



HEI MAKERS

# BLENDER ADD-ONS FOR MAKERS

Blender - open source 3D creation software

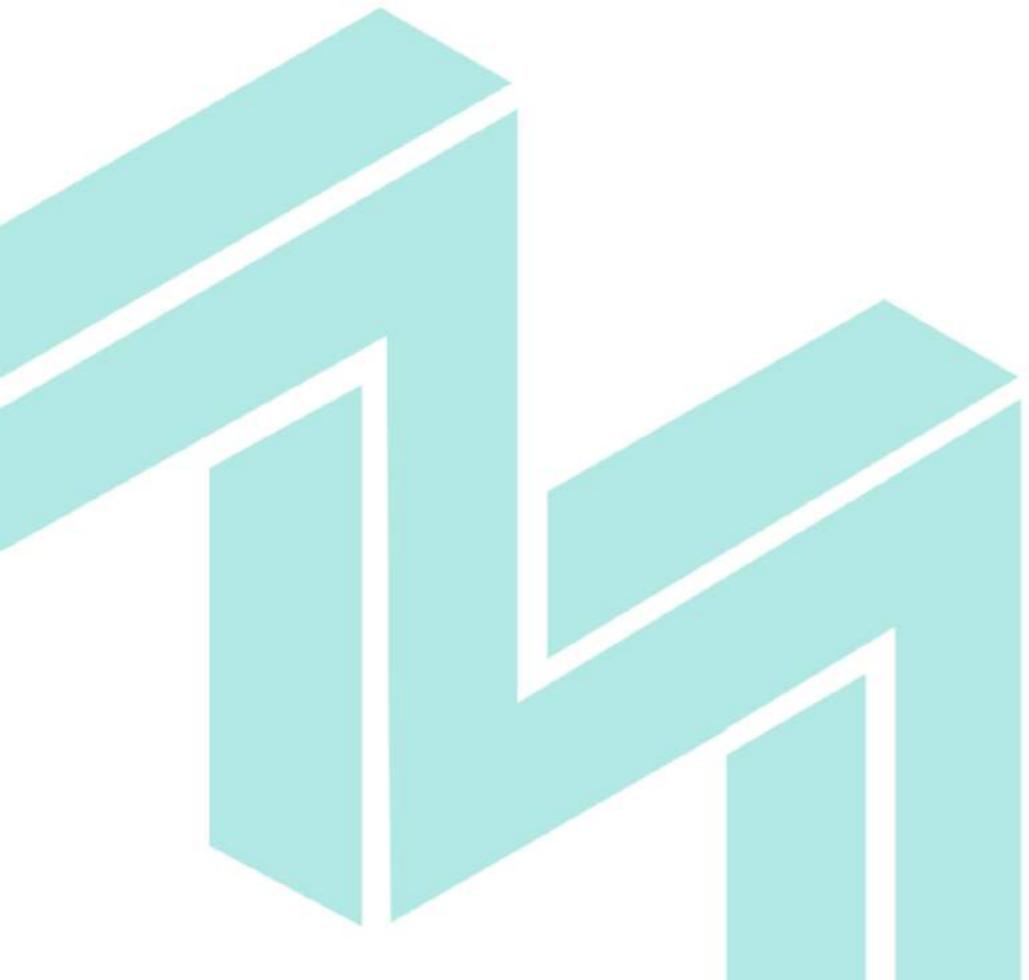


Co-funded by the  
Erasmus+ Programme  
of the European Union  
2017-1-LT01-KA203-035231

# ABOUT BLENDER

Blender is the free and open source 3D creation suite. It supports the entirety of the 3D pipeline—modeling, rigging, animation, simulation, rendering, compositing and motion tracking, even video editing and game creation.

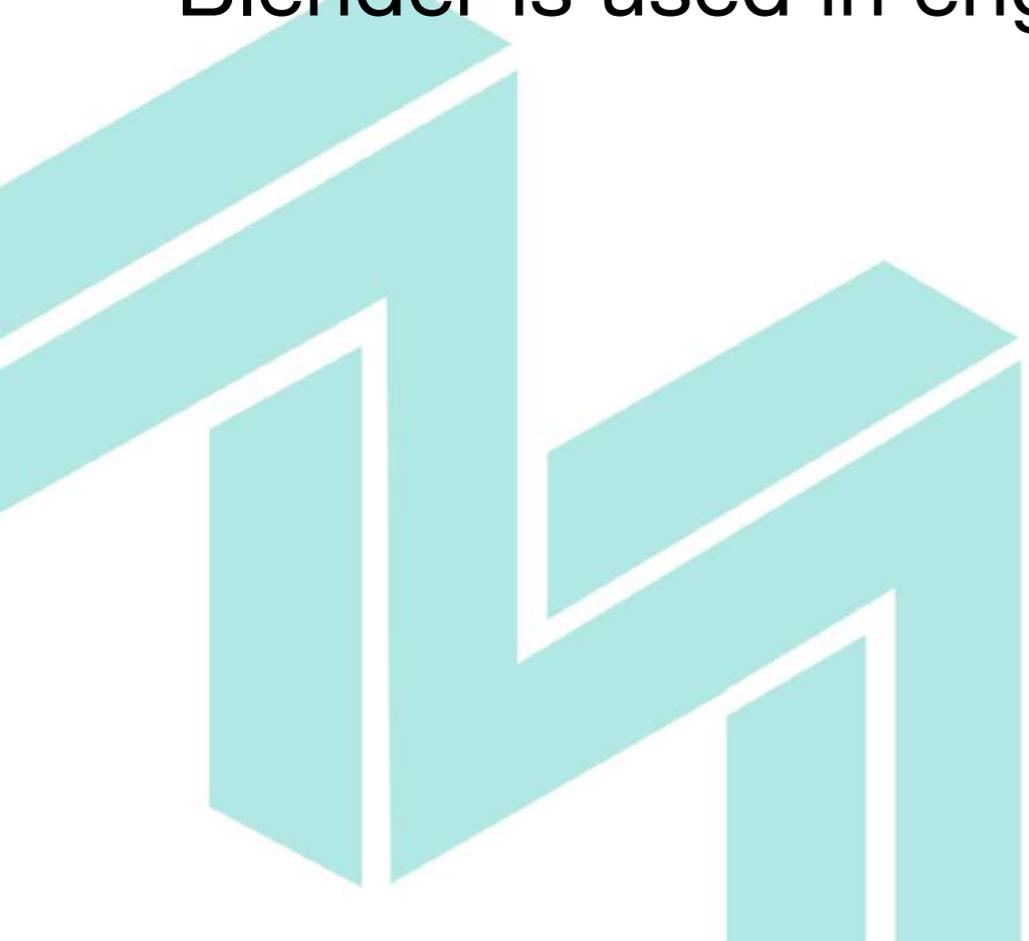
[blender.org](http://blender.org)



# EXTENDING BLENDER CAPABILITIES

Blender is used in other fields outside art, because of openness and active community.

Blender is used in engineering, science, medicine.



# AIM 05 SOFTWARE TOOLS FOR MAKERS



Add-ons for improving  
workflow for makers



# BLENDER INSTALLATION

Download blender 2.8 from official website [blender.org](https://blender.org)



Features

Download

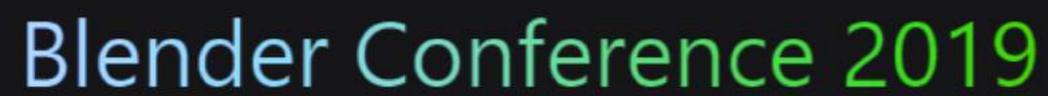
Support

Get Involved

About

Store

♥ Donate

A banner for the Blender Conference 2019, set against a background of a 3D-rendered city street at night. The banner is a dark rectangle with the text 'Blender Conference 2019' in a light blue and green font. Below it, in a smaller white font, is the text 'Watch all the videos here!'. The background shows tall buildings with lit windows, street signs, and various advertisements.

Blender Conference 2019

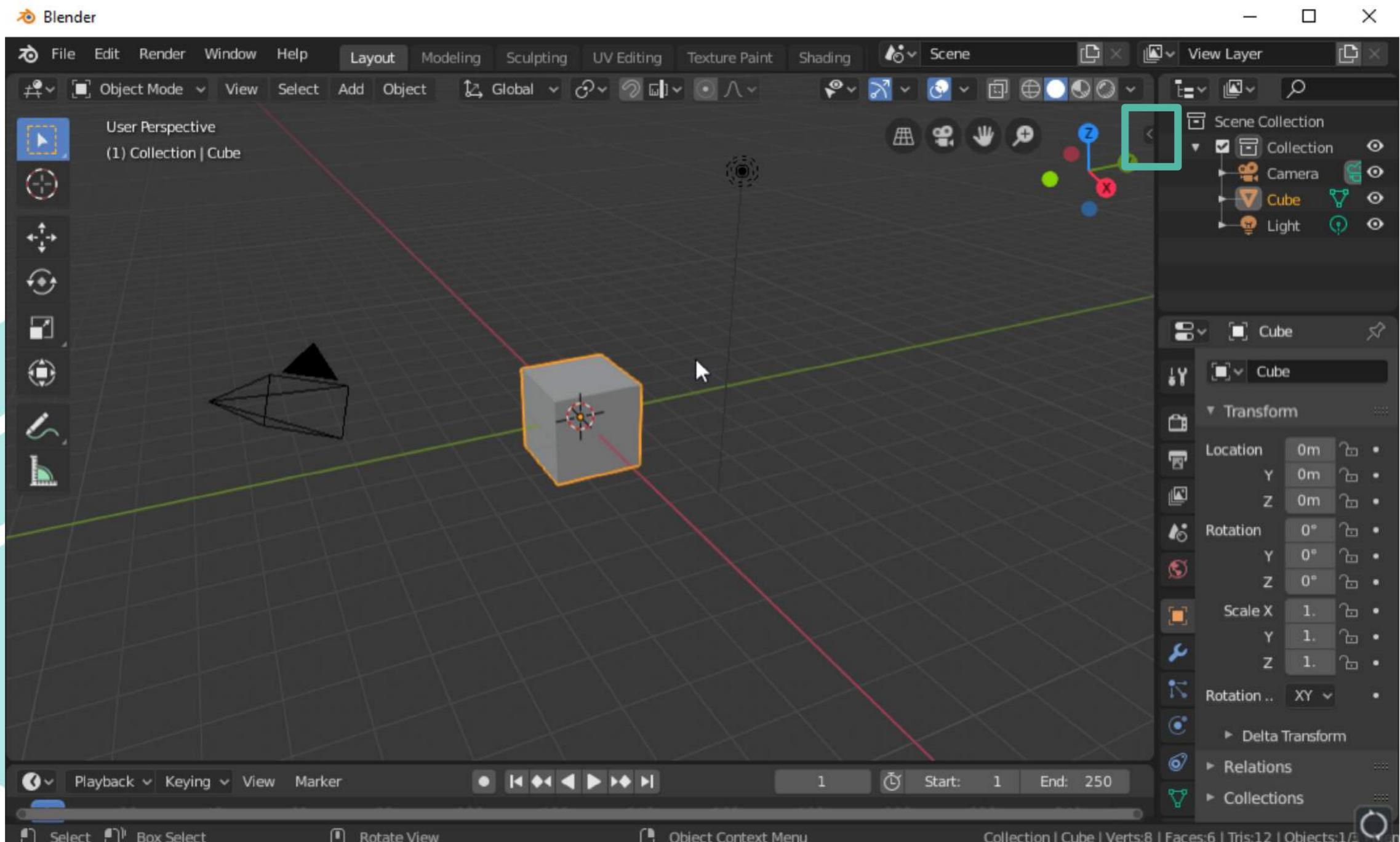
Watch all the videos [here!](#)

Open source 3D creation. Free to use for any purpose, forever.

 Download Blender 2.80

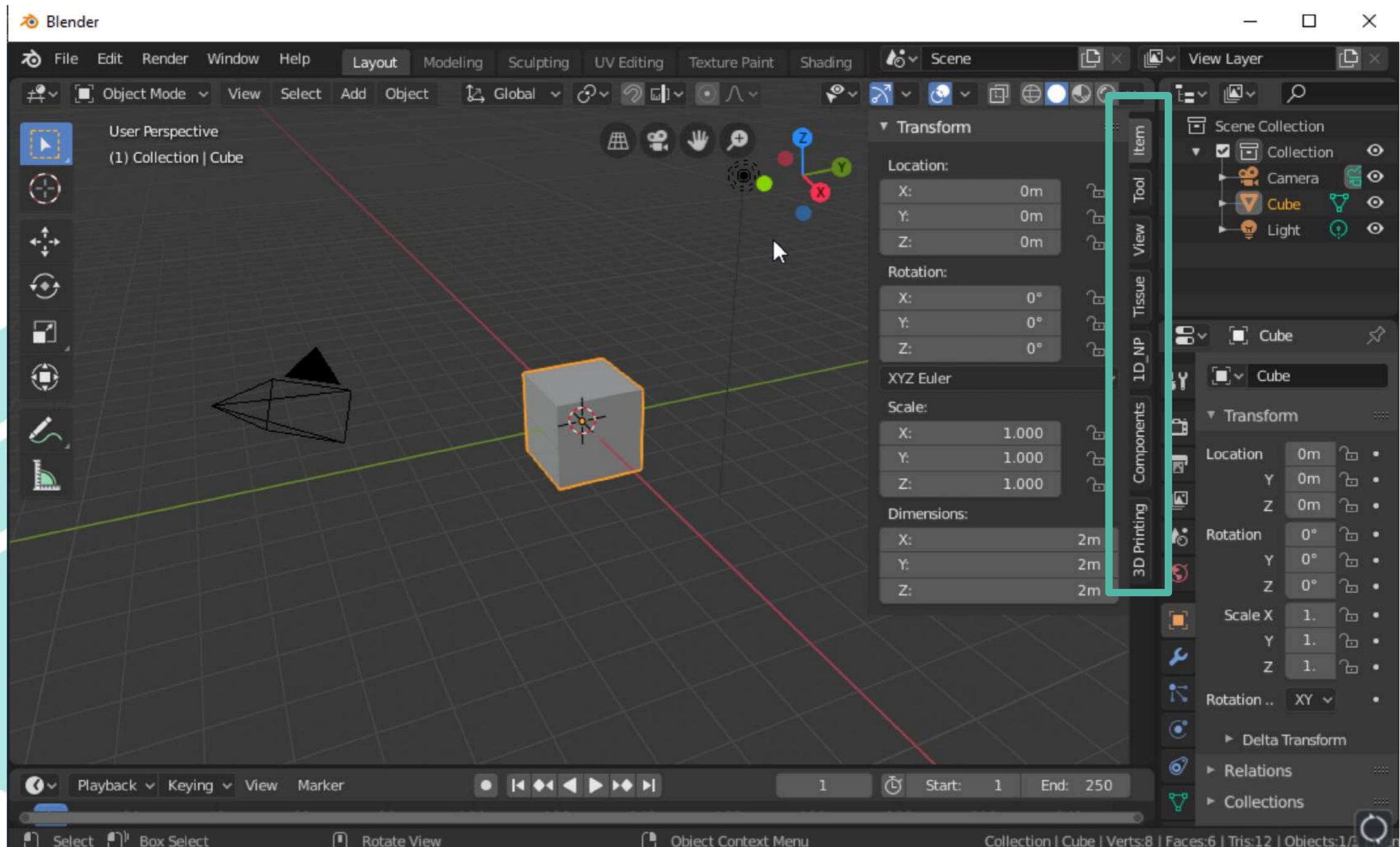
# INSTALLATION OF UPDATED 3D PRINTING TOOLBOX ADD-ON

Add-ons appear in the Add-ons section of blender interface



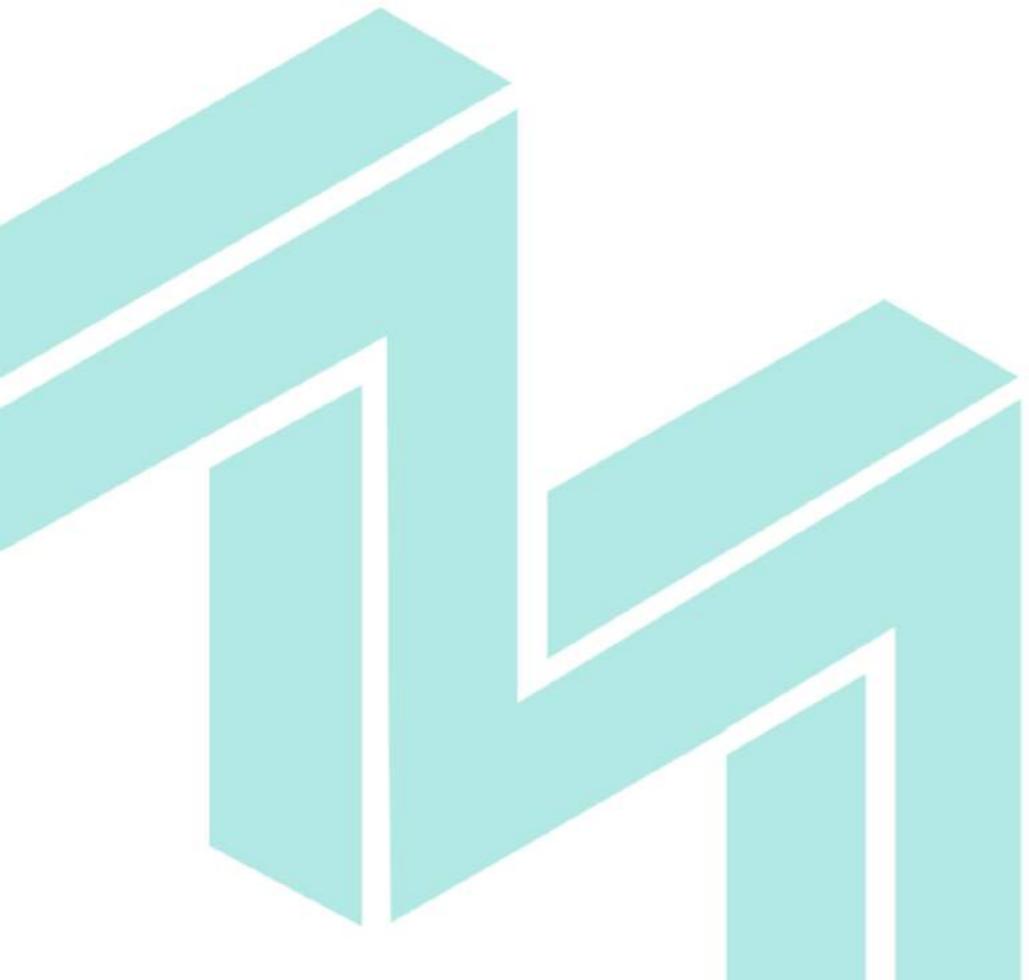
# INSTALLATION OF UPDATED 3D PRINTING TOOLBOX ADD-ON

Add-ons appear in the Add-ons section of blender interface



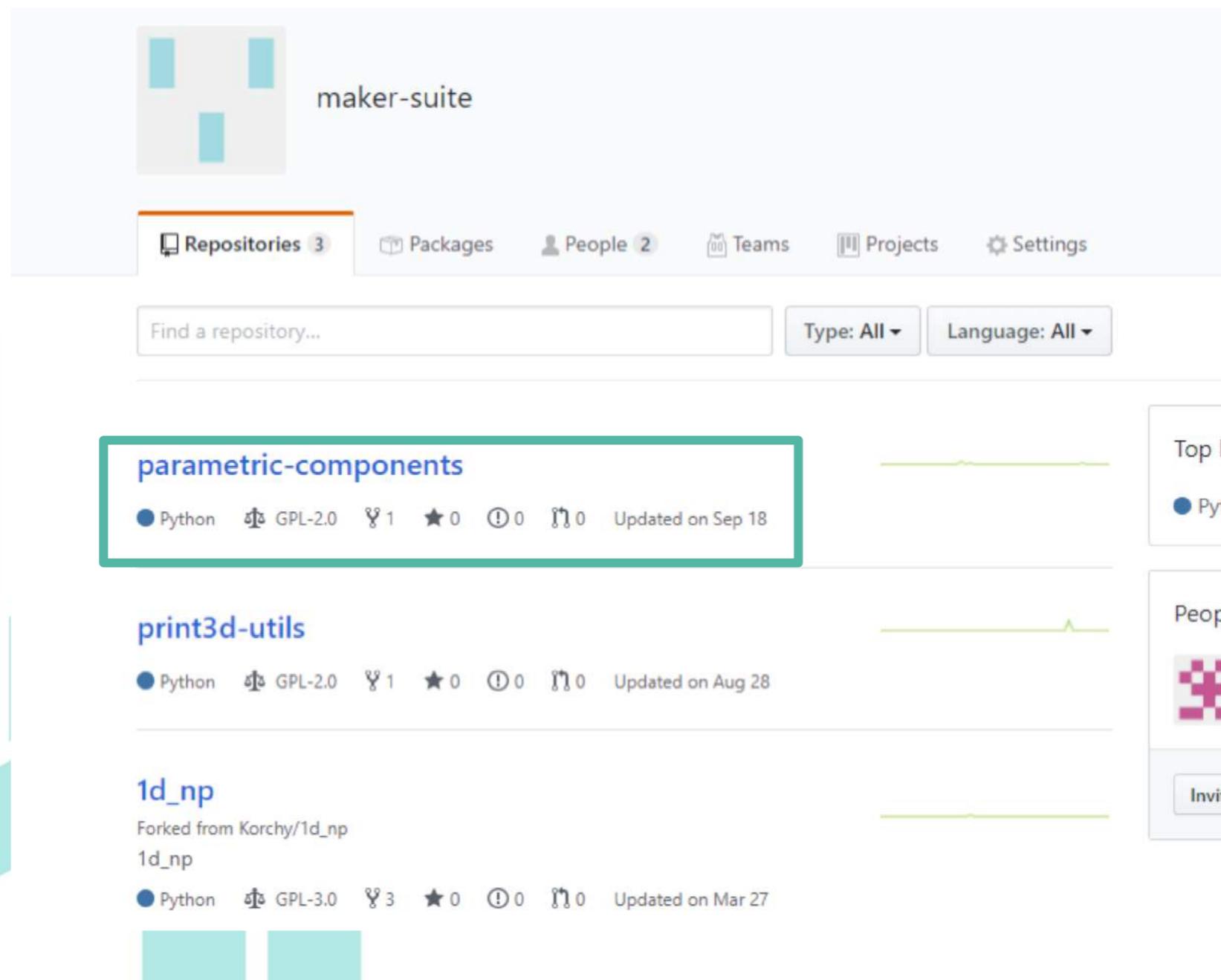
# ADD-ON FOR CREATING PARAMETRIC OBJECTS IN BLENDER

It's important for makers to have ability to create parametric objects. For instance have chair, table or window model and have ability to change model dimensions by simply entering different width, height, leg height or other custom parameter value and change model without need to remodel everything.



# INSTALLATION OF ADD-ON FOR CREATING PARAMETRIC OBJECTS

Github repository for Blender Add-ons for makers  
<https://github.com/maker-suite>



The screenshot shows the Github profile page for 'maker-suite'. The profile header includes a repository count of 3, and navigation tabs for Repositories, Packages, People (2), Teams, Projects, and Settings. A search bar is present with filters for Type and Language. The repository list includes:

- parametric-components** (highlighted with a green box): Python, GPL-2.0, 1 fork, 0 stars, 0 issues, 0 pull requests, updated on Sep 18.
- print3d-utils**: Python, GPL-2.0, 1 fork, 0 stars, 0 issues, 0 pull requests, updated on Aug 28.
- 1d\_np**: Python, GPL-3.0, 3 forks, 0 stars, 0 issues, 0 pull requests, updated on Mar 27.

On the right side, there are filters for 'Top language' (Python) and 'People' with an 'Invite' button.

# INSTALLATION OF ADD-ON FOR CREATING PARAMETRIC OBJECTS

## [Download Add-on .zip file](#)

maker-suite / parametric-components

Unwatch 2 Star 0 Fork 1

Code Issues 0 Pull requests 0 Projects 0 Wiki Security Insights Settings

No description, website, or topics provided.

Edit

Manage topics

4 commits 1 branch 0 releases 1 contributor GPL-2.0

Branch: master New pull request

Create new file Upload files Find file Clone or download

devynios Move properties, operators, ui to separate files

object\_parametric\_components Move properties, operators, ui to separate file

.gitignore Initial commit

LICENSE Initial commit

README.md Initial commit

Clone with HTTPS Use SSH

Use Git or checkout with SVN using the web URL.

https://github.com/maker-suite/parametri

Open in Desktop

Download ZIP

# INSTALLATION OF ADD-ON FOR CREATING PARAMETRIC OBJECTS

Extract .zip file

The screenshot shows a Windows File Explorer window with a context menu open over a zip file. The file list in the background includes:

File Name	Date Modified	File Type	Size
keeez.blend	2018-10-24 13:10	Blender File	298 KB
parametric-co...	2019-11-11 11:57	zip Archive	15 KB
print3d-utils-r...	2019-11-04 11:21	zip Archive	24 KB

The context menu is open, and the 'Extract to' option is highlighted with a green box. The options in the context menu are:

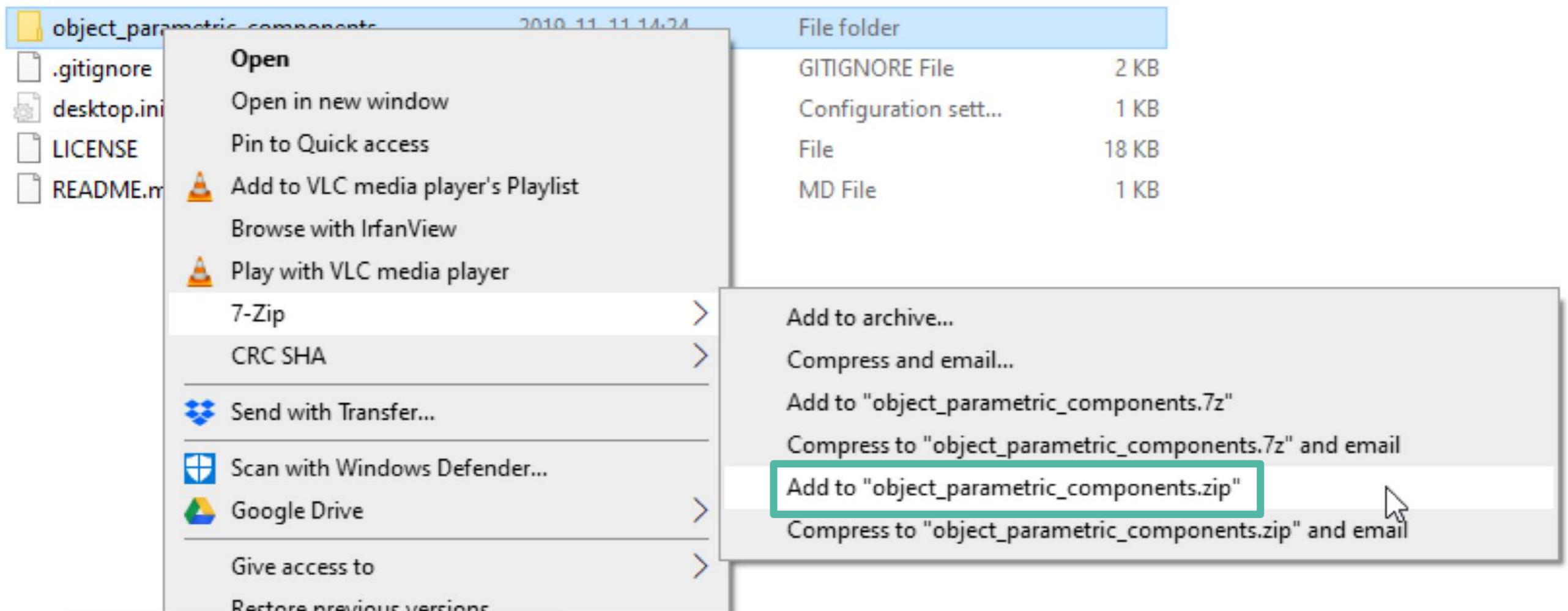
- Open
- Import to Grammarly
- 7-Zip >
- CRC SHA >
- Edit with Notepad++
- Send with Transfer...
- Scan with Windows Defender...
- Google Drive >
- Share
- Open with >
- Give access to >
- Restore previous versions

The sub-menu for 'Extract to' is also visible, showing the following options:

- Open archive >
- Open archive >
- Extract files...
- Extract Here
- Extract to "parametric-components-master\"**
- Test archive
- Add to archive...
- Compress and email...
- Add to "parametric-components-master.7z"
- Compress to "parametric-components-master.7z" and email
- Compress to "parametric-components-master.zip" and email

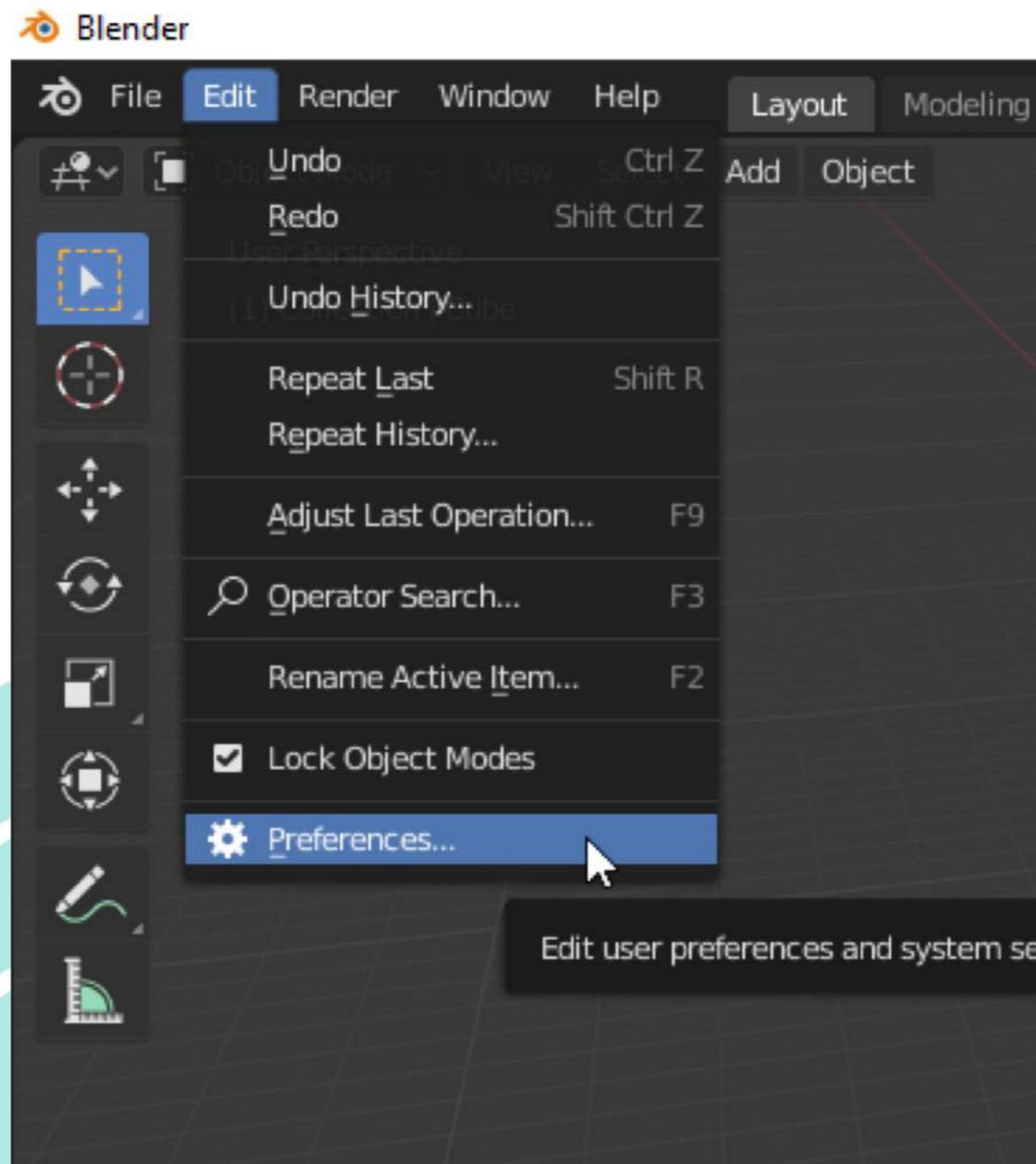
# INSTALLATION OF ADD-ON FOR CREATING PARAMETRIC OBJECTS

Create .zip file from folder “object\_parametric\_components”



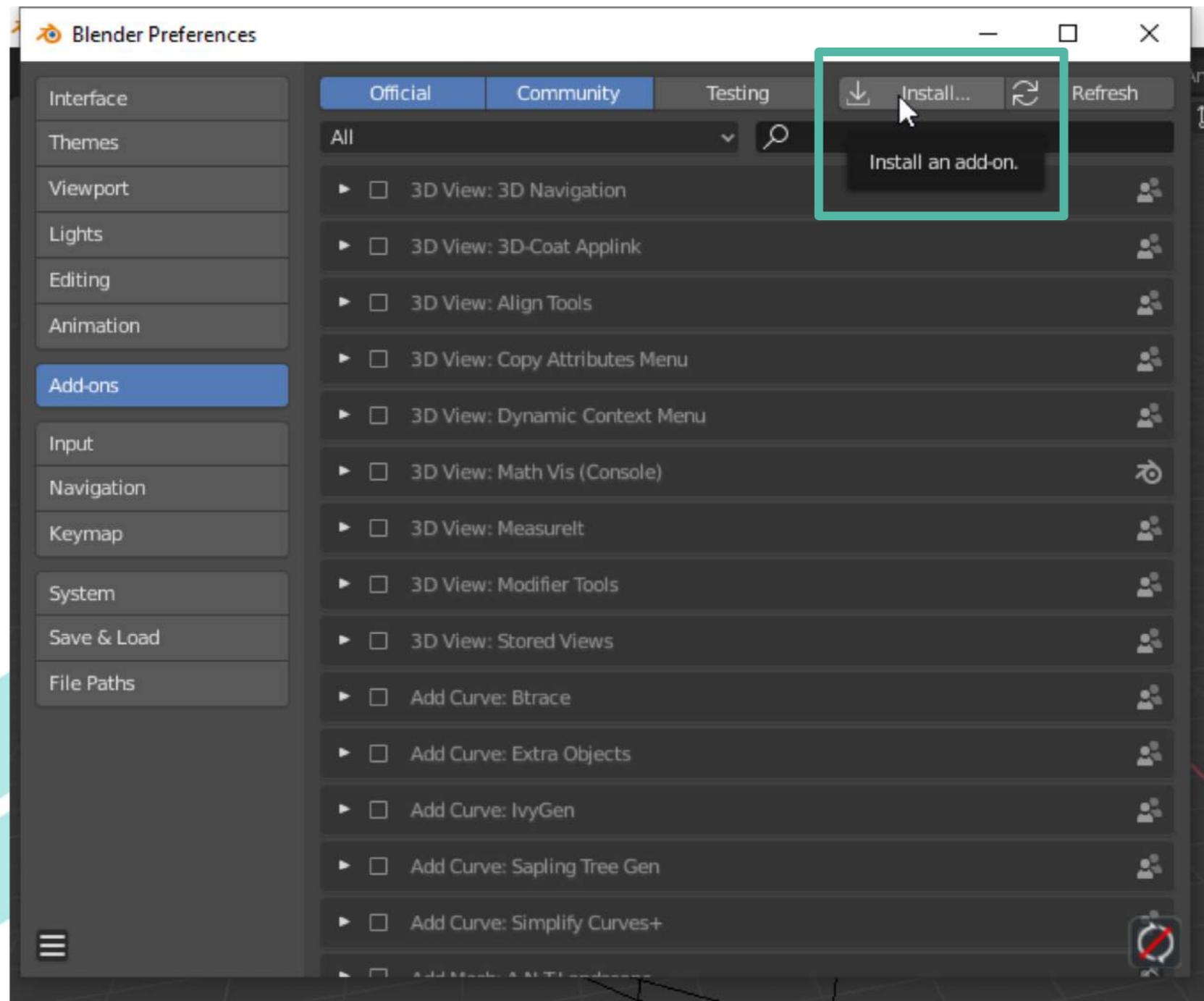
# INSTALLATION OF ADD-ON FOR CREATING PARAMETRIC OBJECTS

Run blender and open preferences ->Add-ons



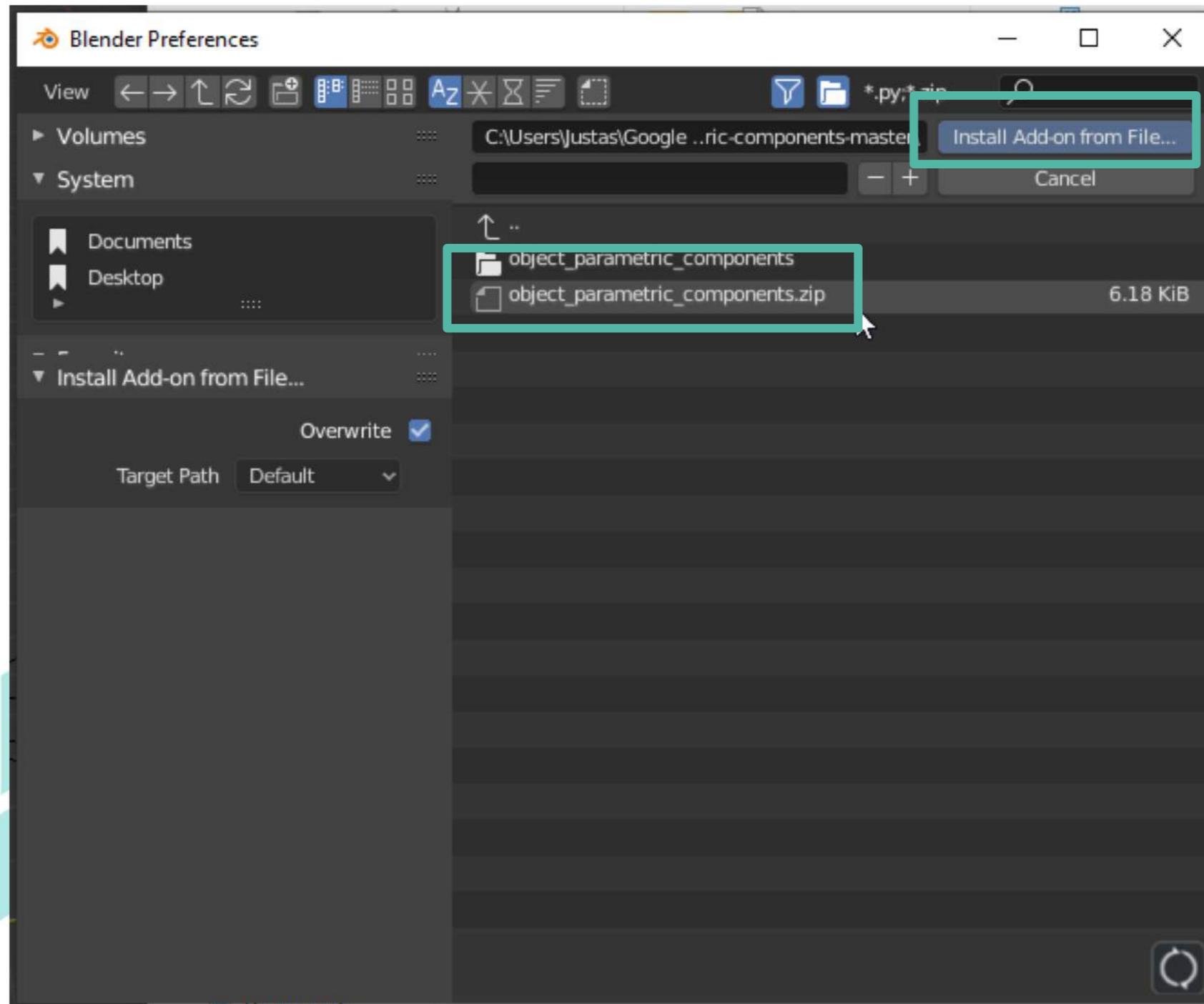
# INSTALLATION OF ADD-ON FOR CREATING PARAMETRIC OBJECTS

Run blender and open preferences -> Add-ons



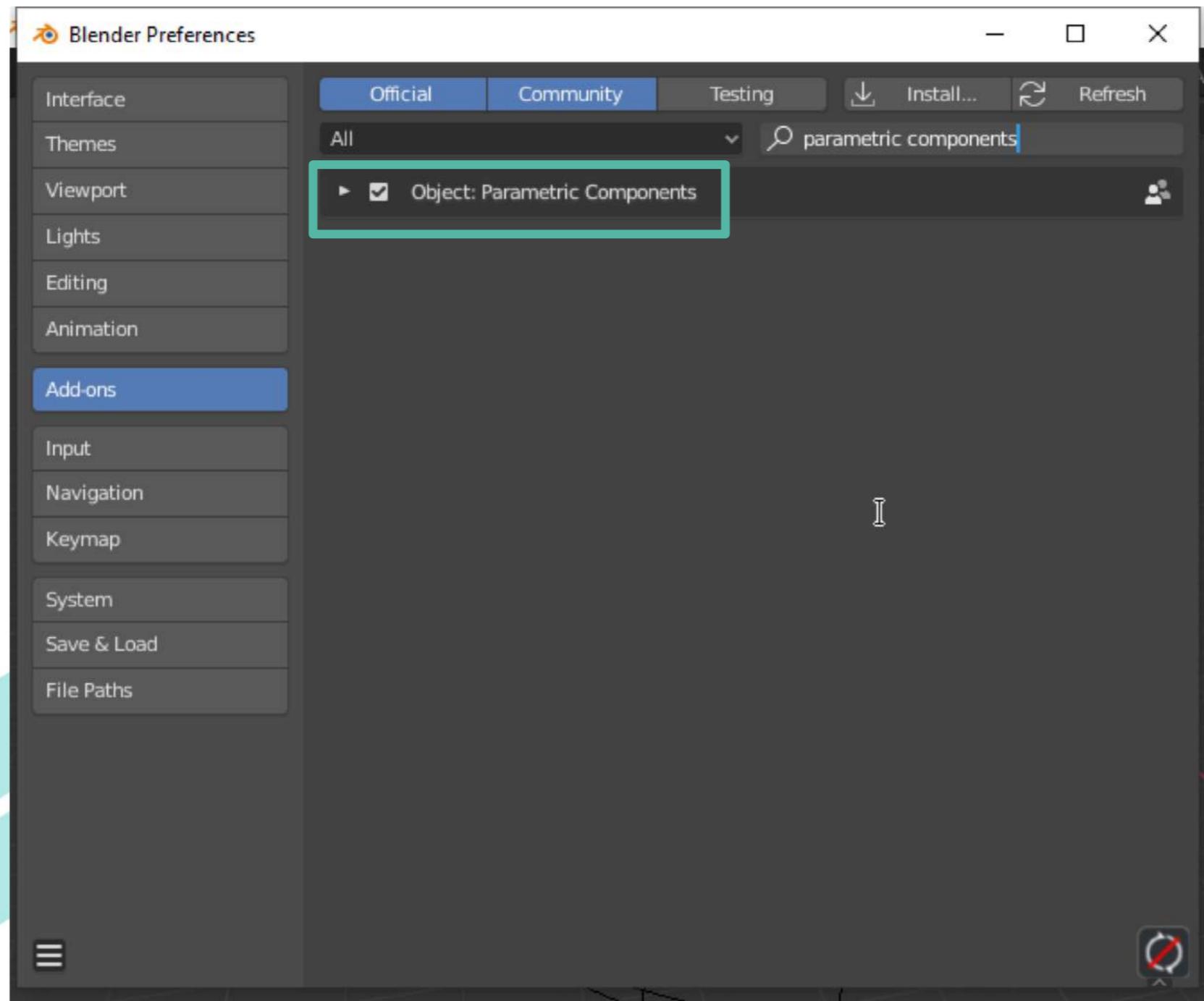
# INSTALLATION OF ADD-ON FOR CREATING PARAMETRIC OBJECTS

locate downloaded file and click “install from file”



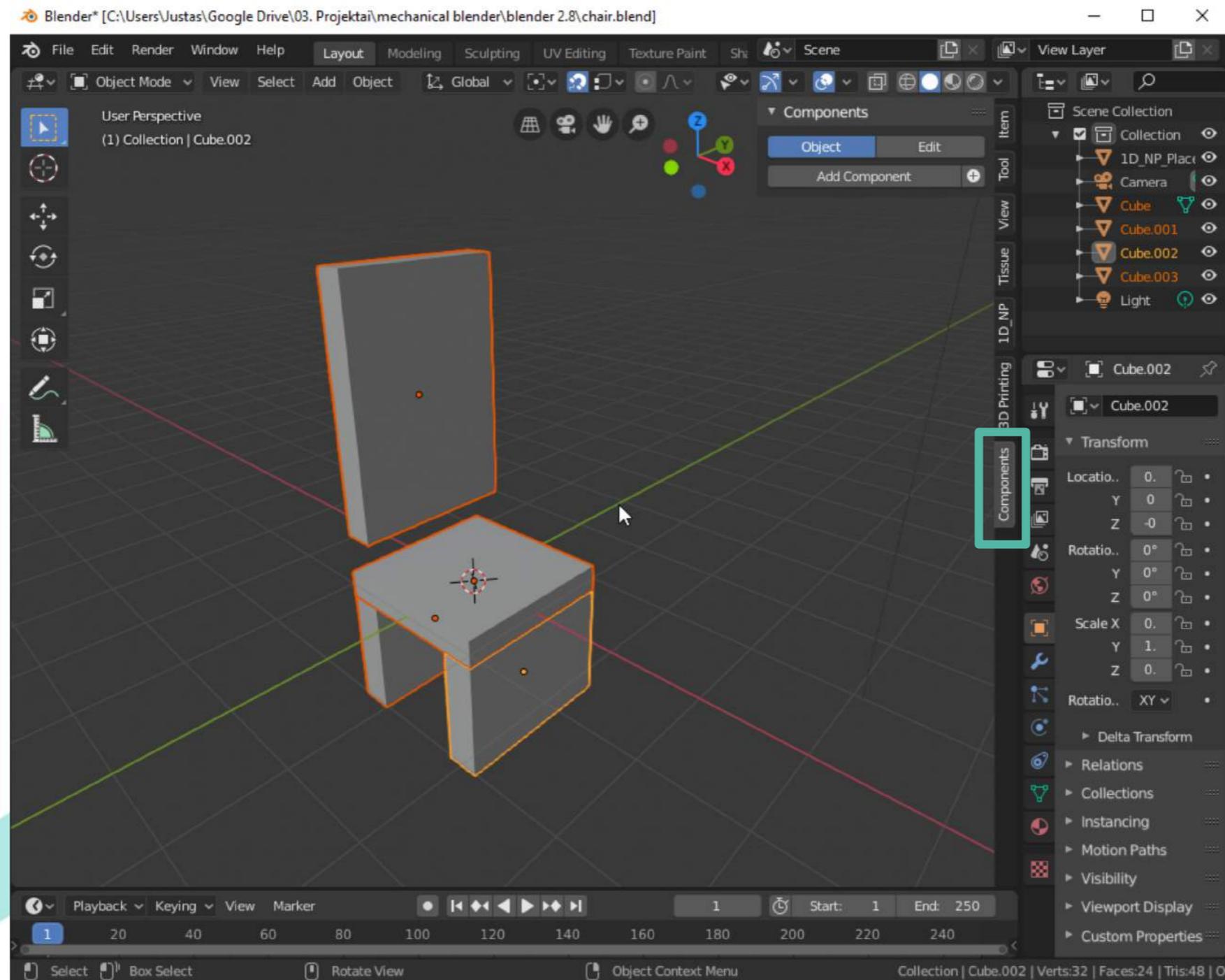
# INSTALLATION OF ADD-ON FOR CREATING PARAMETRIC OBJECTS

Activate updated 3D print toolbox Add-on



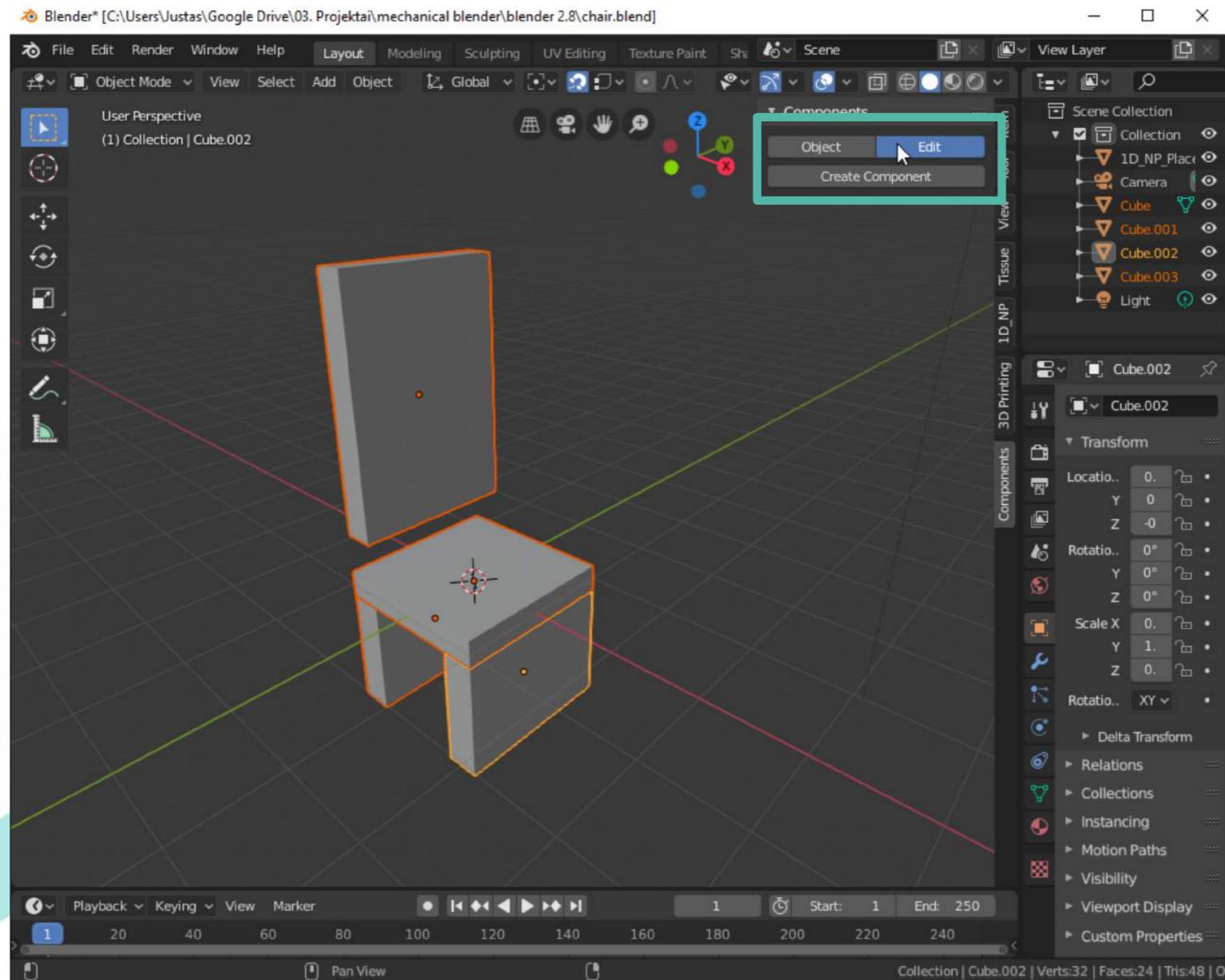
# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

To create new parametric object select parts you want to include



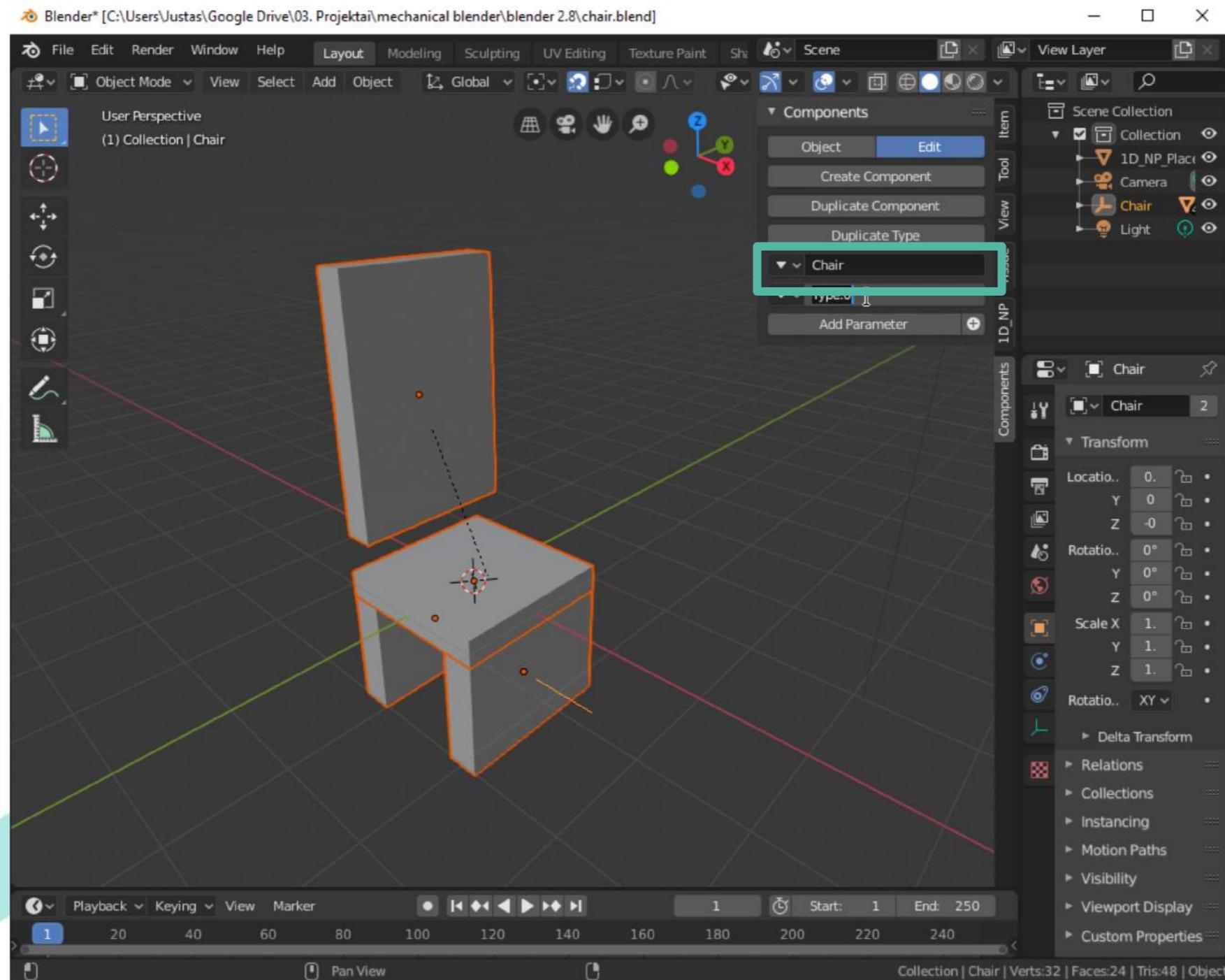
# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

Click “Edit” and “Crate Component”



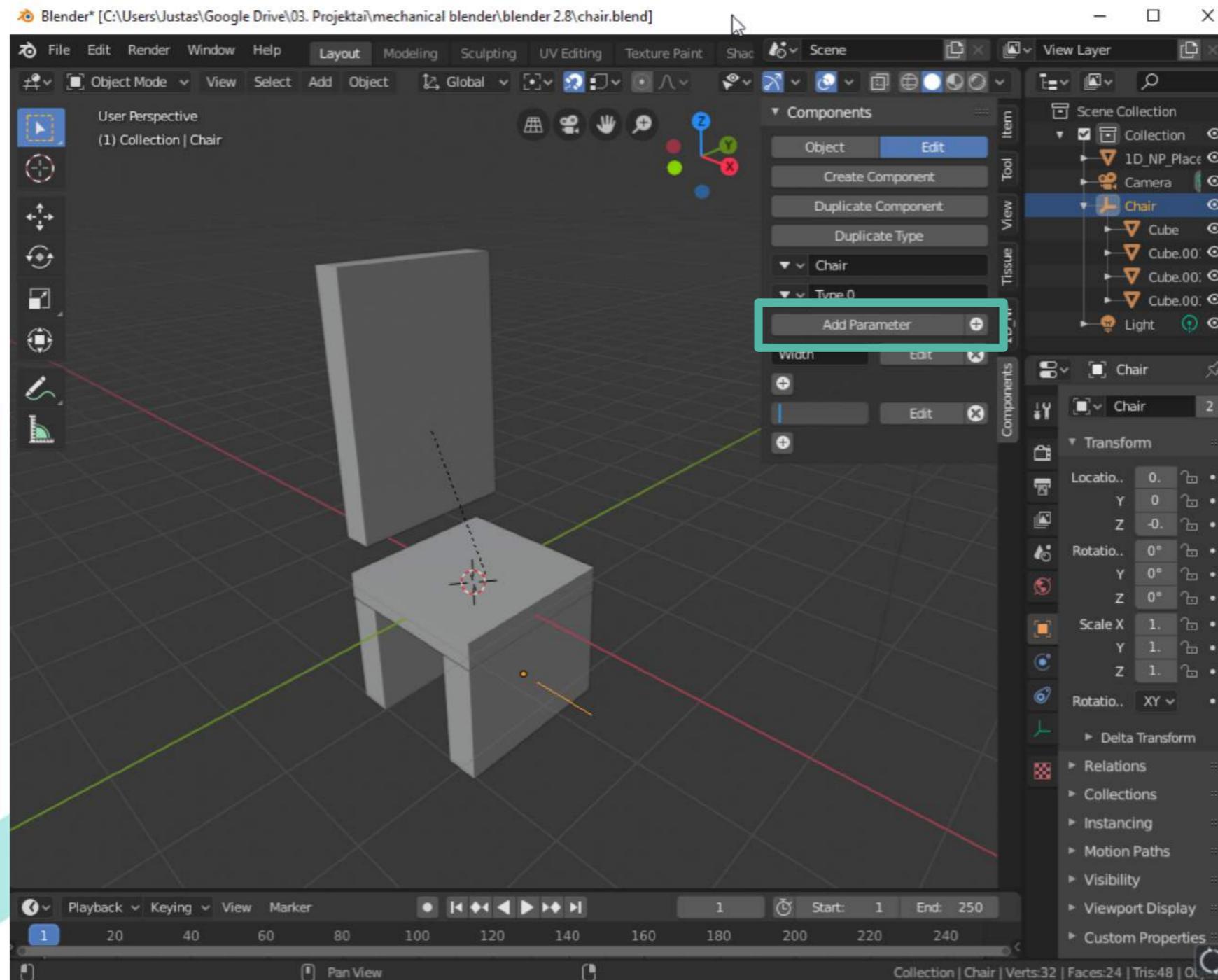
# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

Write name of the component



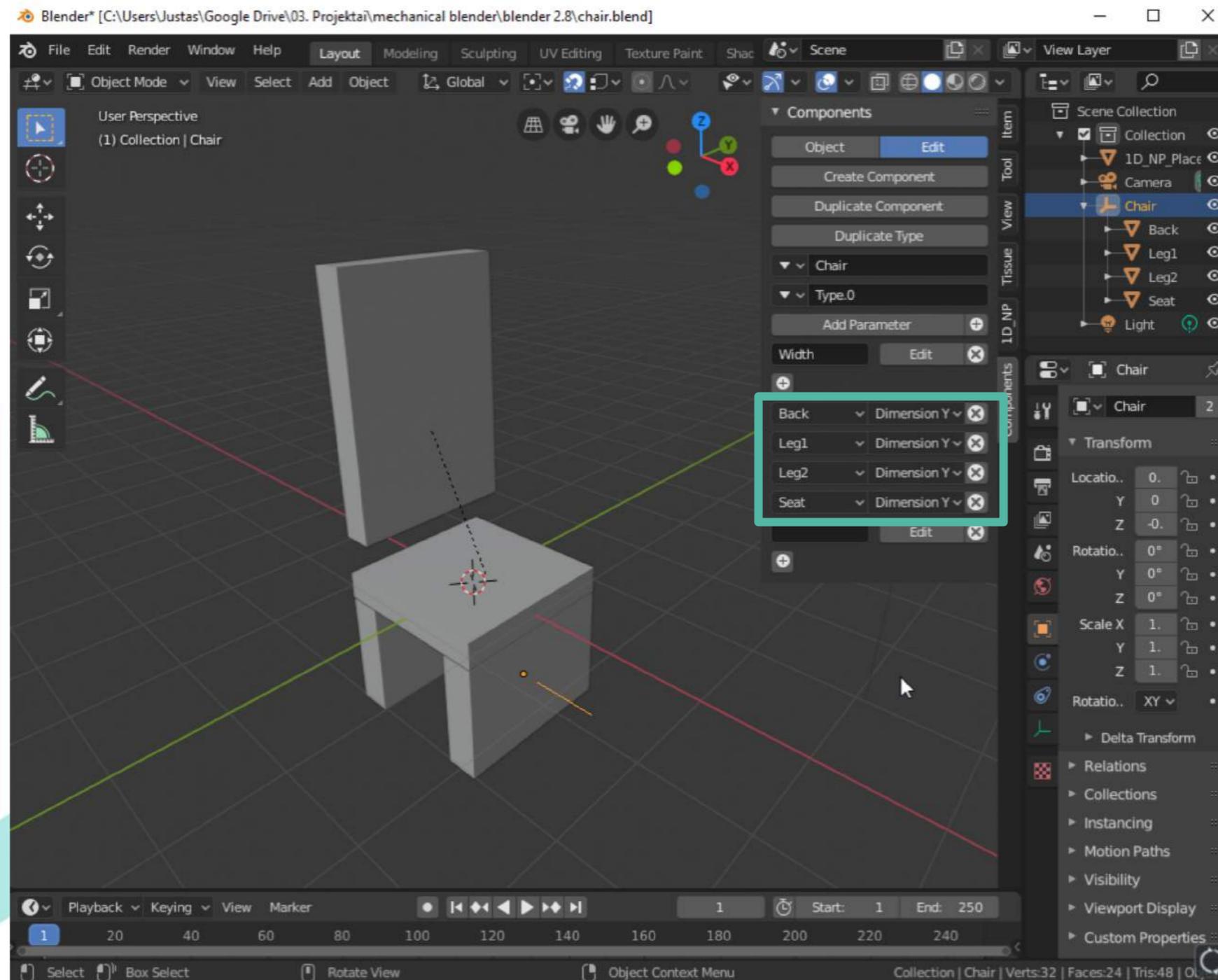
# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

Add custom parameter



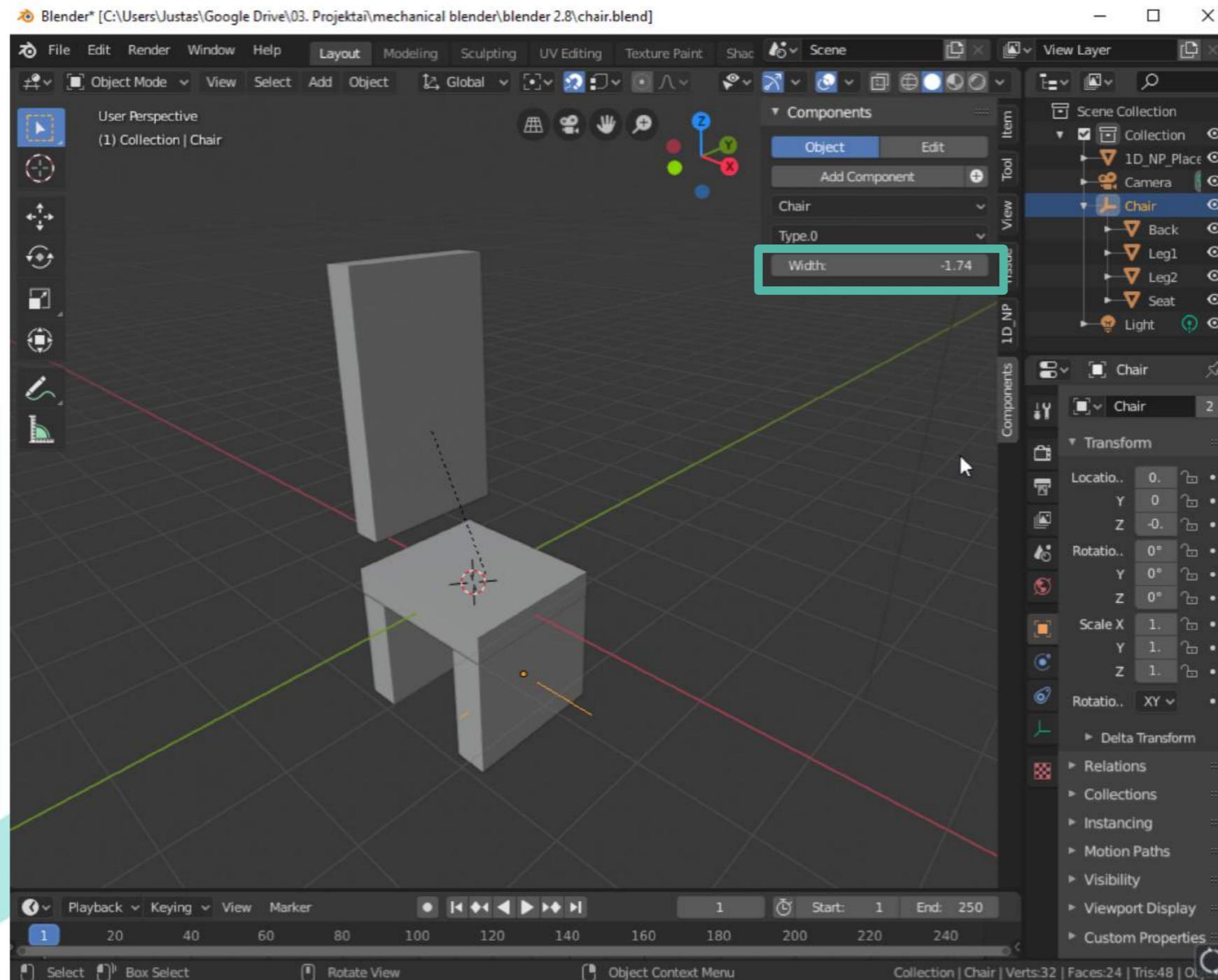
# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

Assign parts with new parameter will control



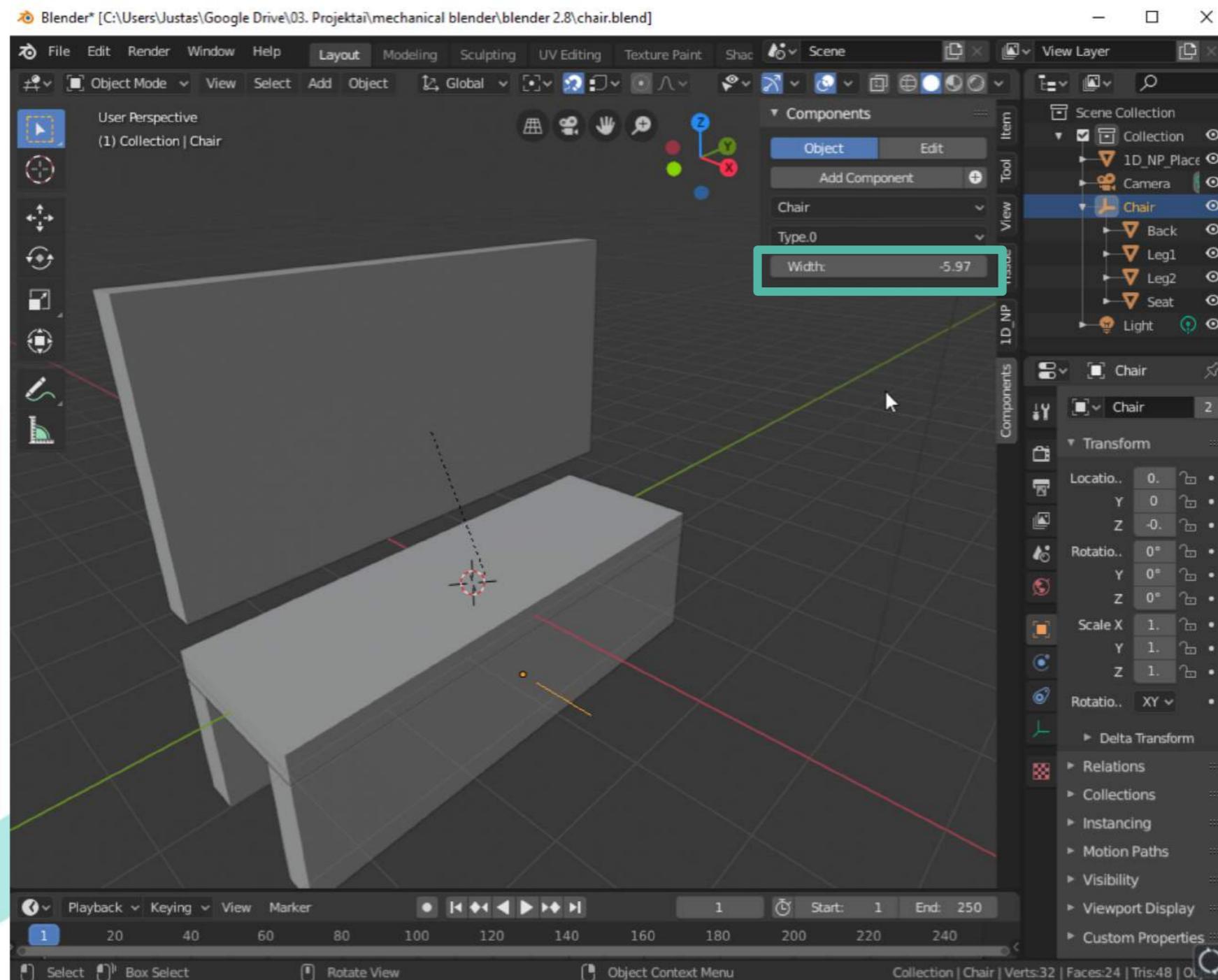
# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

Click “Object”



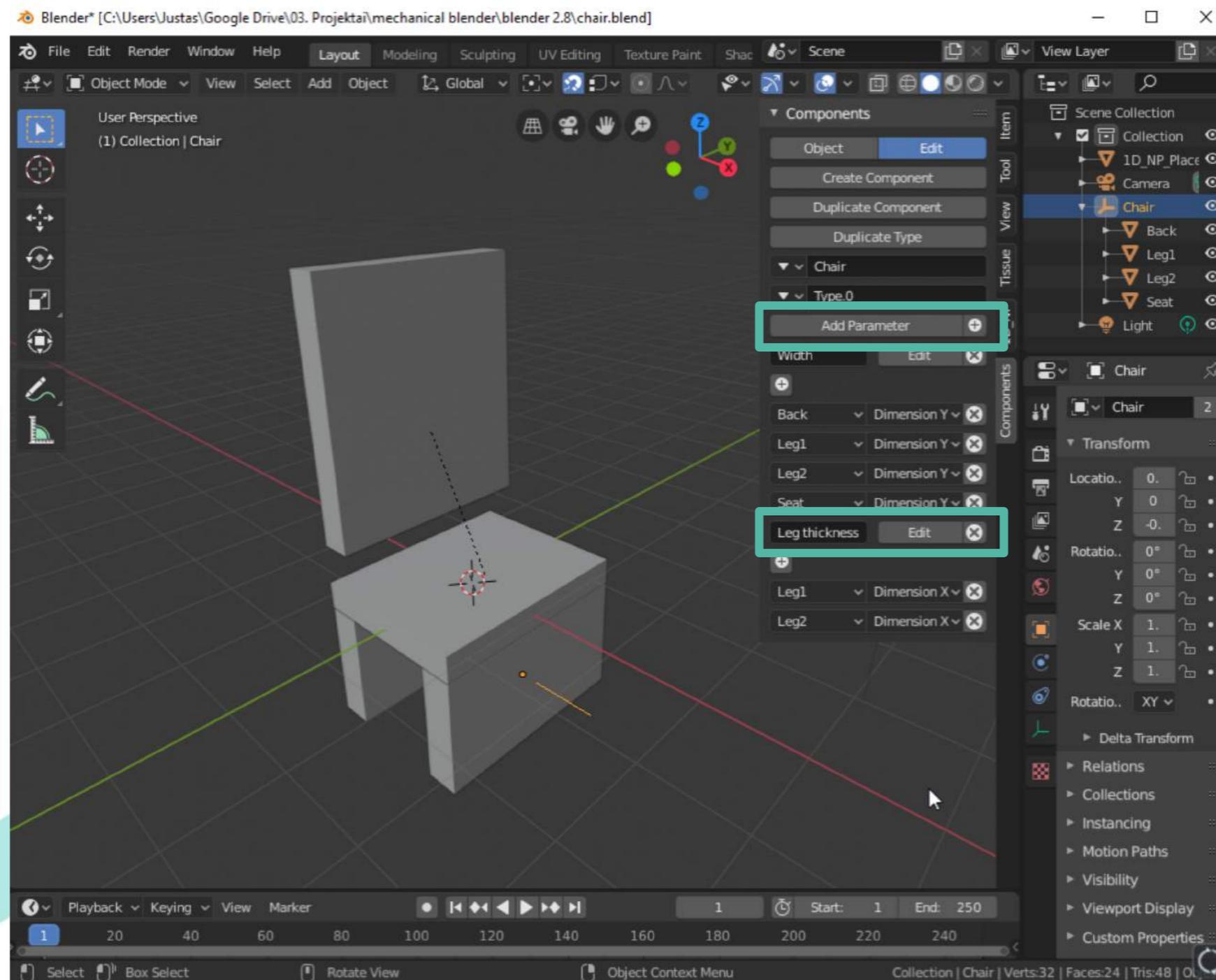
# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

Now its possible change chair width by changing parameter value



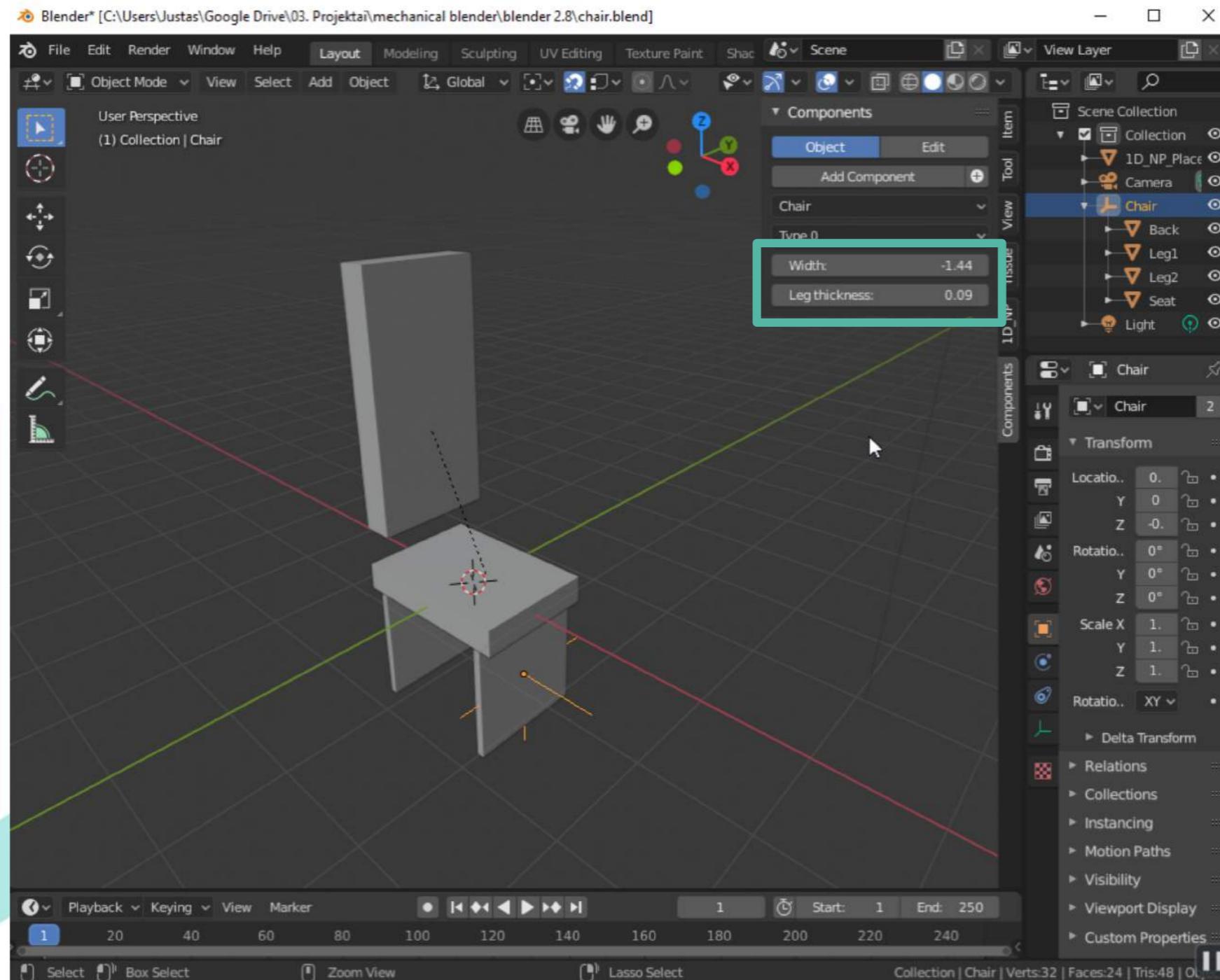
# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

Add more custom parameters



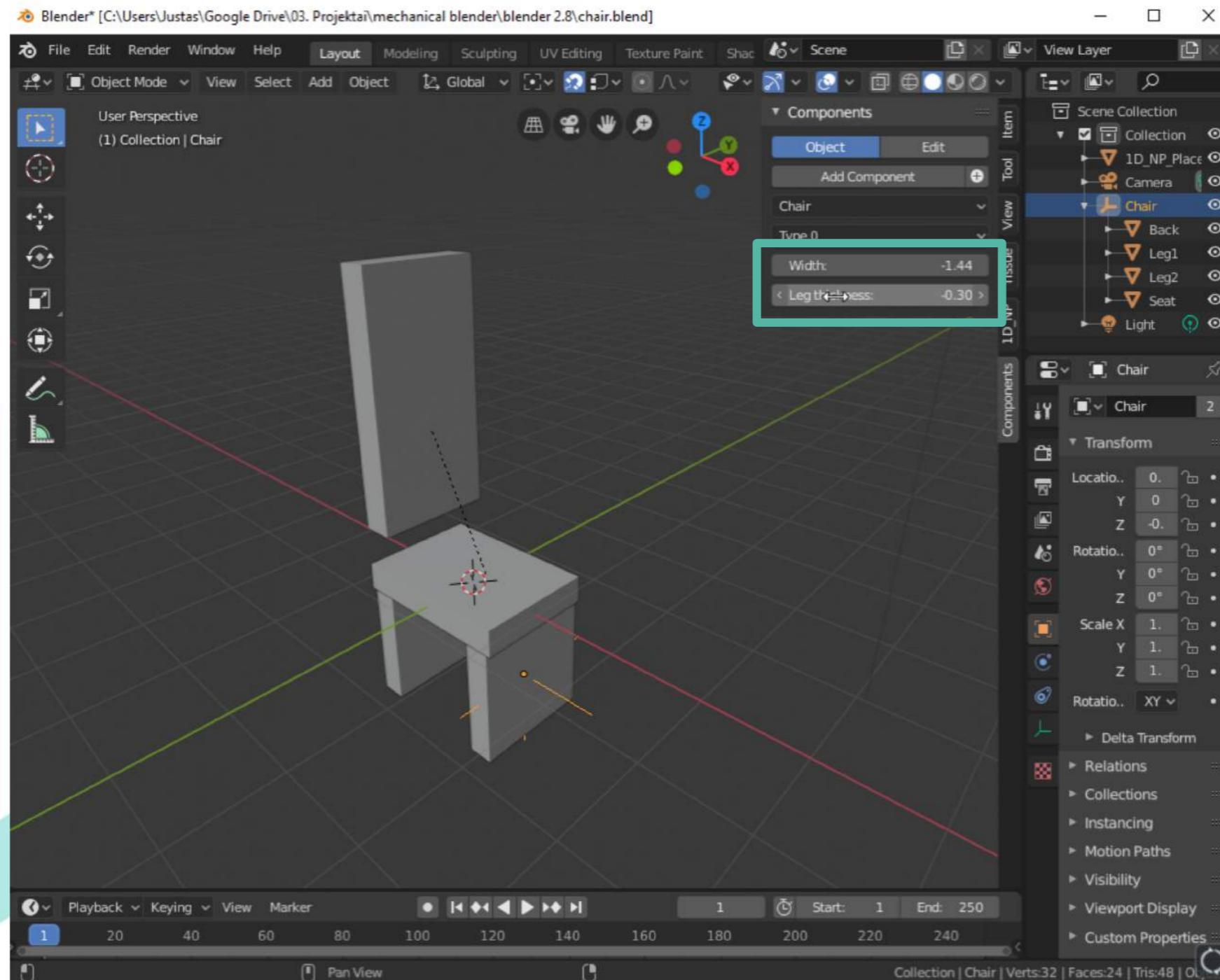
# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

Now it's possible to control more parameters



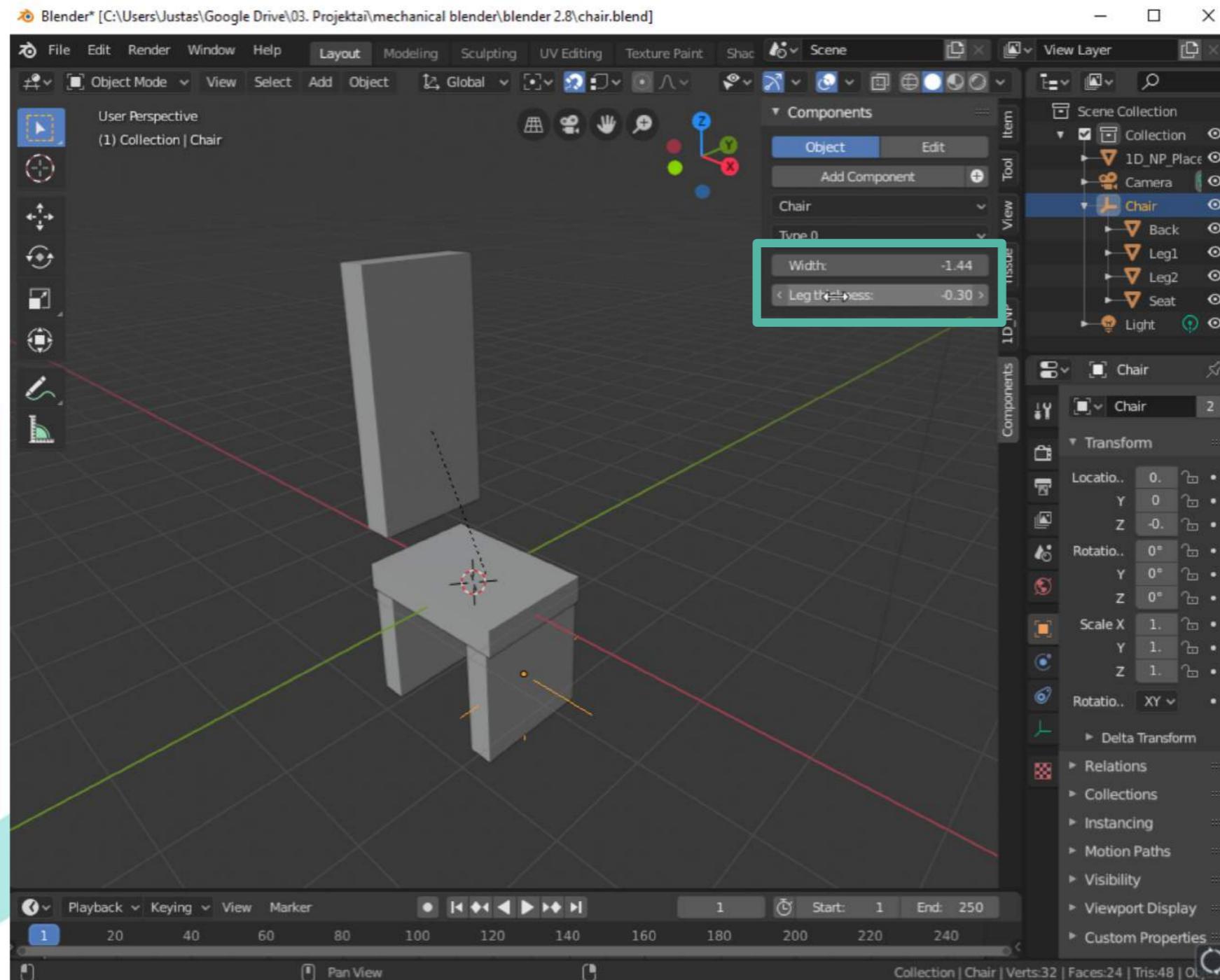
# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

Now it's possible to control more parameters



# USING ADD-ON FOR CREATING PARAMETRIC OBJECTS

And create multiple types of the same object



# ADD-ON FOR EVALUATING MODELS FOR 3D PRINTING

We updated 3D printing toolbox add-on and included features to visually evaluate models for 3D printing and show potential model flaws.



# INSTALLATION OF UPDATED 3D PRINTING TOOLBOX ADD-ON

Github repository for Blender Add-ons for makers  
<https://github.com/maker-suite>



The screenshot shows the Github repository page for 'maker-suite'. The repository is highlighted with a green border. The repository name is 'maker-suite'. The repository is a Python add-on for Blender, licensed under GPL-2.0, with 1 fork, 0 stars, 0 issues, and 0 pull requests. It was updated on Sep 18. The repository is part of the 'maker-suite' organization. The repository is a Python add-on for Blender, licensed under GPL-2.0, with 1 fork, 0 stars, 0 issues, and 0 pull requests. It was updated on Sep 18. The repository is part of the 'maker-suite' organization.

maker-suite

Repositories 3 Packages People 2 Teams Projects Settings

Find a repository... Type: All Language: All

parametric-components  
Python GPL-2.0 1 fork 0 stars 0 issues 0 pull requests Updated on Sep 18

print3d-utils  
Python GPL-2.0 1 fork 0 stars 0 issues 0 pull requests Updated on Aug 28

1d\_np  
Forked from Korchy/1d\_np  
1d\_np  
Python GPL-3.0 3 forks 0 stars 0 issues 0 pull requests Updated on Mar 27

Top language: Python

People

Invite

# INSTALLATION OF UPDATED 3D PRINTING TOOLBOX ADD-ON

[Download Add-on .zip file](#)

maker-suite / print3d-utils

Unwatch 2

Star 0

Fork 1

Code

Issues 0

Pull requests 0

Projects 0

Wiki

Security

Insights

Settings

No description, website, or topics provided.

Edit

Manage topics

6 commits

1 branch

0 releases

1 contributor

GPL-2.0

Branch: master

New pull request

Create new file

Upload files

Find file

Clone or download

devynios Add property check\_distort

object\_print3d\_utils\_x

Add property check\_distort

LICENSE

Add license file

Clone with HTTPS

Use SSH

Use Git or checkout with SVN using the web URL.

https://github.com/maker-suite/print3d-u



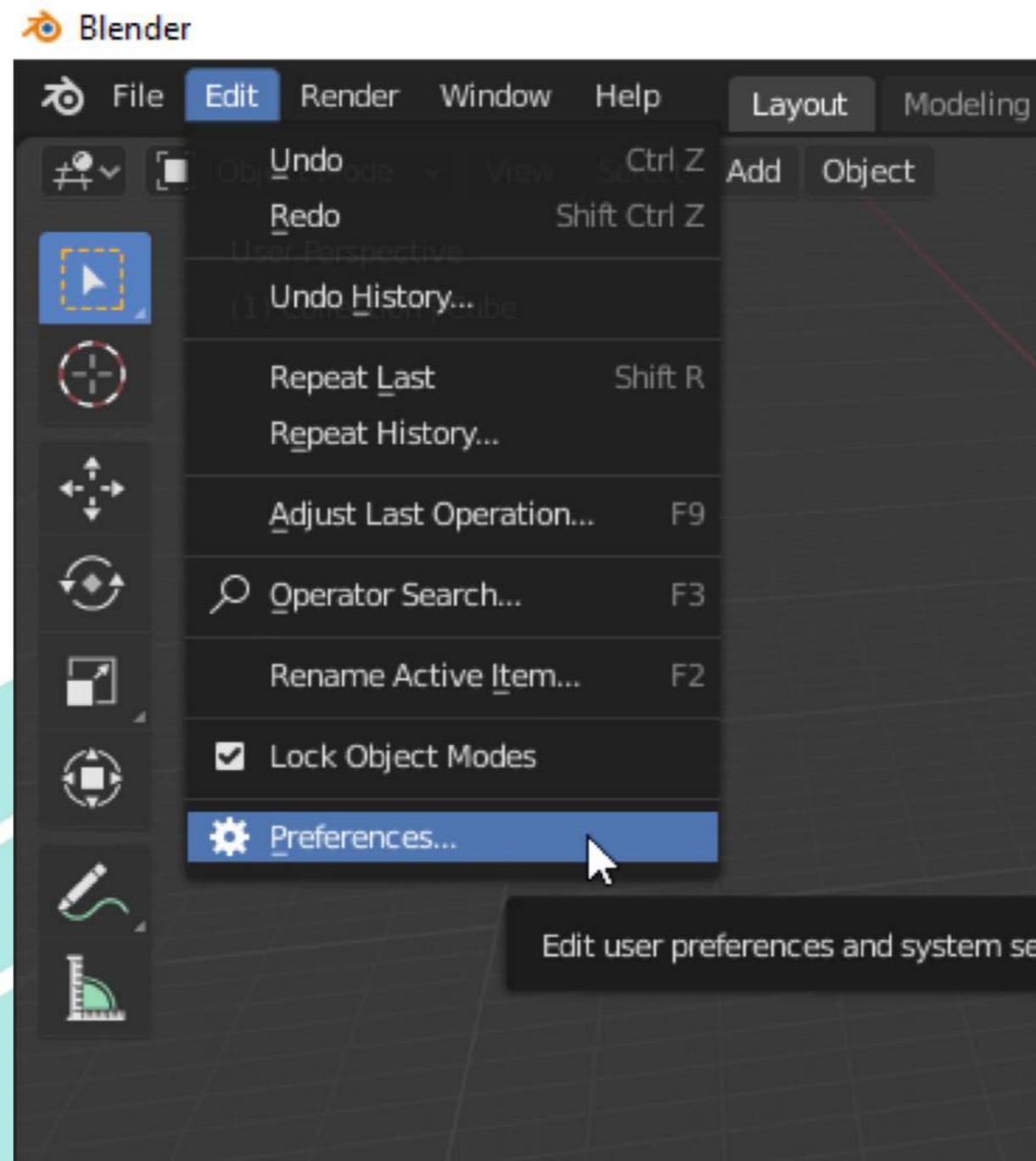
Open in Desktop

Download ZIP

Help people interested in this repository understand your project by adding a README.

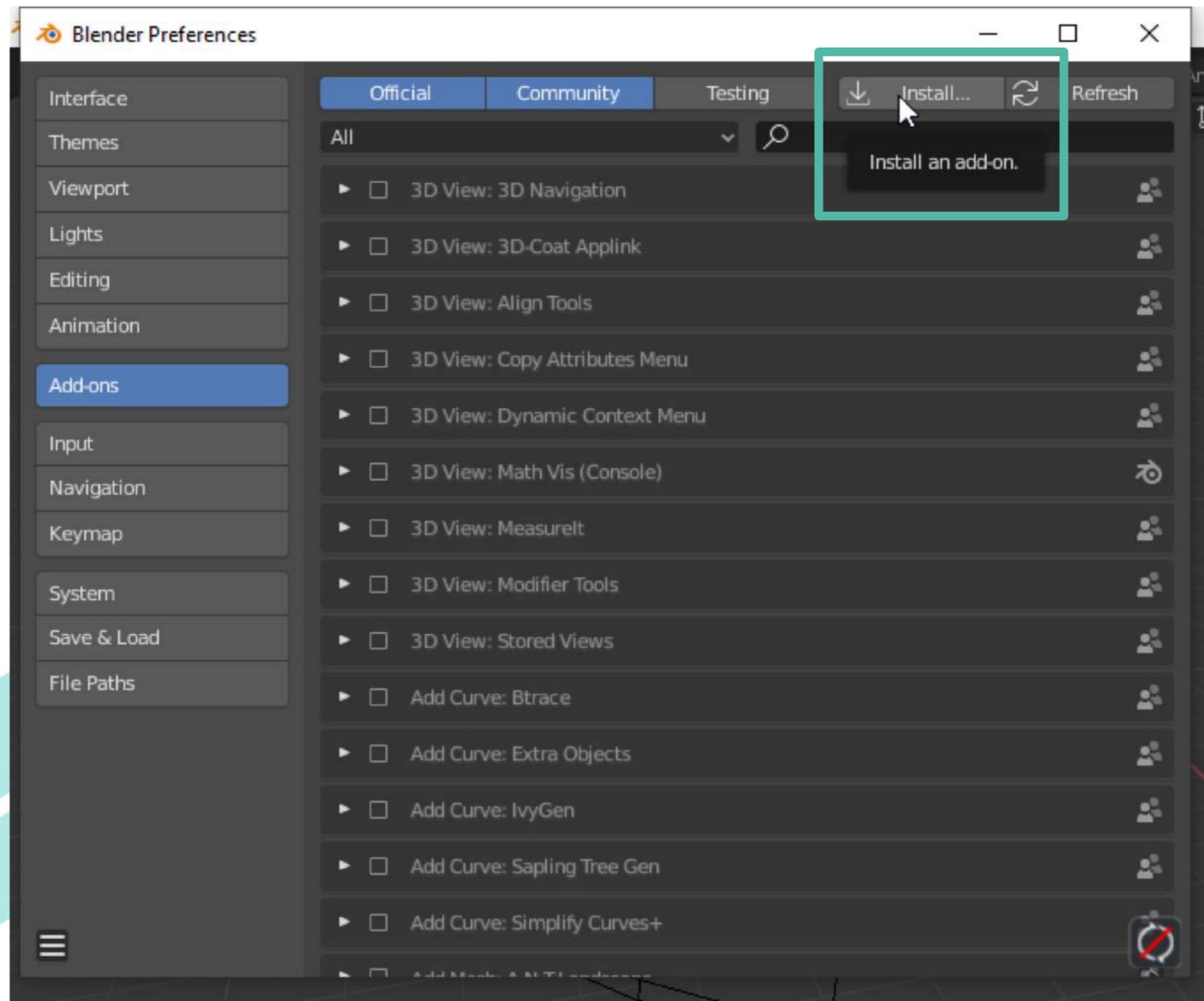
# INSTALLATION OF UPDATED 3D PRINTING TOOLBOX ADD-ON

Run blender and open preferences ->Add-ons



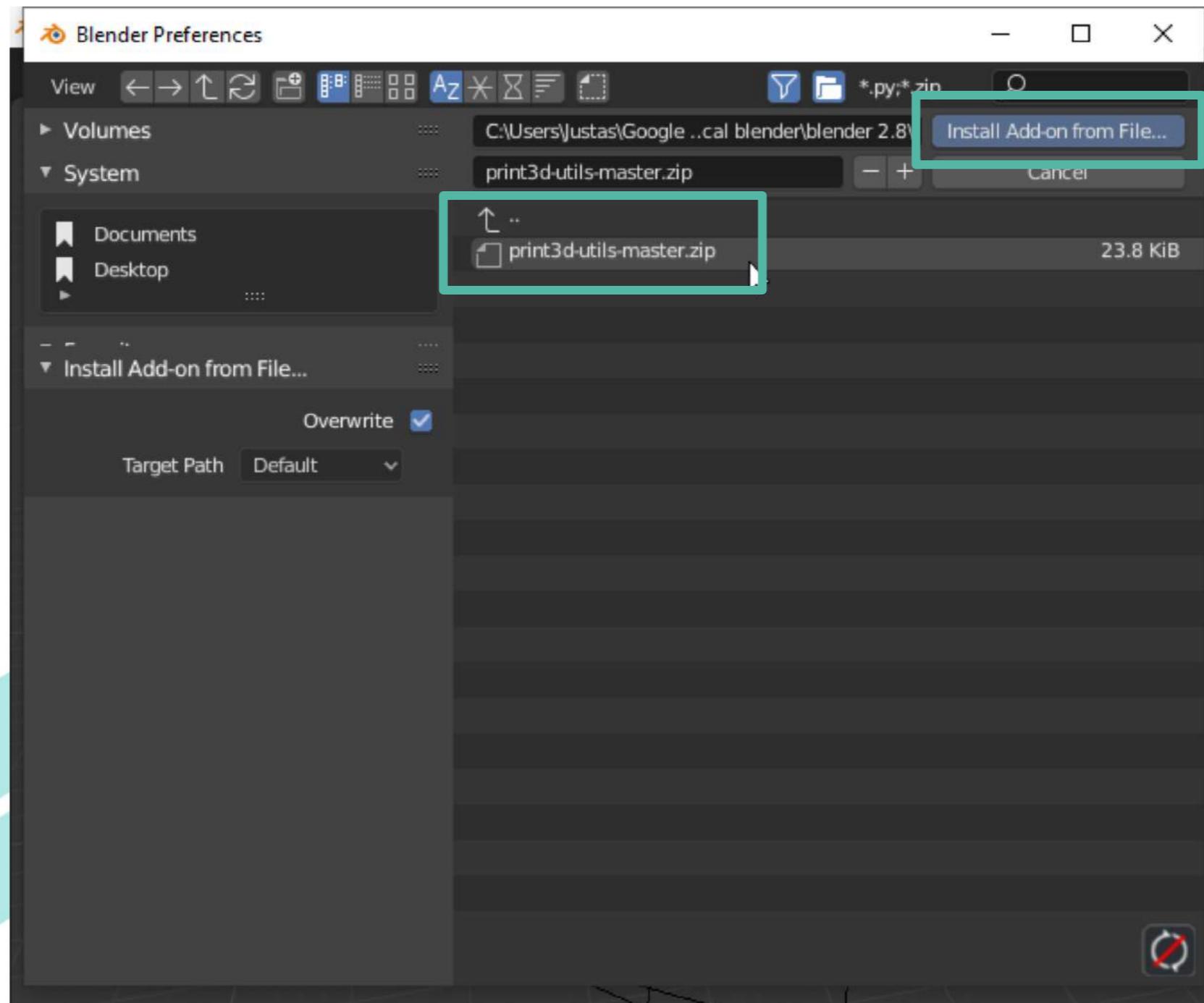
# INSTALLATION OF UPDATED 3D PRINTING TOOLBOX ADD-ON

Run blender and open preferences -> Add-ons



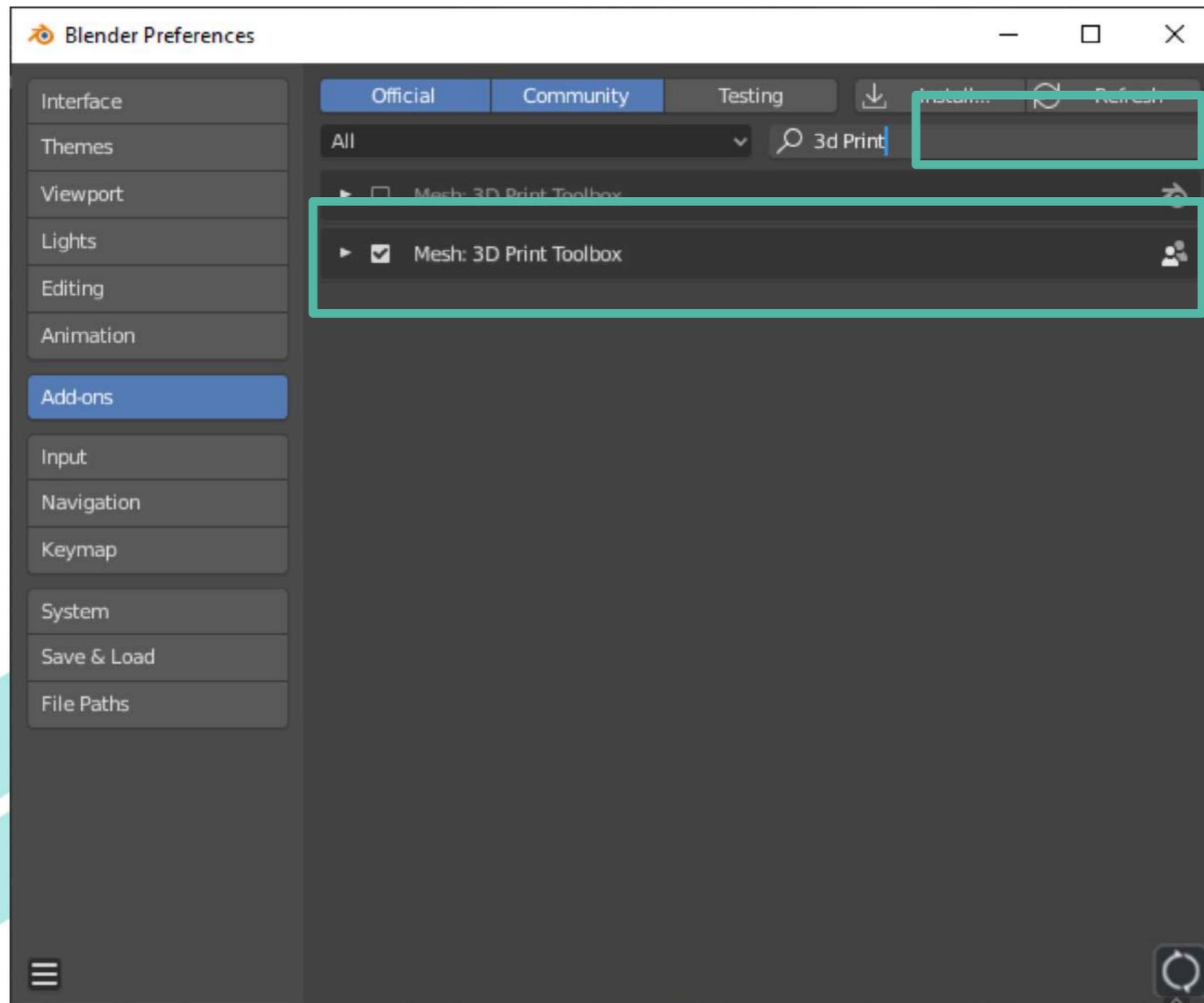
# INSTALLATION OF UPDATED 3D PRINTING TOOLBOX ADD-ON

locate downloaded file and click “install from file”



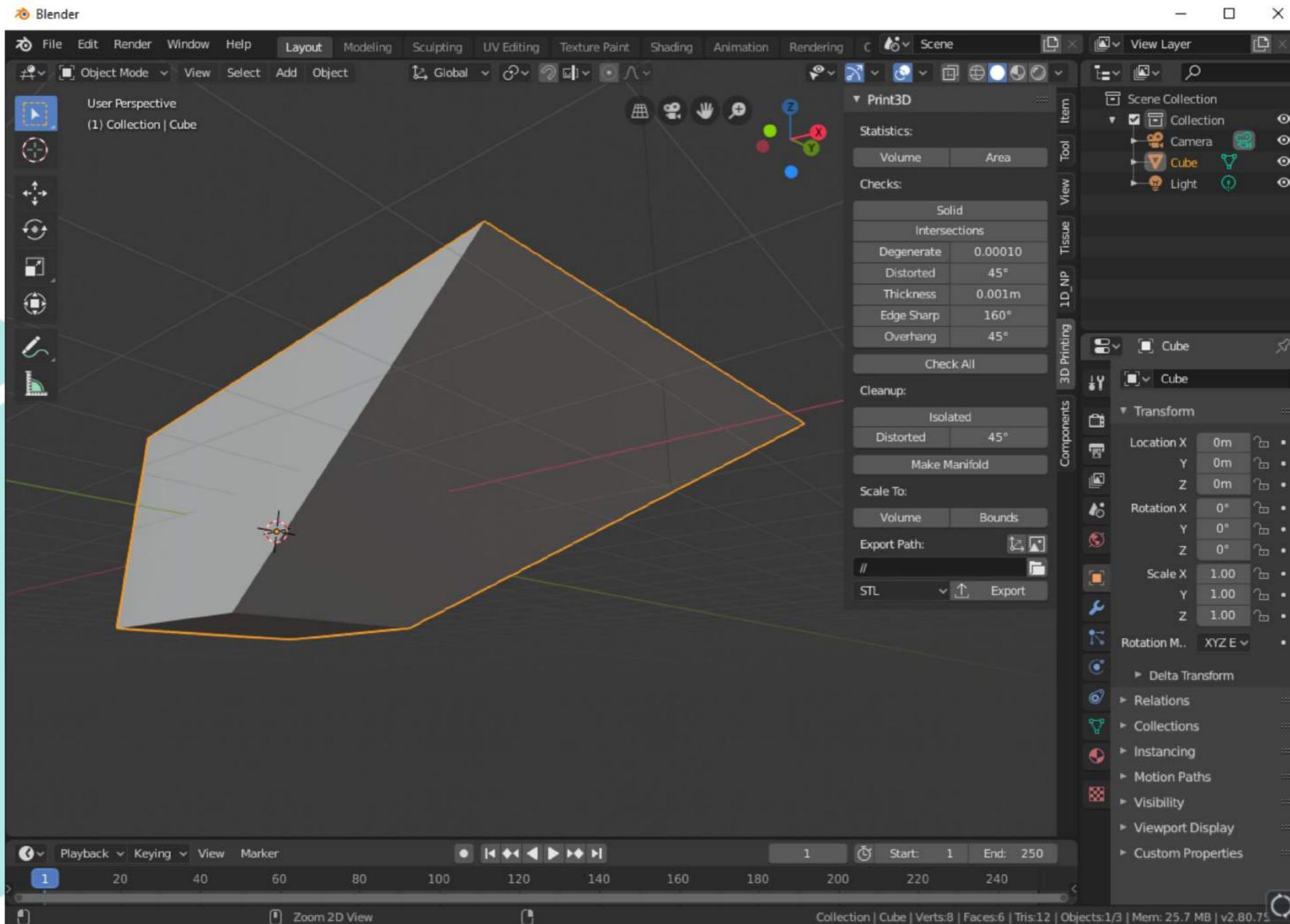
# INSTALLATION OF UPDATED 3D PRINTING TOOLBOX ADD-ON

Activate updated 3D print toolbox Add-on



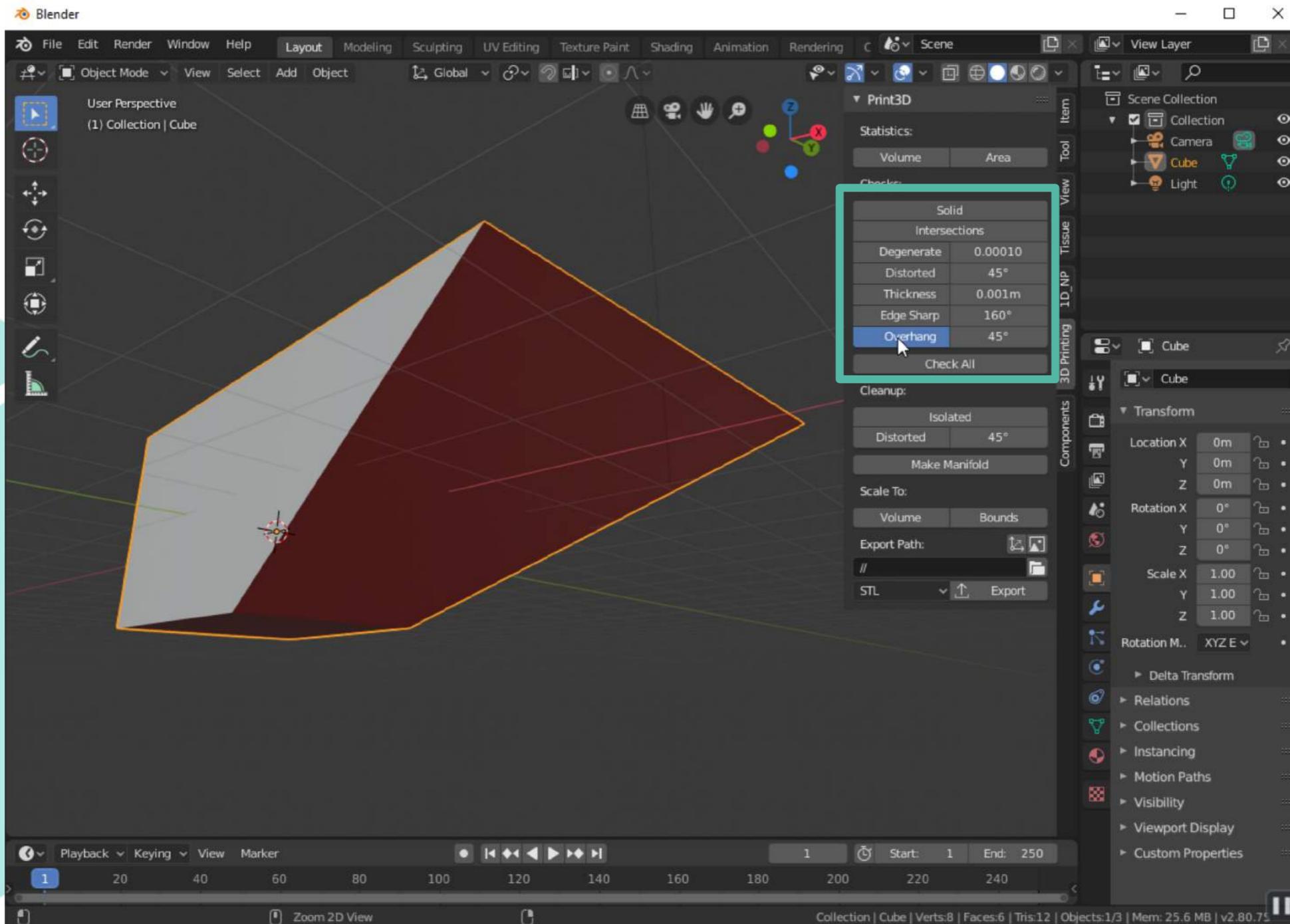
# USING UPDATED 3D PRINTING TOOLBOX ADD-ON

Select object you want to check



# USING UPDATED 3D PRINTING TOOLBOX ADD-ON

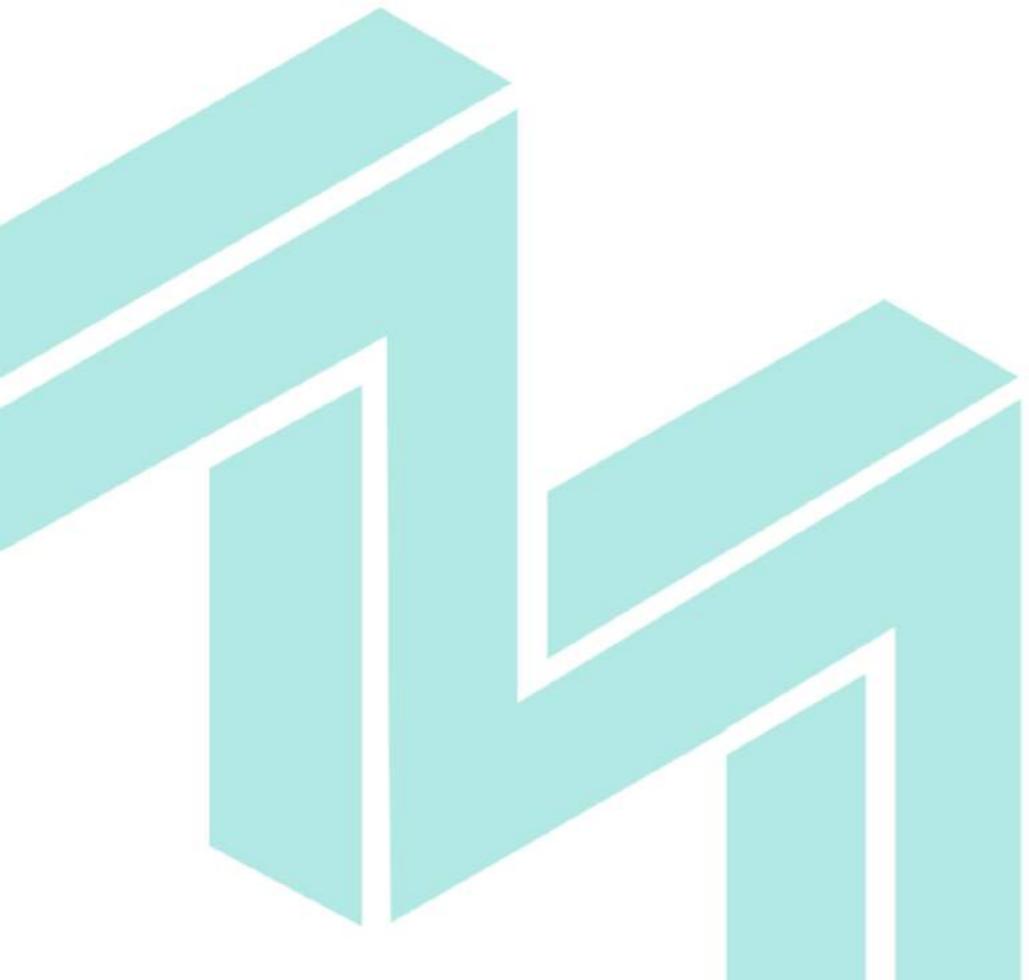
Select what to check and results will be colored in red



# ADD-ON FOR PRECISE COPY AND MOVE

We updated and made precision copy, move Add-on available with newest version of blender.

Blender is developed mainly for artists and lack precision copy and move tools.



# INSTALLATION ADD-ON FOR PRECISE COPY AND MOVE

Github repository for Blender Add-ons for makers  
<https://github.com/maker-suite>



The screenshot shows the GitHub repository page for 'maker-suite'. The repository is highlighted with a green border. The repository name is 'maker-suite'. The repository is a Python add-on for Blender, licensed under GPL-3.0, with 3 forks, 0 stars, 0 issues, and 0 pull requests. It was updated on Mar 27. The repository is a fork of '1d\_np' by 'Korchy'. The repository is listed under the 'maker-suite' organization, which has 3 repositories, 2 people, and 0 teams. The repository is listed under the '1d\_np' repository, which is a fork of 'Korchy/1d\_np'.

maker-suite

Repositories 3 Packages People 2 Teams Projects Settings

Find a repository... Type: All Language: All

**parametric-components**  
Python GPL-2.0 1 0 0 0 Updated on Sep 18

**print3d-utils**  
Python GPL-2.0 1 0 0 0 Updated on Aug 28

**1d\_np**  
Forked from Korchy/1d\_np  
1d np  
Python GPL-3.0 3 0 0 0 Updated on Mar 27

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● Pyth

Peopl  
Invite

# INSTALLATION ADD-ON FOR PRECISE COPY AND MOVE

## [Download Add-on .zip file](#)

maker-suite / 1d\_np  
forked from Korchy/1d\_np

Unwatch 1 Star 0 Fork 3

Code Pull requests 0 Projects 0 Wiki Security Insights Settings

1d\_np

Edit

Manage topics

34 commits 1 branch 1 release 2 contributors GPL-3.0

Branch: master New pull request

Create new file Upload files Find file Clone or download

This branch is 1 commit ahead of Korchy:master.

devynios Update to half-work with blender-2.8

.gitignore update

LICENSE Initial commit

README.md update

\_\_init\_\_.py Update to half-work with blender-2.8

Clone with HTTPS Use SSH

Use Git or checkout with SVN using the web URL.

https://github.com/maker-suite/1d\_np.git

Open in Desktop

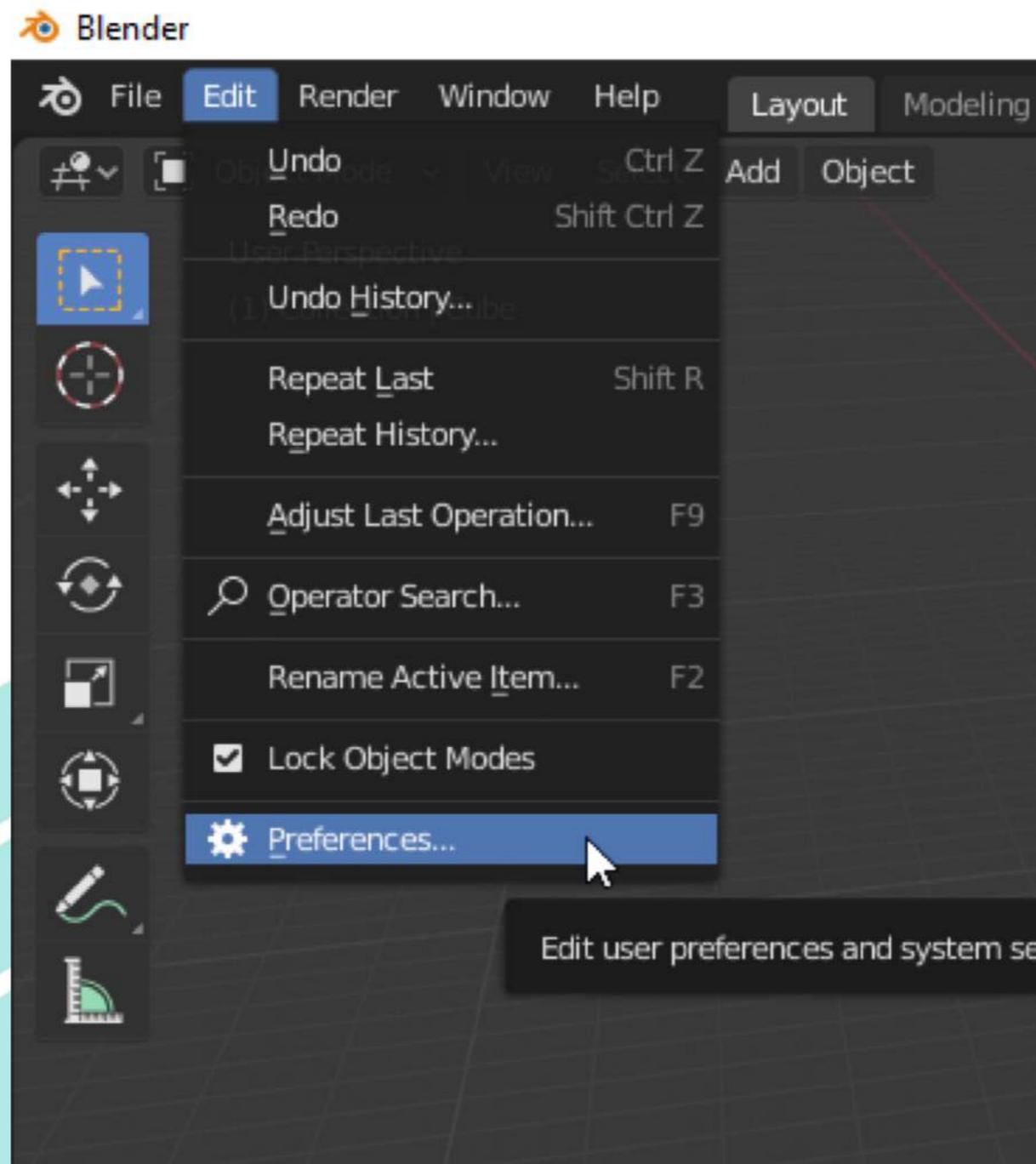
Download ZIP

2 years ago

7 months ago

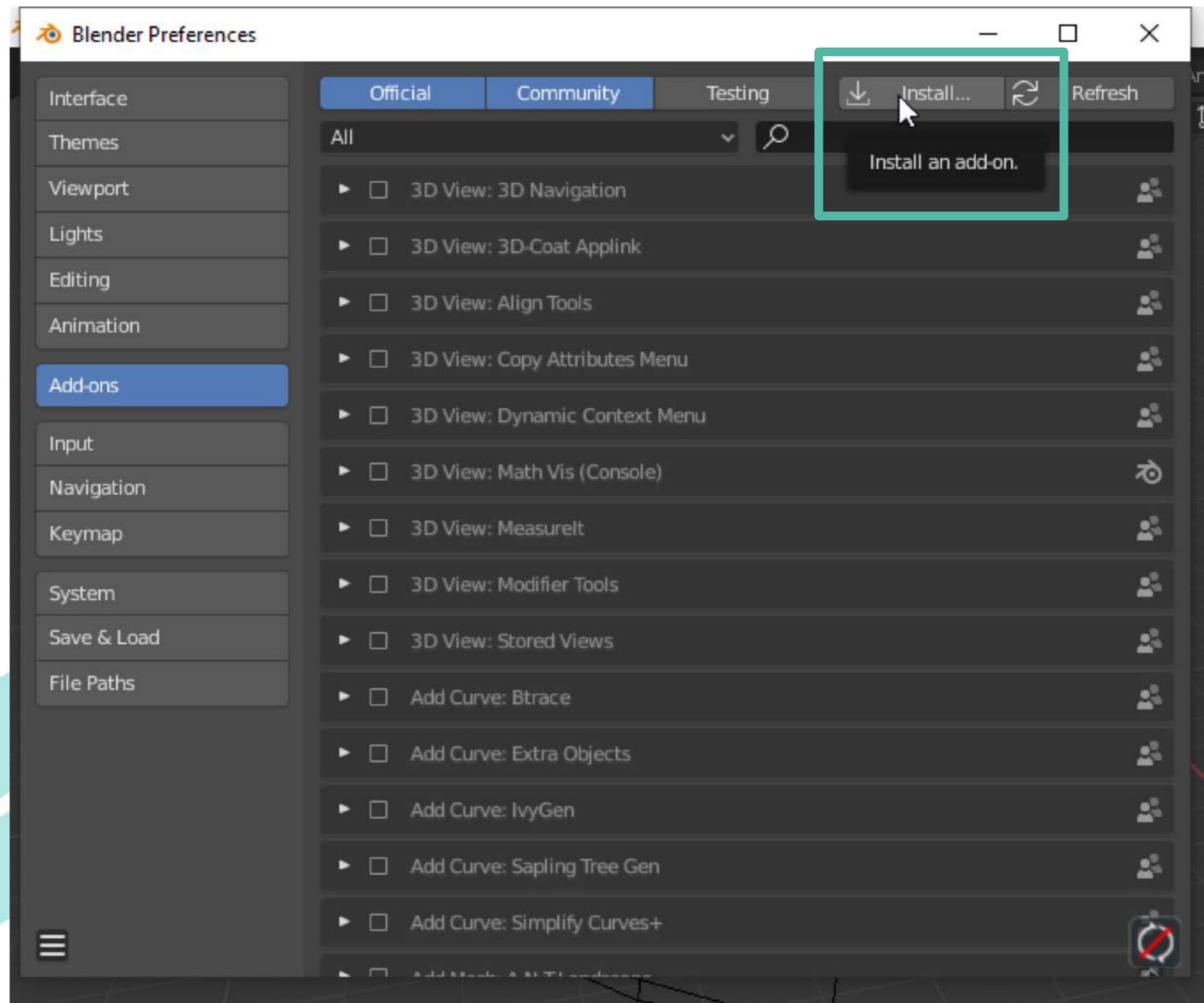
# INSTALLATION ADD-ON FOR PRECISE COPY AND MOVE

Run blender and open preferences ->Add-ons



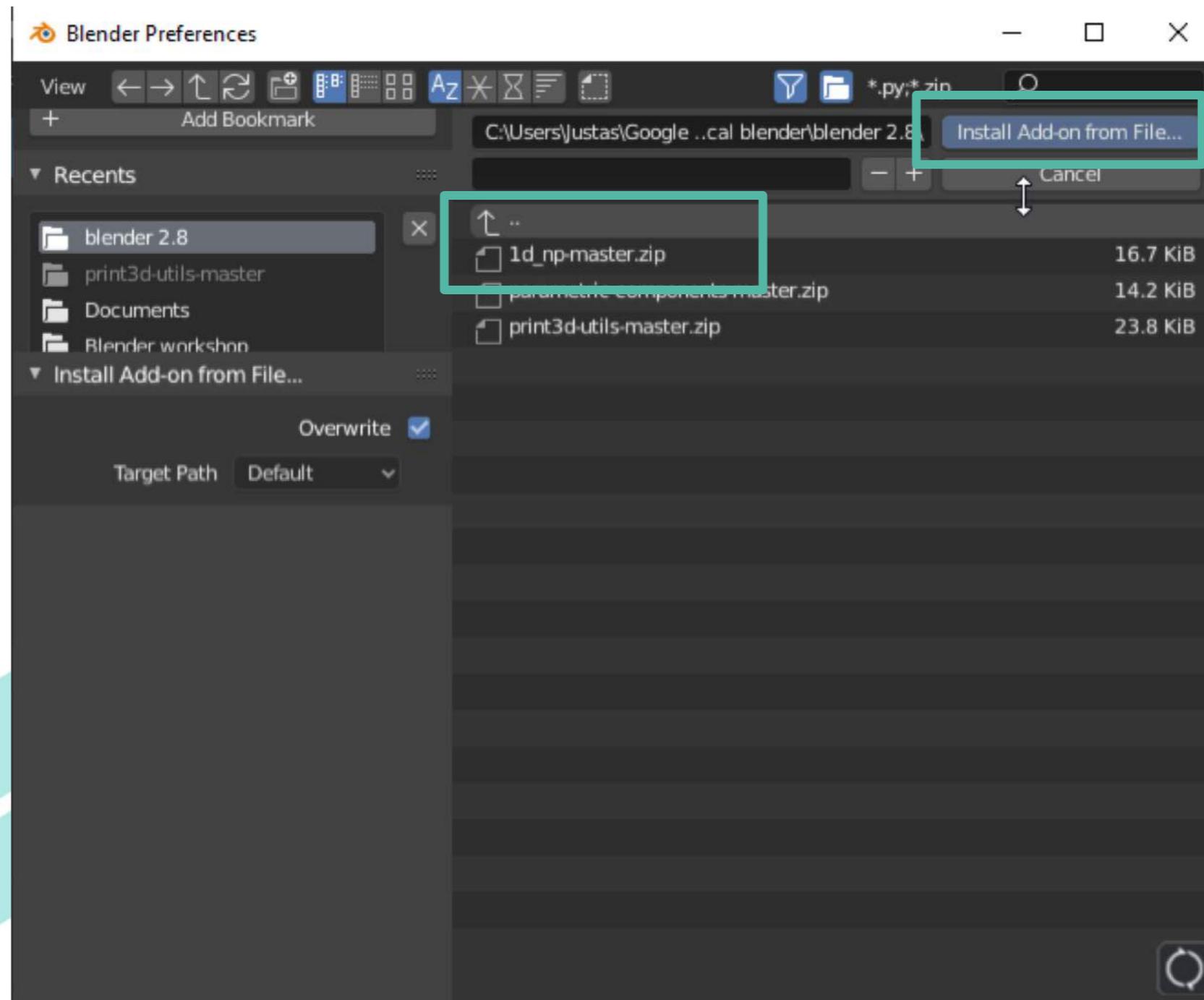
# INSTALLATION ADD-ON FOR PRECISE COPY AND MOVE

Run blender and open preferences -> Add-ons



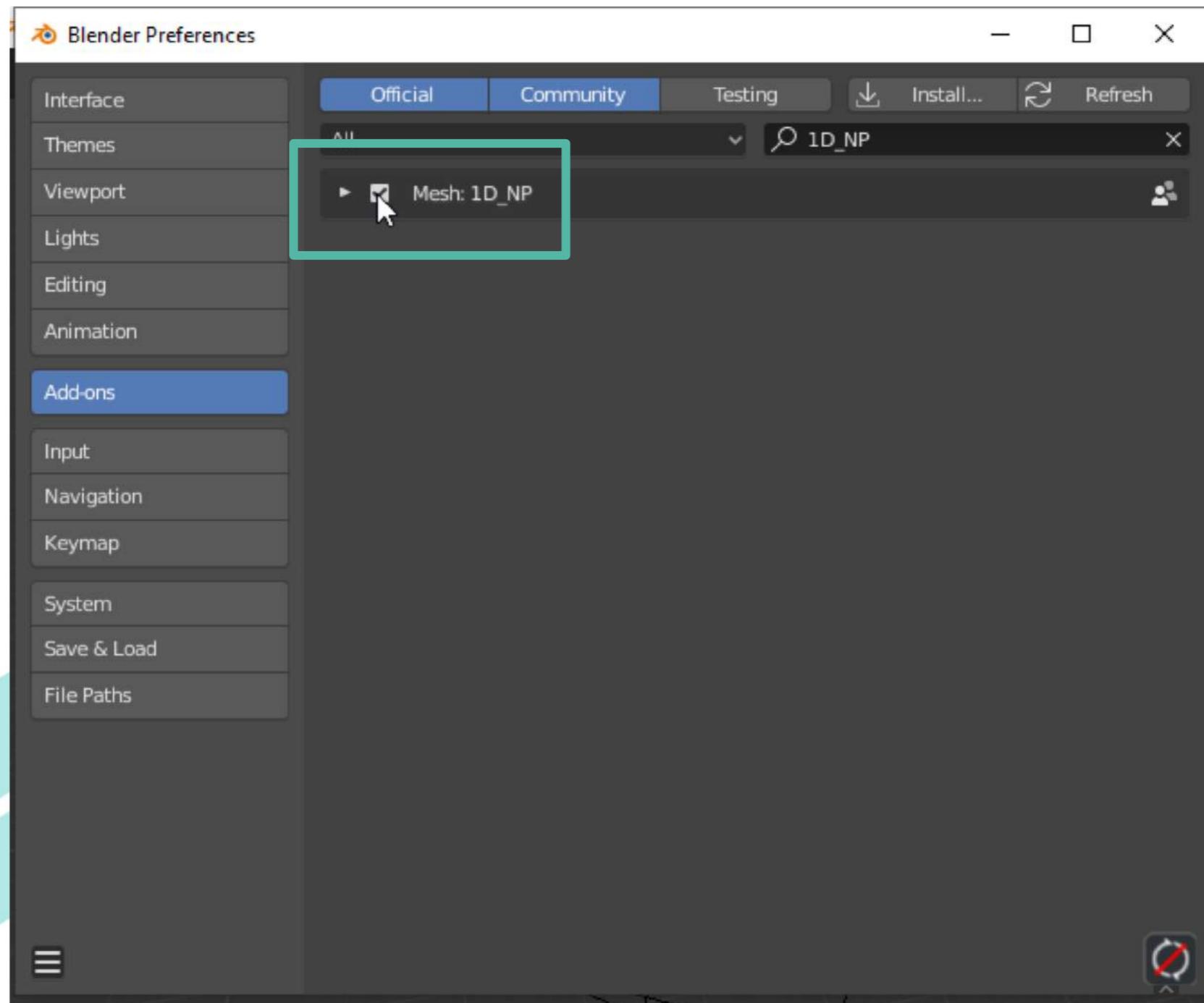
# INSTALLATION ADD-ON FOR PRECISE COPY AND MOVE

locate downloaded file and click “install from file”



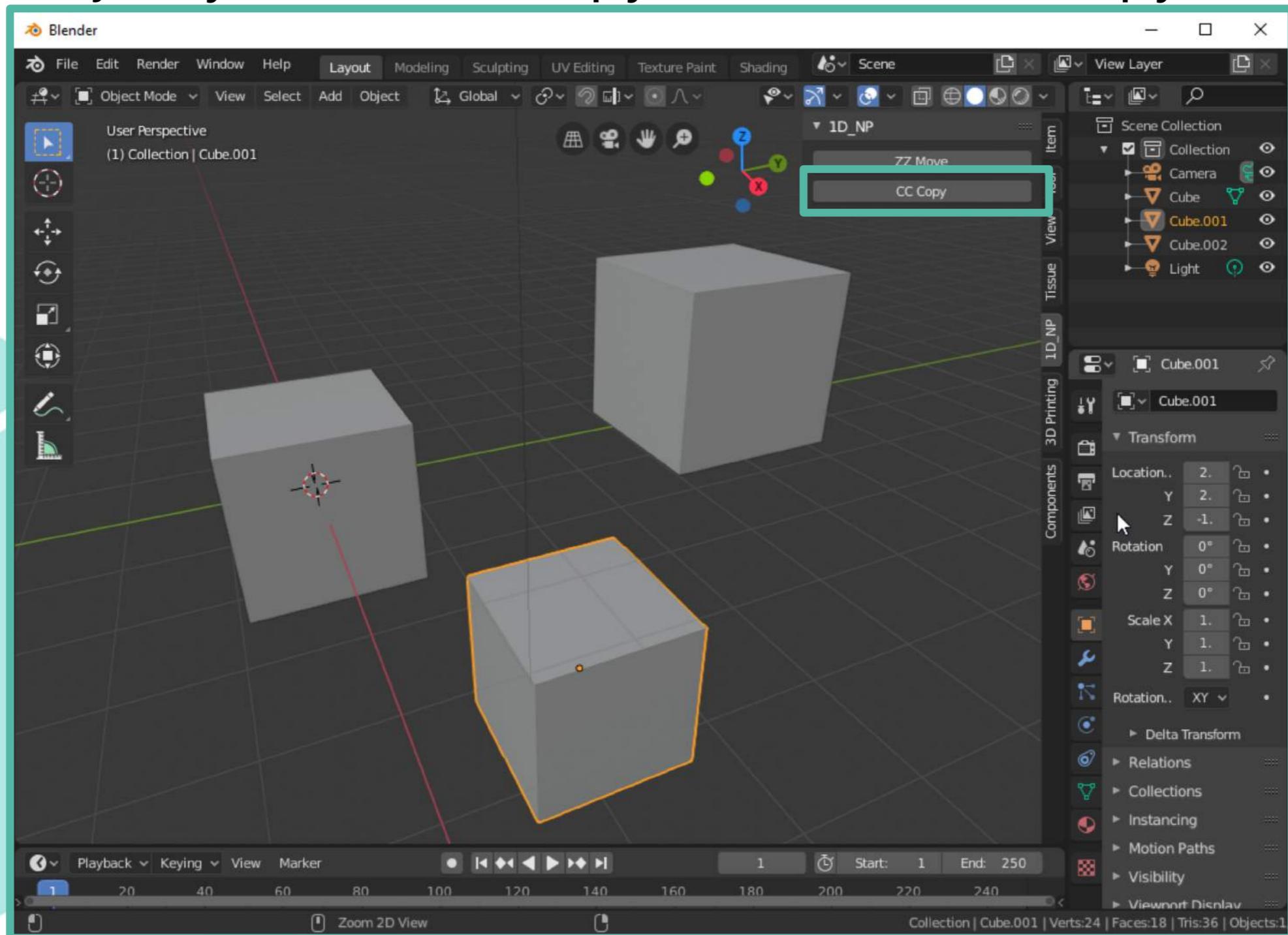
# INSTALLATION ADD-ON FOR PRECISE COPY AND MOVE

Activate updated 3D print toolbox Add-on



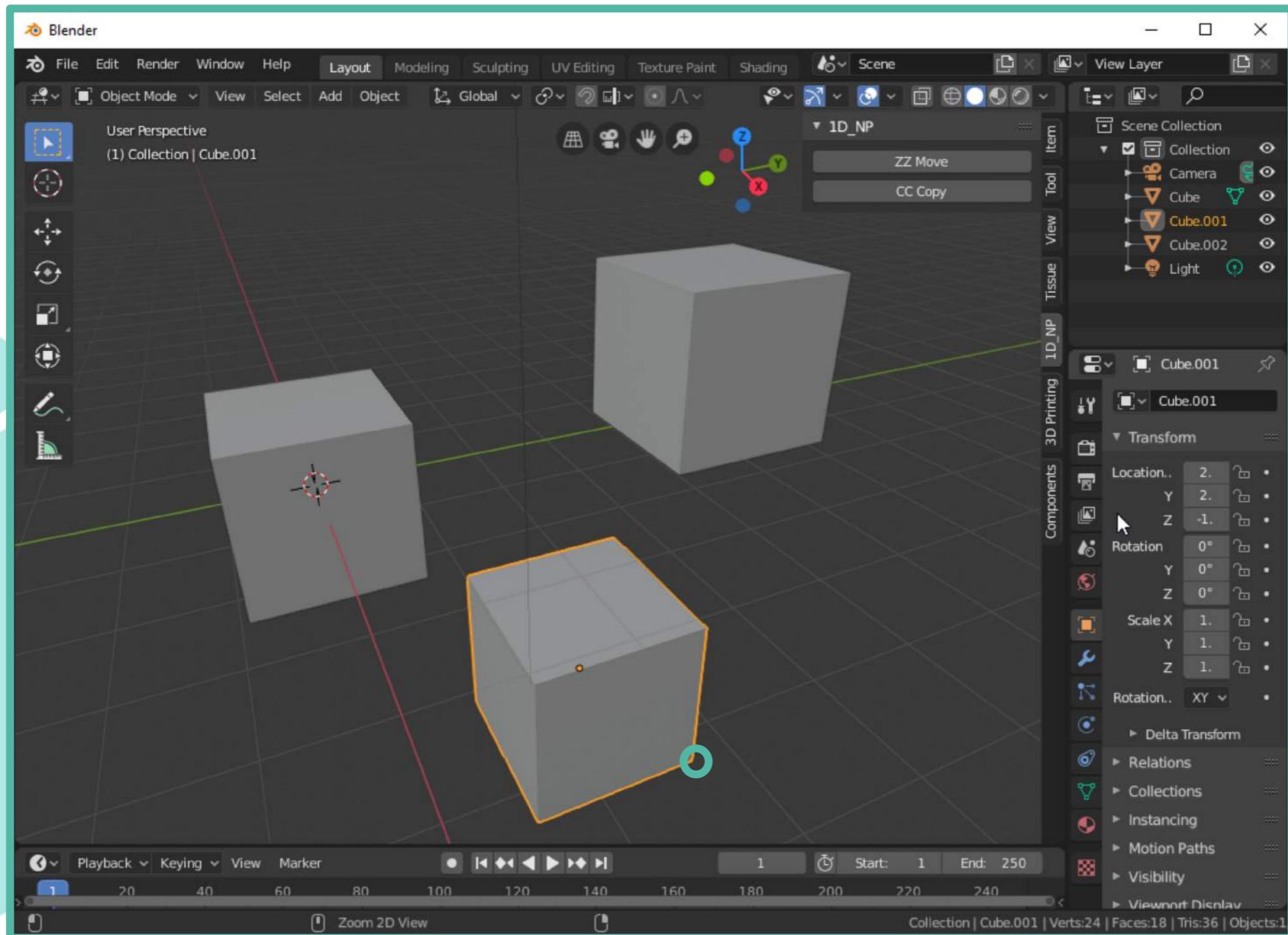
# USING ADD-ON FOR PRECISE COPY AND MOVE

Select object you want to copy and click “CC Copy”



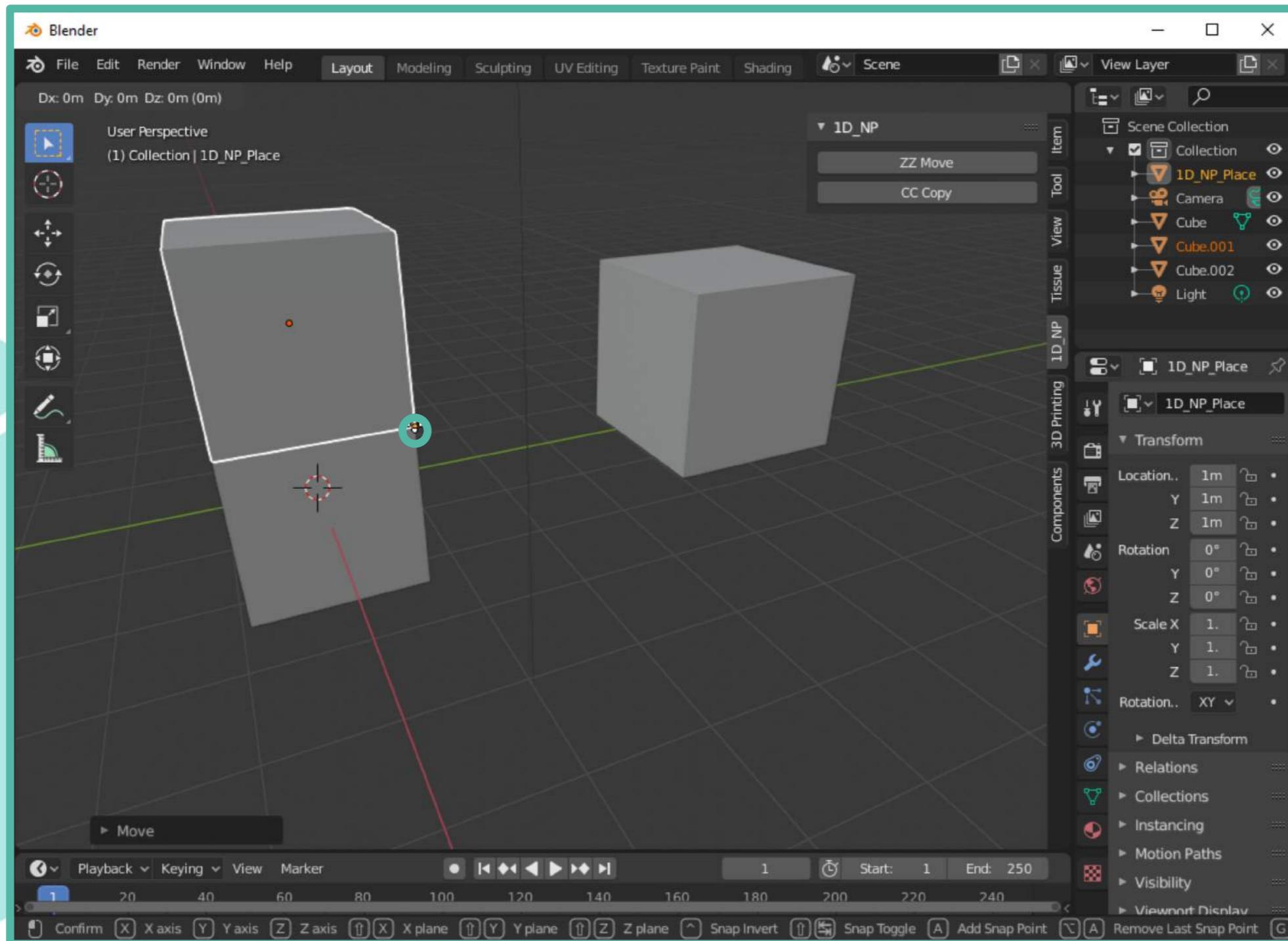
# USING ADD-ON FOR PRECISE COPY AND MOVE

Select reference vertex



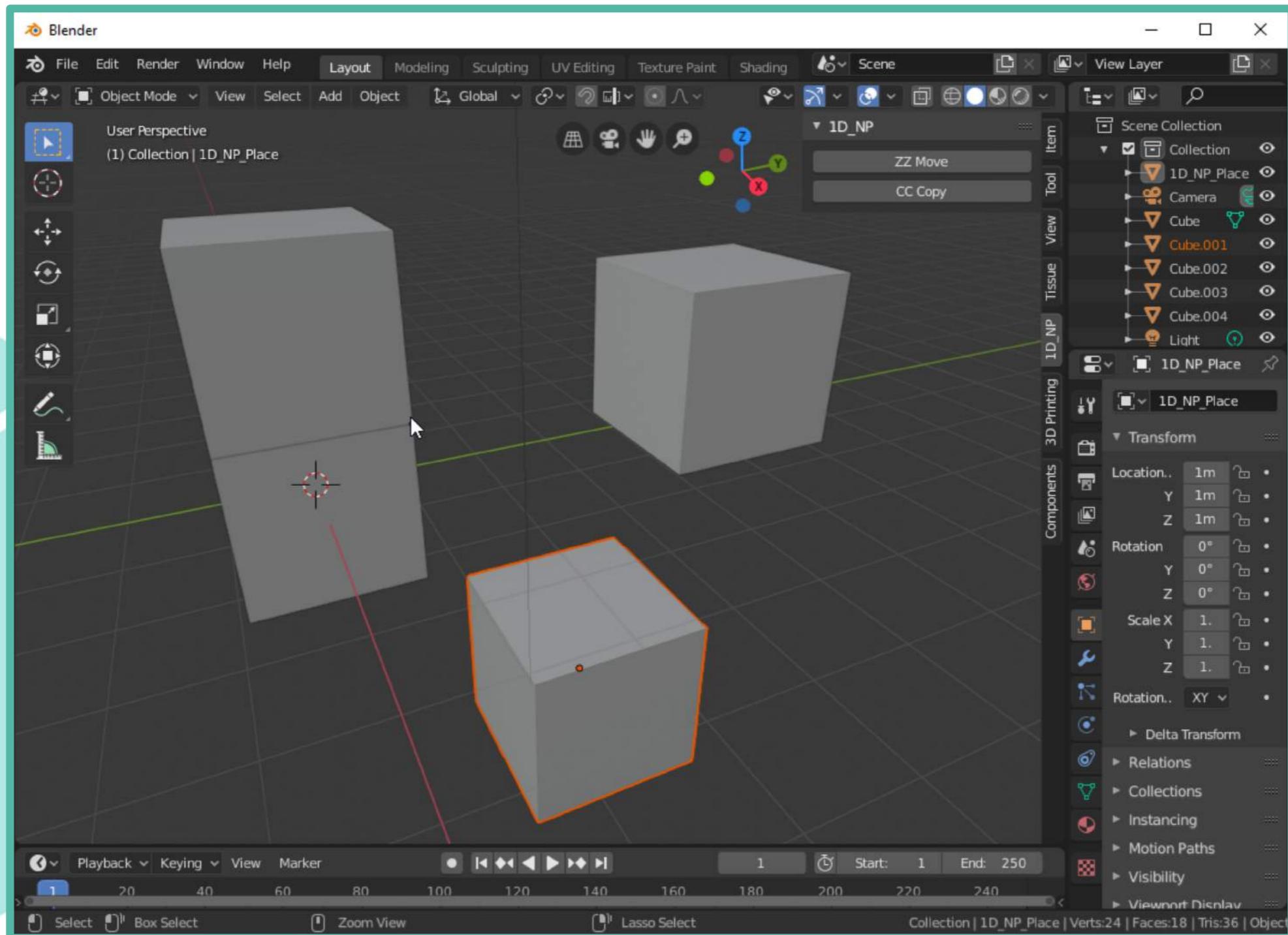
# USING ADD-ON FOR PRECISE COPY AND MOVE

Select destination vertex



# USING ADD-ON FOR PRECISE COPY AND MOVE

Press “Enter”





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[www.heimakers.eu](http://www.heimakers.eu)

