Introduction 101

Institute of Micro- and Nanostructure Research

Introduction Adam Kalisz:

Blender Foundation CERTIFIED TRAINER

- 31 years old
- 17 years of experience with 3D computer graphics
  - 8 years using Cinema 4D
  - since 9 years: Blender 3D only

- A/V Media Designer (2009)
- Bachelor‘s degree Media Engineering (2015)
- Blender Foundation Certified Trainer (2016)
- Master‘s degree Computer Science (2018)
- Co-Founder NuremBUG (2010)
- Working in Autonomous Robotics (PhD student @LIKE, FAU)

Introduction Gottfried Hofmann:

Blender Foundation CERTIFIED TRAINER

- Founder: www.BlenderDiplom.com
- Co-Founder: NuremBUG
- Co-Author: The Cycles Encyclopedia
- Blender Foundation Certified Trainer
- Articles published in c't, Digital Production, Linux Magazine User, Linux Pro Magazine, Redshark News, Heise Online, Blender Cookie, CG Tuts+
- Presentations/Workshops at FMX Stuttgart, Blender Conference Amsterdam, BlenderDay Germany, Libre Graphics Meeting etc. pp.
- Diploma Computer Science FAU Erlangen-Nürnberg
- 8 years of experience in Blender

Seminar schedule:

Day 1: 17.01.2019	• Fundamentals	(30 Minutes)
	• Modeling + Workflow	(60 Minutes)
Day 2: 24.01.2019	• Materials / Shader-Nodes	(45 Minutes)
	• UV Unwrapping + Texturing	(45 Minutes)
Day 3: 31.01.2019	• Rendering	(30 Minutes)
	• Questions + Custom Projects	(60 Minutes)

Fundamentals

What is Blender 3D?

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It is a free and open source 3D creation suite!

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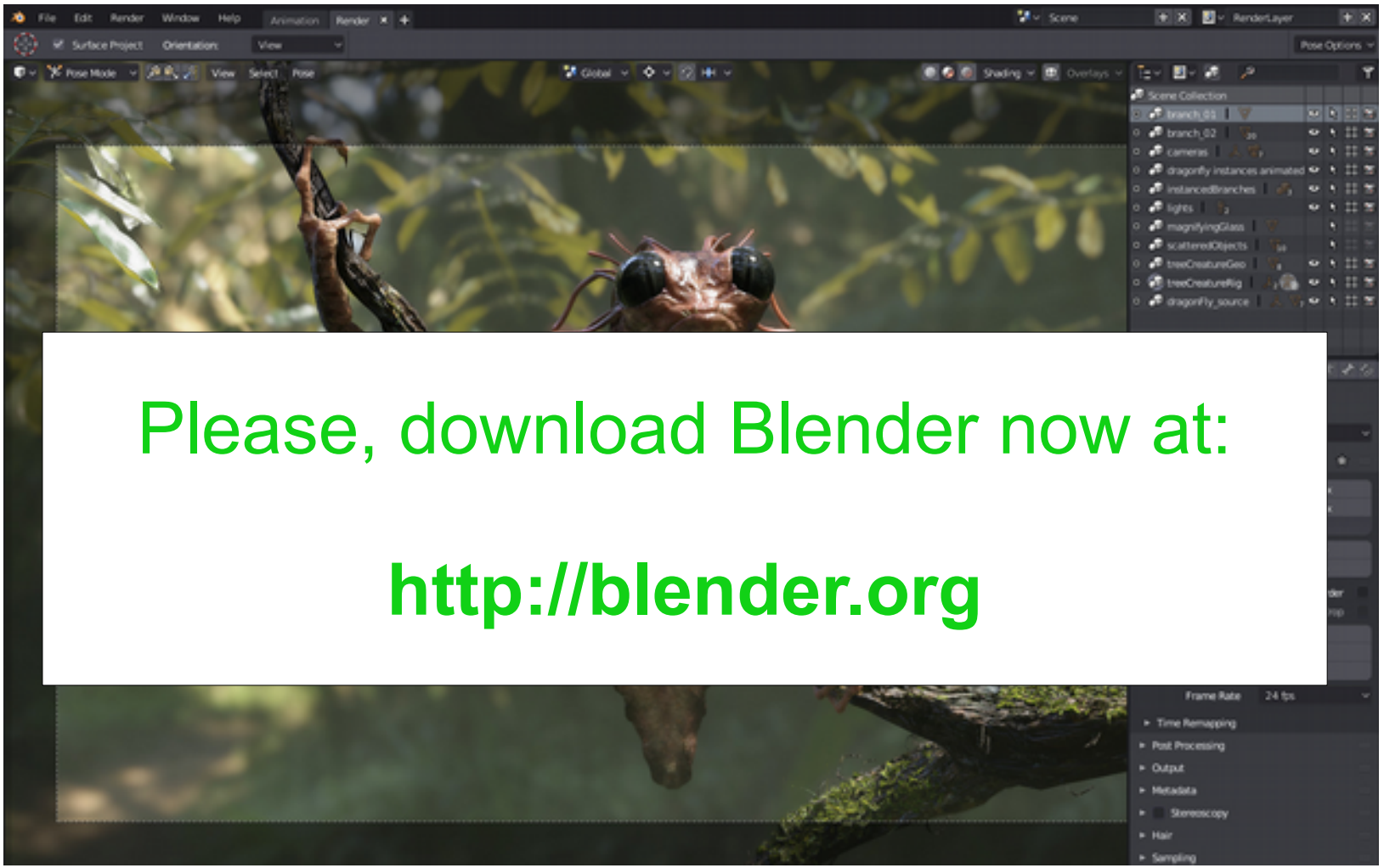

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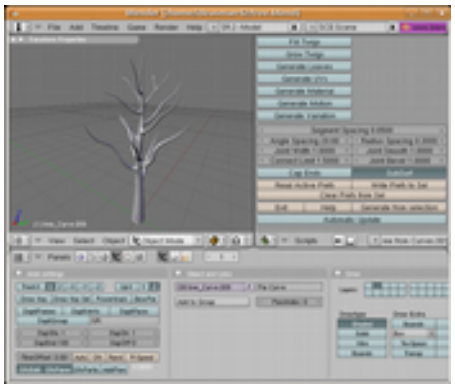
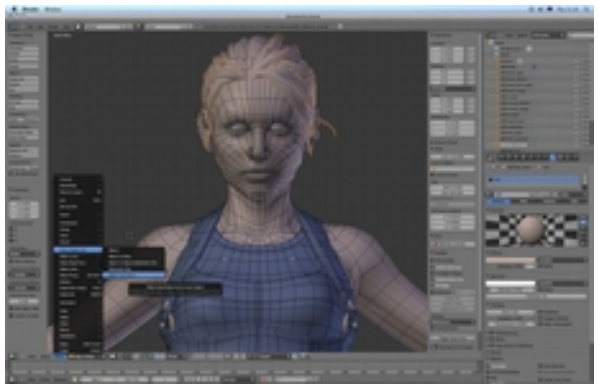
Why Blender 3D?

- Open Source (free)
- Popular, a lot of tutorials and help online
- On par with commercial software
- Active development, new features added daily
- Knowledge useful in other areas (3D printing, simulations, games)



Blender 2.4 (2006)



Blender 2.5 (2010)

Blender 2.8 (2019)

What can Blender do?

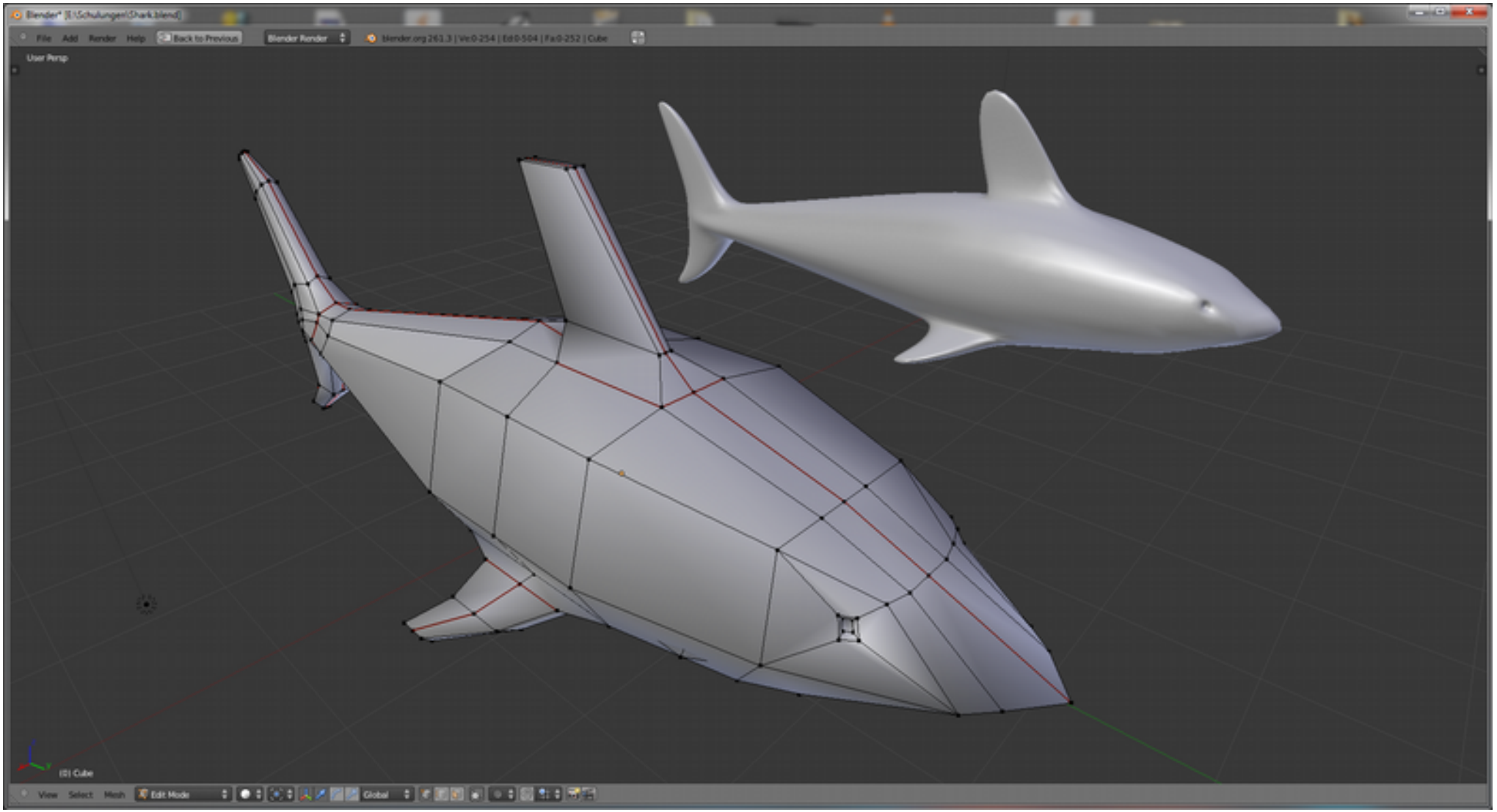
- Modeling
- Texturing
- Animation (2D and 3D)
- Sculpting
- Game development
- Simulations (particles, fire, smoke, etc.)
- Compositing
- Video editing
- Motion Tracking (Visual FX)
- And much more...


"Colibrì" by Giuseppe Albergo

Production Pipeline

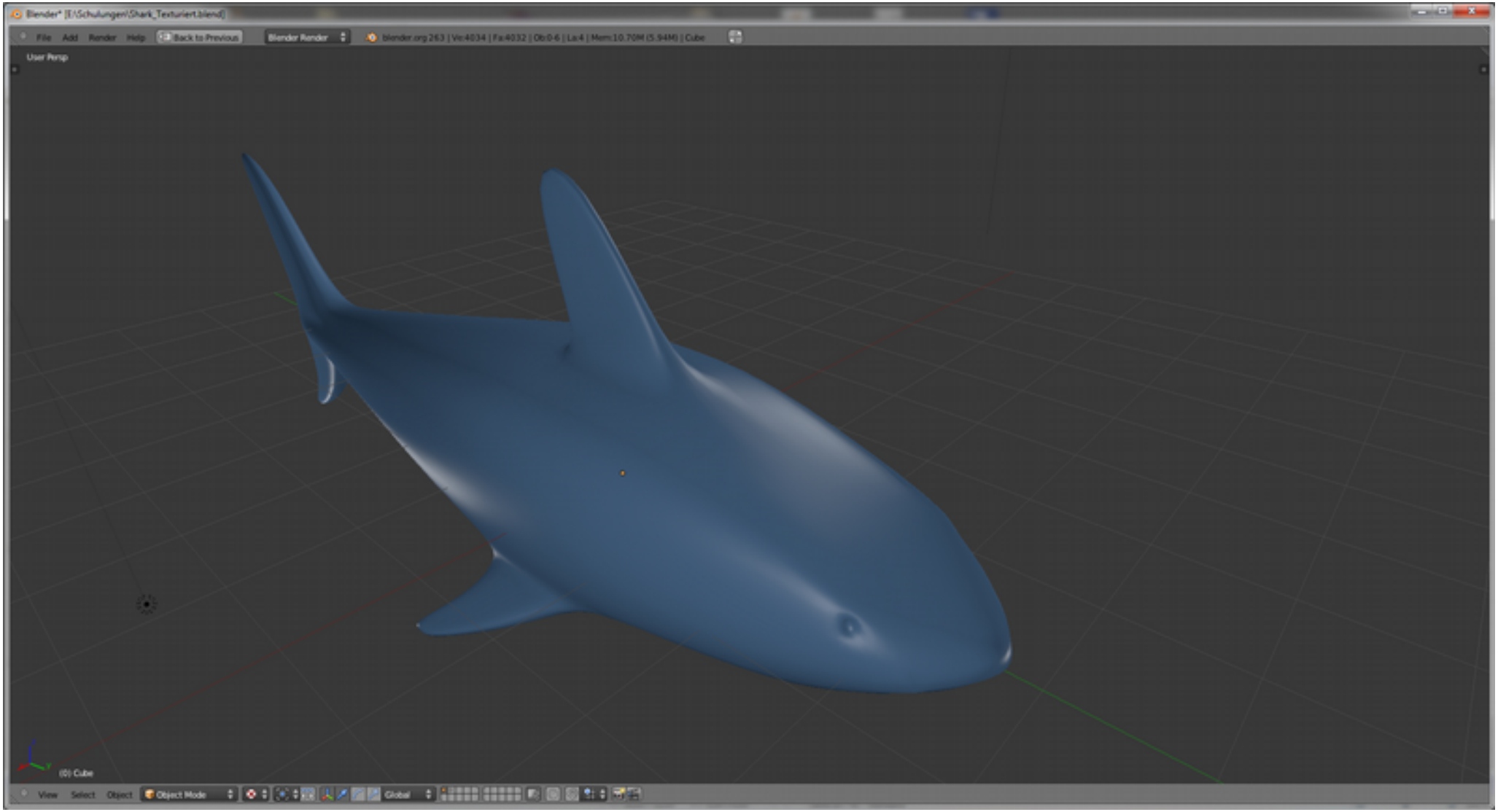
Modeling

How a 3D mesh is created

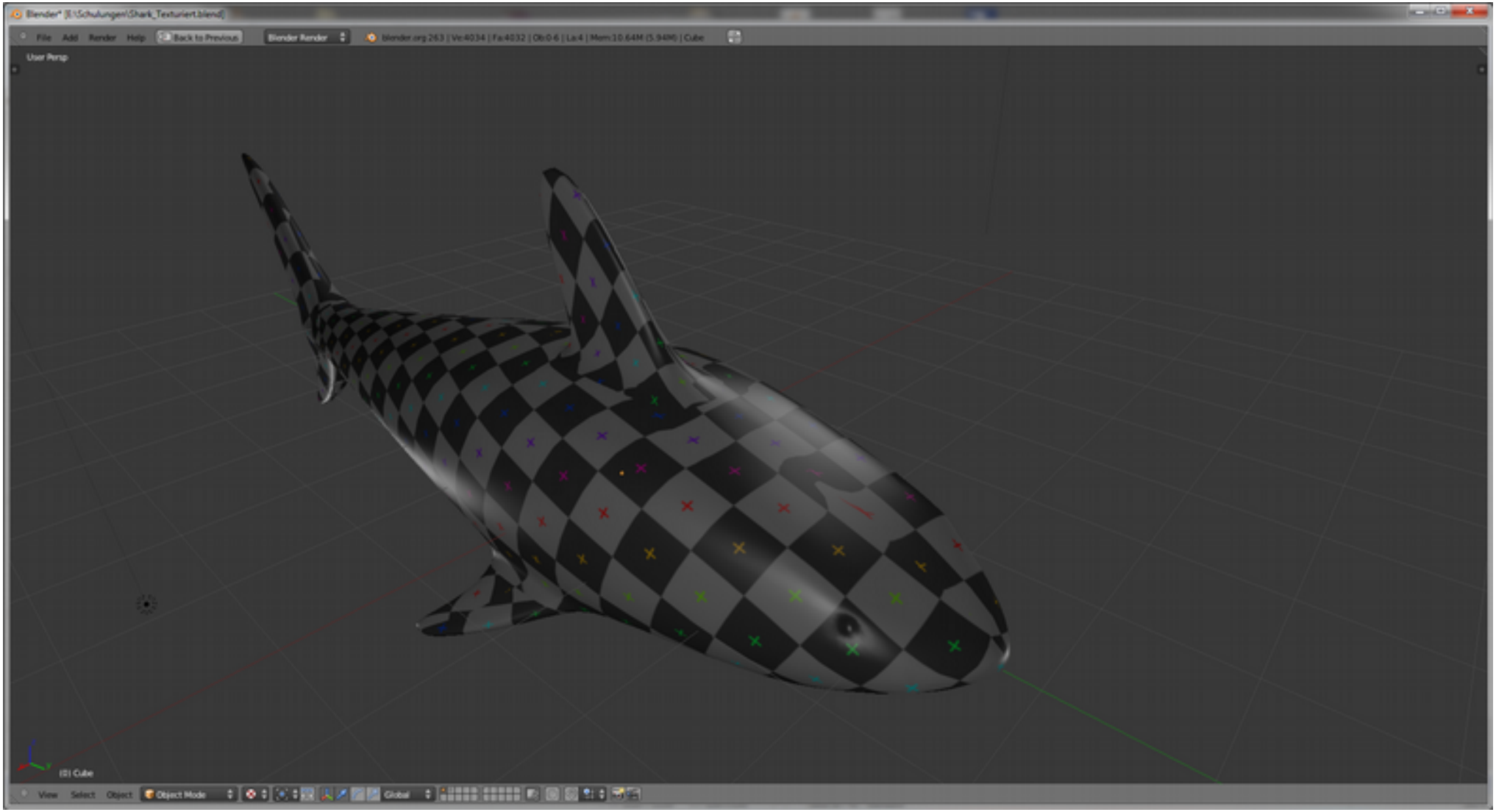


Shading

Materials (Shader: „BSDFs“)

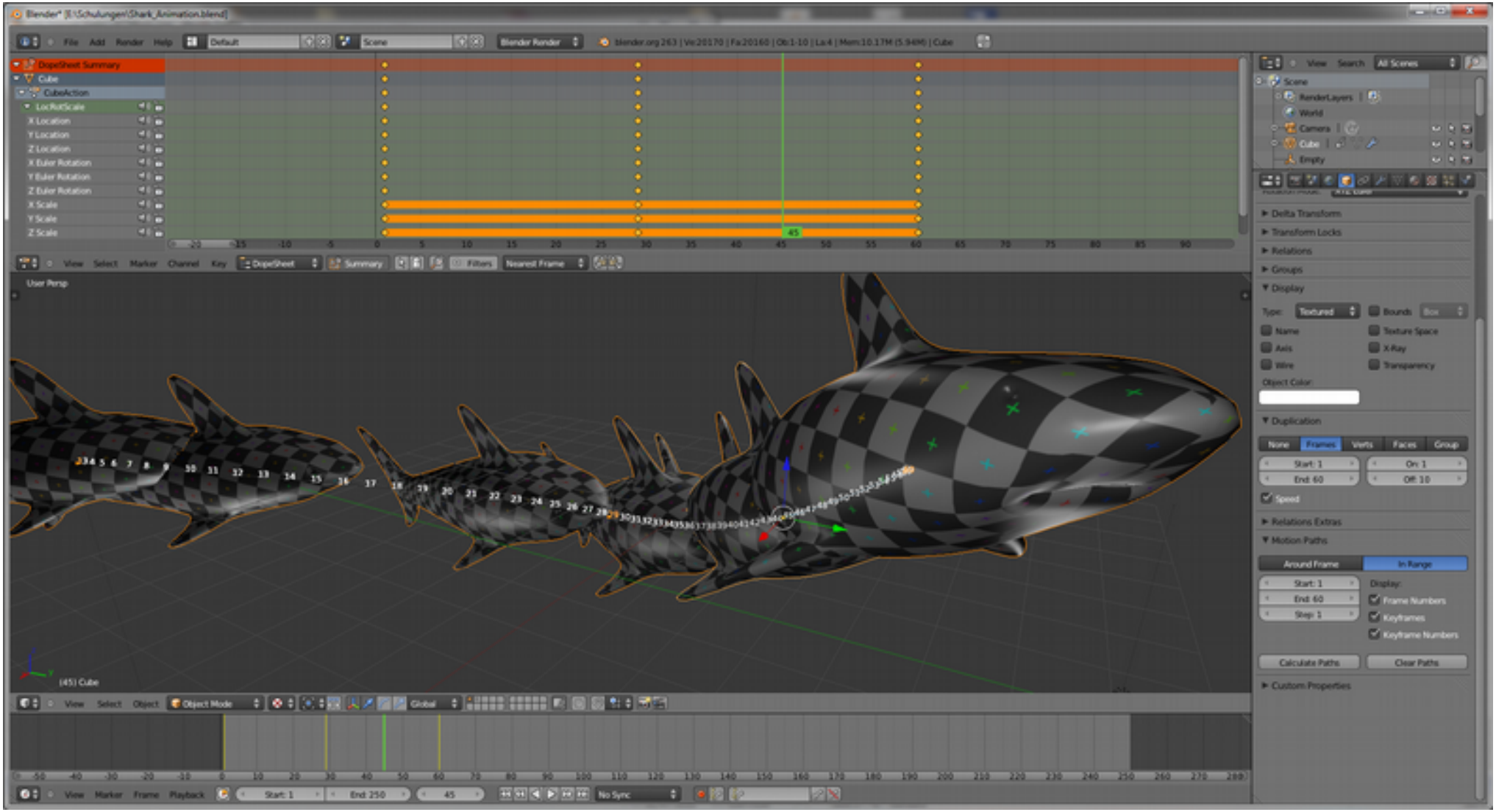


Textures



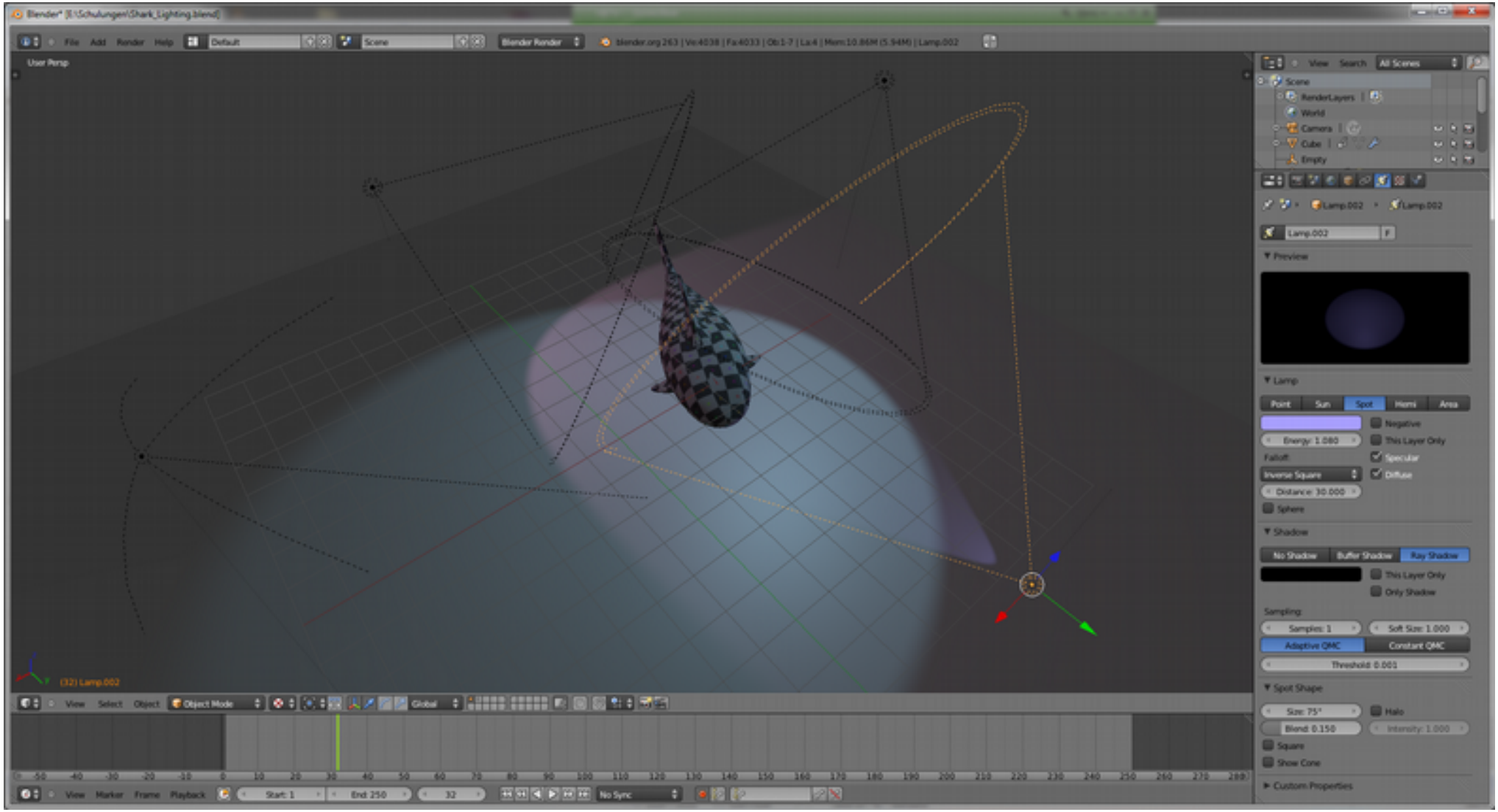
Animation

Keyframes



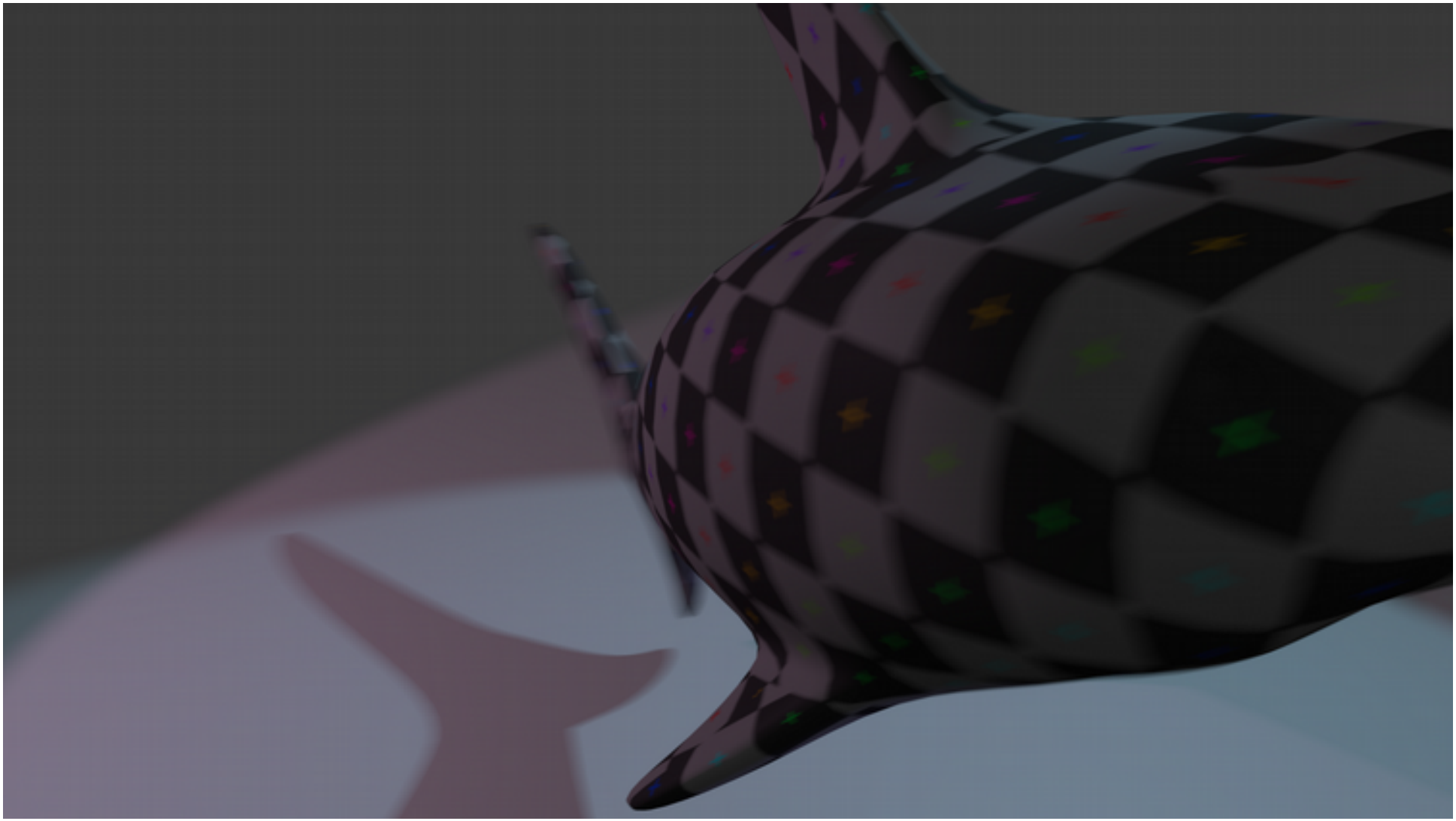
Lighting

Light Sources

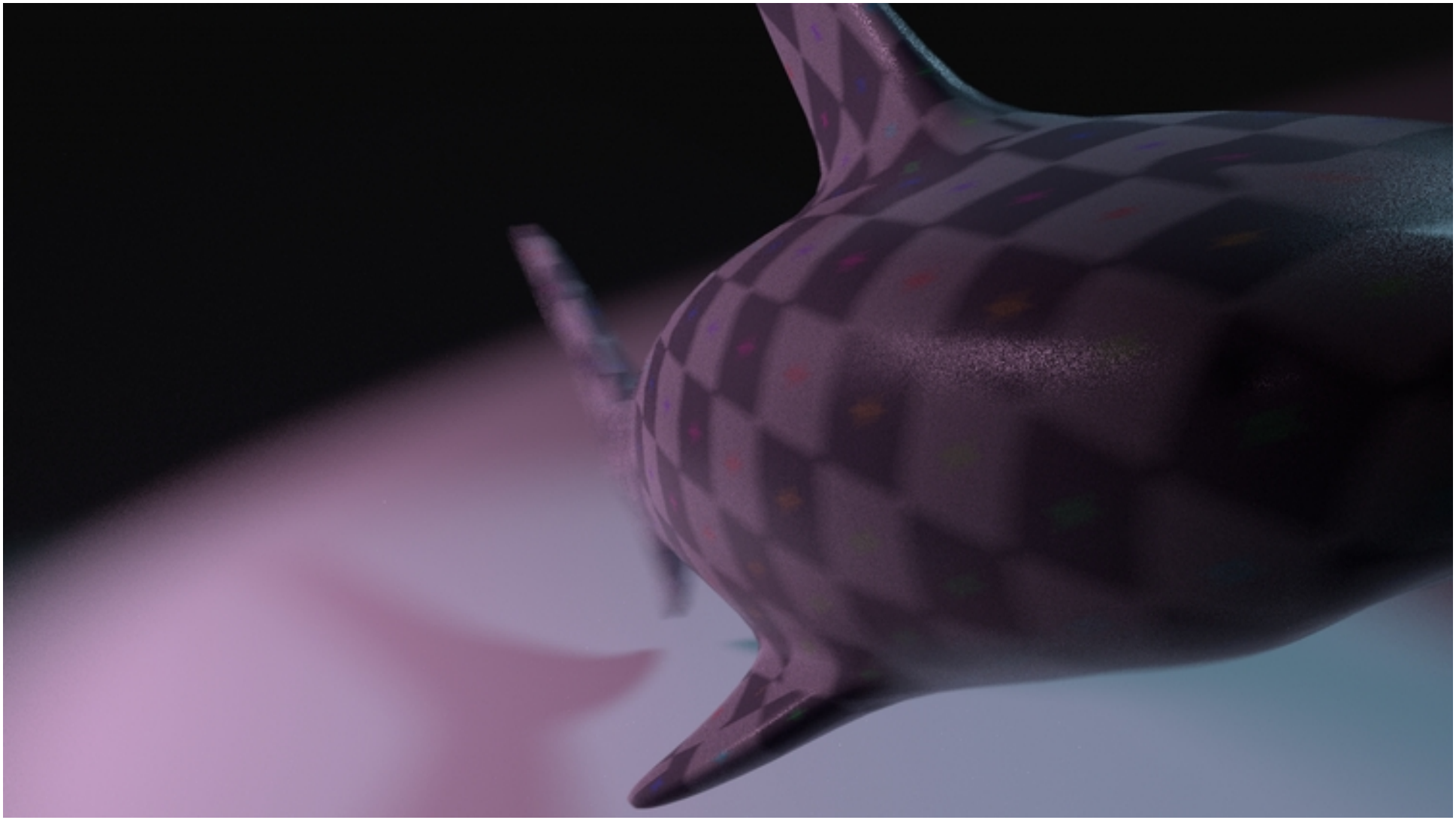


Rendering

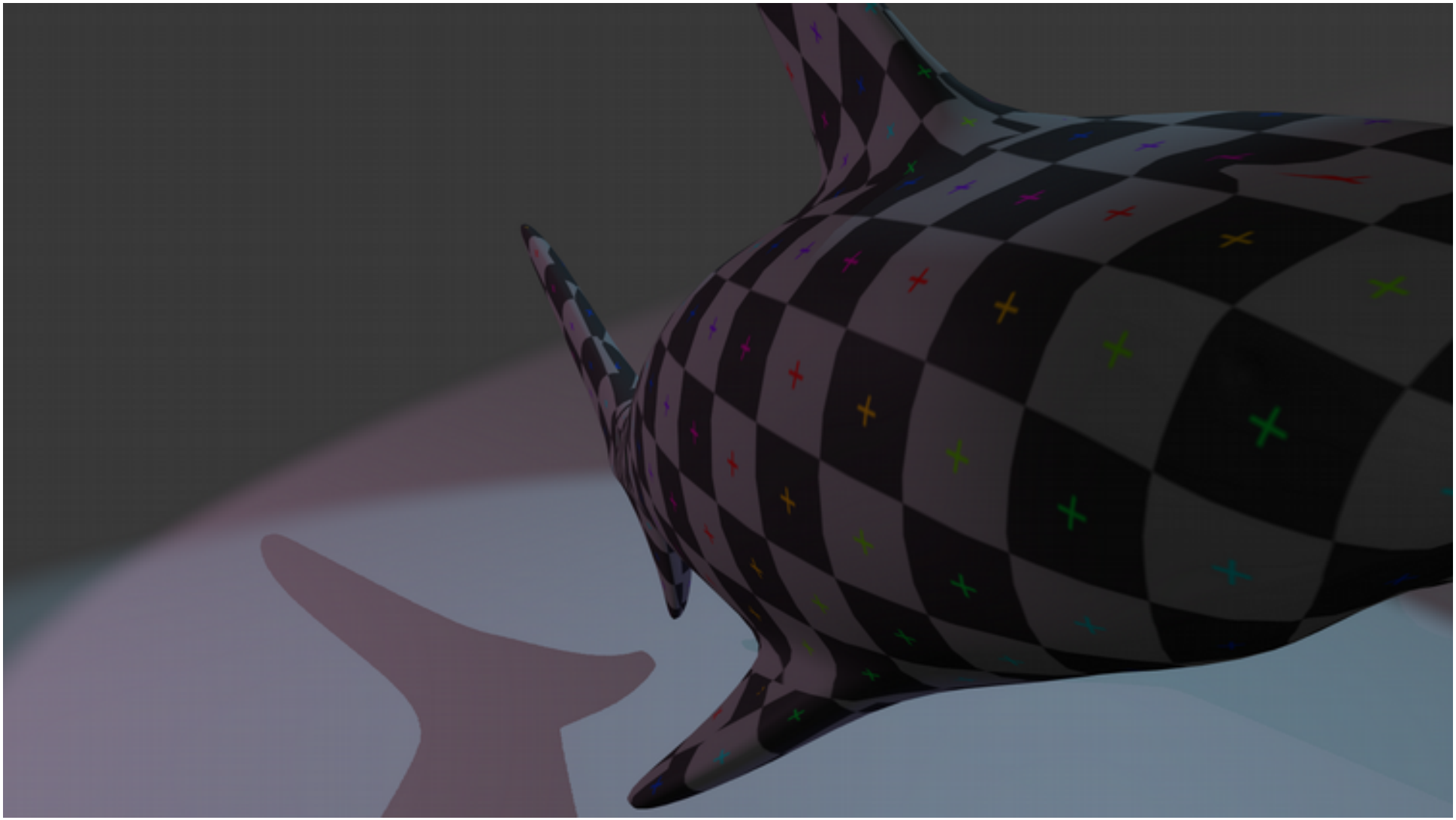
Raytracing (Blender Render, 0:49 Minutes)



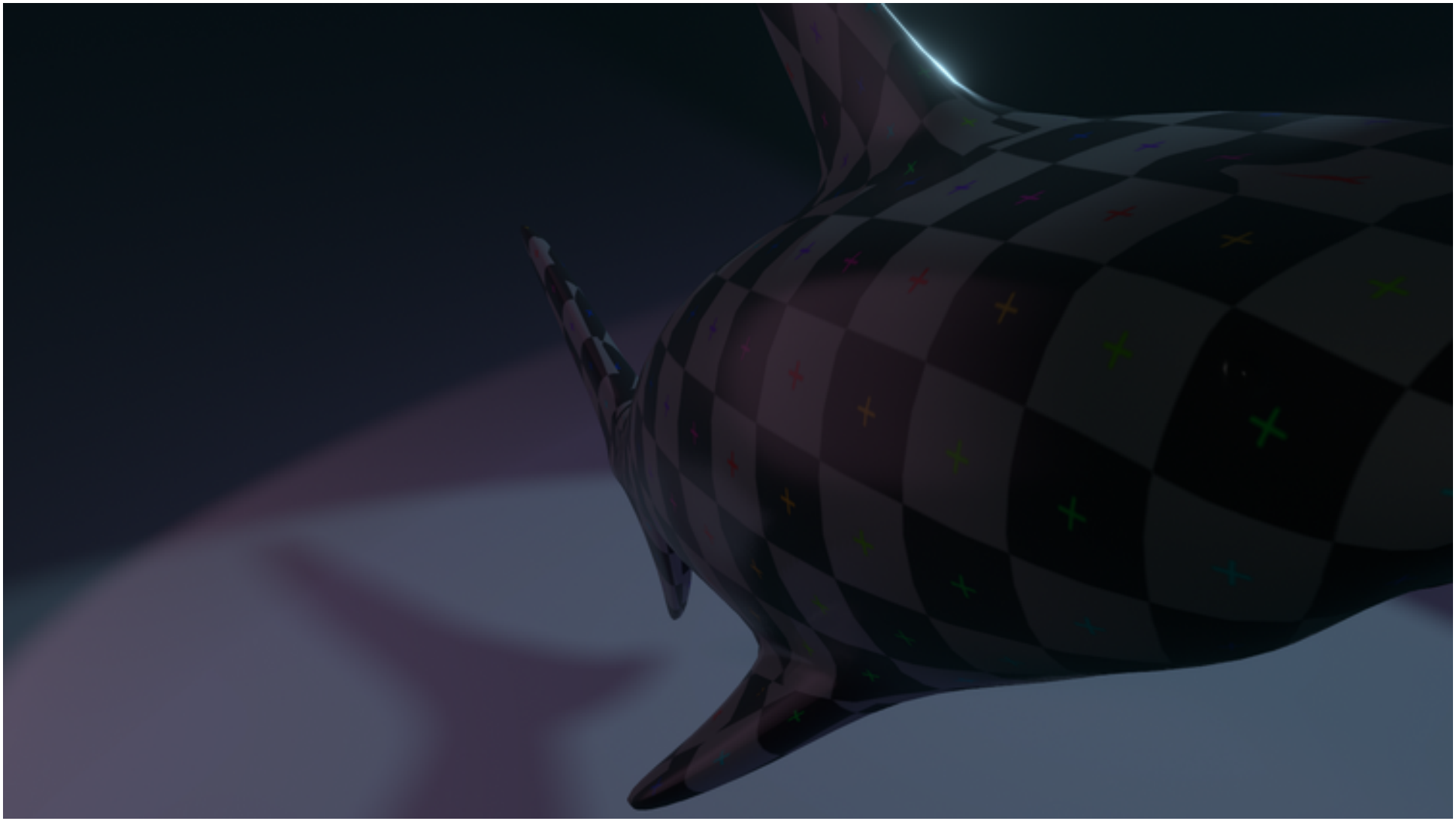
Pathtracing (Cycles Render, 5:39 Minutes)



Rasterization (OpenGL < 3.0, Blender <= 2.79)

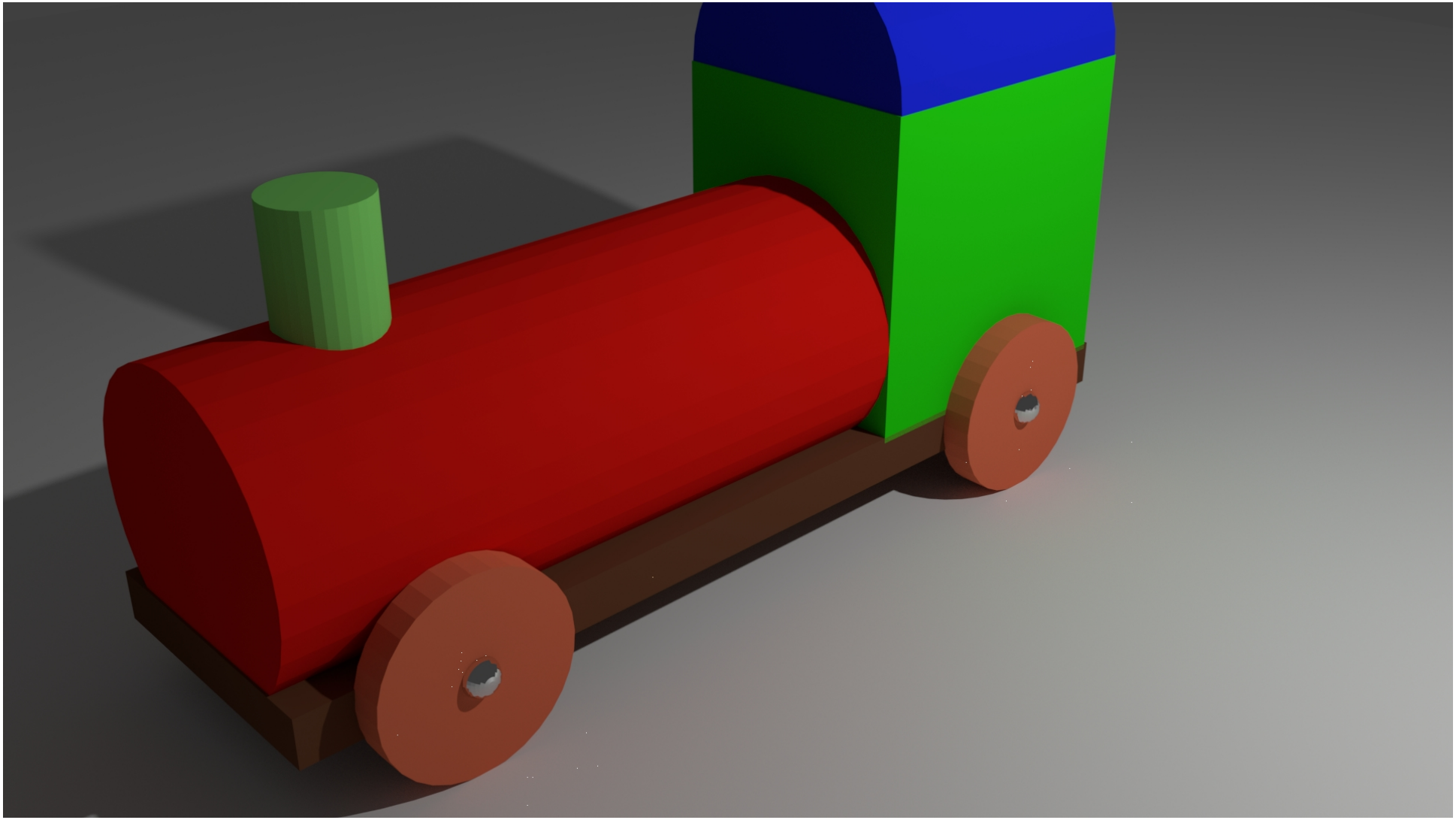


Rasterization (OpenGL >= 3.2 Core, Blender 2.8 Eevee)



Our Project

Toy Train



Additional material:

http://Training.Kalisz.co