

Computer Graphics Summary and Outlook

Matthias Teschner



Introduction to Computer Graphics

Rendering

Modeling

Simulation

Homogeneous Notation

Ray Casting

Bézier Curves

Particle Fluids

Rasterization

Piecewise
Polynomial
Curves

Phong

Specialization Courses – Topics

Rendering

Light: Radiometric Quantities

Material: BRDF

Light / Material: Rendering Equation

Radiosity

Stochastic Raytracing

Simulation

Particle Motion

Elastic Solids

Fluids (Particles and Grids)

Rigid Bodies

Contact

Specialization Courses – Concepts

Rendering

Finite Element Modeling

Monte Carlo Integration

Simulation

Numerical Integration

Smoothed Particle Hydrodynamics

Linear Systems

Spatial Data Structures

Projects – Theses

Rendering Track

Simple Raytracer

Stochastic Raytracer

Simulation Track

Simple Fluid Solver

Incompressible SPH Solver

Performance / Quality / Capabilities

Research

Rendering – Modeling – Simulation



© Spellwork Pictures

Rendering – Modeling – Simulation

© Spellwork Pictures



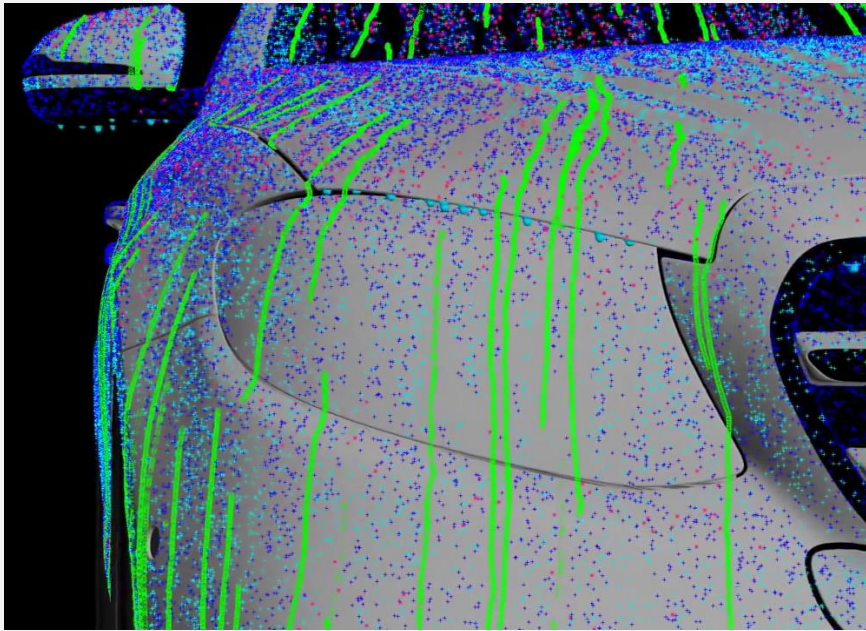
Modeling



Rendering

Rendering – Modeling – Simulation

© Spellwork Pictures



Animation



Rendering