

NOVEMBER 18, 2020 | 6:00PM | THE MID-AMERICA CLUB
HOSTED BY POLYMORPHIC SYSTEMS, INC.



TOPIC: Cinematic Scientific Visualization:
Where Science Meets Hollywood

SPEAKER: Kalina Borkiewicz
Senior Visualization Programmer
Advanced Visualization Lab
NCSA at University of Illinois

WHEN: November 18, 2020 – 6:00PM

WHERE: Zoom Online Presentation
RSVP or call 312.861.1100



Kalina Borkiewicz is a senior research programmer for the Advanced Visualization Lab at the National Center for Supercomputing Applications, University of Illinois at Urbana-Champaign. She spends much of her time writing computer graphics software and tools that are used to convert extremely large scientific datasets into high-fidelity, production-quality, IMAX-screen-ready visuals. She is the primary developer of Ytini, an open-source middleware between the scientific analysis Python package, yt, and the visual effects package, Houdini. She has contributed to documentaries including “Imagine the Moon” (Adler Planetarium), “A Beautiful Planet” (IMAX/Hulu), and “Seeing the Beginning of Time” (Amazon Prime).

Cutting Through the Noise

Scientific visualization for public education serves a vital role in our modern society which communicates with image-based memes and incentivizes out-of-context sensationalism through clickbait journalism. The data visualization community has the unique capacity to engage public audiences by cutting through the noise with meaningful scientifically validated imagery.

The Advanced Visualization Lab at the National Center for Supercomputing Applications (NCSA) has years of experience in creating high-quality cinematic scientific visualizations for public outreach. They work with scientists, film producers, and education experts to create virtual tours through data collected from astronomers, geologists, biologists, and other scientific domains for high-resolution immersive screens.

These films contextualize cutting-edge computational research with a narrative and innovative visual effects to help audiences build a foundational understanding about complex science concepts.

Join Us As We Visualize New Worlds

In this presentation, Kalina Borkiewicz will explore the process of creating cinematic scientific visualizations with scientific and visual effects tools for public audiences.

ABOUT NCSA'S ADVANCED VISUALIZATION LAB

NCSA's Advanced Visualization Lab (AVL) is a “Renaissance Team”, where each member of the AVL team plays a unique role and contributes a variety of skills to the process, development, and production. Our expertise includes advanced graphics and visualization techniques, artistic design, cinematic choreography, multimedia and video production, and data management and render wrangling. The Advanced Visualization Lab bridges the gap between science and the arts. We create high-resolution data-driven cinematic-quality visualizations for public outreach.

NCSA's visualization teams bring their software knowledge and expertise in information presentation to bear on a wide range of topics, from turbulence in liquid fuels to the kinetic energy of a supernova. They work with researchers to identify the best tools for their needs and assist in effective operation of visualization software to generate publication-quality imagery and animations for posters, papers, journal articles and even feature films; they also develop visualization solutions using custom software.

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