



# Digital Salon: An AI and Physics-Driven Tool for 3D Hair Grooming and Simulation

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## ACM Reference Format:

Chengan He, Jorge Alejandro Amador Herrera, Yi Zhou, Zhixin Shu, Xin Sun, Yao Feng, Sören Pirk, Dominik L. Michels, Meng Zhang, Yangtuanfeng Wang, and Holly Rushmeier. 2024. Digital Salon: An AI and Physics-Driven Tool for 3D Hair Grooming and Simulation. In *SIGGRAPH Asia 2024 Real-Time Live! (SA Real-Time Live! '24)*, December 03-06, 2024. ACM, New York, NY, USA, 1 page. <https://doi.org/10.1145/3681757.3697054>

## 1 Abstract

We introduce Digital Salon, a novel approach to 3D hair grooming and simulation by integrating advanced AI and physics-based algorithms. This tool enables users to create detailed hairstyles through natural language descriptions, seamlessly blending text-driven hair generation, interactive editing, and high-fidelity rendering within a cohesive workflow. With its innovative real-time simulation capabilities, Digital Salon supports dynamic hair interactions, accommodating 10,000 to 80,000 strands, thus making sophisticated hair design accessible to a wide range of users. This tool significantly enhances the creative process in digital media by providing an

intuitive, versatile, and efficient solution for hair modeling and animation.

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*SA Real-Time Live! '24*, December 03-06, 2024, Tokyo, Japan

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ACM ISBN 979-8-4007-1139-8/24/12  
<https://doi.org/10.1145/3681757.3697054>

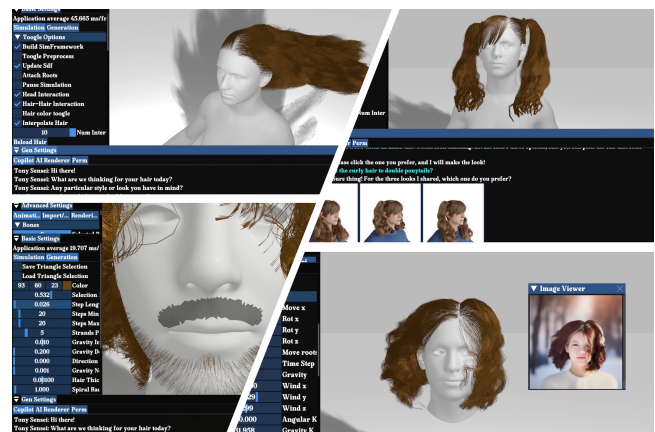


Figure 1: Digital Salon: An AI and Physics-Driven Tool for 3D Hair Grooming and Simulation