CT Scanner CAF Central Analytical Facilities STELLENBOSCH UNIVERSITY

CT NEWS

The Stellenbosch CT scanner facility newsletter

"more than just a scan"

February 2015

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Recent interesting scans (clickable links)

Sugar pot tests
http://blogs.sun.ac.za/ctscanner/3d-printed-sugar-pot-test/

Image quality indicators
http://blogs.sun.ac.za/ctscanner/image-quality-indicator/

Radio controlled airplace engine 3D NDT
http://blogs.sun.ac.za/ctscanner/3d-x-rays-of-radio-control-airplane-engine/

Image quality indicators

Image quality indicators are used in 2D X-ray inspections to make sure the system image quality is good enough to resolve small features. Typical thin wires are used with well-defined thicknesses. We demonstrate a 2D X-ray on our system (which is also possible, not everything needs to be scanned). Furthermore a CT scan and advanced analysis allows us to check the thicknesses of the wires, indicating the thinnest wire is not cylindrical in shape and not exactly as specified.

Lots more images and videos at:

http://blogs.sun.ac.za/ctscanner/image-quality-indicator/

Welcome

Welcome to the February newsletter! There is a lot of news and three upcoming events, so please have a look and join us for some of these meetings.

We have lots of new developments planned for the year so please check our newsletters when you get them and even pass on to your colleagues. Thanks for your support and remember: we are here to check and analyze YOUR samples!

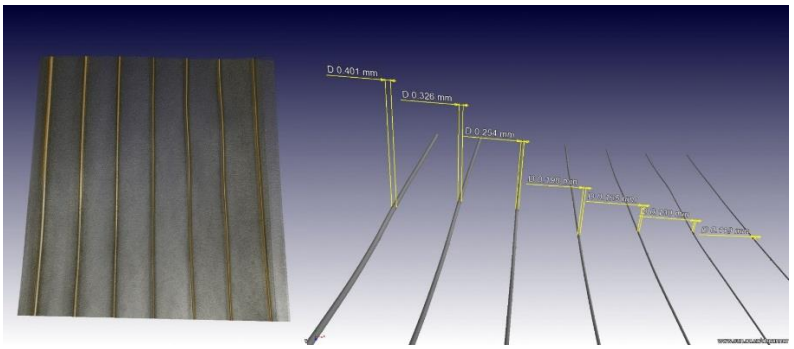

Figure 1: Image quality indicator testing

Mining industry

The nanoCT scanner has made the cover page of Mining Weekly, as the technology offers the mining industry many new possibilities for nondestructive analysis and now down to 500 nm resolution, which makes it a unique facility in Africa. The article can be found at the link below, but this is also a good time to show some older mining-related examples, see the additional links below for some great videos and examples

Lots more images and videos at:

http://blogs.sun.ac.za/ctscanner/ct-geoscience-example-videos/

http://blogs.sun.ac.za/ctscanner/drill-core-ct/

http://blogs.sun.ac.za/ctscanner/slag-sample-advanced-analysis/

http://blogs.sun.ac.za/ctscanner/iron-ore-drill-core/

https://www.youtube.com/watch?v=nQNeW7oqjLI&feature=youtu.be

Figure 2: Cover page of Mining Weekly, full article here:

http://blogs.sun.ac.za/ctscanner/files/2013/07/53203_mining_weekly_6_february_2015.pdf

Upcoming events & News

There are some important events upcoming and all hosted at our facility, please join us for these:

- Young Spectroscopist Symposium: 9 March, see the call here: http://blogs.sun.ac.za/ctscanner/events/2015/03/young-spectroscopist-symposium/
- Zeiss X-ray microscopy workshop: 27 March, see more information here: http://pages.microscopy.zeiss.com/3D-XRM-Workshop-Registration.html
- 2nd national microCT conference IMGRAD (imaging with radiation): 10-11 September, first announcement: http://blogs.sun.ac.za/ctscanner/imgrad2015/

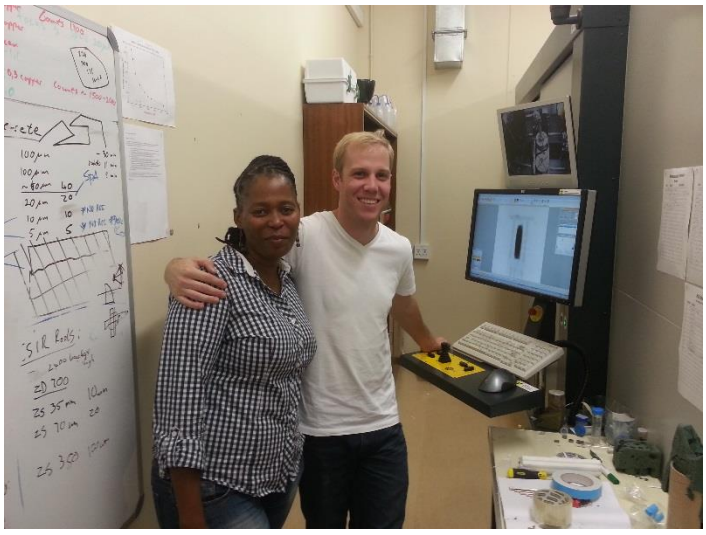

Figure 3: Zodwa Ngubeni recently finished her MSc in Forest Science (cum laude) using data from the CT scanner. Here she is with Stephan at the scanner. In her own words "if it wasn't for you guys' help it would have taken me another year"

Special offers

1. **FREE ANALYSIS**

Our 2014 NRF interns are nearing the end of their contracts. We are offering our existing clients some free analysis by making use of these interns during the rest of February and March, for data analysis only (no scans). Make use of this opportunity to get more from your data. First come, first served.

2. **NEW SPECIAL RATE FOR STELLENBOSCH STUDENTS**

Thanks to the growth of the CT scanner service and an increase in university subsidy to CAF it is now possible to provide Stellenbosch University clients the extremely low price of **R275 per hour**. This includes scans and basic analysis as usual: use this opportunity and book your scans today!

External clients please note this is subsidized from within the university and hence cannot be extended to other clients. Yet, at external rates of R600 for academics and R1300 for commercial, it's the lowest cost, fastest turnaround facility in the world. Thank you for your support.

Contact Us

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Online Booking System

Please use our online booking system to secure your booking and receive automated confirmations and reminders of your scan session.

www.sun.ac.za/ctscanner

Click on the ***MAKE AN APPOINTMENT*** tab, choose your service type and search availability, then add your email and any notes for us to prepare. We also still do manual bookings and ad hoc work as always.

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. Stellenbosch University support of CAF allows special internal rates, subject to acknowledgement of our facilities in publications.

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