

# Workshops



e338

## Artist PROFILE

**Loïc Zimmermann**

**COUNTRY:** France  
**CLIENTS:** Quantic Dream, Autodesk, Sparx Animation, les Gobelins, 263 film, Alias Wavefront, Art motion Lab, le CNNITH



Loïc graduated with a masters degree in fine

art and has been a teacher, CG artist, lead artist, character modeller, artistic director and rendering supervisor. He is now freelance, mostly doing 3D characters, workshops, and he also undertakes a lot of personal works: illustrations, exhibitions, and books.  
 URL: [www.e338.com](http://www.e338.com)

### DVD Assets

The files you need are on the DVD  
**FOLDERS:** Screenshots, Layered\_Files  
**FILES:** 00\_render.tga  
**SOFTWARE:** Photoshop CS2 (demo)

# Photoshop CREATING 3D ILLUSTRATIONS

**Loïc Zimmermann** shares his unique image creation technique to show how he produces striking three-dimensional illustrations

**R**ecently, I've been busy experimenting with a variety of art techniques to combine different sources and produce great 3D illustrations. Taking my inspiration from both the real world and the digital one, I usually start the over-paint process on a pre-textured 3D scene. I rarely go into high-end rendering, since it's a waste of time for illustration, choosing instead to focus more and more on modelling a detailed and funky scene with good, effective lighting. I'm using the same topology each time, which is obviously a very fast way to get

decent results (especially when you can share UVs, Rigs and so on).

In this workshop, I'm going to share some of my personal favourite options in Photoshop, for working with layers and making adjustments. I admit, this is a very personal approach, but I'll explain it as best I can. Hopefully, this guide will encourage you to find your own individual method of working.

I'll split the workshop into a few key areas: importing sources (which can be CG or photographs), fixing rendering artefacts, tweaking the shapes and adjusting skinning issues. Then I'll go on

to look at enhancing the basic rendering with local contrasts, levels and increasing highlights and shadows. After that, I'll use a set of textures to create details to produce a more organic feel. I'll integrate my characters with a background, over-paint and finally look closely at colours.

The idea of the picture is a very classic girl 'n' guns thing. I did a lot of these in the old days, when I was still drawing. Anyway, I wanted this portrait to be cool and calm, with a touch of sci-fi and an efficient focusing point... Hopefully I succeeded. Let's see how this was made.

## 1 Cleaning the alpha

Open your CG render, which you'll find on your DVD, and load the alpha in order to put the characters on a layer. Name it Characters. When you render on a black background, the alpha is pre-multiplied with black. This means that when you load the alpha back in Photoshop, you end up with a slightly blurred outline. In compositing packages, it's really easy to get rid of it by specifying the colour of pre-multiplication. In Photoshop, I haven't found a way to do the same. So, load your selection, then go to **Select>Modify>Contract** and type 1. Create a mask. You can soften the selection before you create the mask (**Select>Feather** and type 1), or use the right mouse button with the Lasso tool or Rectangle selection activated.

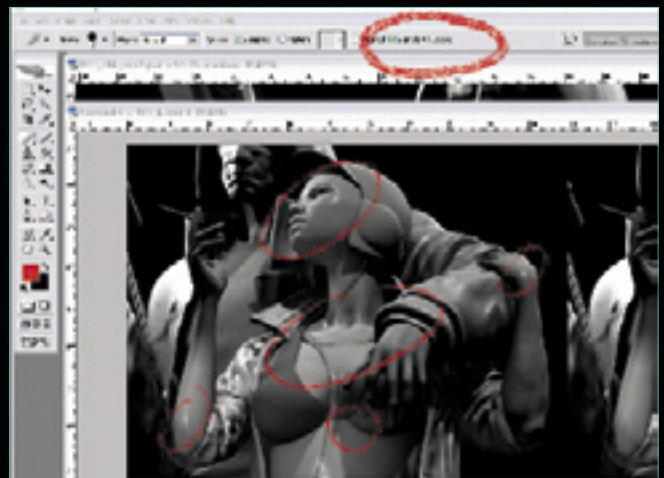
The render I'm using here is 4,000 x 4,000 pixels. Usually, I scale everything up to 5,000 x 5,000, and it's far better to do this at the start. When the picture is finished it gains some sharpness if it's been scaled down to an A4 300dpi.

## 2 Patches

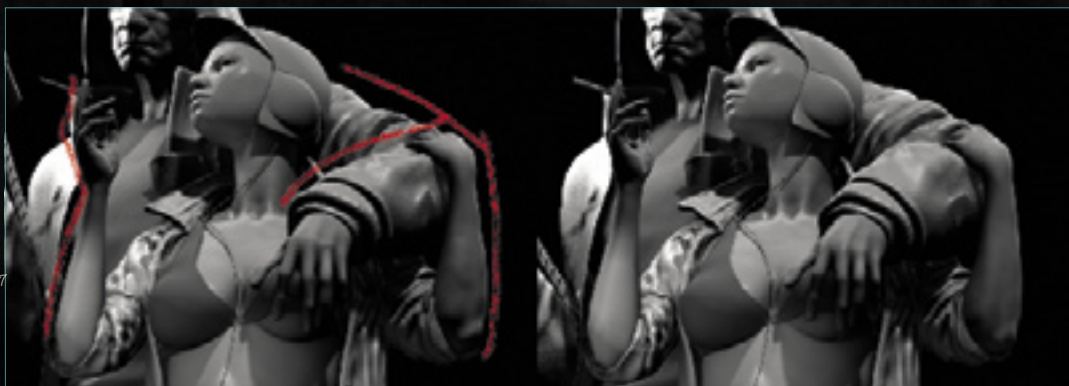
Create a new layer on top and call it Patches. Always start by fixing any obvious problems with texture seams and so on. In this particular case, the head and body of the girl are two different geometries, so I sew them together and smooth things over. To correct that, use the Clone Stamp tool (S) and the Healing Brush tool (J). These two tools complement each other nicely: the Clone Stamp, as its name suggests, clones one area on to another, while the Healing Brush copies texture information from one area to blend it on to another area. The Healing Brush would, for example, be perfect to remove a blemish from an image of a celebrity, though the results will always be better if the underlying surface is neat already.

## 3 Small adjustments

Stamp things a bit to correct seams, and then use the Healing Brush to improve details. Both tools work with Alt/Option key to set the source. To work



on a different layer than the source, go to the source layer, Alt/Option+left click to pick the source, then go back to your working layer (Patches) and start cloning, or click on the Sample All Layers option on the top menu. When you're done, you can merge Characters with Patches. ➔



element: a patch for the jacket, another one for the body, and so on. I turn the paper, choose another area of the picture and avoid repetitions.

## 7 Adjustment layers

It's time to start refining things a bit, so let's do so with some adjustment layers. Instead of painting on top, with regular colours, you use Levels (or Curves) to darken the things you want to, and lighten others. This is why the previous step was important. With all the noise we now have, there's a wider

## 4 2D Tweaking

Now it's time to start thinking about doing some tweaking. This is when you should start working with the Liquify function of Photoshop. Liquify enables you to deform the picture very softly, without too much loss, by using a deformation mesh. Use it to push things, and correct shapes, proportions, curves and so on.

Select your Character layer, and go to Filter>Liquify. You can define a rectangle selection first, to increase speed and control. Select a wider area than you need. There are a few different brush types on the left, so have a play around with them. I work with a lot of textures. Even if Liquify is pretty neat, it won't give its best results with a noisy picture. This is why I try to correct as many things as I can at this stage, before I start adding too much texture.

## 5 First paint over

Now you can start working on your highlights and shadows. This includes defining contours and adding primary details such as seams, folds, soft wrinkles. To do this initial paint over, create some new layers. Use a basic brush, set to a few pixels width (two or

three pixels maximum) with control over the opacity.

## 6 Starting to add texture

It's time to add some noise. I can't stand clean render and I need grain to grip on for really getting what I want for over-paint and colour work. Instead of using grain filters – even though they're pretty good – I tend to use organic textures as much as I can. I shoot macro pictures of some walls, canvas, paintings and the like, to create a bank of textures. I use them with blending modes, to achieve noise, details and to add an organic touch. Right now, I only use three of my textures. One is a brown paper bag, turned into black and white, the second one is a piece of paper with folds, the third is a close-up of an abstract painting. I use them with Overlay or Soft Light blending mode on. The trick is, instead of using one giant texture on top of everything, I apply patches of paper, on each separate

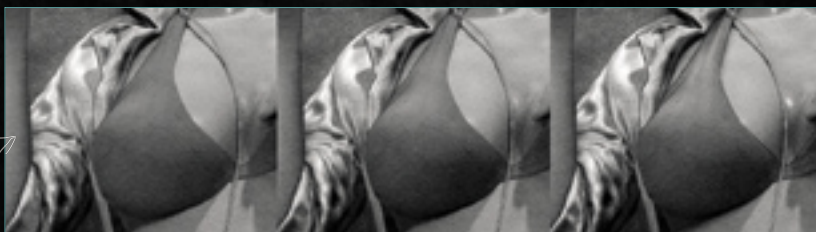


## PRO SECRETS

### Gaussian Blur

Instead of using feather on a selection, I prefer blurring the mask directly, to get exactly what I want. Select the mask and go to Filter>Blur>Gaussian Blur). With this in mind, you can then create an advanced selection, by selecting areas of the mask, add a feather set to a very smooth value, and blur more.

range of variations in our levels. They can hold a lot more information than in a clinical-looking CG ramp. Create a Levels adjustment layer (Layer>New Adjustment Layer>Levels or click the icon on the bottom of the Layer tab), and set it to Dark. Make a second one and set it to Bright. The levels that you use will be different for each picture: these screenshots are just here as an example. When you've done this, fill the mask with black, to hide the effect of the layer, and paint with the airbrush for soft highlights and shadows, or with a sharp brush for speculars and contours.



## 8 Clothing

When this is done, create a new set of layers to work with basic brush and colours this time. I'm doing more work with the girl's clothing now, specifically focusing on the contour of the bra. You can add as many details as you like here, depending on what you want to achieve.

This means the grain is heavy and won't necessarily match with my characters. This is why I use the same brown paper bag again, on top of the entire picture, plus painting samples that will give an organic touch. Keep on pushing values and start the over-paint on the background. You can be much more brutal here, just adding a couple of strokes, very roughly, to make the whole scene more dynamic.

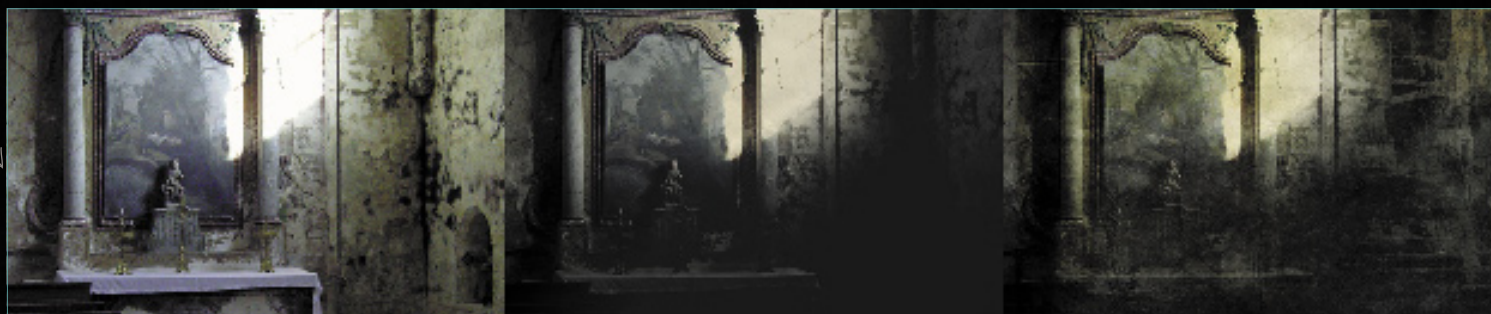


## 9 About the background

First create a couple of adjustment layers to finely tune the global lighting, and help with the integration of the characters into the background. Use gradients to mask those adjustments.

## 10 More details

Now it's time to add some more details in the background. In my case I've opted to use a digital photograph, taken without any flashlight, inside a church.



## PRO SECRETS

### Liquify

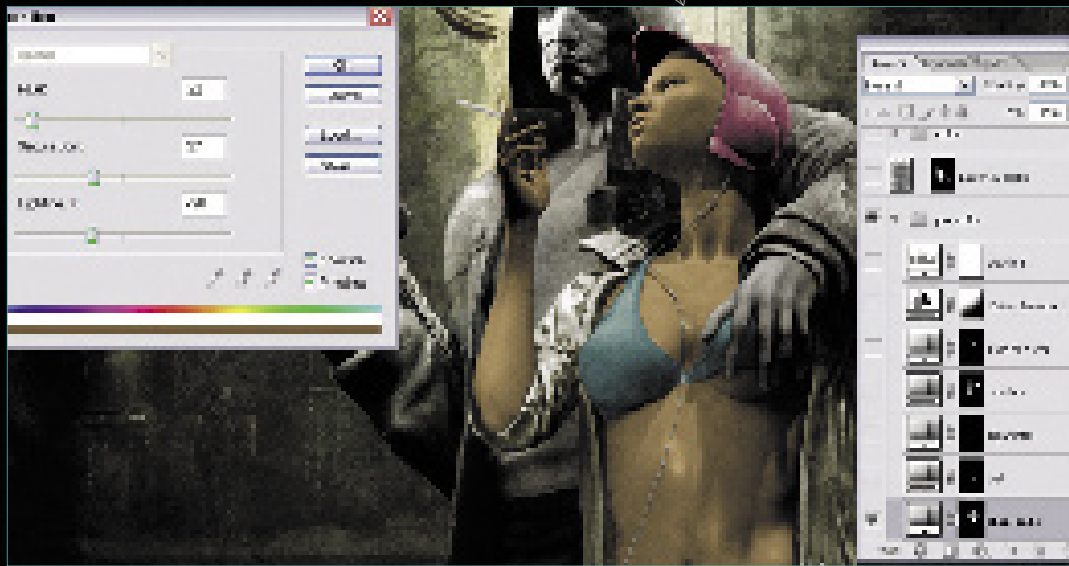
You can save your deformations. This is really useful when you work on many layers and you don't want to merge them yet. In this case, you can select one of them, use Liquify, go to Save Mesh and give the deformation a name. Click OK to apply deformations. Then select the next layer, Liquify>Load Mesh. And magic! You have the same deformation. Have fun with this.

## 11 Colours and more

As a first step, I often use a global texture on top of everything to give an idea of some tones. Then I apply adjustment layers to finalise the colours. The texture I've gone for is a metallic plate with a lot of concentric scratches and cool colours. You can use whatever texture you want. Try to be neat at this stage. Make a sharp selection of every element - clothes, body, guns, cap - and create an adjustment layer for each.

## 12 Hues and Saturation

To colorise your image, use Hues and Saturation set to Colorise and play with the Hue slider to find some cool values. When you do this, expect to lose some of the highlights from the image. But don't worry, it's easy to fix.

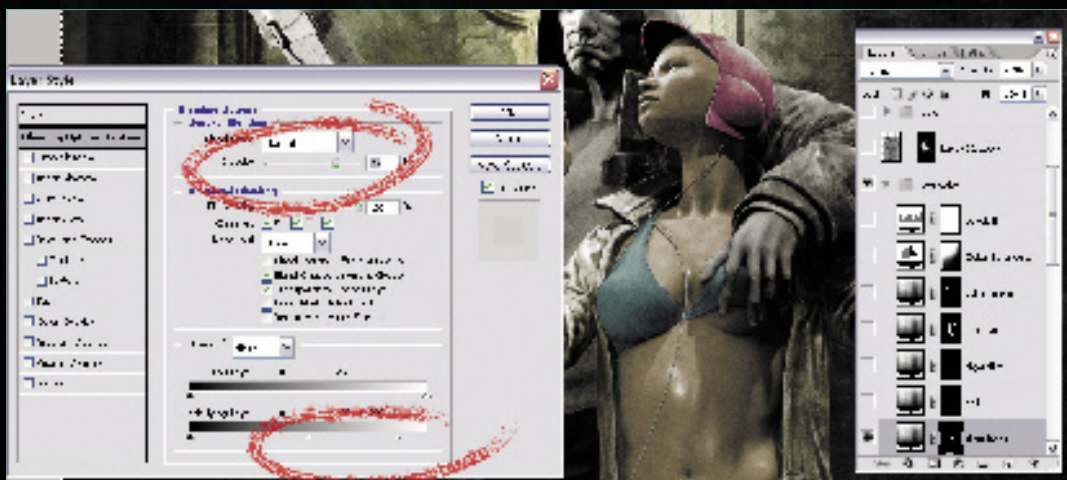




blending options, you focus the effect of the layer where you want. Press Ctrl/Cmd+I, and paint areas manually, with a soft airbrush set to white.

## 16 Old school ways

Finally, do more over-painting, add more textures, and more adjustment layers, until you're happy with the finished result. You'll no doubt find yourself skipping backward and forward through the steps, but I've mapped out the most important things, in my opinion. That's using very few tools and functions and applying old school ways that are open to intuition and experimentation. This is how I work. ●



## 13 Advanced blending options

On a regular layer, you would simply double-click on the thumbnail, and the menu would pop up. When you do the same on an adjustment layer, you go into its settings, which is good, but not what we want. So right click on the layer and select Blending Options.

The bottom slider enables you to fade your layer into the background, with the option to make this only happen where it's dark or bright on a specific range of your choosing. Here you can see I dragged the bright slider on the left, which means I recovered the highlights on the girl's skin. When you're happy with the result, drag the slider again with Alt/Option key pressed. I use this function on 80 per cent of my layers.

## 14 Primary colours

Perform the previous step for every separate element in your image. Make sure you put some global colours on your picture. Because you're working with adjustment layers, you can quickly tune the colour to make them match. When it's done, group all those layers together (Ctrl/Cmd+G) and name this Primary Colours.

## 15 Secondary colours

Create some more subtle tones of colours with variation, not only for colours but levels too, as you did before. Use advanced blending option to really work on specific areas. This way, for example, you can set a Colour and Balance adjustment layer to cool highlights and mid-tones. Then with the

