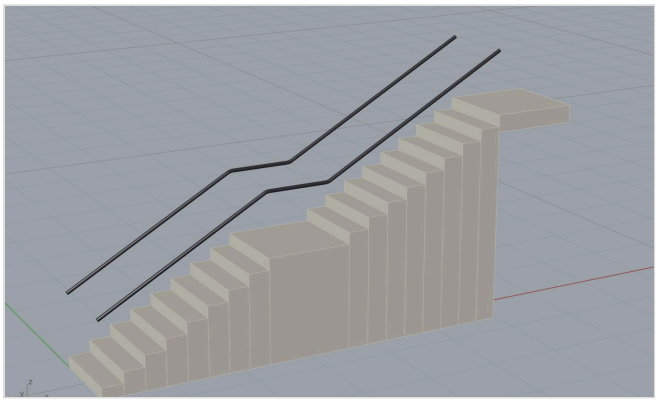
FREE GRASSHOPPER DEFINITIONS FOR ARCHITECTS

THE COLLECTION

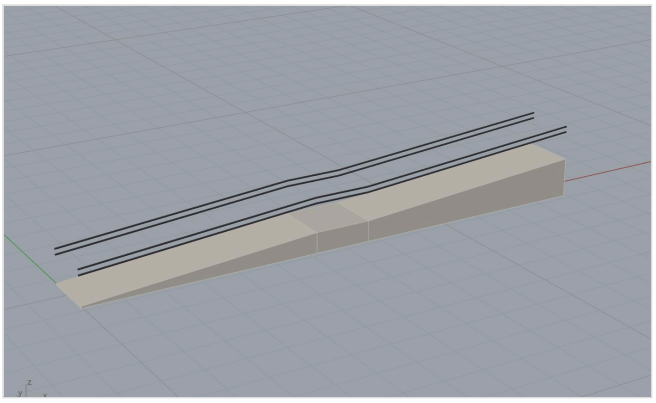
Each definition comes with this kind of guide in English and Italian, clean numbered stages inside the file, and the checks an architect needs. Rhino 7 and 8, native components (Kangaroo2, included with Rhino, where noted).



CIRCULATION

STAIR

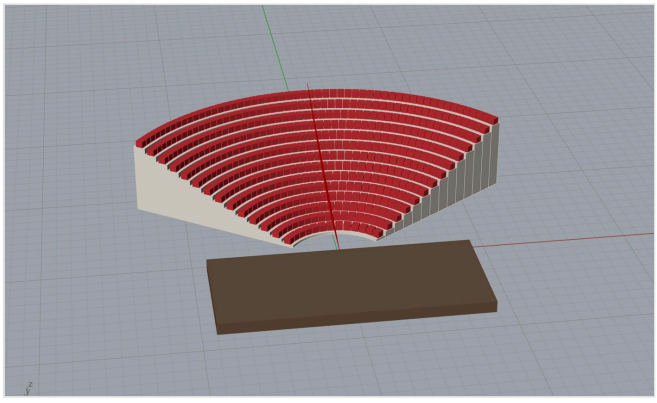
Straight, L, U or free-form stair on any plan path, with code checks



CIRCULATION

ACCESSIBLE RAMP

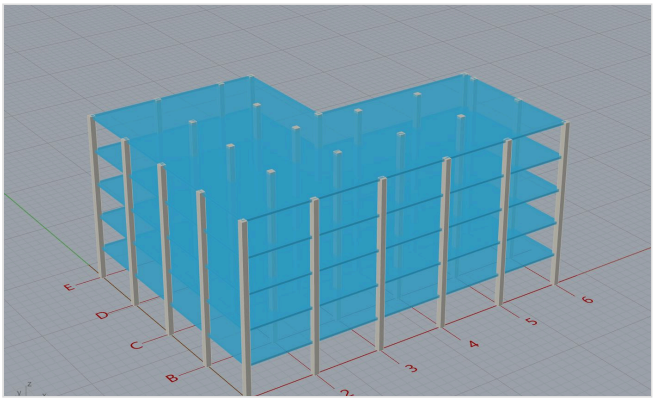
Ramp on any plan path with landings, continuous handrails and accessibility checks



PLANNING

AUDITORIUM SEATING

Raked seating from sightlines (C-value method), tiers and seats

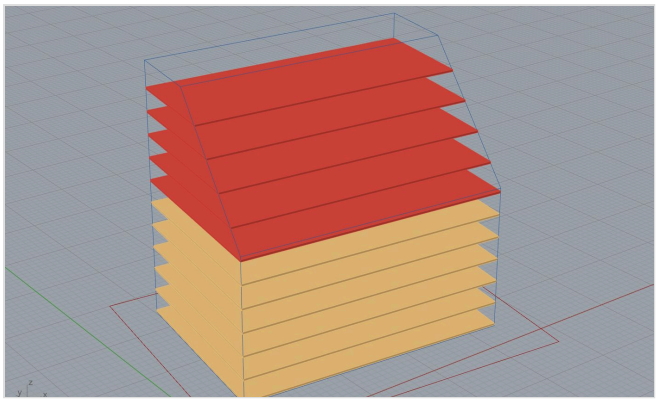


PLANNING

STRUCTURAL GRID

Column grid from a floor outline with rule-of-thumb pre-sizing

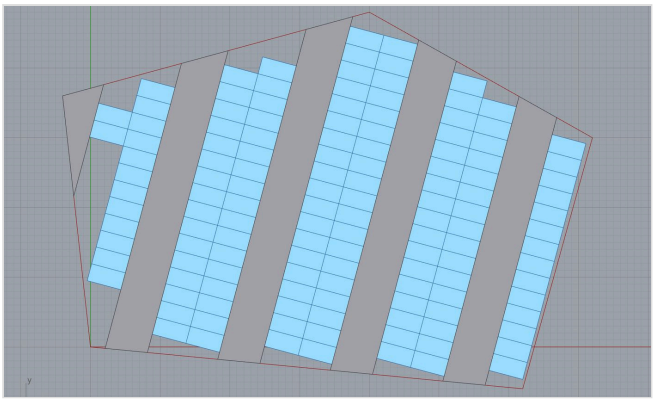
Free to use in your own projects, commercial ones included. Please do not resell or re-upload the files: share the link instead.



PLANNING

ZONING ENVELOPE

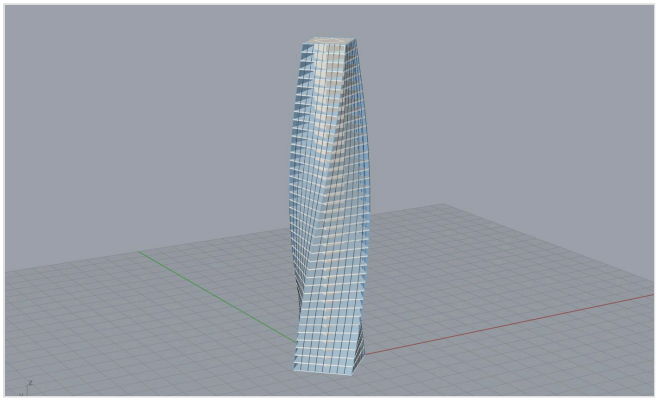
Buildable volume from setbacks, height limit and sky-exposure plane, checked against the FAR



PLANNING

PARKING LAYOUT

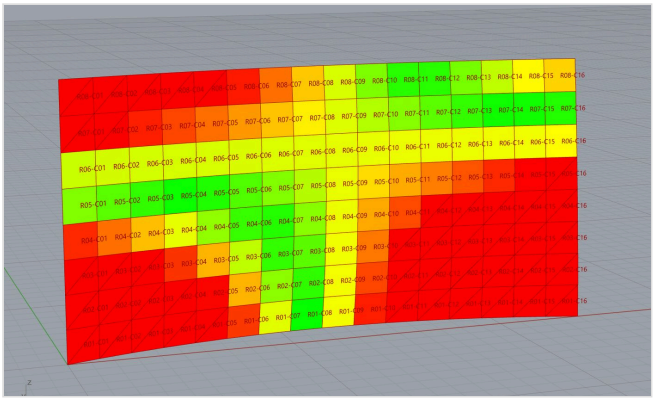
Stalls and aisles fitted into any site, with stall count



MASSING

TWISTED TOWER

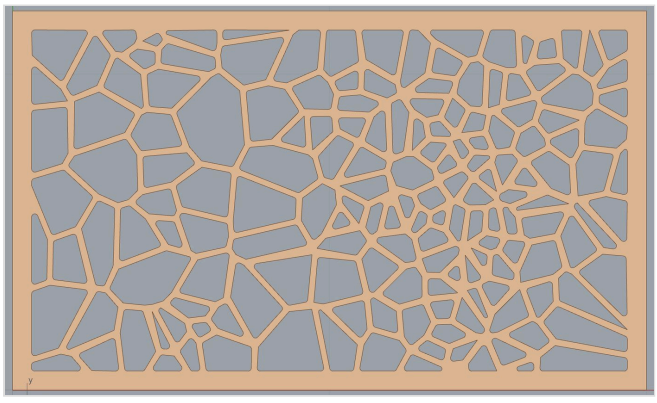
Tower massing with twist, taper and bulge, slabs, mullions and floor areas



FACADE AND FABRICATION

FACADE PANELS

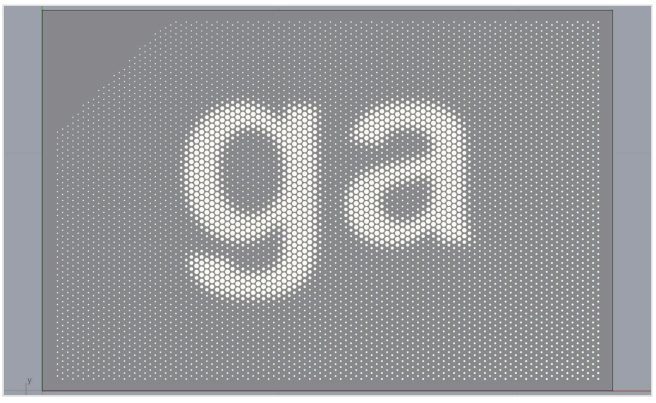
Panelise a double-curved facade, planarize with Kangaroo, schedule flat and warped panels



FACADE AND FABRICATION

VORONOI SCREEN

Laser-ready Voronoi panel, denser near an attractor, with open area



FACADE AND FABRICATION

PERFORATED SHEET

Image or attractor perforation with fabrication rules and open area

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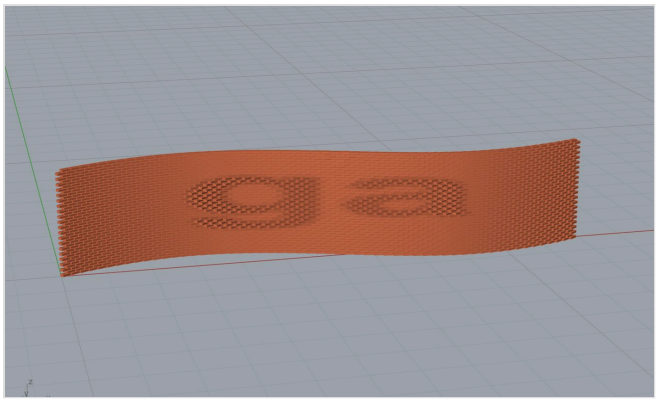
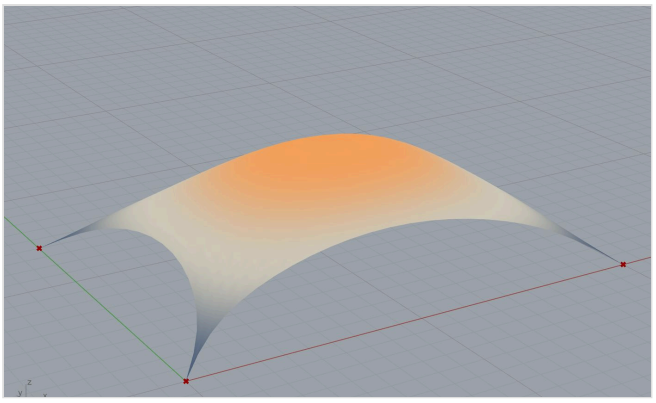


FACADE AND FABRICATION

PARAMETRIC BRICK WALL

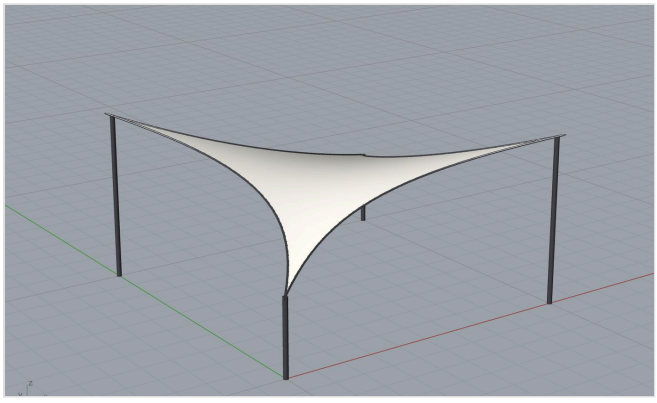
Rotated and pushed bricks along any curve, driven by attractor, image or wave



FORM FINDING

FUNICULAR SHELL

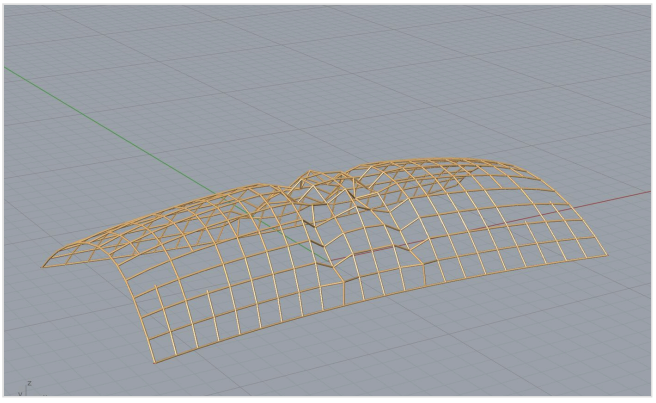
Compression shell from a Kangaroo hanging model



FORM FINDING

TENSILE MEMBRANE

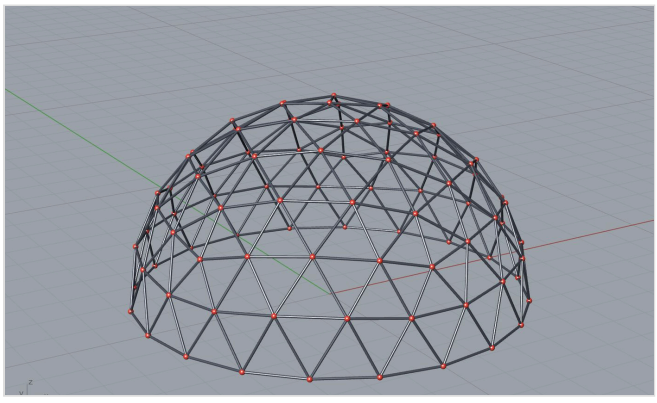
Four-point sail or central-mast tent, form found with Kangaroo



FORM FINDING

TIMBER GRIDSHELL

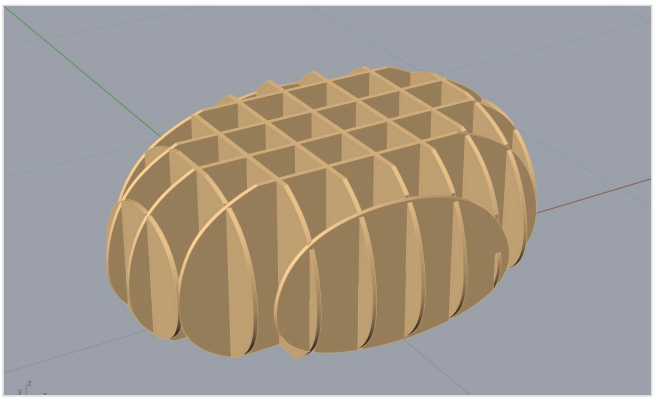
Active-bending lath gridshell form found with Kangaroo, with strain check



STRUCTURE

GEODESIC DOME

Geodesic dome of any frequency with strut schedule by length



DIGITAL FABRICATION

WAFFLE STRUCTURE

Interlocking slotted ribs from any solid, laid flat and labelled for the laser

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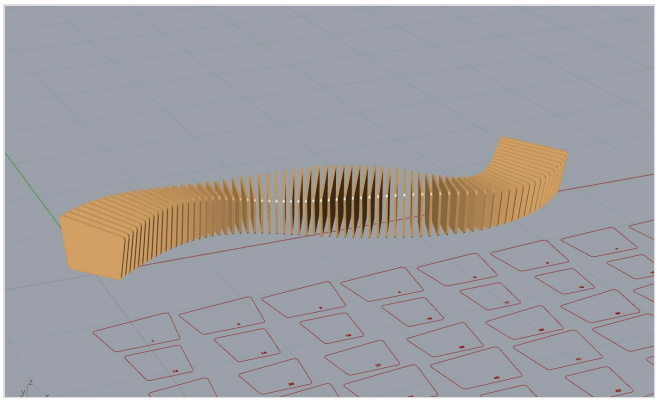
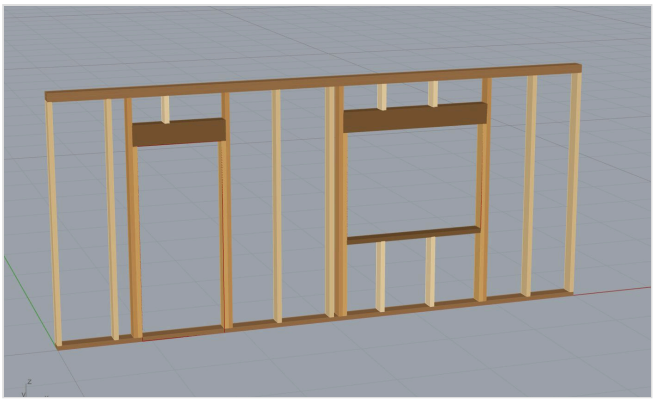


DIGITAL FABRICATION

RIB BENCH

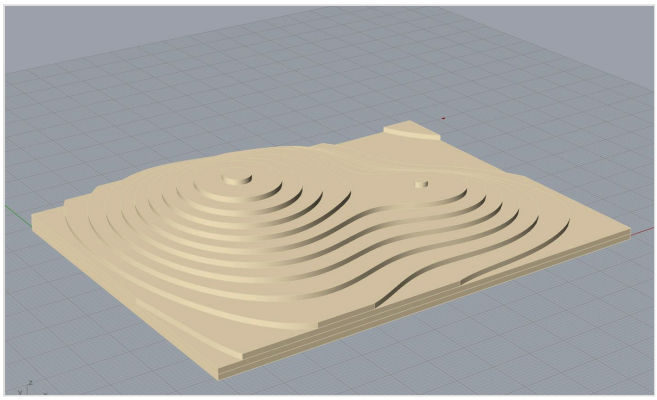
Bench of CNC ribs along any curve, laid flat and numbered



STRUCTURE

TIMBER STUD WALL

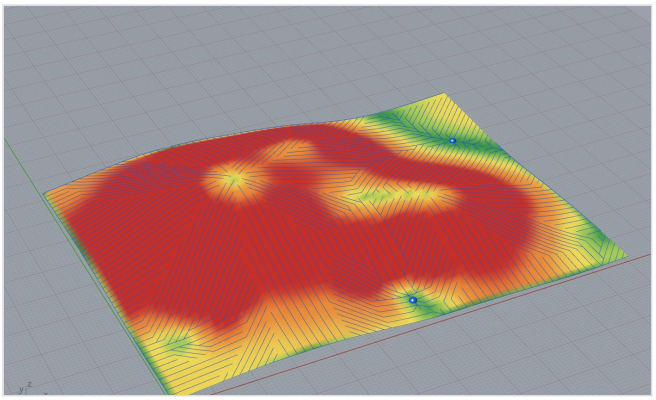
Platform framing of a wall with openings and cutting list



SITE AND MODELS

TERRAIN MODEL

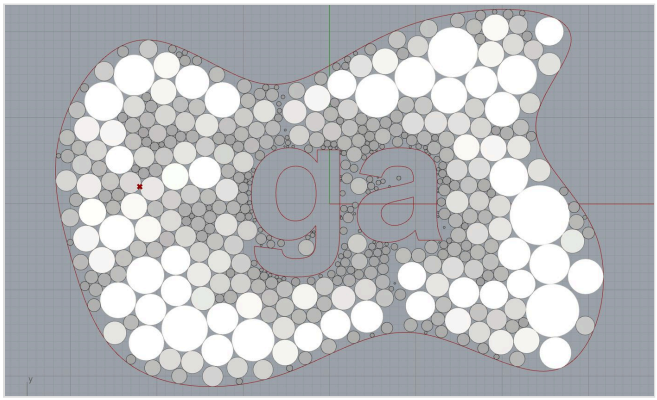
Layered site model from a terrain surface, laid out for the laser with engraved guides



SITE AND MODELS

WATER FLOW AND SLOPES

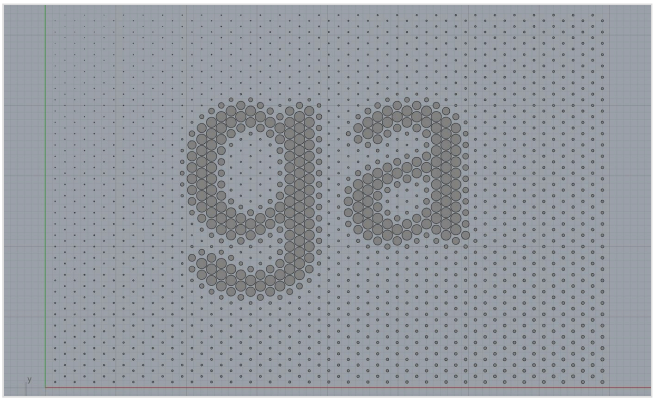
Drainage network, ponding points and slope classes on any terrain



GRAPHICS AND PATTERN

CIRCLE PACKING

Tangent circles like a foam, around parametric text, with Kangaroo



GRAPHICS AND PATTERN

IMAGE TO SHAPES

Halftone of circles, triangles, squares or hexagons from any image

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