UNISEC
Southern Africa Region
Activities
by
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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)
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.
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

- 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