



## 26.10.19 Editors - Properties Editor - Particle Properties Tab - Children panel

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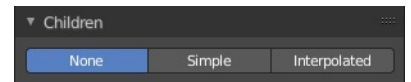
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## Children panel

Children are Hair or Emitter particles originating from individual particles. They allow to work with a relatively low amount of Parent particles. Which reduces the calculation effort.

If you activate children, then the parents are no longer rendered. They can be re-enabled in the Render panel in the Extras subpanel. Parent Particles. By default, parent particles are not rendered because the shape of the children can be quite different from that of their parents.

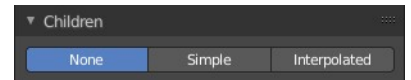


## Children panel - Type None

### Child Type

#### None

No children are generated. No settings.



## Children panel - Type Simple

### Simple

Children are emitted from the parent position.

#### **Display Amount**

The number of children in the 3D Viewport.

#### **Render Amount**

The number of children to be rendered.

#### **Length**

Length of child paths.

#### **Threshold**

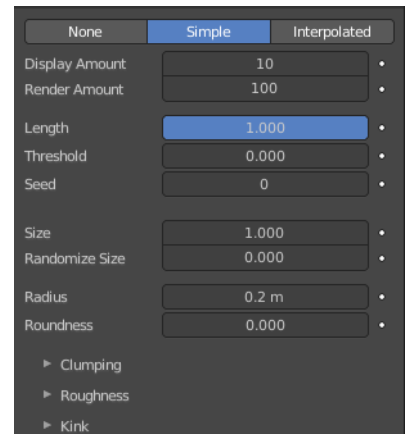
Amount of particles left untouched by child path length.

#### **Seed**

Offset in the random number table for child particles, to get a different randomized result.

#### **Size**

A multiplier for children size.



## **Random Size**

Random variation to the size of child particles

## **Radius**

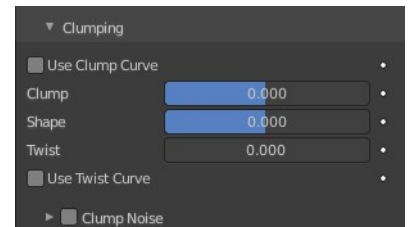
The radius in which the children are distributed around their parents. This is 3D, so children may be emitted higher or lower than their parents.

## **Roundness**

The roundness of the children around their parents. Either in a sphere (1.0) or in-plane (0.0).

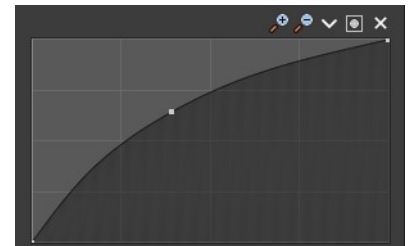
# Children panel - Type Simple - Clumping subpanel

Clumping allows as the name says to break the even look, and clump particles together.



## **Use Clump Curve**

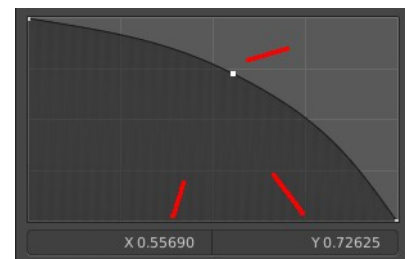
Use a Curve instead of parameters to adjust the clumping.



## **Selecting Points**

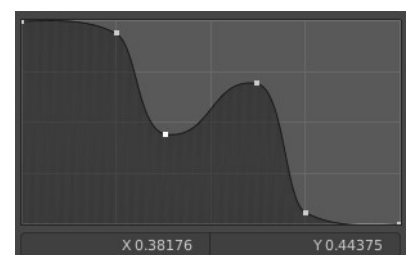
You can select curve points. This reveals two edit boxes for the x and y coordinate of this point.

Selected points can be moved around. Left click at them, hold the mouse button down and move them to a new location.



## **Adding Points**

You can add new curve points by simply left clicking at the curve. Move the mouse to position them where you need it.



## Navigation elements

The navigation elements at the top are described from left to right.



### ***Zoom in and out***

The two buttons with the magnifying glass at it zooms in and out in the curve window.

---

## **Tools**

Tools is a menu where you can find some curve related tools.

### **Reset View**

Resets the curve windows zoom.

### **Vector Handle**

Set handle type to Vector.

### **Auto Handle**

Set handle type to Auto.

### **Extend horizontal**

Extend the curve horizontally before the first and after the last curve point.

### **Extend vertical**

Extend the curve vertically before the first and after the last curve point.

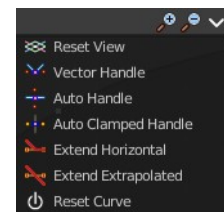
### **Auto Clamped Handle**

Set handle type to Auto Clamped.

### **Reset Curve**

Resets the curve to the initial shape.

---



## ***Use Clipping***

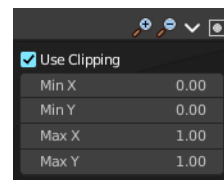
Clipping options. Set up clipping for the stroke.

### ***Delete Points***

Deletes selected curve points.

## **Clump**

Clumping amount along child strands. The children may meet at their tip (1.0) or start together at their root (-1.0).



## Shape

Form of Clump. Either inverse parabolic (0.99) or exponentially (-0.99).

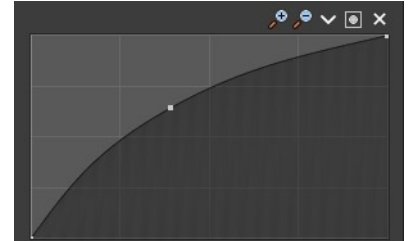
## Twist

Number of turn around parent along the strand.

## Use Twist Curve

Use a Curve instead of parameters to adjust the twisting of the particles.

For controls see above, clump curve.



## Clump Noise

Creates random clumps around the parent hair.

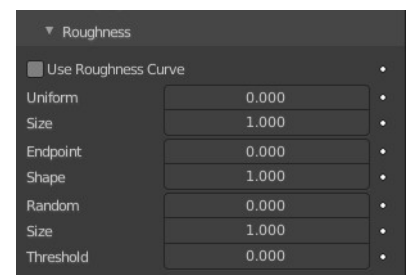


## Clump Noise Size

The size of clump noise.

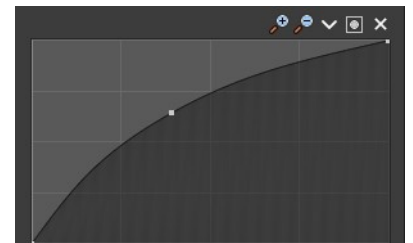
# Children panel - Type Simple + Interpolated - Roughness sub-panel

Give the particles a roughness.



## Use Roughness Curve

Use Curve Widget instead of parameters.

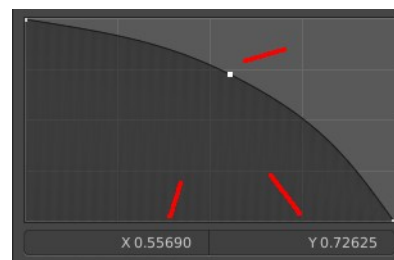




## Selecting Points

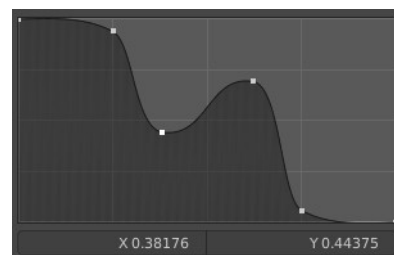
You can select curve points. This reveals two edit boxes for the x and y coordinate of this point.

Selected points can be moved around. Left click at them, hold the mouse button down and move them to a new location.



## Adding Points

You can add new curve points by simply left clicking at the curve. Move the mouse to position them where you need it.



## Navigation elements

The navigation elements at the top are described from left to right.

### *Zoom in and out*

The two buttons with the magnifying glass at it zooms in and out in the curve window.



## Tools

Tools is a menu where you can find some curve related tools.

### Reset View

Resets the curve windows zoom.

### Vector Handle

Set handle type to Vector.

### Auto Handle

Set handle type to Auto.

### Extend horizontal

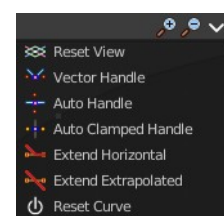
Extend the curve horizontally before the first and after the last curve point.

### Extend vertical

Extend the curve vertically before the first and after the last curve point.

### Auto Clamped Handle

Set handle type to Auto Clamped.

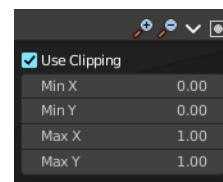


## Reset Curve

Resets the curve to the initial shape.

## Use Clipping

Clipping options. Set up clipping for the stroke.



## Delete Points

Deletes selected curve points.

## Roughness

Amount of location dependent roughness.

## Size

Size of location dependent roughness.

## Uniform, Size

It is based on children location so it varies the paths in a similar way when the children are near.

## Endpoint, Shape

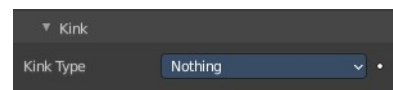
“Rough End” randomizes path ends (a bit like random negative clumping). Shape may be varied from  $<1$  (parabolic) to  $10.0$  (hyperbolic).

## Random, Size, Threshold

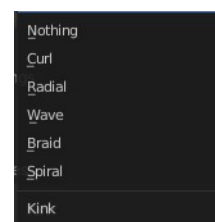
It is based on a random vector so it is not the same for nearby children. The threshold can be specified to apply this to only a part of children. This is useful for creating a few stray children that will not do what others do.

## Children panel - Type Simple + Interpolated - Kink subpanel

With Kink you can rotate the children around the parent.



## Kink Type



## Nothing

Deactivated.

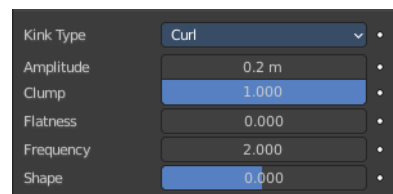
## Curl, Radial, Wave, Braid

Curl - Children grow in a spiral around the parent hairs.

Radial - Children form around the parent a wave shape that passes through the parent hair.

Wave - Children form a wave, all in the same direction.

Braid - Children braid themselves around the parent hair.



### **Amplitude**

The amplitude of the offset.

### **Clump**

How much clump effects kink amplitude.

### **Flatness**

How flat the hairs are.

### **Frequency**

The frequency of the offset (1/total length). The higher the frequency the more rotations are done.

### **Shape**

Where the rotation starts (offset of rotation).

## Spiral

Generates a spiral at the end of each hair.

### **Amplitude**

The amplitude of the offset.

### **Randomize Amplitude**

Give the amplitude a random variation.

### **Axis**

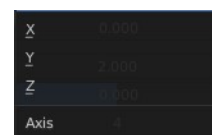
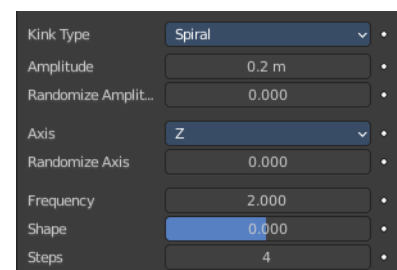
Which axis to use for offset.

### **Randomize Axis**

Randomize the orientation.

### **Frequency**

The frequency of the offset (1/total length). The higher the frequency the more rotations are done.



## Shape

Where the rotation starts (offset of rotation).

## Steps

Extra steps for resolution of special kink features.

# Children panel - Type Interpolated

Children are emitted between the Parent particles on the faces of a mesh. They interpolate between adjacent parents. This is especially useful for fur, because you can achieve an even distribution. Some of the children can become virtual parents, which are influencing other particles nearby.

## Display Amount

The number of children in the 3D Viewport.

## Render Amount

The number of children to be rendered.

## Length

Length of child paths.

## Threshold

Amount of particles left untouched by child path length.

## Seed

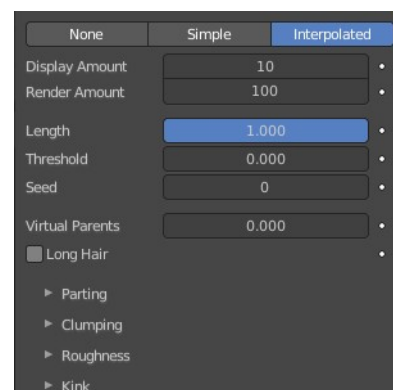
Offset in the random number table for child particles, to get a different randomized result.

## Virtual Parents

Relative Amount of virtual parents.

## Long Hair

Belongs to Hair particles. Calculate children that suit long hair well.

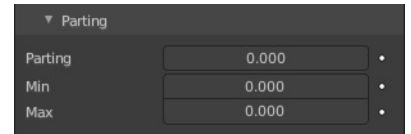


## Children panel - Type Interpolated - Parting subpanel

This panel belongs to Hair particles.

### Parting

Creates parting in the children based on parent strands.



### Min

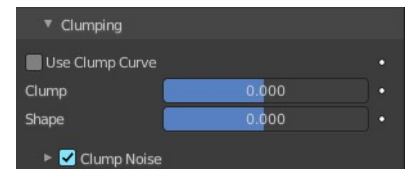
Minimum root to tip angle. Tip distance / root distance for long hair.

### Max

Maximum root to tip angle. Tip distance / root distance for long hair.

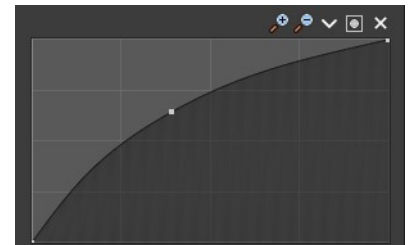
## Children panel - Type Interpolated - Clumping subpanel

Clumping allows as the name says to break the even look, and clump particles together.



### Use Clump Curve

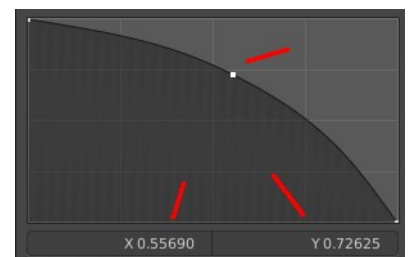
Use a Curve instead of parameters to adjust the clumping.



### Selecting Points

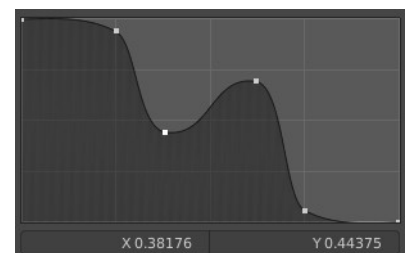
You can select curve points. This reveals two edit boxes for the x and y coordinate of this point.

Selected points can be moved around. Left click at them, hold the mouse button down and move them to a new location.



### Adding Points

You can add new curve points by simply left clicking at the curve. Move the mouse to position them where you need it.



## Navigation elements

The navigation elements at the top are described from left to right.



### ***Zoom in and out***

The two buttons with the magnifying glass at it zooms in and out in the curve window.

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## ***Tools***

Tools is a menu where you can find some curve related tools.

### **Reset View**

Resets the curve windows zoom.

### **Vector Handle**

Set handle type to Vector.

### **Auto Handle**

Set handle type to Auto.

### **Extend horizontal**

Extend the curve horizontally before the first and after the last curve point.

### **Extend vertical**

Extend the curve vertically before the first and after the last curve point.

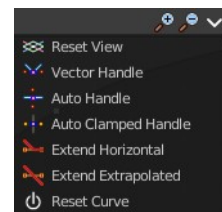
### **Auto Clamped Handle**

Set handle type to Auto Clamped.

### **Reset Curve**

Resets the curve to the initial shape.

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## ***Use Clipping***

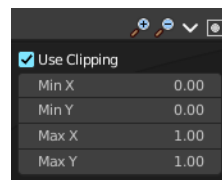
Clipping options. Set up clipping for the stroke.

### ***Delete Points***

Deletes selected curve points.

## **Clump**

Clumping amount along child strands. The children may meet at their tip (1.0) or start together at their root (-1.0).

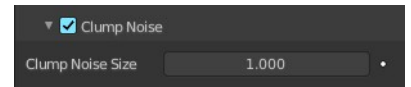


## Shape

Form of Clump. Either inverse parabolic (0.99) or exponentially (-0.99).

## Clump Noise

Creates random clumps around the parent hair.



## Clump Noise Size

The size of clump noise.