (CA) - Italia
Tel. +39 070 9243.1
Fax +39 070 9243.2203
info@sardegna ricerche.it

Type of business: scholarship holder

Project link: [Project link1](http://www.nikoborg.it/project_pro1.html) http://www.nikoborg.it/project_pro1.html

From December 2012 to January

Occupation: Mechanical engineer

Employer: Dept. of Mechanical Eng. – University of Cagliari (CA) (Italy)

Type of business: University Tutor

Main activities and responsibilities: University Tutor in Mechanical and Thermal Measurements course

From September 2008 to March 2012

Occupation: **Mechanical Engineer**

Employer: Dept. of Mechanical. Eng. – University of Cagliari, (CA) (Italy)

Type of business: University volunteer assistant

Main activities and responsibilities: At the Thermal Lab I developed sensor for medical devices, data acquisition.
Design and construction of a clinical simulator (mannequin) for calibration of NIBP monitors.

Project link: [Project link2k](http://www.nikoborg.it/project_pro2.html) http://www.nikoborg.it/project_pro2.html

Education and training

- 2012

Title of qualification awarded: Professional examination for Engineer Job (Full Sect. A - Italy)

Name and type of organization: c/o University of Cagliari, Cagliari - ITALY

- 2012

Title of qualification awarded: PhD. Admission examination on Mechanical Engineering

Name and type of organization: c/o University of Cagliari, Cagliari - ITALY

Notes : The admission examination has been passed.

- 2006-2011

Title of qualification awarded: M.Sc. Mechanical Engineer Degree

Name and type of organization: c/o University of Cagliari, Cagliari - ITALY

Vote: 106 of 110

Electrical Measurements, Sensors conditioning, Data Acquisition Systems, Control

Principal subjects: Systems, Mechanical Systems Design, FEM Analysis, Gasdynamics.

Condensed matter physics, Theoretical Mechanics, Experimental Mechanics,

Mechanics of Robots.

"Issues about developing a new breathalyzer device."

Thesis:

The main argument of my thesis is about experimental work of polymeric alcohol sensor,

developing of polymeric sensor based from [polyaniline](#) like a semiconductive polymeric material. Analysis of affidability, sensor property, behaviors in alcohol vapor environment.

- 1997 - 2005

Title of qualification awarded: B.Sc. Mechanical Engineer Degree

Name and type of organization: University of Cagliari - M. Eng. Department - Cagliari (ITALY)

Principal subjects:

Physics 1,2 ; Math 1, 2, 3; Structural analysis 1, 2; electronics; business organization;

Applied , Thermodynamics; Flowdynamics; Applied Mechanics 1,2; Pneumatic systems; ...

"Numerical Modelling of Spherical and parallel platform"

Thesis:

The main argument of my thesis is it a first analysis for a robotic platform used in high speed movements.

Personal skills and Competences

Languages:

- Mother tongue: ITALIAN
- Other language: ENGLISH - good [B1]

Computer skills and Competences:

- Autodesk AutoCAD 2010 for 2D design

- Working Model 2D for dynamic simulation in 2D
- Dassault SolidWorks 2013 for 3D modeling of parts and products
- Visual Nastran for 3D dynamic simulation
- Ansys for complex structural FEM computation
- Basic Stamp, Arduino programming language to control sensors
- Matlab and Simulink to implements kinematics and robotic algorithms and their validation
- Internet and Networking topics
- MS-Windows XP, MS-Seven
- Excel and Office Suite for general documentation, flow charts and reports
-

Technical skills and competences:

I think that my Annexes pictures show everything about all that.

My personal projects:

- Home made RC submarine based by a old German submarine plan.
- Homemade little CNC milling machine for my hobbies using spare parts.
- Fully designed CNC milling machine with Solidworks and structural analysis computations.
- Various homemade gearbox with extruded plastic like nylon and ABS.
- Building RC Airplane models with various light materials.

- *Persona Project link:*
 - [Project link3k](http://www.nikoborg.it/project_pro3.html) http://www.nikoborg.it/project_pro3.html
 - [Project link5k](http://www.nikoborg.it/project_pro5.html) http://www.nikoborg.it/project_pro5.html
 - [Project link6k](http://www.nikoborg.it/project_pro6.html) http://www.nikoborg.it/project_pro6.html
 - [Project link7k](http://www.nikoborg.it/project_pro7.html) http://www.nikoborg.it/project_pro7.html

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