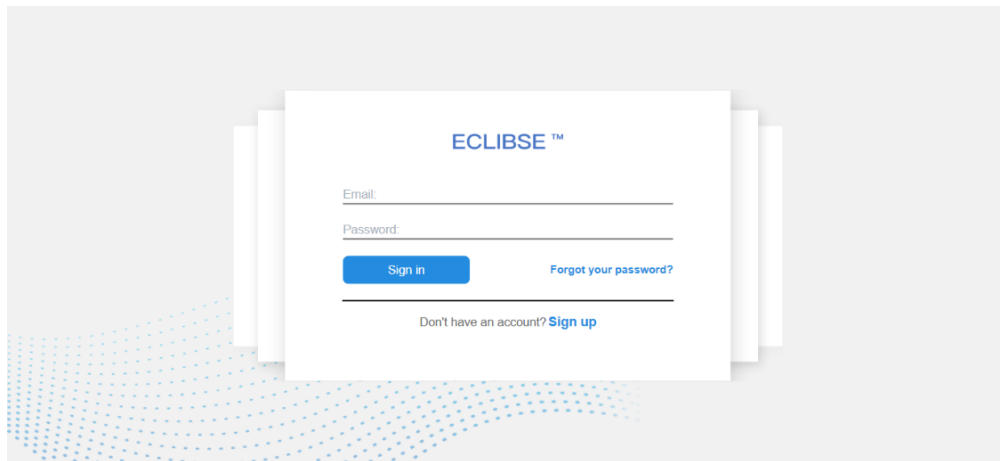


Simple Steps to Use ECLIBSE™

ECLIBSE™ is a cloud-based generative design platform that helps you to generate lightweight and functional lattice & solid structures within a few steps, including specifying the designable / non-designable domains, load cases, material properties and the optimization model.

Register & Sign in

- Register an account with a valid email address and personal information.



- Sign-in to the portal page to: Top-up the account balance, Subscribe to a package with discounts, Create a new project, View/Edit/Copy/Delete a project, View the status of each project (Editing/Optimizing/Optimized/Aborted), Download the design (in STL format) from an optimized project.

A screenshot of the ECLIBSE™ dashboard. The top navigation bar includes the ECLIBSE™ logo, a search bar, and 'Help' and 'Log out' buttons. The left sidebar shows the user's profile 'Qingping MA' and account details: 'Balance: \$0' with a 'Top-up' button, and 'Subscription: Regular' with an 'Upgrade' button. The main content area displays a table of projects with columns for 'Project Name', 'Creation Time', 'Last Modified Time', and 'Status'. The table lists several projects, all with a status of 'Optimized'. At the bottom of the table, there are five buttons: 'New Project', 'Copy Project', 'View / Edit', 'Download', and 'Delete'.

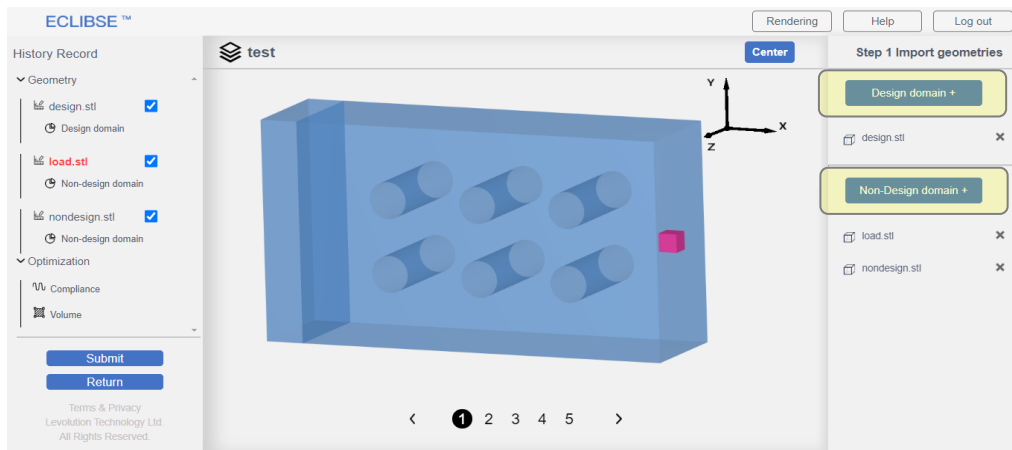
Project Name	Creation Time	Last Modified Time	Status
Cantilever_LC1_Vol0.3_Solid_0526	2020-05-26 20:58:09	2020-05-26 21:23:44	Optimized
Cantilever_Coarse_LC1_Vol0.3_Lattice_0521	2020-05-21 11:04:39	2020-05-21 14:58:30	Optimized
Cantilever_Coarse_LC1_Vol0.3_Solid_0521	2020-05-21 11:02:42	2020-05-21 14:58:30	Optimized
LBeam_Coarse_LC1_Vol0.3_Solid_0515_CP	2020-05-15 15:05:16	2020-05-15 15:05:16	Optimized
LBeam_Coarse_LC1_Vol0.3_Solid_0512	2020-05-12 16:16:25	2020-05-12 16:34:00	Optimized
Bike_Coarse_LC3_Vol0.1_Solid_0512	2020-05-12 14:39:11	2020-05-12 16:42:16	Optimized
Swingarm_Medium_LC1_Vol0.3_Lattice_0511	2020-05-11 14:36:48	2020-05-11 14:46:46	Optimized
Swingarm_Medium_LC1_Vol0.3_Solid_0511	2020-05-11 12:53:55	2020-05-11 13:49:13	Optimized
Bike_Coarse_LC2_Vol0.3_Solid_0508	2020-05-08 10:11:58	2020-05-11 11:25:47	Optimized
Robot_Coarse_LC1_Vol0.3_Solid_0506	2020-05-06 22:52:52	2020-05-06 23:36:46	Optimized

Structural Design Optimization

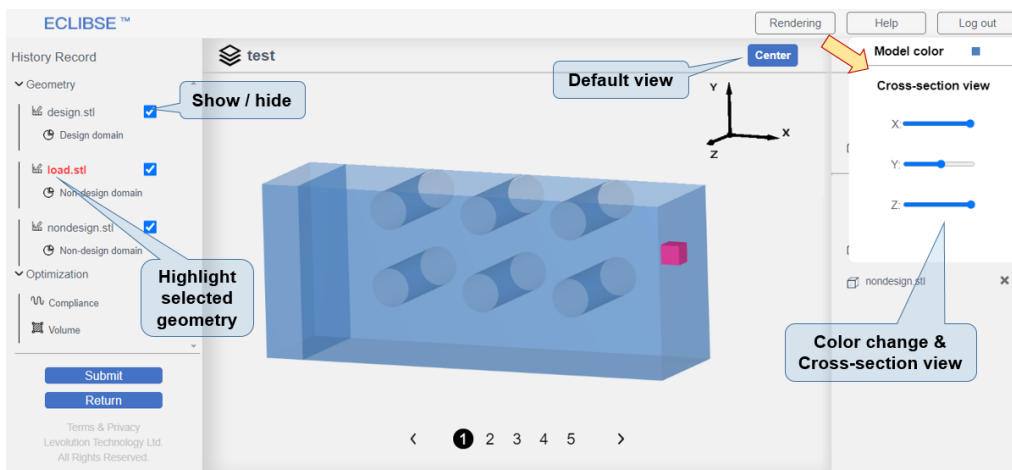
For a new project, click [View / Edit](#) in the portal page to enter the ECLIBSE™ GUI.

Step 1 Import geometries

- Import one or more STL files to define the design domain and non-design domain.

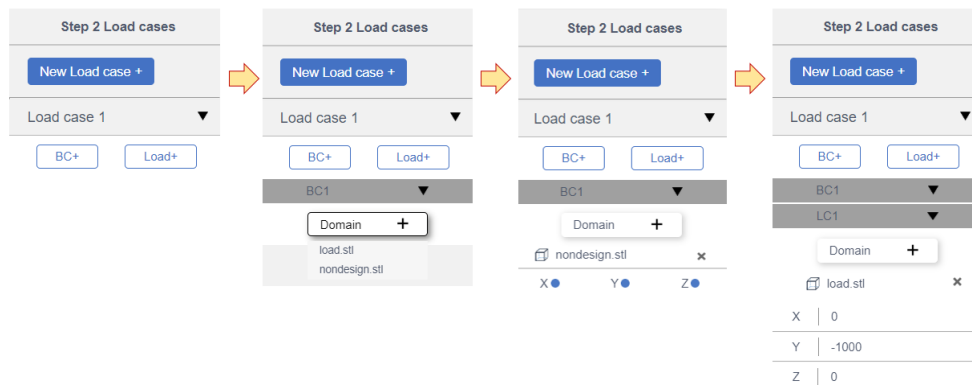
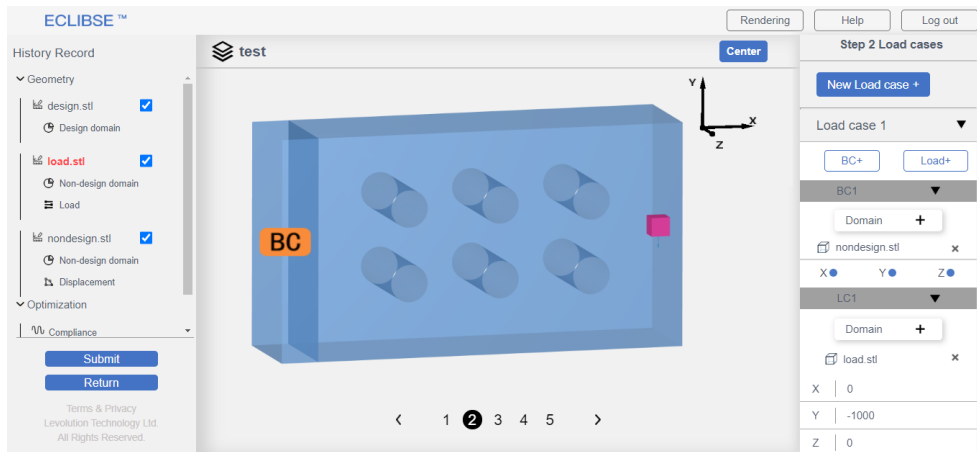


- View the imported STL models by highlighting, show/hide, rotation, translation, zooming, color change, cross-section view and default view.



Step 2 Load cases

- Define the load cases, each of which includes one or more boundary and loading conditions.



Step 3 Material properties

- Specify the material properties, including the material name, density, Young's modulus, Poisson's ratio and yielding stress.

Step 3 Material property	
Name	Aluminum
Density	2700
Modulus	69000000000
Poisson's ratio	0.35
Yielding	265000000

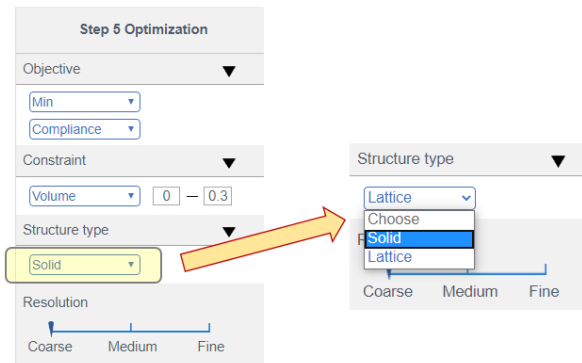
Step 4 Design responses

- Define the design responses, e.g. the weighted compliance and volume ratio. A weight (0.0 ~ 1.0) for each load case should be specified.

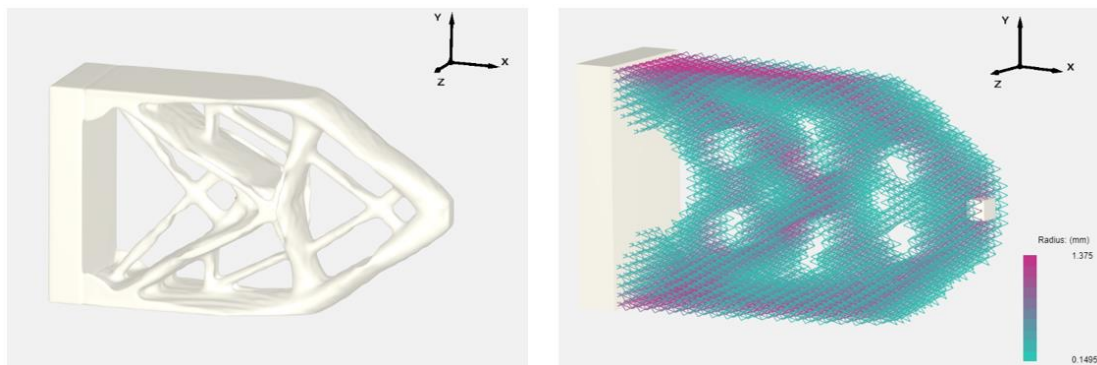
Step 4 Design responses	
Weighted compliance	▼
Weight for load case 1	1
Volume	☑

Step 5 Optimization

- Specify the objective function & constraints with the design responses defined in Step 4.
- Choose the structure type (solid / lattice) and resolution (Coarse / Medium / Fine). The resolution corresponds to the level of structural details in the final optimized design.



- Submit the optimization job.
- Once the optimization job finishes, ECLIBSE™ will send out a notification message in the GUI to the user to View and Download the optimized design in STL format. Depending on the structural type specified, different designs will be displayed.



For more details, please download the [Tutorial & Input Geometry](#).

<http://levolute.com/test/img/agreement.pdf>