Eisen Montalvo

Sr. Principal Computer Engineer

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Sr. Principal Computer Engineer at RTX with more than 25 years of industry experience, and a PhD student in computing (graphics and visualization) at the University of Utah. My research covers real-time rendering and physically based simulation, with papers at SIGGRAPH 2024 and SIGGRAPH Asia 2025 and a SIGGRAPH 2023 Real-Time Live! demo. From 2023 to 2026 I also taught computer science as adjunct faculty at Southern New Hampshire University.

EXPERIENCE

Sr. Principal Computer Engineer, RTX — Nov 2013 - Present
Previously Principal Systems Engineer

Chief Technical Officer, Unident Software Company — Jan 2011 - Dec 2014

Senior Systems Engineer, Raytheon — Jul 1999 - Nov 2012

EDUCATION

Doctor of Philosophy (PhD) in Computing, University of Utah · Computer Graphics and Visualization Track — Est. May 2027

Master of Science in Computing, University of Utah · Computer Graphics and Visualization Track — May 2023

Bachelor of Science in Computer Engineering, University of Puerto Rico at Mayagüez · Magna Cum Laude — May 1999

PUBLICATIONS

1. Elie Diaz, Jerry Hsu, **Eisen Montalvo-Ruiz**, Chris Giles, Cem Yuksel. Implicit Position-Based Fluids. *SIGGRAPH Asia 2025 Conference Papers*, 2025. DOI: 10.1145/3757377.3764005
2. Gaurav Bhokare, **Eisen Montalvo-Ruiz**, Elie Diaz, Cem Yuksel. Real-Time Hair Rendering with Hair Meshes. *SIGGRAPH 2024 Conference Papers*, 2024. DOI: 10.1145/3641519.3657521
3. Gaurav Bhokare, **Eisen Montalvo-Ruiz**, Elie Diaz, Mitchell Allen, Cem Yuksel. Super Fast Strand-based Hair Rendering With Hair Meshes. *SIGGRAPH 2023 Real-Time Live!*, 2023. DOI: 10.1145/3588430.3597247

TEACHING

Computer Science Adjunct Faculty, Southern New Hampshire University — Jun 2023 - Jul 2026

SKILLS

Rendering: Real-time rendering, Path tracing, Spectral rendering, Hair rendering

Simulation: Position-based dynamics, Fluid simulation

Graphics APIs: WebGPU, Vulkan, DirectX 12, OpenGL / WebGL

Languages: C++, Rust, Python, TypeScript

Tools: Unreal Engine, Blender, OpenUSD

LANGUAGES

Spanish (Fluent) · English (Fluent) · French (Learning · working toward CEFR A2) · Japanese (Learning · working toward JLPT N5)

AFFILIATIONS

Association for Computing Machinery