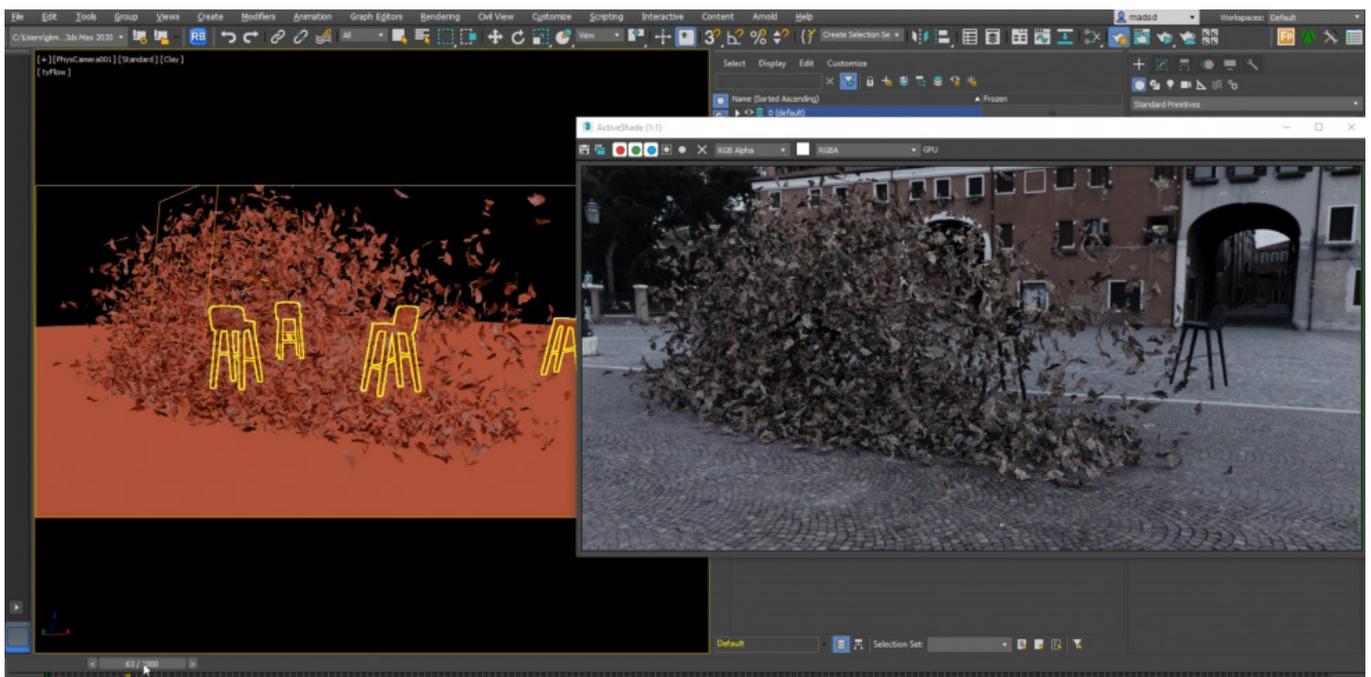## Arnold 6

Get ready for a faster, more flexible renderer with Arnold 6 - now with full GPU!

With this update, Arnold can now be used for production rendering on both the CPU and GPU. From look development to final frame rendering, Arnold 6 with Arnold GPU simplifies how you create and iterate content, giving you the speed and flexibility to keep up with tight production deadlines and scale rendering capacity as needed. We've made it easy to toggle between CPU and GPU rendering, keeping the same settings with a single click. Arnold GPU is based on NVIDIA's OptiX framework and optimized to take advantage of NVIDIA RTX technology.

There are also several new features in this release to help you work faster and more efficiently, a collection of components for Arnold in the USD ecosystem, and updates to Arnold plugins.

Arnold 6 Highlights

Autodesk first unveiled Arnold GPU as a beta release in March 2019 with support for a set number of features, including shading networks, hair, SSS, atmospherics, instancing, and procedurals. Arnold 6 now rounds out the Arnold GPU toolset with updates across lights, shaders, and cameras:

- Improved support for Open Shading Language (OSL)
- Improved support for OpenVDB volumes
- Textures are now loaded on-demand instead of at the start of the render, helping to reduce memory usage and save time from the first pixel

- Time to first pixel is now faster thanks to a number of improvements including more efficient NVIDIA OptiX caching
- Bounding volume hierarchy (BVH) memory used by geometry is reduced by as much as 50% for large meshes
- A first version of the new Shadow Matte shader has been added to the GPU renderer
- Excessive sources of noise have been removed, such as indirect noise in refractions or reflections. GPU noise is now on par with CPU noise when using adaptive sampling, which has been improved to yield even faster, more predictable results regardless of the renderer used.
- Most LPEs (39/46 and counting) are now supported
- The majority of lights are supported, including portals
- All cameras are now supported
- Most shaders are supported

Note that at this time, there are still some limitations to rendering with Arnold GPU.