CT Scanner CAF Central Analytical Facilities STELLENBOSCH UNIVERSITY

CT NEWS

The Stellenbosch CT scanner facility newsletter

"more than just a scan"

July/August 2016

In This Issue

Quick links to recent examples

Water flow simulation in wood microstructure
http://blogs.sun.ac.za/ctscanner/image-based-simulations-fluid-flow-in-wood-microstructure/
Reverse engineering a shoe
http://blogs.sun.ac.za/ctscanner/reverse-engineering-of-a-shoe/
CAD file of a shoe
http://blogs.sun.ac.za/ctscanner/files/2016/06/shoe.stl

CAD file of internal cavity of the same shoe
http://blogs.sun.ac.za/ctscanner/files/2016/05/shoe_cavity.stl

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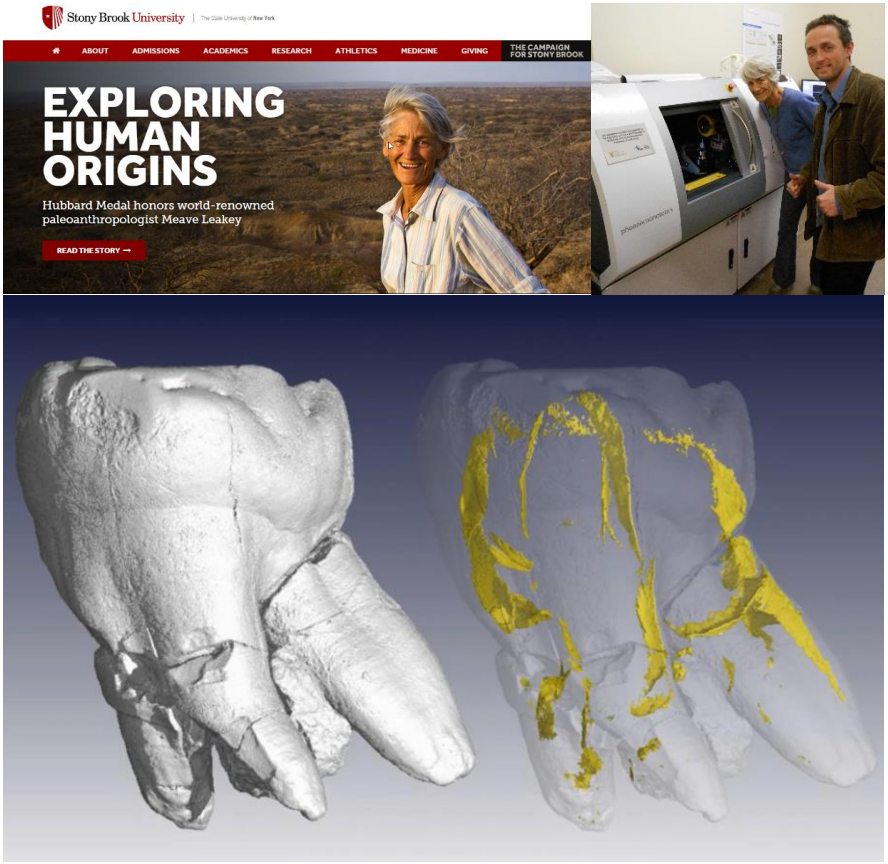
Welcome

In this issue: recent high impact work, international collaboration, guess-the-x-ray and upcoming events. Remember to book your scans early as our schedule is very full the rest of the year.

Human origins research

We have been honoured to have Prof's Meave Leakey and Frederick Grine visit and make use of our facility recently. See the link below to read more about Prof Leakey and her recent awards. You will also see below an image from one of her scans, which is of a *Homo habilis* tooth, approx. 2 million years old. The (false-coloured) yellow inclusions will be described in a paper soon.



Human origins research taking place at our facility recently: this is a *Homo habilis* tooth. Read more about Prof Leakey here: http://sb.cc.stonybrook.edu/news/general/2016-07-12-meave-leakey-wins-hubbard-medal.php

International collaboration

A new research collaboration between our facility and Durham University in the UK has started, with half our staff over in the UK at the moment. Stephan is doing a PhD part time and has been starting his research in CT applications in soil science and soil mechanics. This is the start of a longer term research exchange with a scheduled visit of a PhD student to our lab as well. We gladly host research exchange students in well defined projects related to our own research areas, see our research page for more information if you are interested.

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

Special offers: analysis

We offer currently the following special deals:

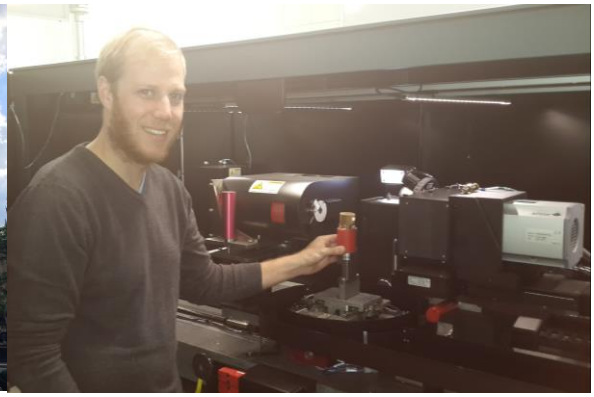
1. **Get all your old scan data segmented NOW:**

3D Data analysis from any global location via ftp server: upfront quotes with price guaranteed, quick turnaround, manual image segmentation from US$100 per volume depending on complexity/data quality.

2. **Get the first week of analysis facility use free when booking more than R30 000 of scanwork**, only for July-August.

The analysis facility consists of three high spec PCs with 3D image processing softwares and on-hand assistance, for getting the most out of your data. Normal rates are equal to the hourly scan-rate for half a day (eg. R750 for external academics for half a day) or R3500 for a month any time.

Please support our advertiser on the last page



Half of our staff in the UK, using in this case a Zeiss X-ray CT instrument. The scan starts once you take your hand away from the sample.

Guess-the-X-ray

We're introducing a new section to our newsletter where you can try to guess what is the object being X-rayed and why. In the next issue we give the solution to this one. If you email us the correct answer before then, you can come in for a free coffee!

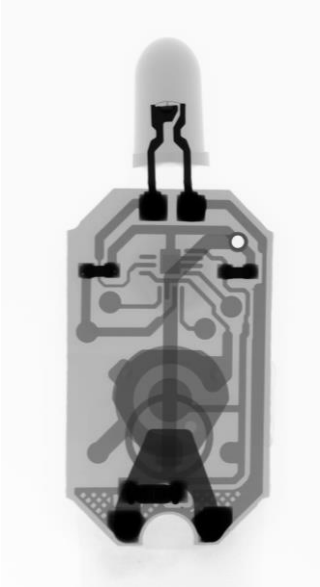


Image supplied thanks to one of our clients

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.

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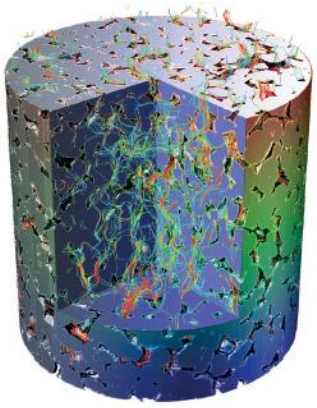
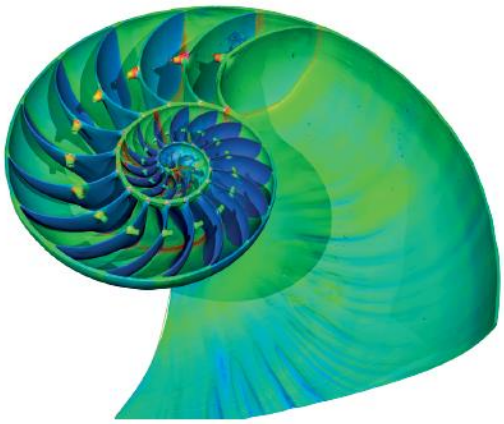
Visualization
Brittle star with visualized juveniles inside the mother's brood pouches

Segmentation
Reptile with segmented muscle system, bones, and nervous tissue

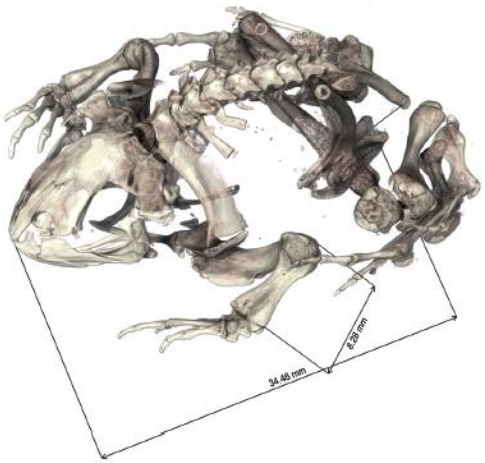


Transport Phenomena
Sandstone with simulate fluid permeability

Wall Thickness Analysis
Shell with color-coded wall thickness of the shell



Coordinate Measurement
Frog with measured extremities and body length



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