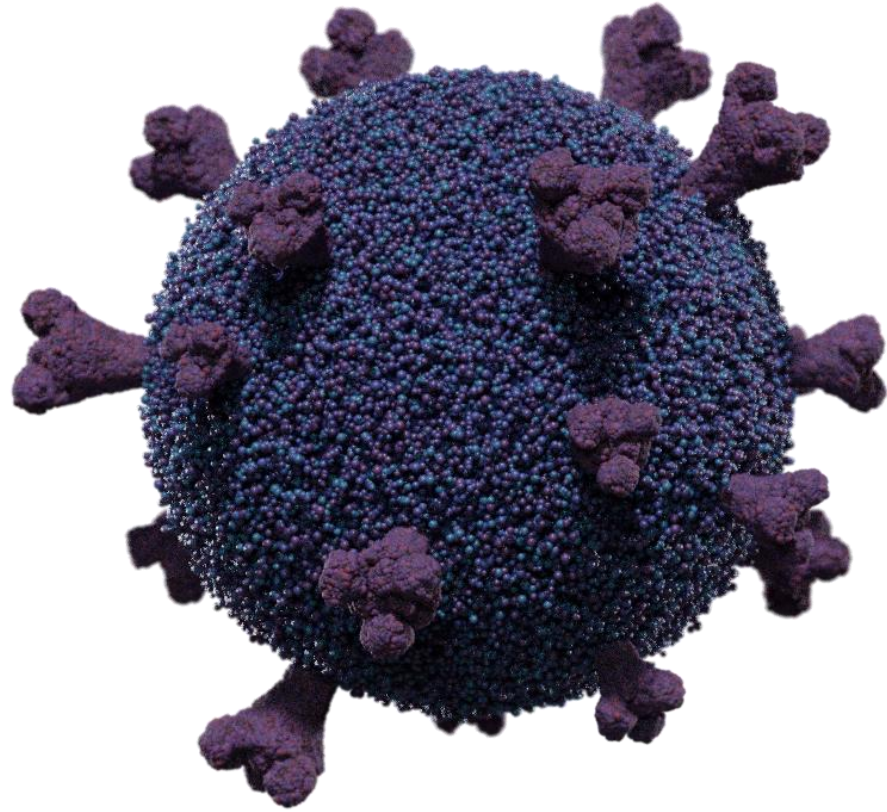


**PV272**

Cv 05

What do we create today?



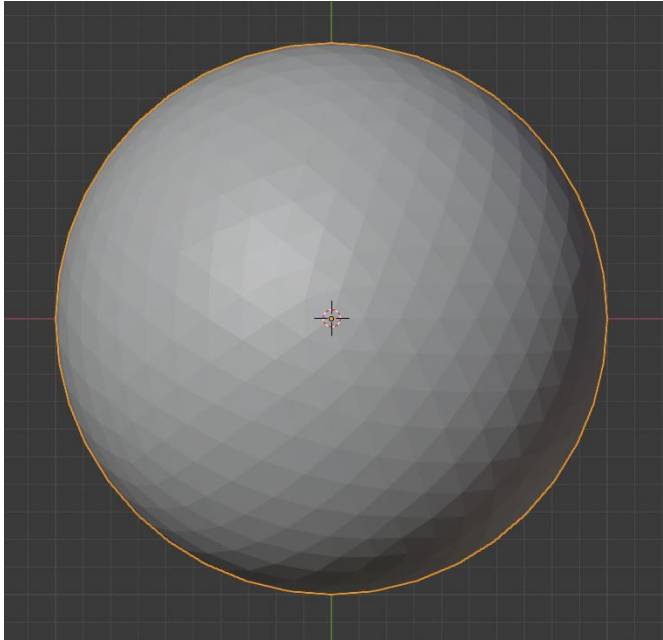
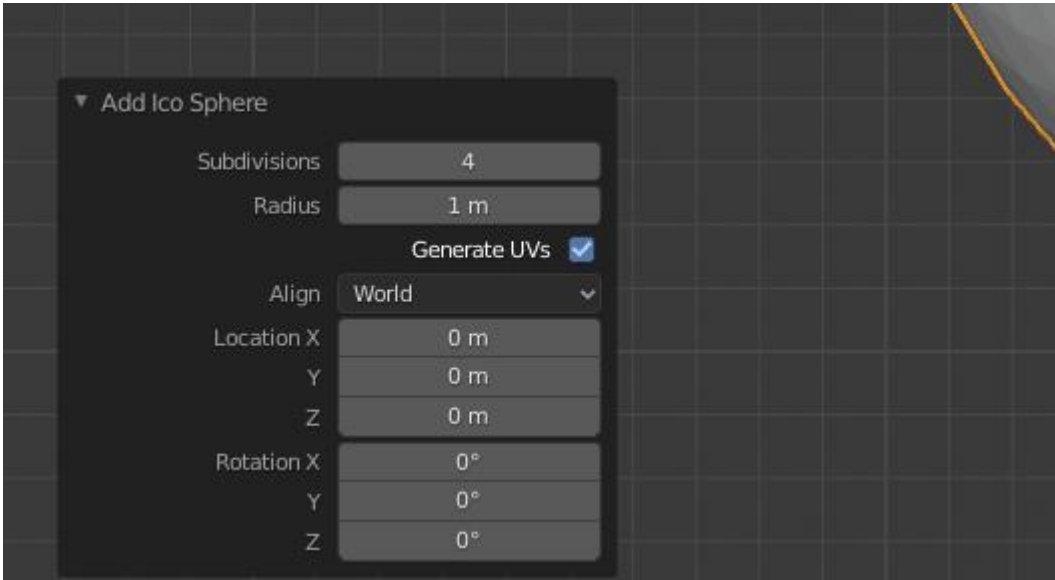
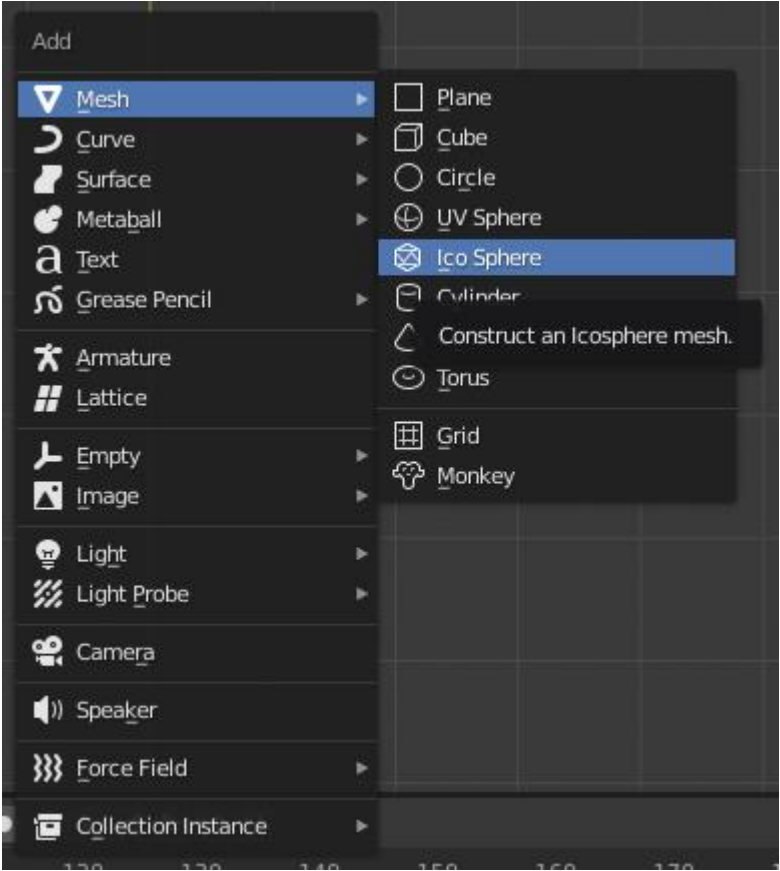
**COVID!!!**

# How do we create it?

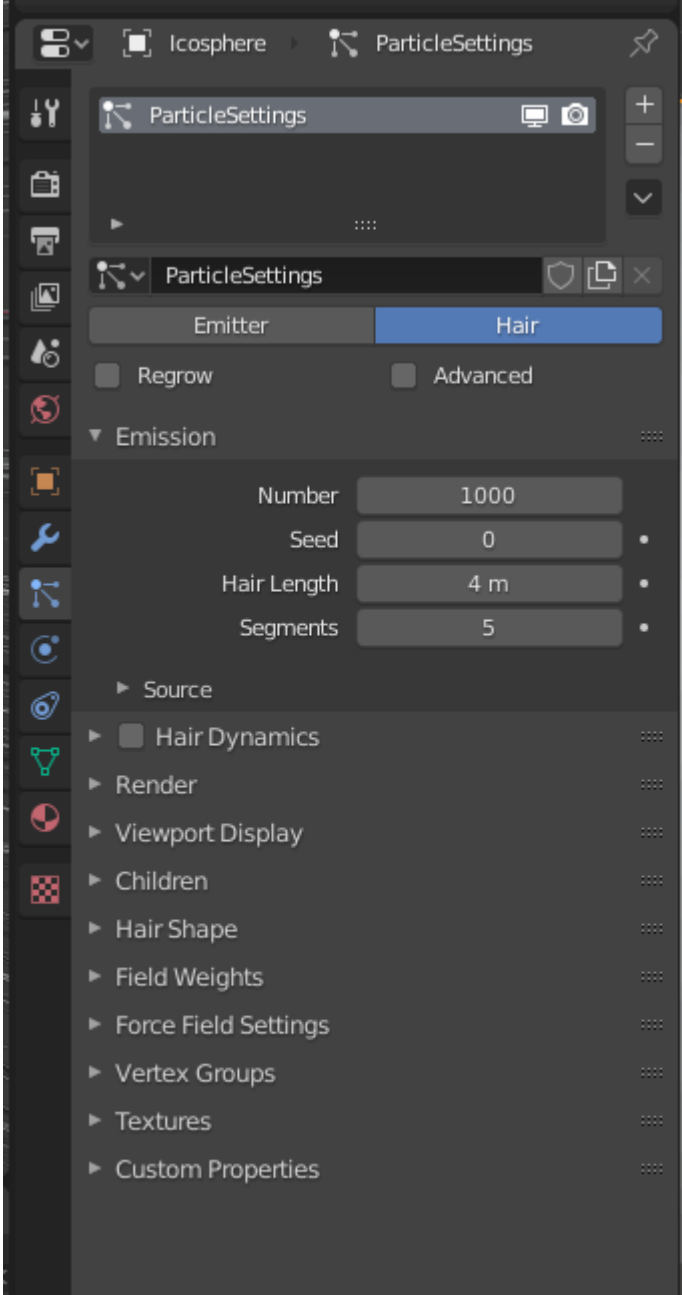
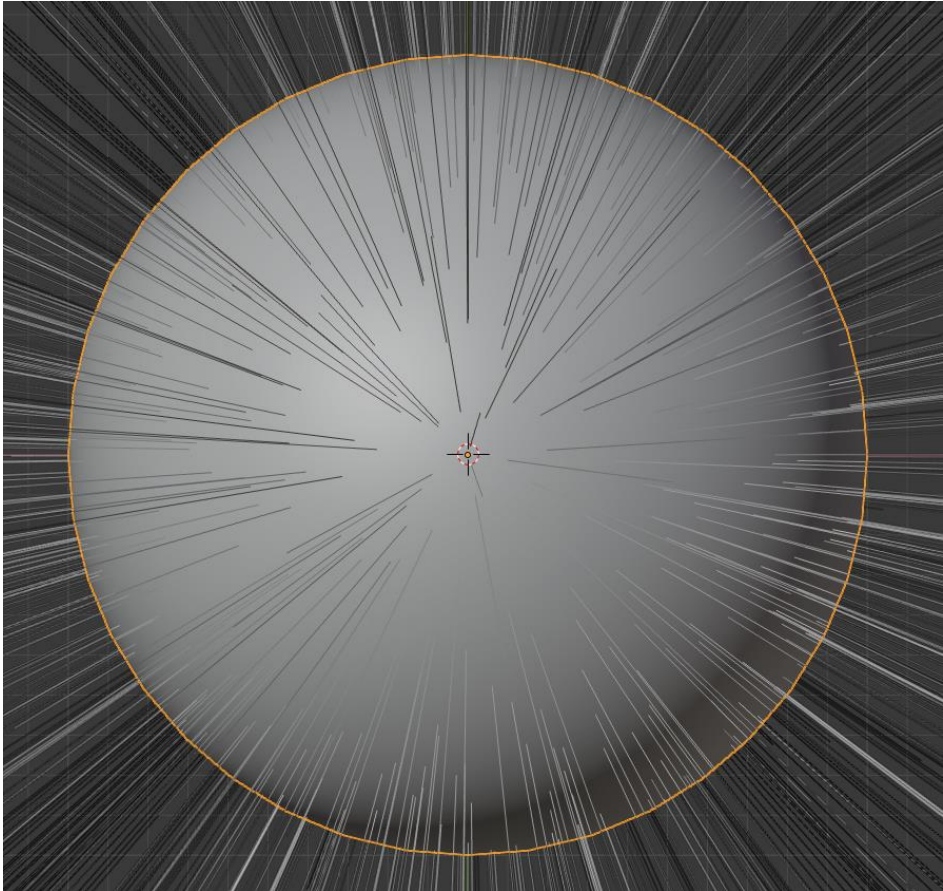
- Particles system is a technique in 3D graphics which helps us create effects such as hair, smoke, fire, rain, snow, etc.
- Particles in Blender
  - **Hair**
    - Objects that grow from a model
      - Hair, grass
  - **Emmision**
    - Objects that emit from a model
      - Rain, snow

**PARTICLES!!!**

# Add parent mesh

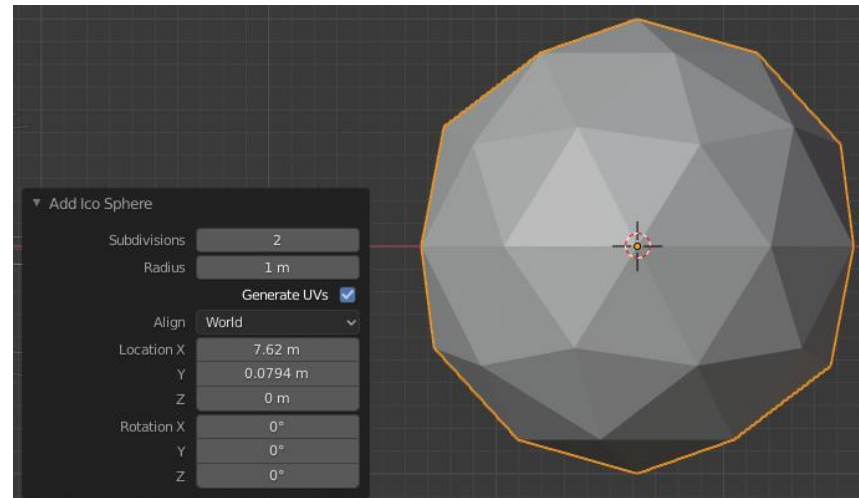


# Add particle system - hair



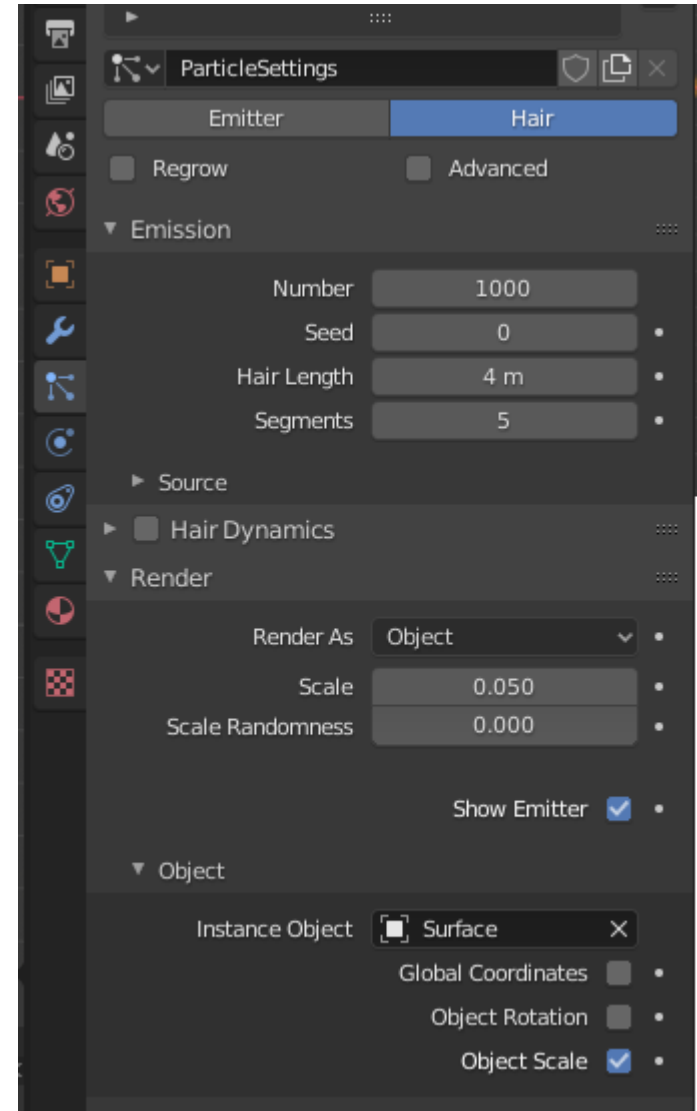
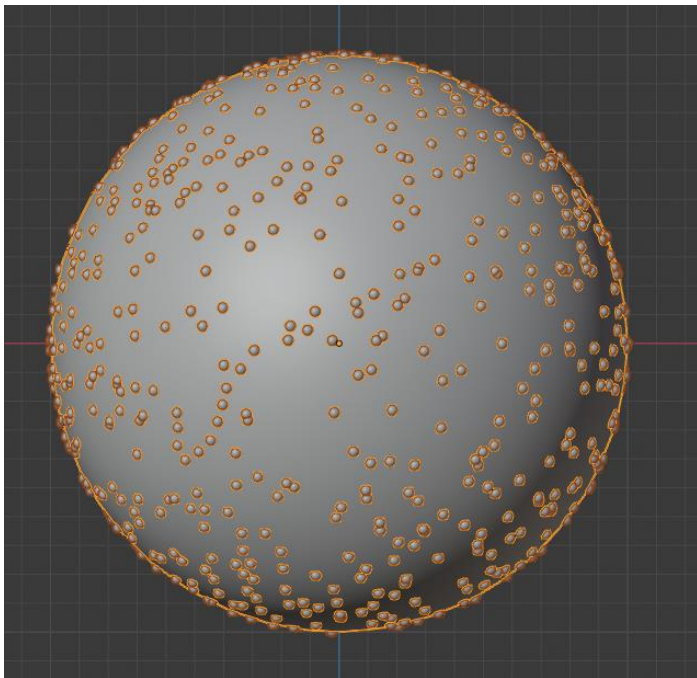
# Emission object

- At the moment the hair particle systems emits straight paths
- We want to cover the surface of the mesh with little spheres
- Add another icosphere object
- Shade it smooth
- Name it “Surface”
- Make it small



# Update the particle settings

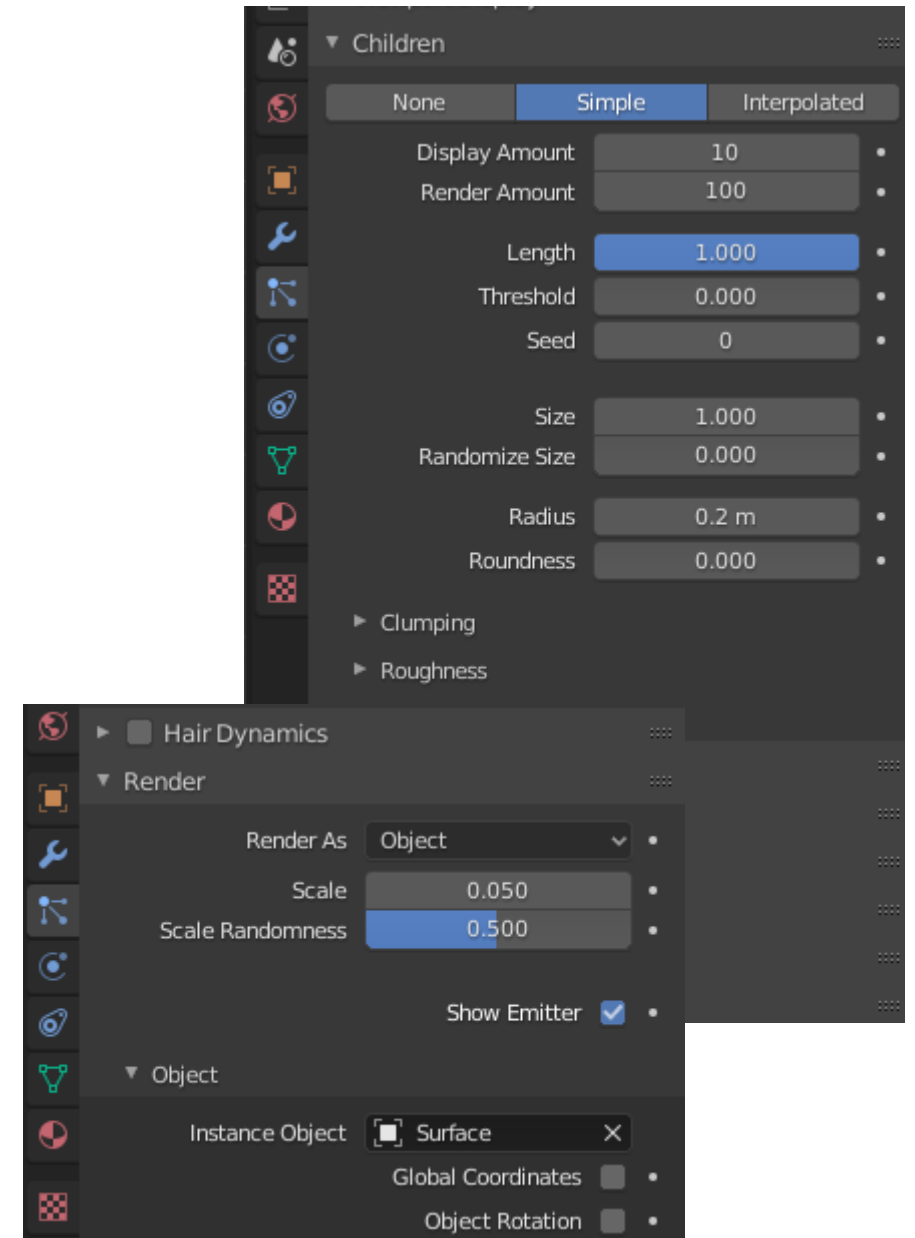
- Select the parent
- Go to particle system
- Set the rendered object to “Surface”





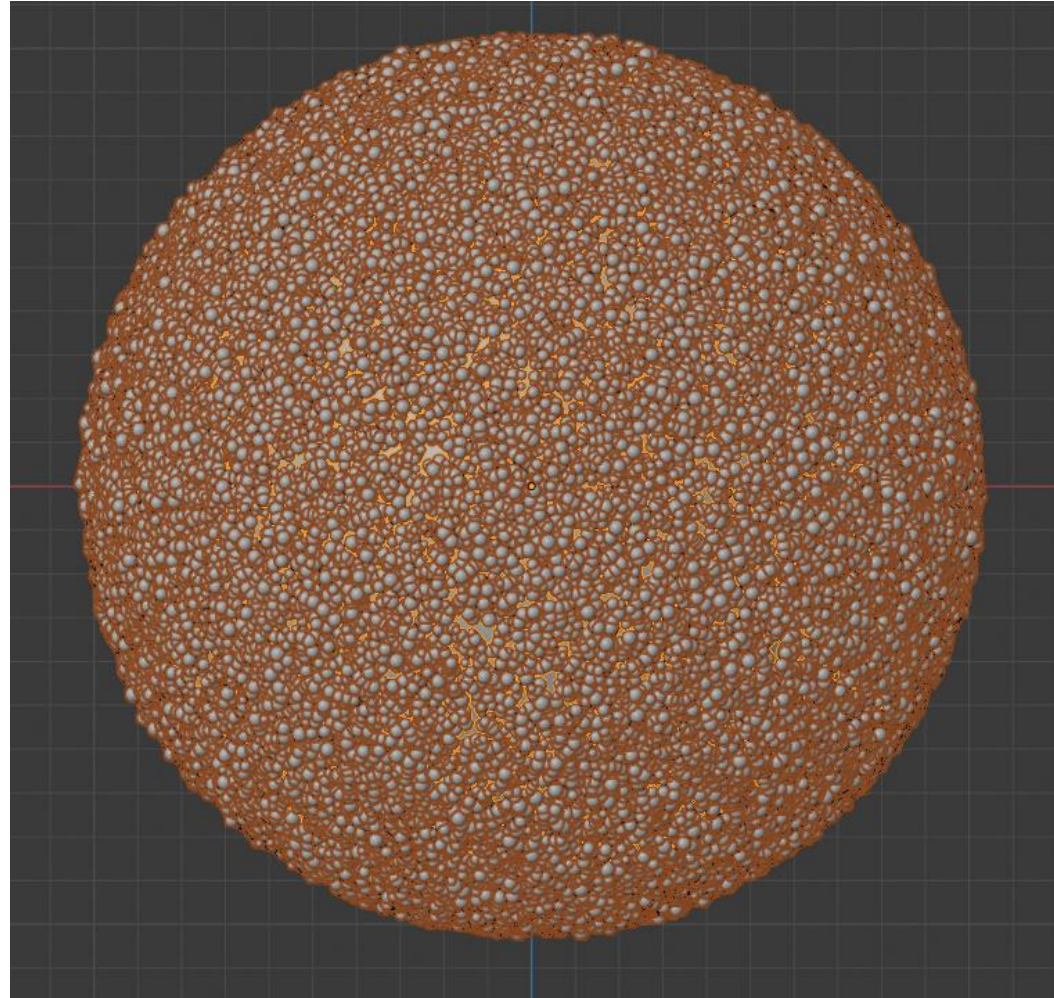
# Update the particle settings

- Add children
  - Each of the particles will have children
  - Different number
- Set random size
  - Each object will have a different size
- Play around with the number of particles, children, sizes, until you like it



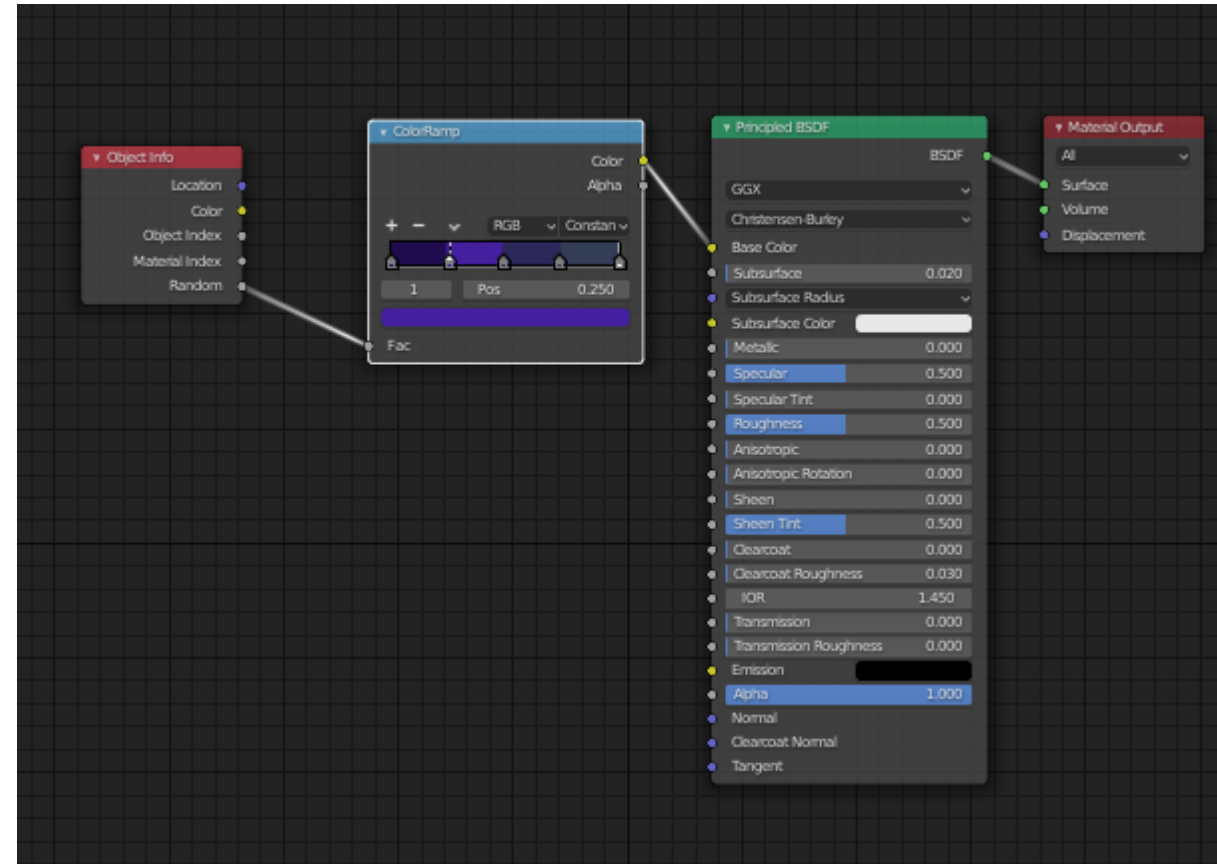


# Preliminary result

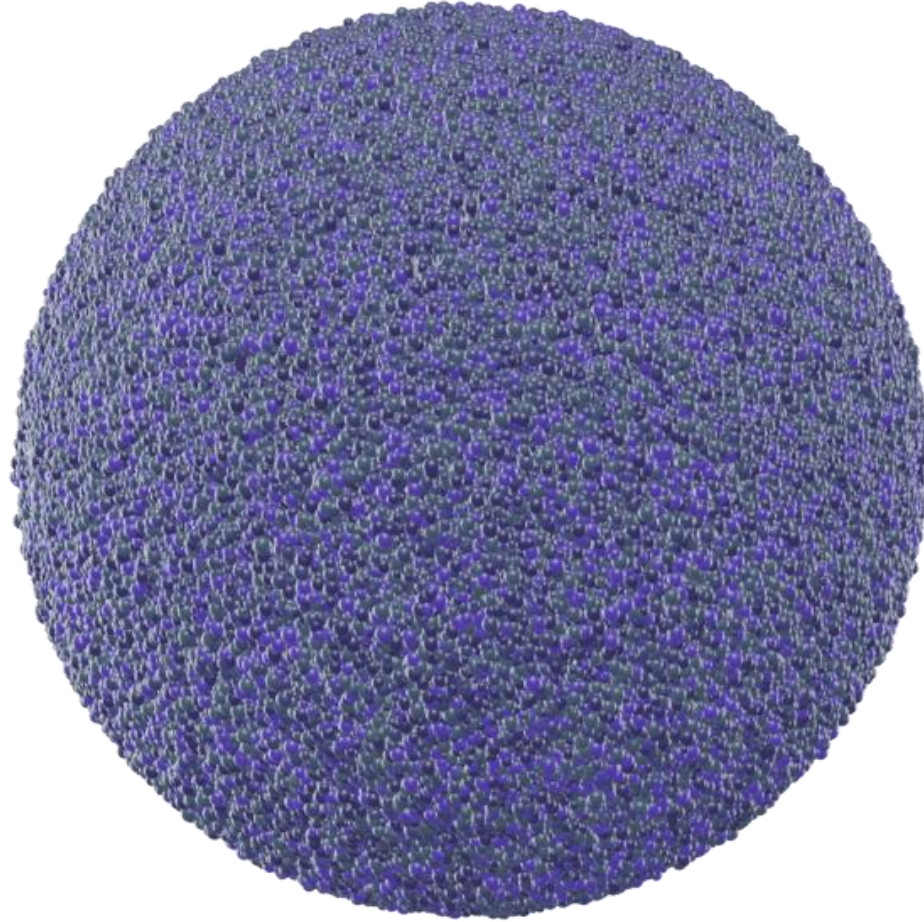


# Ball material

- Add a material to the “surface” object
- Go to the Shader Editor
- Add a Color Ramp
  - Add -> Converter -> Color Ramp
  - Set to constant
  - Add new colors with ‘+’ button
- Add an Object Info
  - Add -> Input -> Object Info
- Also, add some blue material to the parent
- Don't forget to add an environmental texture to the world settings

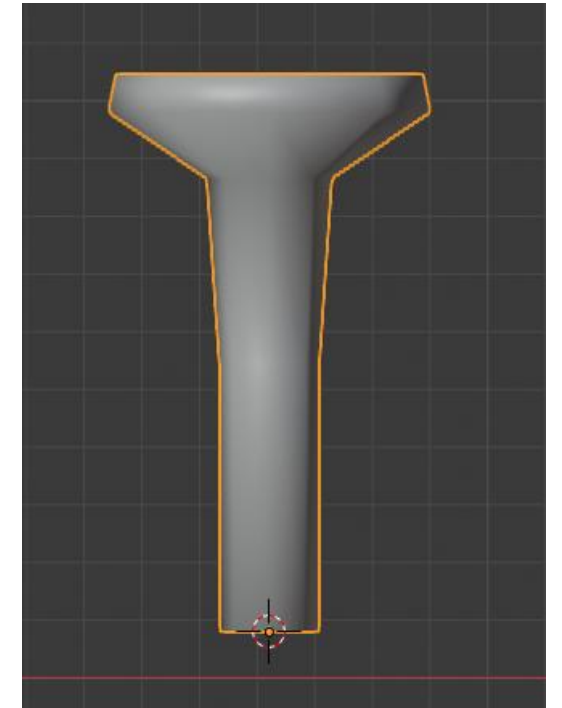


# Render



# What next?

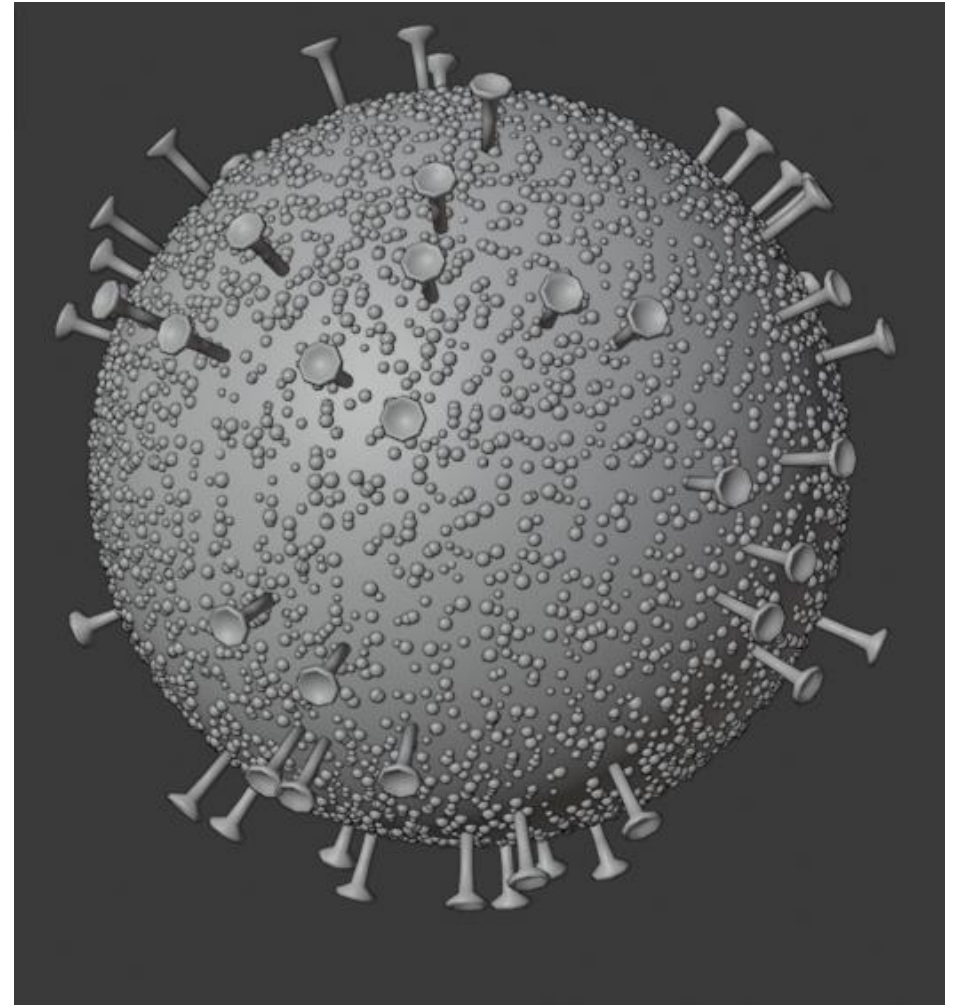
- Now we need to add the structures protruding from the parent
- How?
  - Model and place the individually
  - Use the particle system again
- Create the model
- Rotate it in edit mode, so when you are looking it from the top view it looks like in the image
- If you do not do it, it will not look good when applied to the particle system
  - In such case go back to the edit mode and rotate it by 90 degrees around x/y/z axis, until it looks as it should





# Create a new particle system

- Select parent
- Go to particle settings
- Add new hair particles, set rendered object to the newly created model
- Play around with the settings until it looks good
  - There are no perfect settings, it is up to the scale you are using and various other factors and your own personal taste



# Finish

- Set the material for the structure object, add lights and render
- Go as crazy and creative as you wish, make the surface and the object as original as you want
- Upload the final renders to Odevzdávarena
- Stay safe and respect the quarantine