

SHU LOW

lighting reel breakdown

<https://vimeo.com/shulow/lightingreel>

MY FRIEND THE SEASNAIL



My Lighting and Modelling reel at Vancouver Film School is inspired by French Artist Olivier Derouetteau's beautiful illustration, "The Seasnail" with a lovely story. In Olivier's words:

It is the story of a little girl who found an egg on the beach. She put it in is bedroom (like E.T.) and one day a cute small snake come out of the egg. Days after days they became friends but the seasnail was bigger and bigger...And there was a moment, he was so big that he go away and get free.

It features the magical Seasnail in an enchanting world with 17 buildings, 14 bridges and 155 lamp posts. Each piece of architecture (including roof tiles!) is built to real world scale and measurements, as far as possible (while staying true to Olivier's concept art). In this way the world looks convincing where lighting is all in linear workflow.

Rendering is very efficient and fast using Final Gather Maps, which also reduce flickering. MIP maps are used for textures, which are gamma corrected. Textures are mixture of procedural (seasnail), from photographic images and painted (in Mudbox and Photoshop).

Software

Maya, Mental Ray, Mudbox, Photoshop, Crazy Bump, Nuke, Premiere Pro

Credits

Created by Shu Low - layout/animatic, modelling, shading, texturing, lighting, rendering, editing

Inspired by illustration of Olivier Derouetteau, compositing by Sean Kalra, sound design by Matthew Thomas, post production by Rob Woods

Honors

Featured in [Autodesk SIGGRAPH 2014 booklet #INSPIRATION](#)

Also in Autodesk Ad: Autodesk Media and Entertainment 2015 Portfolio: [Annecy MIFA 2014 brochure](#), CGSociety Newsletter, [Autodesk Imagine Create Design Tour](#)

CG Student Awards 2014 Bootcamp VFX/Animation Finalist (Canada)

PHOTOREAL LIGHTING: EXTERIOR MORNING



Crayons and trains (toy and real) are my favorites. So I love lighting this piece. The lighting is straight forward, mainly using Arnold Skydome light and Physical Sky shader - adjusting for a morning feel and getting the light and shadows to match the plate. A lot of fun is in shading and texturing - getting the right specs and subsurface scattering on the crayons, creating a whimsical fairy tale crayon-like drawing (of my character *Silver*) with Photoshop and Mudbox, and painting dirt and grime with Mudbox on the giant toy train. Adding dewdrops on the toy train and crayons (with brownian texture) is a nice challenge to complete the look, matching dew drops on grass in the plate. Compositing in Nuke is a blast! The main challenge is the uneven shadow on the grass, and breaking up the shadow to match the bluish tint of the shadows in the plate. Details [here](#).

Software

Maya, Arnold, Mudbox, Photoshop, Nuke

Credits

Lighting, shading, texturing and compositing by Shu Low

Plate and toy train model from [tdu](#)

PAINTING IN STANLEY PARK



I always love oil painting, so why not put my painting in Stanley Park! My lighting, shading and texturing of artist's workspace matching the lighting of this beautiful Stanley Park photo. Key directional light is the sun, casting shadows matching those of the plate. Bluish sky fill, yellowish grey bounce from the ground and turquoise bounce from nearby cars are added using point light, spot lights and volume lights, together with a spotlight that accents the specs on the artist's workspace. Compositing is done in After Effects with beauty, occlusion, colorid1, colorid2 and zdepth render layers.

Software

Maya, Mental Ray, Photoshop, After Effects

Credits

Lighting, shading, texturing and compositing by Shu Low

Models from artist's studio, modelled by Giorgio Luciano ([3d Render lighting challenge #25 Artistry](#)), Vancouver Stanley Park photo by [Andreas Meier](#)

PHOTOREAL LIGHTING: INTERIOR ARTIFICIAL LIGHTING



Who left the cello in the New York tube? Three long Arnold area lights emit light from fluorescent tubes in the interior of the train with a back area light accentuating light above the cello. Stand-ins of the surrounding space around the cello (train window, wall and seats) are setup with projection shader with the image of the plate projected onto the stand-in geos from the render camera. This allows for the surrounding to affect the cello, and conversely the cello to affect the surrounding in terms of bounce, reflections, shadows as well as AO in render layers, which are composited in Nuke.

Software

Maya, Arnold, Photoshop, Nuke

Credits

Lighting, shading, texturing and compositing by Shu Low

Cello and stand-in models and backplate from [tdu](#)

PHOTOREAL LIGHTING: EXTERIOR CAR SCENE



Lighting, shading and texturing the Fisker Karma is so much fun with lots of neat challenges! Arnold Skydome with HDR image is used for image-based lighting, and the key sunlight is simply a point light. The HDR image has the sun painted out, but alignment is based on an LDR image with the sun intact. The sun is adjusted according to the sun position in the image, and to have the ground shadow looking right.

As the car is highly reflective, reflection of the environment has to be as convincing as possible, so simply having the HDR on Skydome will not do. Simple stand-in geos for the fence, ground and the house on the right are created and shaded with a shader with cam projection texture, projecting the plate onto the stand-ins. This also serves to provide indirect illumination of the environment back onto the car.

The nice thing about Nuke is that it allows me to adjust reflection of each part of the car very easily,

modulated with fresnel pass (facing ratio). Also adjusted the specs (direct and indirect) of each part, and added some rimming on the car using a rim pass (lighted with Arnold area light to create some rims on the car).

The uneven ground shadow on the pebbly road is achieved using luminance keying of the plate, and channel merging (minus) the inverted shadow cuts out the shadow with uneven edges according to the pebbles. I also breakup the core of the shadow by bringing back the luminance at the shadow core as the mask to grade the shadow, so that there is variation of colors and luminance due to the pebbles, just like the real shadows in the plate. The shadow is given a bluish tint matching that of the nearby shadows from the plate. Details [here](#).

Software

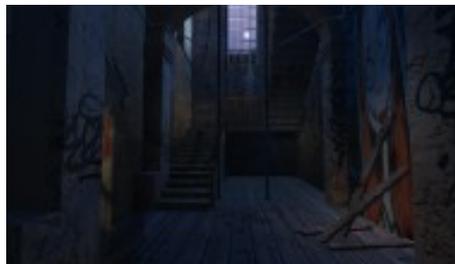
Maya, Arnold, Photoshop, Nuke

Credits

Lighting, shading, texturing and compositing by Shu Low

Car model and backplate from [tdu](#)

HAUNTED HALLWAY



I love graffitis, so I used photos I've taken in Sydney (a blue bat on wall near College of Fine Arts), as well as exported frames from videos we took of graffitis in Newton for my film/video class. I especially love the girl with the stitched mouth (Corpse bride?) which adds zest and atmosphere to the place.

In this piece I wanted to experiment with various techniques - Physical Sun and Sky with Portal light (area light at facing window with mia_portal_light shader) is the key light from the dusk moon. The render camera has mia_exposure_simple lens shader and mia_physicalsky environment shader with a hazy bluish tone. Dusk sky is still a huge bright light source (I turned off all lights in my apartment at dusk to get a sense of it!), so I've skylight (setting sun with rising moon!) coming in from the left and right windows to create pools of interesting light shapes and shadows on the wall. To break up light on walls and floor with shadows (things that go bump in the night?), I used shadow-only spot lights from the facing window and the right window.

I imagine a low dim stairway wall lamp lighting up the stairway, creating glints on those stair rails, balusters and newels, accentuated by a light-linked facing window spotlight. And there is this crooked dim hanging lamp at the entrance archway revealing a hauntingly beautiful girl on the wall. Fill and bounce lights bounce off walls, and together with ambient occlusion (with color bleed so occlusion are affected by illumination) on mia_material_x_shaders, enhance the illumination and occlusion.

There isn't compositing for this piece (except to put in the dusk moon image) - so this is just straight Maya Mental Ray render.

Software

Maya, Mental Ray, Photoshop

Credits

Lighting, shading, texturing and graffiti, moon, sunset photos by Shu Low

Graffiti frames from video taken at Newton in Sydney by my film/video class team

Haunted Hallway modelled by Dan Wade ([3d Render lighting challenge #8 Haunted Hallway](#))

THE LIBRARY



What happens when the library is closed for the day? Lots! To start off, Anna is lighting the candles on the chandelier and the library comes alive in a magical dimension!

I added candles to the chandelier. The candle flame is a simple setup (from [Floze's tut on candle light](#)) with a billboard object of a flame image placed closely to the wick, and the candle light is a spherical area light elongated to the shape of a flame above the wick and set to a color temperature of 1800K via `mib_blackbody` linked to its color map. A volume light fills in as ambient light around the candles. A directional accent light rims Anna.

From the archway the dusk sun and skylight streams in (from a key spotlight and image-based light with HDR). There is also a bluish volume light at the archway (a ceiling lamp?) - to add interest.

The lampposts emit light with a spherical area light set to color temperature of 3200K via `mib_blackbody` linked to the color map of the light.

Software

Maya, Mental Ray, Photoshop

Credits

Lighting, added shading and texturing, and Anna model by Shu Low

The Library models with shaders, textures from Vancouver Film School, candle flame photo from [Floze: Six Tuts on Light and Shade, Part V, Candle Light](#)

LIGHTING FOR ANIMATION: INTERIOR



Who is this guy smiling to himself and deep in thoughts? A secret agent? Batman?

It is a nice challenge doing this stylized piece. I re-shaded Gumosa with Arnold shaders (original is mental ray) and adjusted the interior set shaders, adding specs and bumps to get some “bling”.

I like to imagine the scene lighting up with the flick of a switch. With all practical lights off, moonlight streams in from the foreground (a balcony or a window?) showing a hint of our hero character - very atmospheric! This is lit by two large area lights. Then the table lamp is turned on, revealing more of our hero character in his safe haven. This is a point light at the bulb and various spot lights. Then the side and back rooms lamps are switched on in turn, accenting the painting and filling the space. And finally the

chandelier light is turned on - the key is a point light, while each lamp shade has a lower intensity point light, and coupled with various spot lights, lighting up surrounding targeted areas - on the character, floor, ceiling, and objects in the scene.

Compositing in Nuke is used for “sweetening” the scene - a matte layer of the chandelier and table lamp shades is used to add glow using a glow node (adjusting tint and brightness) and a grade node (fine tuning glow) merged over the beauty pass. Also added some dust - using a grade node to lift a roto’ed area around the chandelier light creates a subtle dusty falloff from the chandelier. A vignette is also added to the top left corner with a grade node (multiply).

I enhanced the specs (shuffled from beauty the direct and indirect specs AOVs) just a tiny bit. And added depth subtly (using the Zdepth AOV in the ZDefocus node), and a little touch of softening with a Soften node. Details [here](#).

Software

Maya, Arnold, Photoshop

Credits

Lighting, shading, texturing and compositing by Shu Low

Interior set from [tdu](#), [Gumosa](#) character from [boutique 23](#)

Honors

Thanks boutique 23 for [featuring my work in Best of B23](#)

MUSIC CREDITS

“Rainbows”, “On My Way”, “Vanishing”, “Dewdrop Fantasy”, “Floating Cities”

Kevin MacLeod (incompetech.com)

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