



STEAM exhibition

Curated by BeiBei Song and Lisa Sibia

Artists

Executing SciArtists Bianka Hofmann, Alexander Köhn, Mathias Neugebauer, all Fraunhofer MEVIS

Name of Exhibit	About the Artists
1. Digital Medicine, Arts, and STEAM: Before Us Lies Eternity	STEAM Imaging – An Experimental Artist Residency STEAM Imaging II is an artist residency jointly hosted by the Fraunhofer Institute for Digital Medicine MEVIS in Bremen, Germany, and Ars Electronica in Linz, Austria in collaboration with the International Fraunhofer Talent School Bremen, the Nanyang Technological University Singapore (NTU Singapore) with School of Art, Design, and Media, and the NTU Art and Heritage Museum.
2. Beauty of Blood Flow Analysis	

Artist Statement

1. The short film shows different scales of the human body, from digitized microscopic lymphoma tissue examined with the molecular cytogenetic technique Fluorescent in situ hybridization (FISH) to detect specific abnormal changes in DNA, to 3D reconstructions of two vessel systems of a liver used in patient-specific treatment planning to a whole-body MRI.

This film won “Industry Award for Best Infographic” at Raw Science Festival, held in January 2019.

2. This short film shows the dynamic reconstruction of the blood flow of a healthy human heart. New imaging methods for flow visualizations as shown are integrated into software assistants to help doctors determine how the blood flow changes due to heart diseases without using a catheter. They help calculate how the blood pressure and shear forces on the wall of the blood vessels change for patients with heart valve problems. Additional patient-specific numerical flow simulations could help estimate the benefits provided by a new heart valve before an intervention; 2018.

For the 360° half dome edit we received the “Industry Award for Best Immersive Media” in January 2018. The movie was also nominated and shown at the 12th FullDome Festival, planetarium Jena, Germany, in May 2018.