

References

Viktoriiia Buzovska (s4927022)

Key References

Gend, P. (2017). Maya Dynamics: nHair, Xgen, and Interactive Grooming. [video] Available at: <https://www.pluralsight.com/courses/maya-dynamics-nhair-xgen-interactive-grooming> [Accessed 16 May 2017].

- This tutorial gives a good overview of hair creation methods in Autodesk Maya. It covers the most important basic functions and processes that can be used in Maya 2017 to realistically simulate hair physics, starting with explanations about the nHair toolset, and ending with a description of several methods of hair creation and setting up hair dynamics.

Physics-Based Animation. (2017). *Simulation-Ready Hair Capture*. [online] Available at: <http://www.physicsbasedanimation.com/2017/05/01/simulation-ready-hair-capture/> [Accessed 16 May 2017].

- This paper gives a comprehensive overview on history of hair simulation development, and recounts all prior work conducted in this area. It describes and discusses three main methods of functional hair simulation modelling: mass-spring systems, projective dynamics, rigid multi-body serial chains, and the latest development which is known as Super-Helices.

Ward, K., Bertails, F., Kim, T., Marschner, S., Cani, M. and Lin, M., 2007. A Survey on Hair Modeling: Styling, Simulation, and Rendering. *IEEE Transactions on Visualization and Computer Graphics*, 13 (2), 213-234.

- This paper is a detailed review of hair styling simulation and rendering with an emphasis on different methods for hair animation; for instance, through a continuous medium or disjointed groups of hairs. It gives a decent overview of existing hair simulation techniques, the necessary loss of visual fidelity to achieve greater interactivity, and their adaptability in representing styles and hair dynamics.

Other references

Arif, F. (2017). NVIDIA HairWorks Version 1.1 Showcased with 500K Realistic Hair Rendered in Real-Time on a Single GTX 980. [online] Wccftech. Available at: <http://wccftech.com/nvidia-hairworks-11-demo-500k-hair-gtx-980/> [Accessed 16 May 2017].

Autodesk (2017). Interactive Grooming with Maya. [video] Available at: <https://www.youtube.com/watch?v=e8DyZpDtp3g> [Accessed 16 May 2017].

Butler, P. (2017). Hair Simulation COMP 768 Qi Mo.

CGMeetup : Community for CG & Digital Artists. (2017). Houdini 16 Hair & Fur Tutorial - CGMeetup : Community for CG & Digital Artists. [online] Available at: <http://www.cgmeetup.net/home/houdini-16-hair-fur-tutorial/> [Accessed 16 May 2017].

Dutra, R. (2017). Ornatix for Maya: Ornatix for Maya produces first results. [online] Ephere.com. Available at: https://ephere.com/plugins/autodesk/maya/ornatrix/forums/news/thread_2775.html [Accessed 16 May 2017].

Knowledge.autodesk.com. (2017). Modify and style nHair overview | Maya | Autodesk Knowledge Network. [online] Available at: <https://knowledge.autodesk.com/support/maya/learn-explore/caas/CloudHelp/cloudhelp/2015/ENU/Maya/files/GUID-CAA3760C-0556-4FBF-AA73-118FAE27E098-htm.html> [Accessed 16 May 2017].

Lynda.com (2014). Creating Hair with Maya nHair. [video] Available at: <https://www.lynda.com/Maya-tutorials/Creating-Hair-Maya-nHair/144855-2.html> [Accessed 15 May 2017].

Magenat Thalmann, N., 2000. State of the Art in Hair Simulation. In: *International Workshop on Human Modeling and Animation*. [online] Korea Computer Graphics Society. Available from: https://www.researchgate.net/publication/232612552_State_of_the_Art_in_Hair_Simulation [Accessed 9 May 2017].

Selle, A., Lentine, M. and Fedkiw, R. (2008). A Mass Spring Model for Hair Simulation. In: A mass spring model for hair simulation. [online] New York: TOG Homepage. Available at: <http://physbam.stanford.edu/~fedkiw/papers/stanford2008-02.pdf> [Accessed 16 May 2017].

Snape, J. (2017). Simulating Hair Dynamics.

VDK, p. (2017). Xgen hair style. [online] Interspacedigital.blogspot.co.uk. Available at: <http://interspacedigital.blogspot.co.uk/2015/06/xgen-hair-style.html> [Accessed 16 May 2017].

Wiki.blender.org. (2017). Doc:2.6/Tutorials/Simulation/Hair/Using the Particle Mode - BlenderWiki. [online] Available at: https://wiki.blender.org/index.php/Doc:2.6/Tutorials/Simulation/Hair/Using_the_Particle_Mode [Accessed 16 May 2017].