

# INSTRUMENTATION 2007



# Content

- Instrumentation matrix on website
- Current work
- New developments

# Instrumentation matrix on website

- [http://www.gautrans-hvs.co.za/hvsia/hvsia\\_instrument\\_matrix.htm](http://www.gautrans-hvs.co.za/hvsia/hvsia_instrument_matrix.htm)
- Contains supplied information from all programmes

# Current and new work

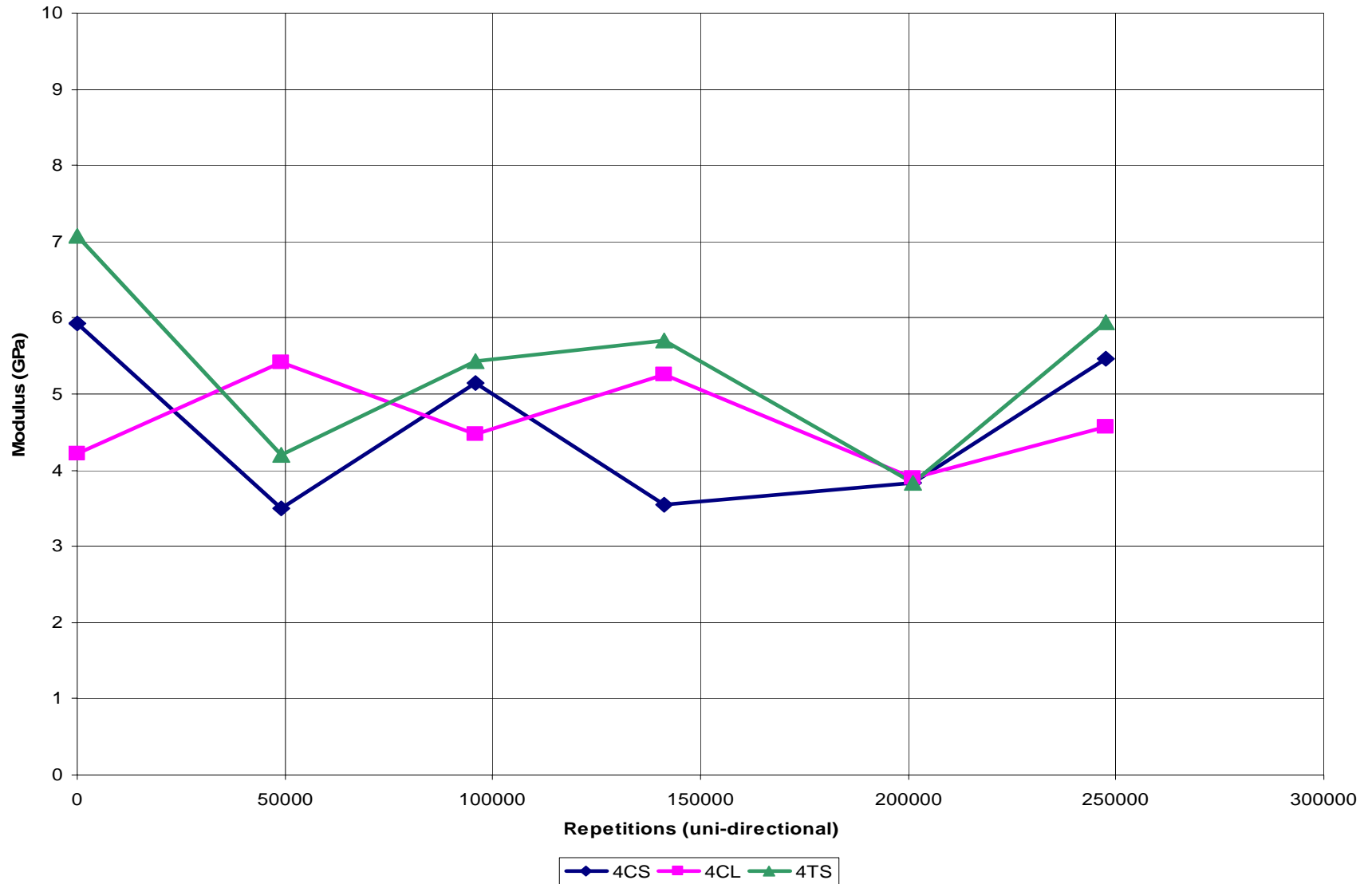
- PODS
  - <http://www.accsense.com/>
- PSPA
  - Used on HVS site and LTPP sites
  - Busy with analyses
- Wireless instruments
  - RSD and profilometer
- New projects
  - SANRAL measurement of parameters for calibration
  - Stress, strain, moisture, temperature, suction
- New sensors
  - U Leeds RFID sensors
  - Flexiforce - UCD
  - Fibre optic stress – U Johannesburg
  - AFM



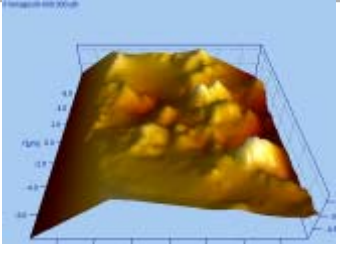
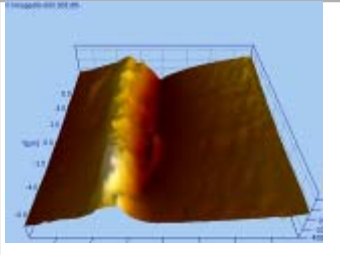
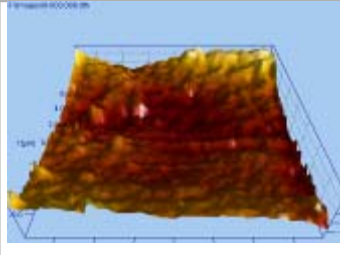
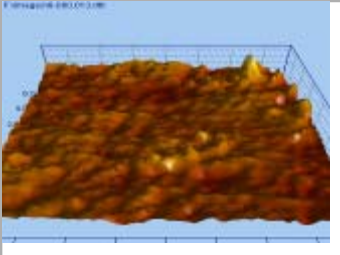
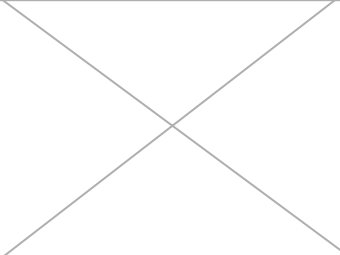
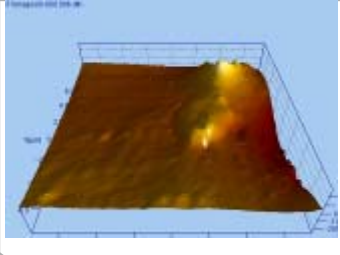
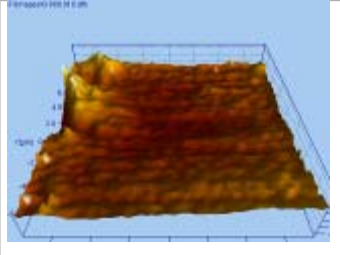
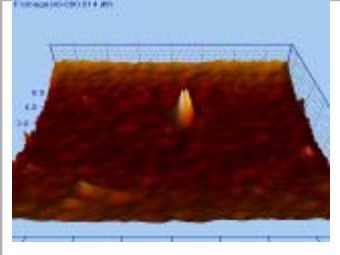
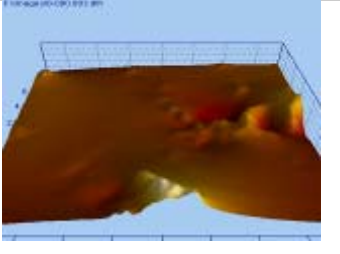
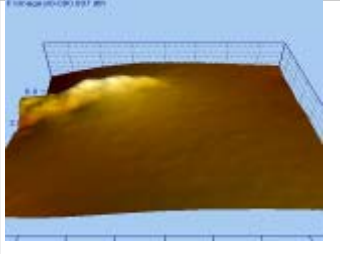
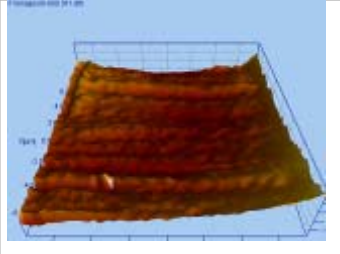
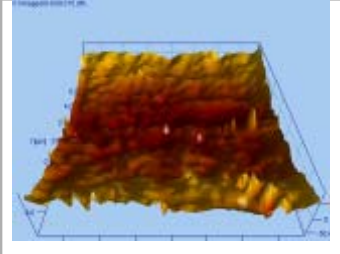
# PSPA output from HVS site

## PSPA MEASUREMENTS ON SECTION 443A4 POINT 4

40mm Asphalt Overlay - Start temperature 50°C



# Atomic Force Microscope (AFM) Images of bitumen

15x15 $\mu\text{m}$ sample Z – 115 nm to 1 600 nm	No ageing	1 h ageing @ 40°C	1 h ageing @ 80°C	1 h ageing @ 140°C
40/50 Pen				
60/70 Pen				
100/120 Pen				
150/200 Pen	