# A Gallery of Mathematical Ducky Shaders

## CS 519 ("Shaders") Class Assignment – Spring Quarter 2010

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**Oregon State University**
**Computer Graphics**

### Islam Almusaly

I modeled a small pond and gave everything a texture. I added noise to the ripple normals and then added the cube map to fake the reflection in the pond.

A ducky whose surface has been treated with parallax mapping.

### Nathan Cox

Using an open-sea cubemap, this shader use uses refraction inside each oval and reflection outside.

### Jennifer Davidson

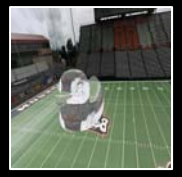
This is a take-off of Magritte's "The Treason of Images" painting, where I replaced pipe with duck. I discarded fragments where the color of the fragment would've been white.

### Qingqing Deng

The glass duck in the oven is created using a fire-photo refractive cube map. The melting mixes the coordinates of the original vertices with a disk.

### Kyongwon Lim

A reflective OSU Beaver-Ducky



A refractive ducky in the OSU football stadium.

### Brian Jackson

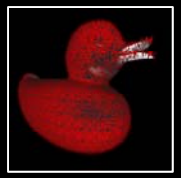
A shader that adds noisy displaced bacon folds to the ducky.

A burlap shader

A point cloud ducky stuck in a tornado.

### Brandon High

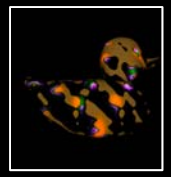
The vertex shader draws ovals and colors them using the refraction vector from a star cubemap. A brushed metal texture is used in between the ovals.



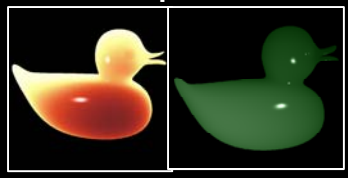
Multiple duckies were rendered, each with an increasing amount of vertex shader noise to make this furry ducky.

### Wojtek Rajski

A ducky covered with oil, being lit with a disco ball.



### Christophe Torne



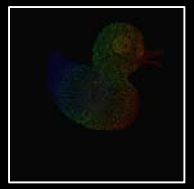
This is a two-pass rendering to create the appearance of subsurface scattering.

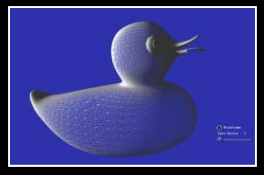
### Evon Silvia

Torn from today's headlines! This uses a blended stripe shader keyed off texture coordinates for its "shirt" and a green high-frequency noise to pattern the head.

### Alex Wiggins

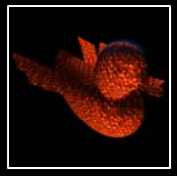
This shader creates the appearance of a LIDAR point cloud ducky.





This ducky uses a tessellation shader to implement the PN Triangles algorithm.

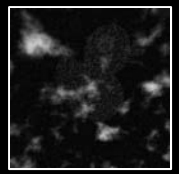
### Ben Tribelhorn



The ducky has had its geometry altered in the vertex shader to give it wings

The winged meteorite duck is re-entering Earth's atmosphere over the cascade Mountains.

### Matt Viehdorfer



This is a ducky constellation. Around key points, the area is divided into "cells" within a nested loop similar to Voronoi diagrams.

A two-pass rendering is used to give the duck the appearance of camera depth-of-field.