

Luiz Velho is a Brazilian scientist and one of the leading figures in **computer graphics, vision, and new media** in Latin America. He is a **Senior Researcher and Full Professor at IMPA** (Instituto de Matemática Pura e Aplicada, Rio de Janeiro) and the creator and head of the **VISGRAF Laboratory**, a pioneering research lab focused on visual computing.

Highlights of his career

- **PhD from the University of Toronto** (Dynamic Graphics Project) and postdoctoral research at **MIT Media Lab**.
- Early contributor to **modeling, rendering, and computational imaging**, including work on wavelets, subdivision surfaces, photorealistic rendering, and interactive visualization.
- Has been deeply involved in **immersive media, virtual reality, 3D reconstruction, and AI-driven new media**.
- Advisor and collaborator to many researchers, artists, and technologists in Brazil and internationally.
- Has produced a long list of **publications, software systems, artistic projects, and research platforms**, often bridging science, mathematics, and multimedia art.

Influence and contributions

- One of the architects of Brazil's research community in graphics, leading initiatives in:
 - **3D modeling and geometry processing**
 - **Computational photography & omnidirectional imaging**
 - **Machine learning for graphics**
 - **Interactive storytelling and multimodal AI**
- Frequently involved in major conferences such as **SIGGRAPH** and **SIBGRAPI**.
- His work often connects **mathematics, computer graphics, and digital art**, influencing both academic research and creative industries.

Current directions

Luiz Velho's recent work explores:

- **NeRFs and Gaussian Splatting**
- **Functional gradient methods for radiance fields**
- **Omnidirectional stereo rigs and calibration**
- **AI-driven multimodal storytelling platforms**