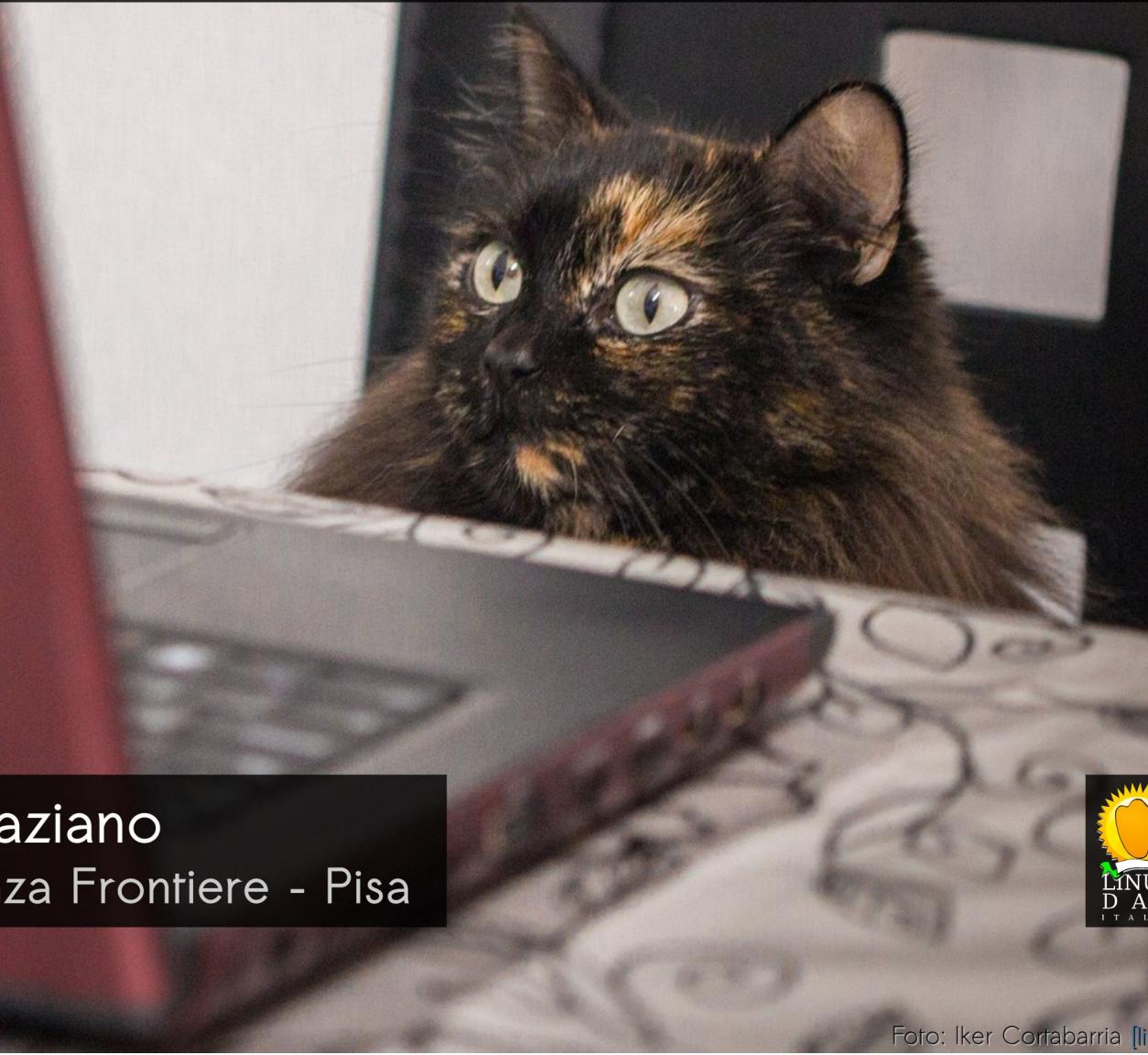


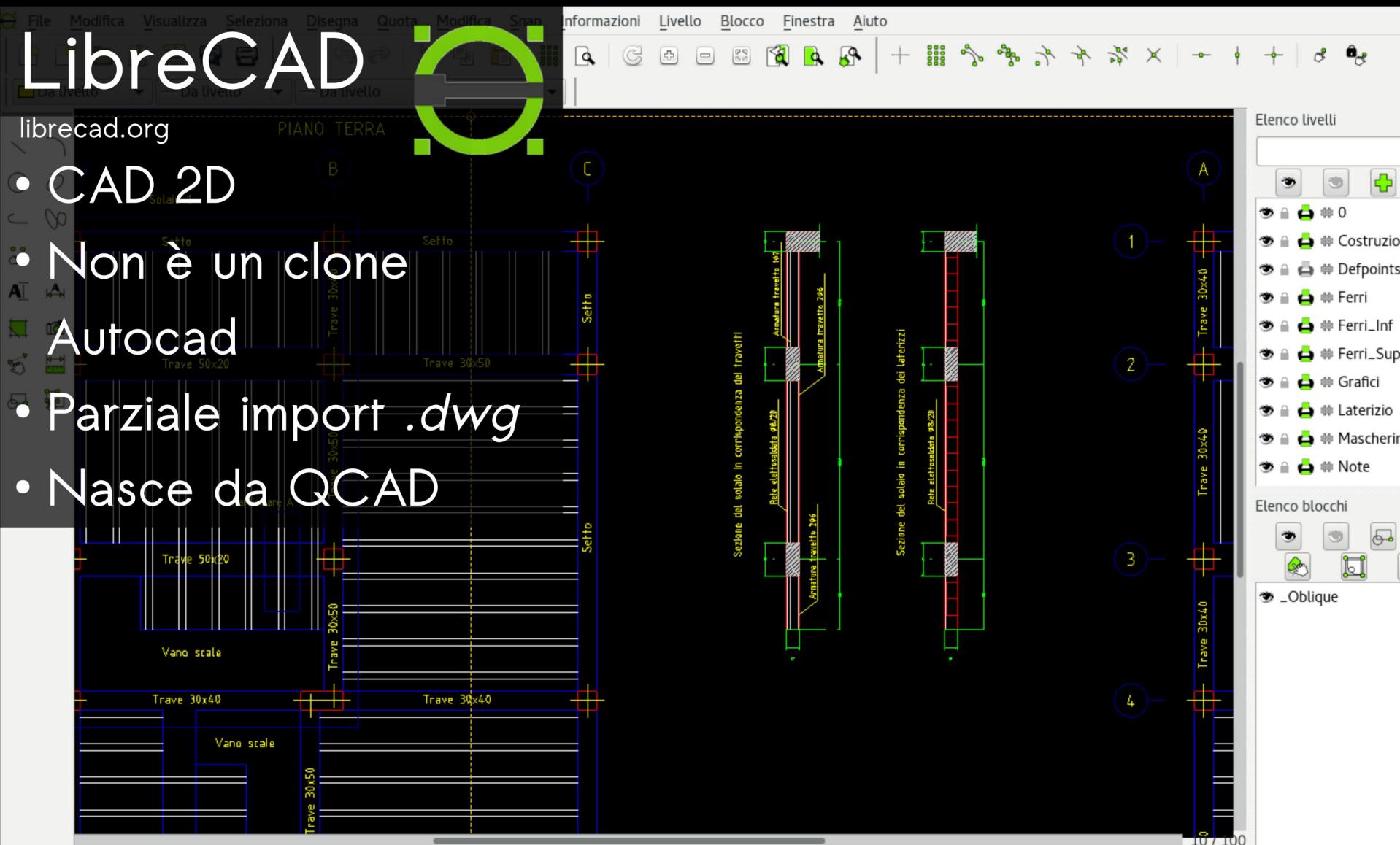
# Pillole di disegno tecnico con software libero



Giulio Di Graziano  
Ingegneria Senza Frontiere - Pisa



# Che programmi possiamo utilizzare?



Documento caricato: /home/tux/PROG\_CA\_DISTINTA\_FERRI\_12.dxf

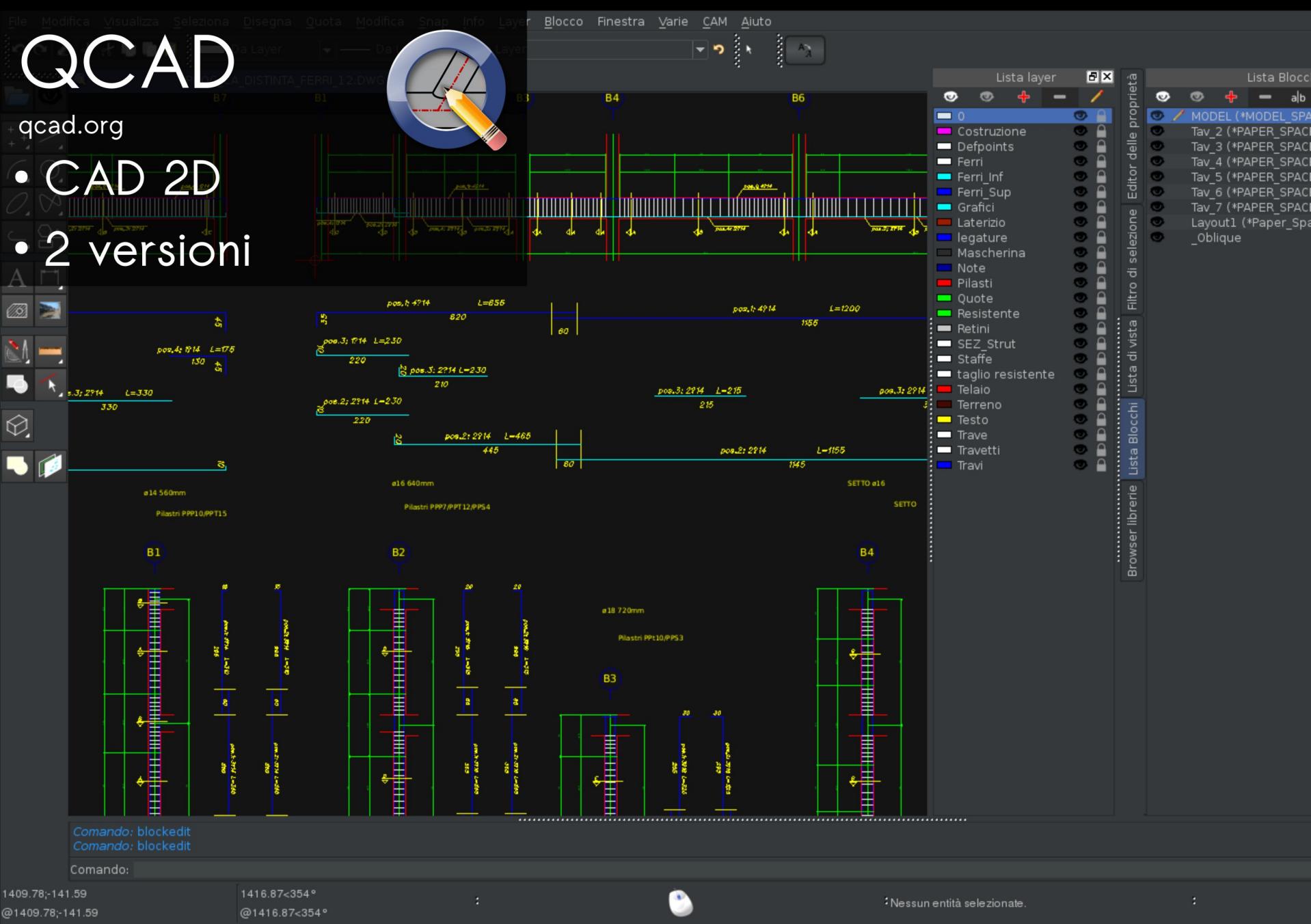


# Che programmi possiamo utilizzare?

# QCAD

qcad.org

- CAD 2D
- 2 versioni



# Che programmi possiamo utilizzare?

Blender

[www.blender.org](http://www.blender.org)



- Modellazione 3D

[mesh]

- Render fotorealistico

• E molto altro



# Che programmi possiamo utilizzare?

FreeCAD

freecadweb.org

- Modellazione solida parametrica



# Che programmi possiamo utilizzare?

Visualizza Strumenti Macro Disegno Finestre Auto

# FreeCAD

freecadweb.org

- Messa in tavola

The screenshot shows a FreeCAD interface with a 3D model of a house. The main view is a plan view with various rooms labeled: 'Main room 4.95m²', 'Terrace 5.04m²', and 'Annex room 3.16m²'. There are also sections labeled 'Sightseeing space' and 'Sightseeing space 3.70m²'. Dimensions are provided for walls, rooms, and openings. A section view is shown at the bottom, highlighting internal wall thicknesses like 0.15, 0.20, and 0.35 meters. A toolbar with various icons is visible at the top.

Plan view  
Section view

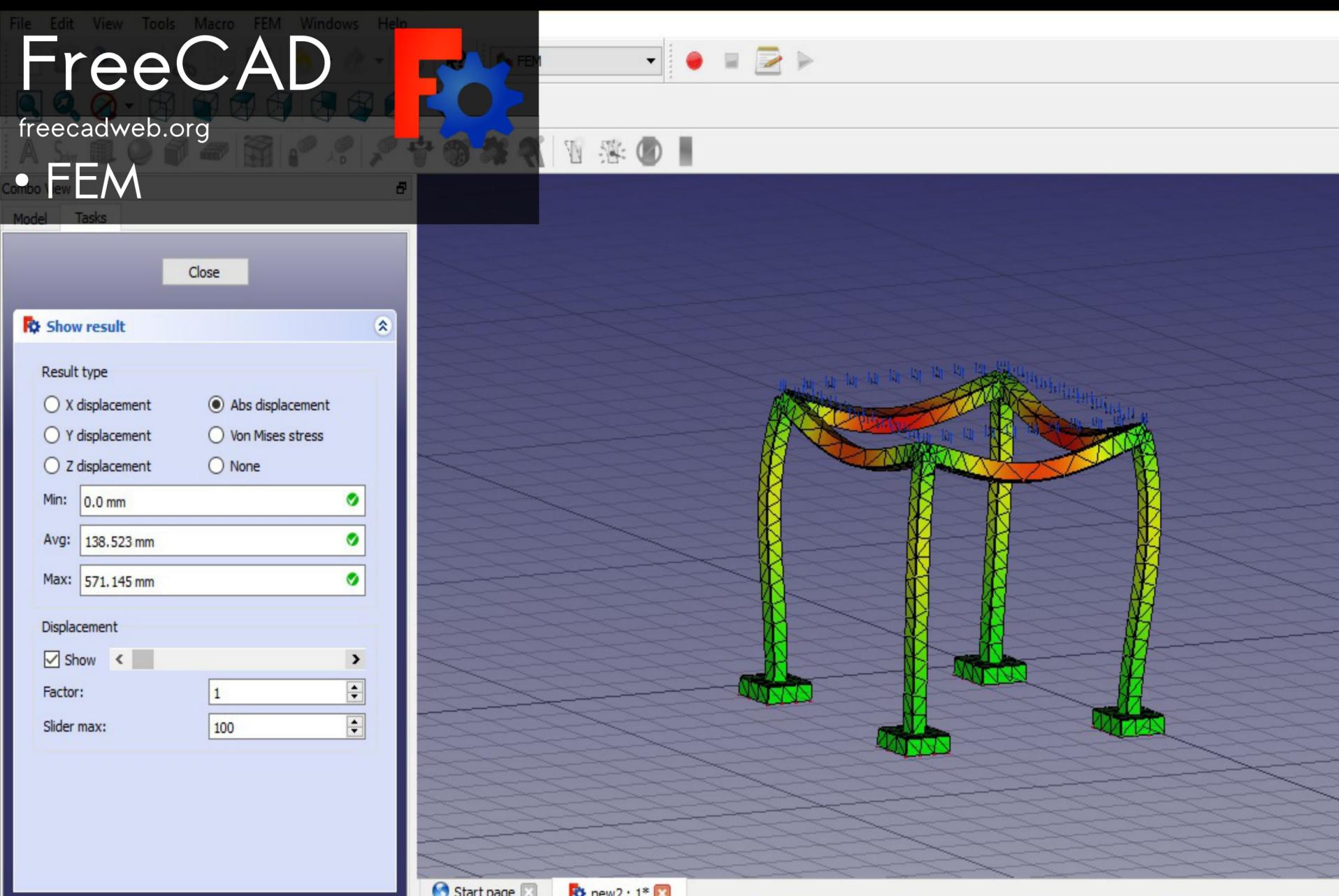
Valore

Test House  
Plan and Section  
Scale: 1:33

Made with FreeCAD

modelo 01 : 1 testhouse : 1\* testhouse : A3 Page\* Quantities schedule\* bh : 1 open mall : 1

# Che programmi possiamo utilizzare?



# Che programmi possiamo utilizzare?

File Modifica Visualizza Strumenti Macro Spreadsheet Finestre Aiuto

# FreeCAD



freecadweb.org

Modello Azioni

Etichette Applicazione

- **Foglio di calcolo**
- **modello 01**
- **testhouse**
- **bh**
- **open mall**

Proprietà Valore

Contenuto Quantities schedule

Columns

8						
9	Steel	Structural steel, protected and painted for exterior use	Metal column 1	0.0424115		
10			Metal column 2	0.0424115		
11			Total	0.084823		
12						
13	Concrete	25MPa cast-in-place structural concrete	Column 1	0.096		
14			Column 2	0.096		
15			Column 3	0.096		
16			Column 4	0.096		
17			Column Extension 1	0.37385		
18			Column Extension 2	0.37385		
19			Total	1.1317		
20						
21	2. Beams					
22						
23	Steel	Structural steel, protected and painted for exterior use	Metal beam 3	0.00625287		
24			Metal beam 2	0.00625287		
25			Metal beam 1	0.0064887		
26			Total	0.0189944		
27						
28	Concrete	25MPa cast-in-place structural concrete	Beam Long 1	0.256		
29			Beam Long 2	0.256		
30			Beam Short 1	0.144		
31			Beam Short 2	0.144		

Vista Dati

modello 01 : 1 testhouse : 1\* testhouse : A3 Page\* Quantities schedule\* bh : 1 open mall : 1

# Mettiamo le mani in pasta



Scarichiamo FreeCAD 0.18 (in sviluppo)  
[github.com/FreeCAD/FreeCAD/releases](https://github.com/FreeCAD/FreeCAD/releases)

# Mettiamo le mani in pasta

Interfaccia FreeCAD

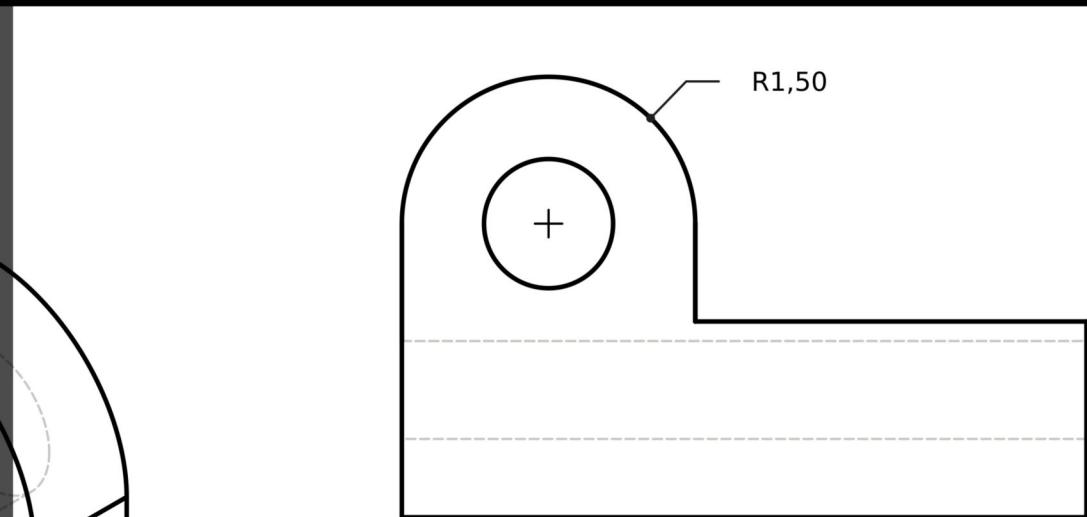
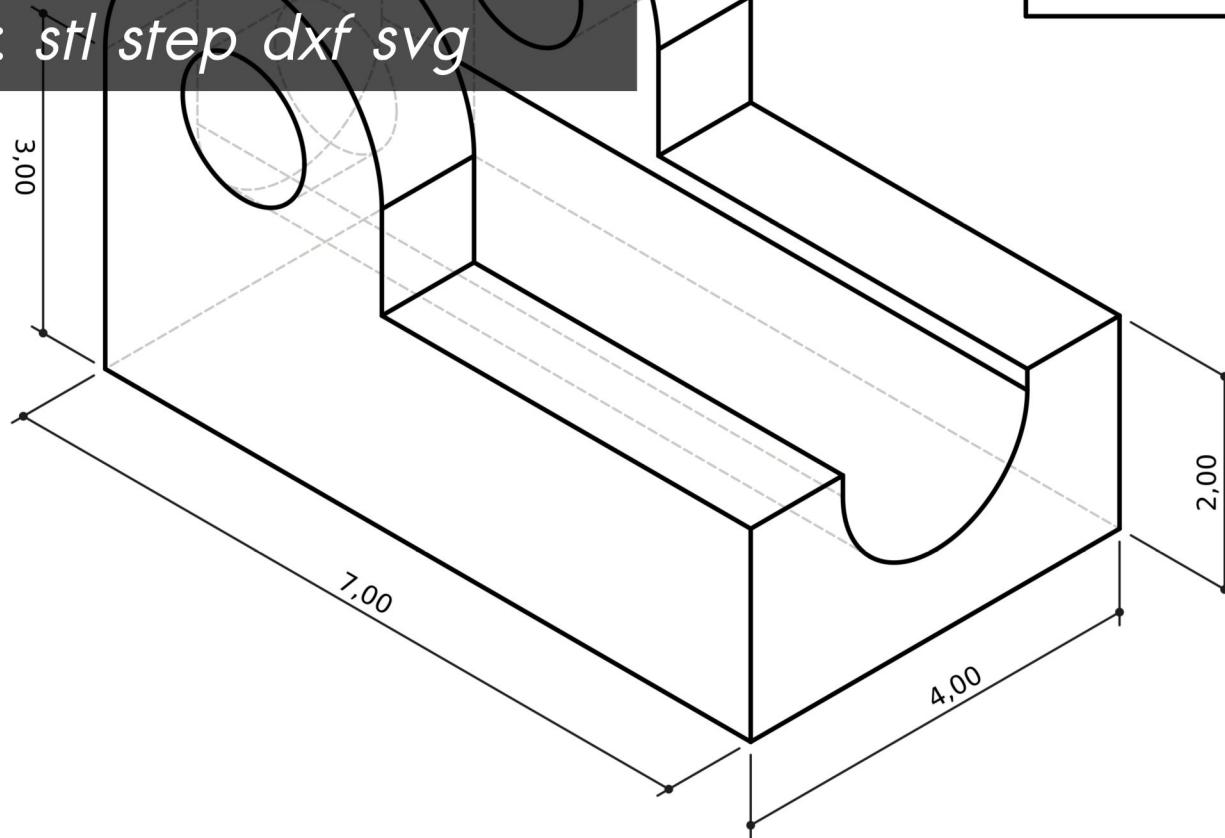
Workbenches:

Part Design

Sketcher

Messa in tavola

Exp: *stl step dxf svg*



# Mettiamo le mani in pasta

## Workbench Arch

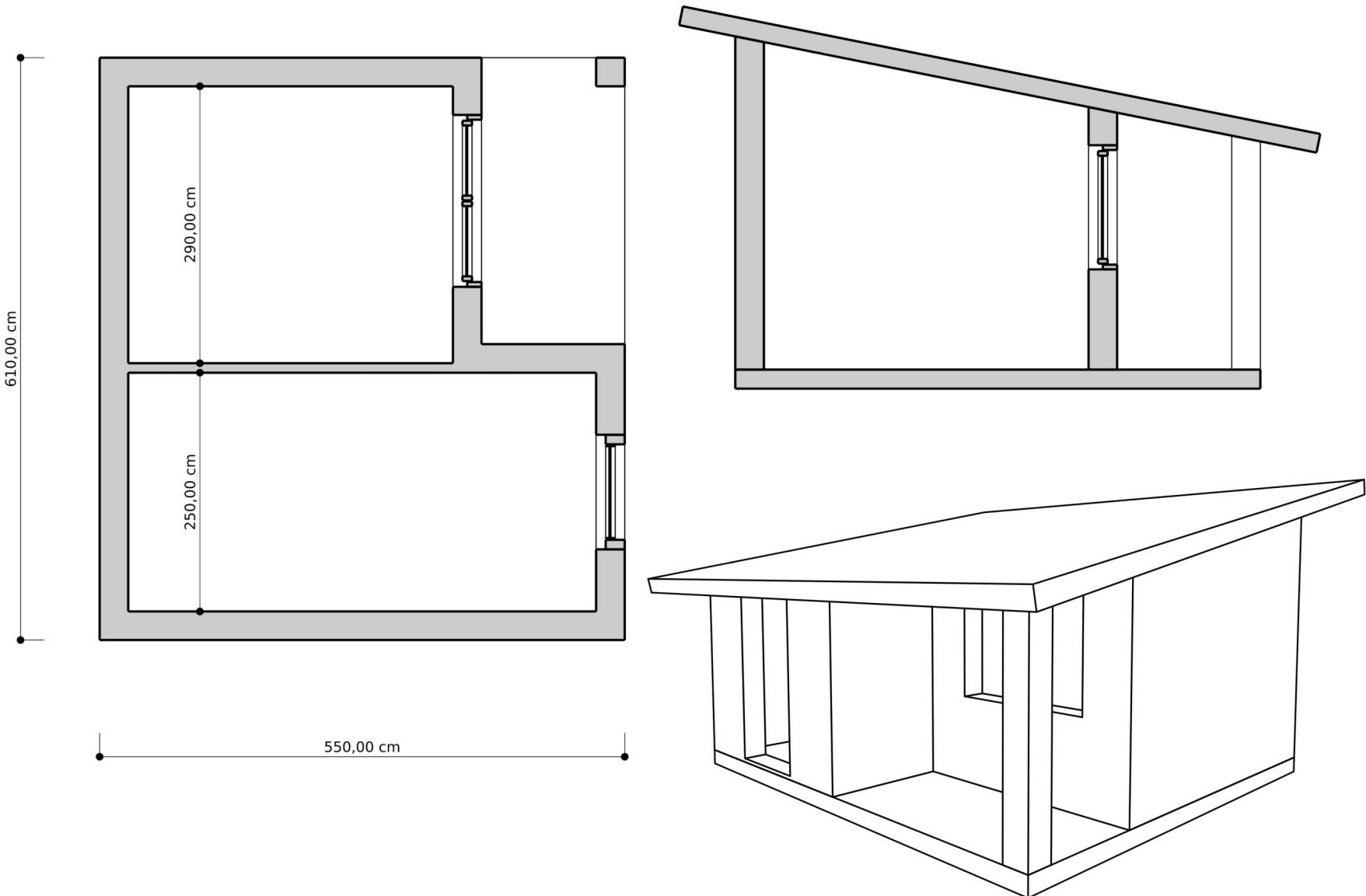




Foto: Toms Baugis [link]

# Risorse e bonus

Wiki e Forum FreeCAD

Blog di Yorik van Havre [yorik.uncreated.net/guestblog.php](http://yorik.uncreated.net/guestblog.php)

Video di Regis Nde Tene [www.youtube.com/user/RegisBBNT](http://www.youtube.com/user/RegisBBNT)

Alexandre Prokoudine [libregraphicsworld.org](http://libregraphicsworld.org)

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libreDWG [www.gnu.org/software/libredwg/](http://www.gnu.org/software/libredwg/)

VI-suit [blogs.brighton.ac.uk/visuit](http://blogs.brighton.ac.uk/visuit)

LeenO: computo metrico [leeno.org](http://leeno.org)



Giulio Di Graziano  
Ingegneria Senza Frontiere - Pisa

giulio.digraziano@isf-pisa.org  
[m] @giuliodg:matrix.org