CT Scanner CAF Central Analytical Facilities STELLENBOSCH UNIVERSITY

CT NEWS

The Stellenbosch CT scanner facility newsletter

"more than just a scan"

Jan/Feb 2017

In This Issue

FREE offers

Make use of these free offers:

1. Mipar image analysis (2D & 3D) Webinar: http://mipar.us/webinar

Mipar is installed for use by students in our analysis facility. It works on all images, also images from electron, confocal, optical & metallurgical microscopes. Watch the webinar to learn more

2. For batch jobs only: for any job of 10 or more scans you **get 4 hrs self-analysis time free for every 10 scans**

NEW offers

Try these new cost effective solutions for getting the most from microCT:

1. ***Method development***: Fixed price for a method development project with report, for your unique sample type – this includes parameter optimization and getting the best solution/answer to your required 3D measurement. Typical project R10 000 for one sample type.
2. ***Batch CT scans***: for 10 scans or more, get free image analysis sessions, for 30 scans or more get 10% discount on job.
3. ***Batch image analysis***: let us do your analysis – 3D image segmentation, making videos, 3D measurements, even simulations. Save your own time and let us do it for you – we stick to quoted price no matter what the challenge.

Welcome

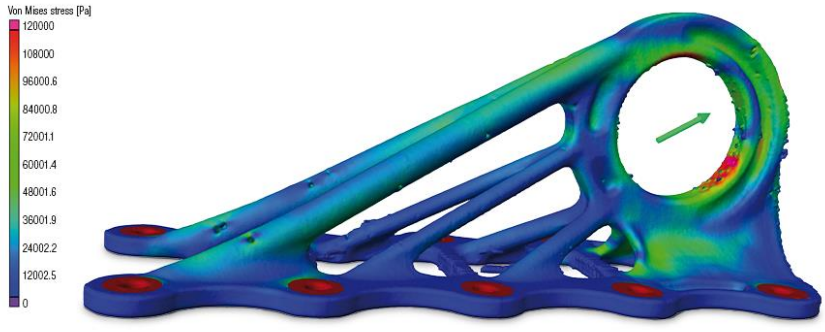
With the new year comes new insights into the inner structure of your materials and products, using microCT scanning. We will continue to offer the best quality microCT services at the lowest prices. If you can find a lower price anywhere, we will beat it *

Now is the time to make use of this service to improve your processes, test your products or advance your research. Please take the time to share this newsletter as much as you can, we really appreciate it.

* We will beat the **price, quality and turnaround time**, but please provide us the quote.

NEW: Stress analysis

When a material is subjected to a force (and fixed in place), it experiences stress. When a mechanical part is designed, the design is usually such that the expected forces do not result in stress hotspots, by making load-bearing sections thicker, for example. However such simulations have traditionally mostly been done on designed models. Now we can simply take the output from a microCT scan and run a simulation to find the hotspots on the real part. The "real" hotspots can provide insight into the effect of internal defects or sections that are thinner than designed.

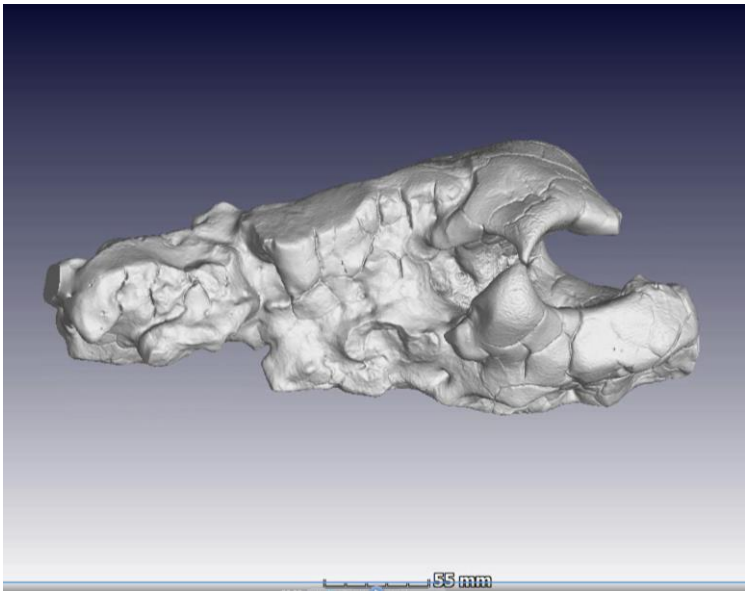


An additively manufactured cabin bracket with deliberately inserted discontinuities (miniaturized, without surface finishing, and with the typical appearance of a printed part; part courtesy of Airbus Emerging Technologies & Concepts): The software generates a color-coded display of the locations of the weak points directly on the scan of the real component.
http://www.volumegraphics.com/en/products/vgstudio-max/structural-mechanics-simulation/

Fossil or rock?

We have an interesting challenge: the rock or fossil seen in the image to the right was found by a private collector. We have no idea what it is, though it does look like a fossil - if you are a paleontologist and think you know what it is please let us know.

Two videos can be seen at this web page:
http://blogs.sun.ac.za/ctscanner/fossil-or-rock/



This is an image of a fossil found by an anonymous private collector. Please help us to identify what it is, see two videos here to get a better 3D view of it:
http://blogs.sun.ac.za/ctscanner/fossil-or-rock/

CT Data bank

This is our bank for long term storage and sharing of your CT data.

There are different options based on if you want to keep your data private (monthly charge) or share it with others (then its free for you, but others must pay us), and the database of open-access scans will allow anyone to purchase CT data, for any and all kinds of CT data, in biology, materials science, engineering, geological and other types of data.

If you are in need of some kind of data, send us your request we will source a sample, scan it and send the data to you and keep it in the data bank for future users.

http://blogs.sun.ac.za/ctscanner/imageanalysis/

Guess-the-X-ray

The solution to the last "guess the X-ray" image: it was a venomous snake fang. Anyone who saw our talk at Tosca2016 should have recognized it. The example this month is a bit easier, especially if you're a mechanical engineer:

Can you see what this X-ray is ? And why do you think we want to CT scan it?

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We are members of IntACT, the International Association for Computed Tomography

http://www.intact-tomo.org/

Acknowledgements

The CT scanner equipment acquisitions were made possible with grants from the National Research Foundation and Stellenbosch University. The Department of Science and Technology Internship program is also acknowledged for its support of this facility. We encourage and welcome any form of sponsorship or support in order to keep delivering the best quality.

Please cite our facility when reporting data generated here:

http://www.sciencedirect.com/science/article/pii/S0168583X16303433

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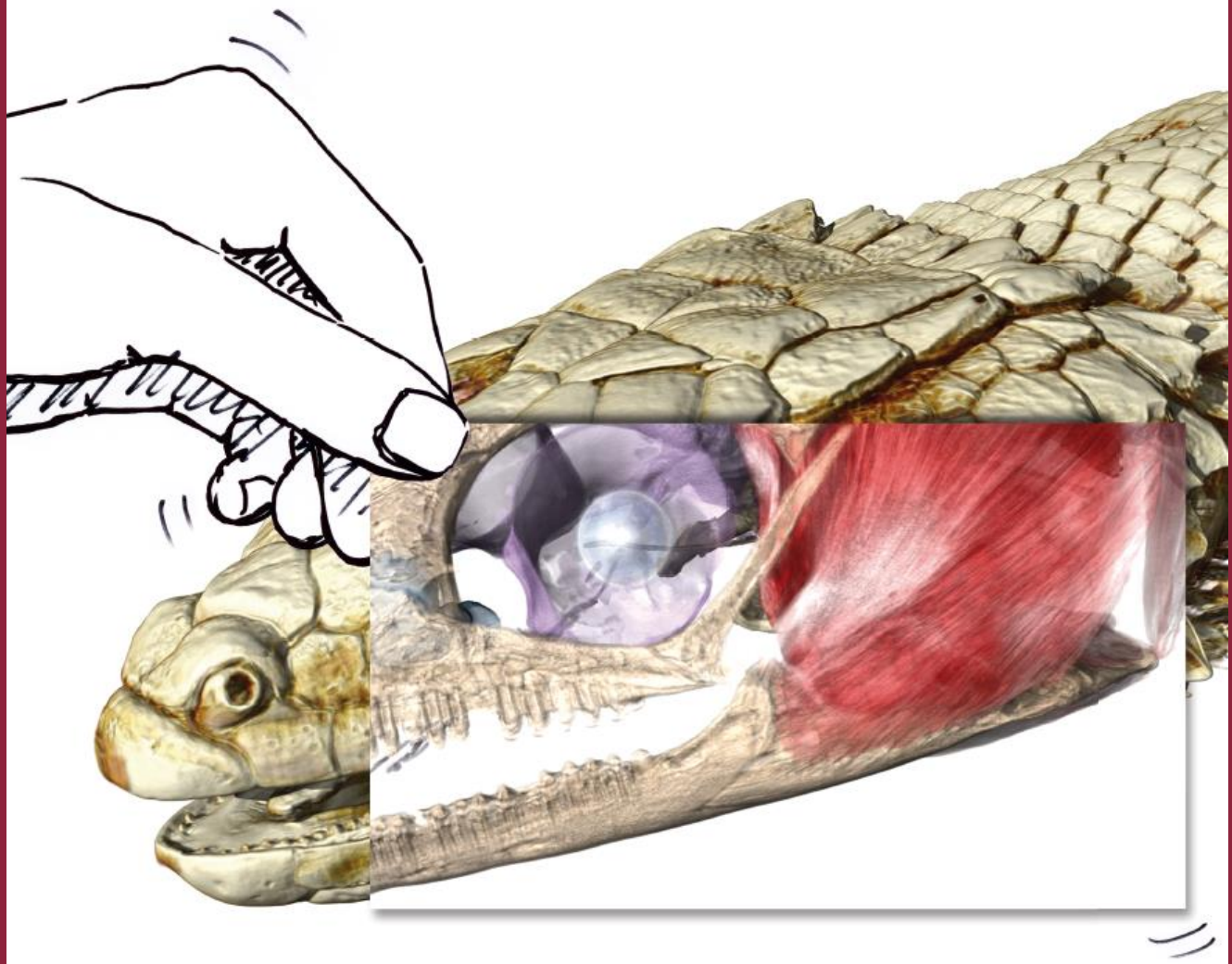
LOOK BEYOND THE SURFACE

VGSTUDIO MAX 3.0 IN SCIENTIFIC USE



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Thousands of customers already use it to inspect objects easily, comprehensively, and non-destructively – in science, research, production, and quality assurance.

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