Orbyt Design - 3D Modeling, 3D Printed Jewellery & Sculpture

OrbytNZ is my Shapeways shop name - Orbyt Design is the name of my business - the 'NZ' is for New Zealand. Shapeways.com is like facebook for 3D printing, but actually fabricates & delivers real 3D printed products! Visit www.shapeways.com/shops/orbytnz to view examples of my work.

I work as a technician for the Architecture Department at Unitec - a technical institute in Auckland, which is New Zealand's largest & fastest growing city. As part of my job I run a Fabrication Laboratory which includes an ABS plastic 3D printer & a Laser Engraver/Cutter. For decades I've been evolving techniques to 3D model & create natural forms I've always admired.

Having developed 3D modeling skills over the last 25 years I randomly challenge myself to produce 3D models of usually organic forms - microflora & fauna including diatoms & radiolarians. Inspiration is sometimes derived from an online image search, or more often from browsing the plates of Ernst Haeckel's 'Kunstformen der Natur' (Art Forms of Nature) which was originally published in the early 20th century in Germany. Prof Haeckel was the guy who coined the term 'Ecology' (among other things).

The OrbytNZ Shapeways shop includes a number of microscopic organism models - the 3D printable ones. Some of the forms I've modeled have appendages which would be too fragile to practically print & then transport. Take note that the finish quality of the Shapeways.com 3D printing varies noticeably between different materials. The best results are from their expensive solid precious metals which I understand are printed in jewellers wax at very fine resolution, then lost wax cast, hand finished & polished to create very high quality jewellery. Some of the more inexpensive metals are 3D printed using a different process which is then electroplated with semi-precious & precious metals, but the detail in the original file is not as accurately reproduced - especially on the smaller objects with fine but shallow surface detail.

Stereoscopy is also an interest, so combining 3D modeling with stereo rendering is a logical extension of the digital sculpting. Mostly I like to render 'x-stereo pairs' - because they don't require glasses or any other form of 3D viewer. It does however require balanced eyesight (e.g. 20/20) & practice, to cross ones eyes while staring at the pair of images until a third 3D image occurs between the original two (which are transposed left to right - thus the 'x' for cross-eyed) The viewer then focuses on the center image to experience the stereoscopic 3D effect. This is known as 'free-viewing 3D' - & I have a few examples of x-stereo renders made to look like 19th century 'Holmes stereoscope' stereogram slides. www.youtube.com/watch?v=bpTAlcoL_CE8. Click fullscreen & HD to the lower right of the youtube video window to view the best resolution, & stereoscopic depth.

The orbytNZ youtube channel has animated HD renders of some of my 3D models - including a number of the radiolaria & diatoms. www.youtube.com/channel/UCeWFSbiCz5q51uP2bGFyvmM. Information about the inspiration & the construction method behind each model is included below each youtube clip, & on the OrbytNZ Shapeways shop pages too.

I am available to work on custom 3D design, modeling & animation projects.

You can contact me either through Shapeways messaging or email orbyt@xtra.co.nz