

Members

Southern Africa and
UNISEC

Stellenbosch

CPUT

UCT

UNISEC Southern Africa Region Activities

by
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UNIVERSITEIT • STELLENBOSCH • UNIVERSITY

Electronic Systems Laboratory
Department of Electrical & Electronic Engineering
Stellenbosch University

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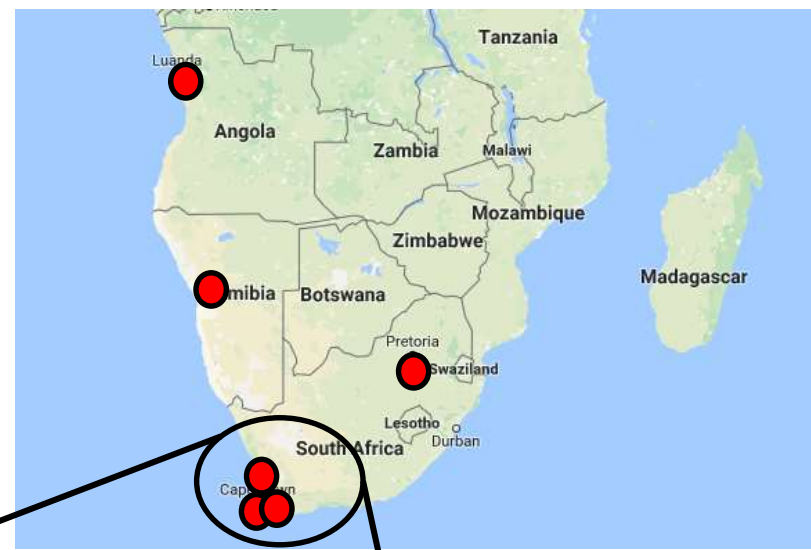
UNIVERSITEIT
STELLENBOSCH
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UNISEC-SAR Members

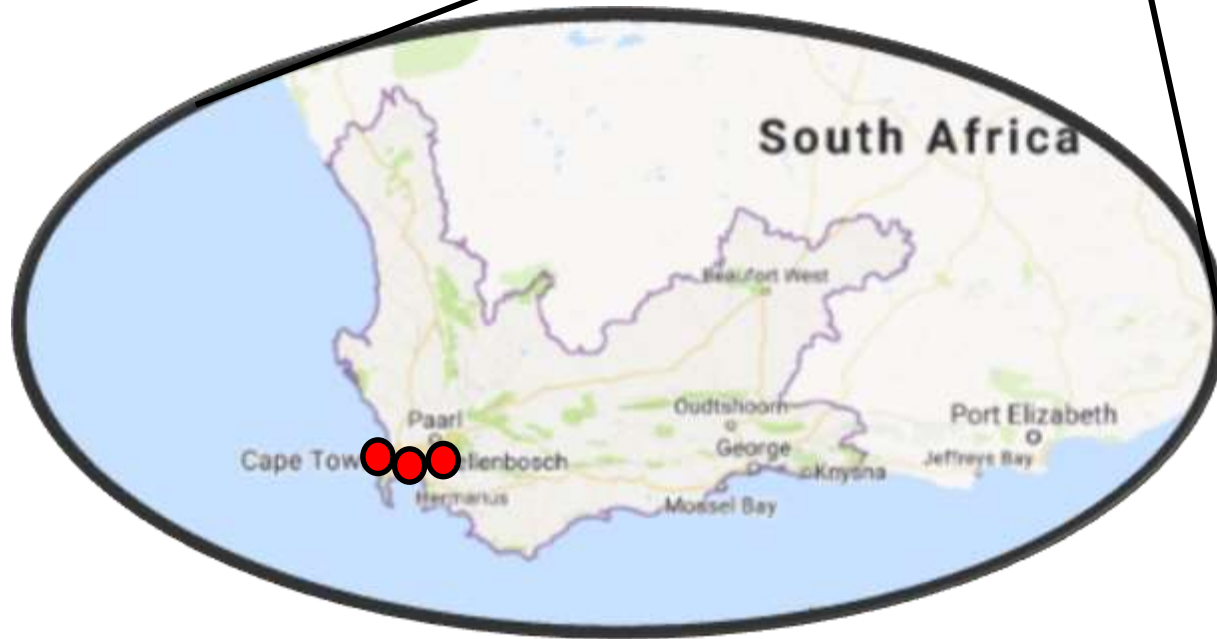
- Stellenbosch University (SU)
- Cape Peninsula University of Technology (CPUT)
- University of Cape Town (UCT)
- Vaal University of Technology (VUT)
- Namibian University of Science and Technology (NUST)
- Angola (Angolan National Office for Space Affairs)



Population:
54,002,000
+ 2,113,077
+ 24,383,301 =
80,498,378 (>Germany)



Area:
1,221,037 km²
+825,615 km²
+1,246,700 km² =
3,293,352 km² (>India)



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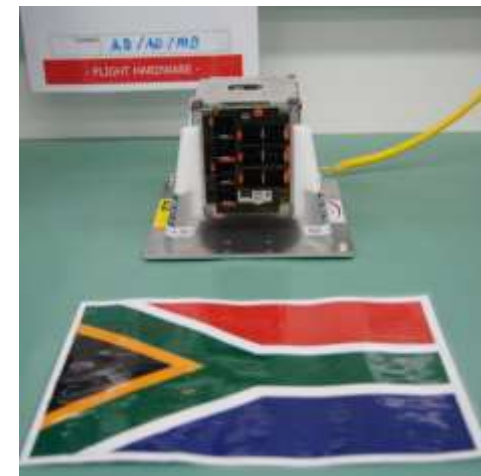
Southern Africa and UNISEC

- SU & CPUT are established
- UCT has grown substantially
- VUT, NUST and Angola have great potential for growth
- Involved in UNISEC competitions
 - 1x semi-final MIC
 - 4x finalist MIC
 - 3x finalist DDC



CPUT

- ZA-Cube 1 launched in 2013 and still operational
- ZA-Cube 2, 3U CubeSat with communication and imager payload
Launch date – May 2018
- Commercialising developed CubeSat communication systems
- PicoSat product - used in some schools' curriculum.





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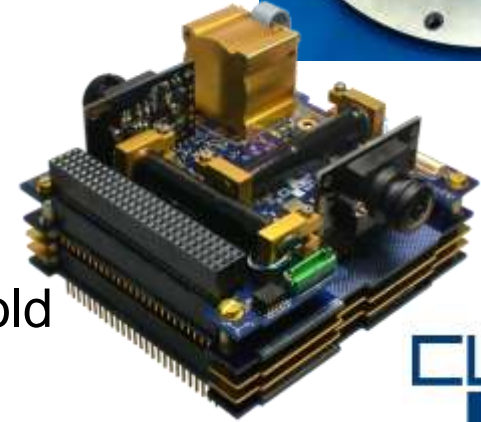
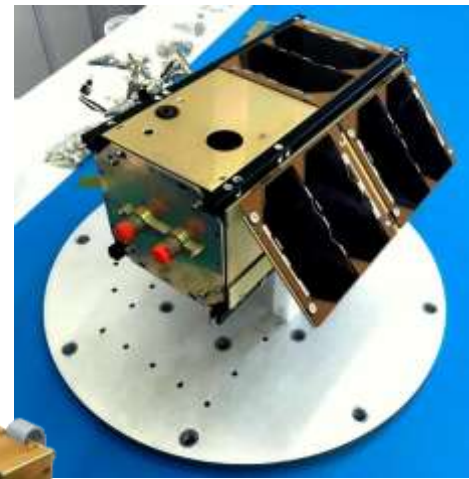
UCT

- Offers MPhil in Space Studies
- Focus not only Satellite Engineering but also on regulation, space law aspects and orbital debris
- 14 papers presented at IAC 2017
- Student won award for best individual proposal at ESA's Sentinel Smallsat S3 Challenge



Stellenbosch University - CubeSpace

- All engineers are past UNISEC – MIC competition participants
- Focuses on ADCS and space radiation research
- Continue to develop ADCS CubeSat components which is sold through CubeSpace
- QB50 Mission contribution
 - ZA-Aerosat
 - Components for nSight
 - ADCS supplied for 15 teams
- Involved in interesting international projects including RemoveDebris



Stellenbosch University Students

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- 6 Under-graduate BalloonSat projects in 2017
 - 2 “CanSats” – Satellite bus
 - 2 Payloads – A wheel stabilized platform, and a camera
 - 2 successful launches
 - 2 successful retrievals



Thank you

UNISEC-SAR POCs



Arno
Barnard



Zolana
Joao



Smita
Francis