



Logistics

Aletha de Witt
DARA-AVN May 2019
Observational & Technical Training HartRAO



SARAO
South African Radio
Astronomy Observatory

Logistics

- **Computers:**

Password: available in the lecture room

Login: available in the lecture room



- **All software required for exercises during the training**

Use the same computer every day



- **Please test that**

- you can login successfully

- you are connected to the internet



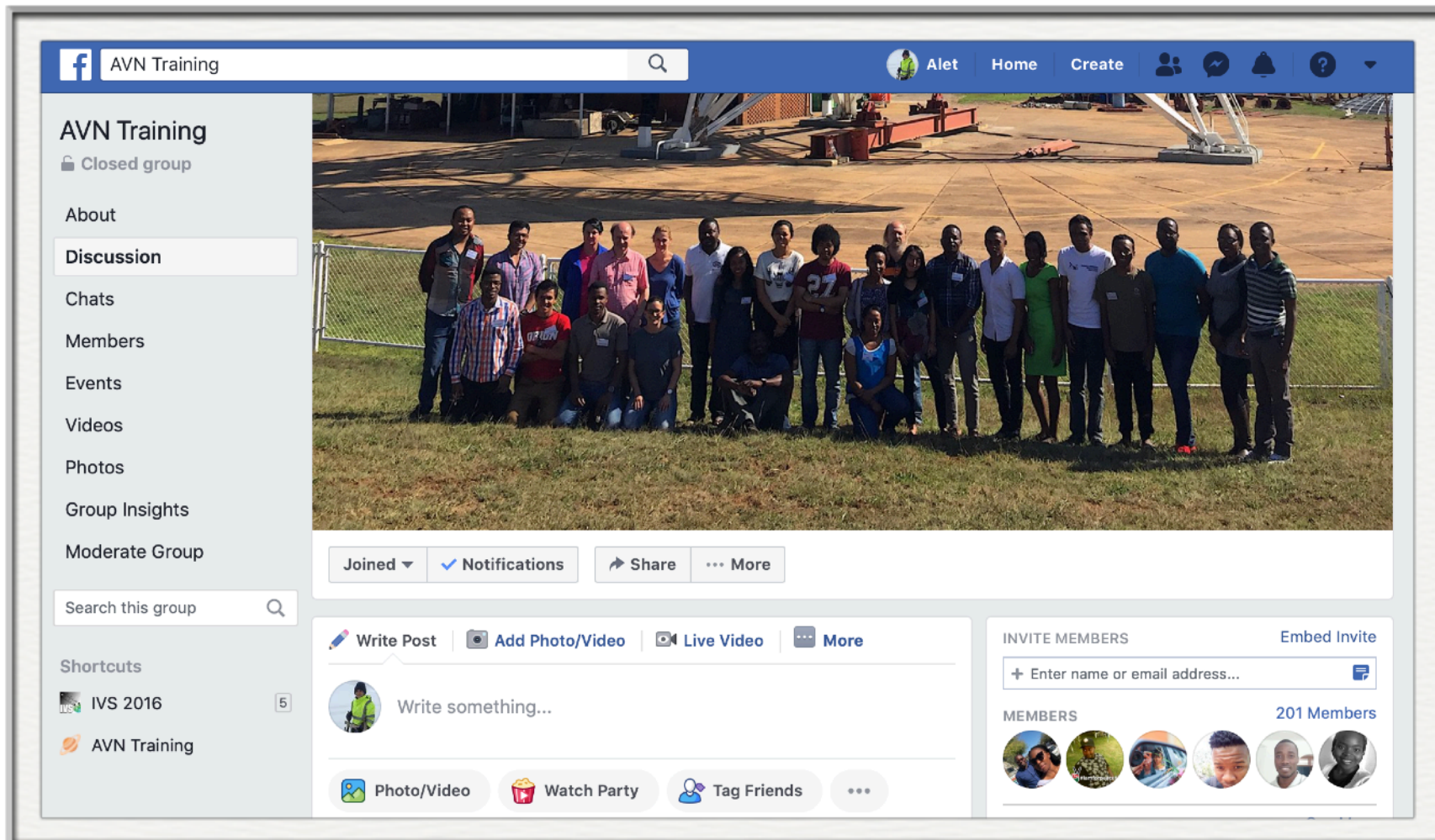
- **Please report any problems immediately**

- Roelf Botha (roelf@hartrao.ac.za)



Logistics

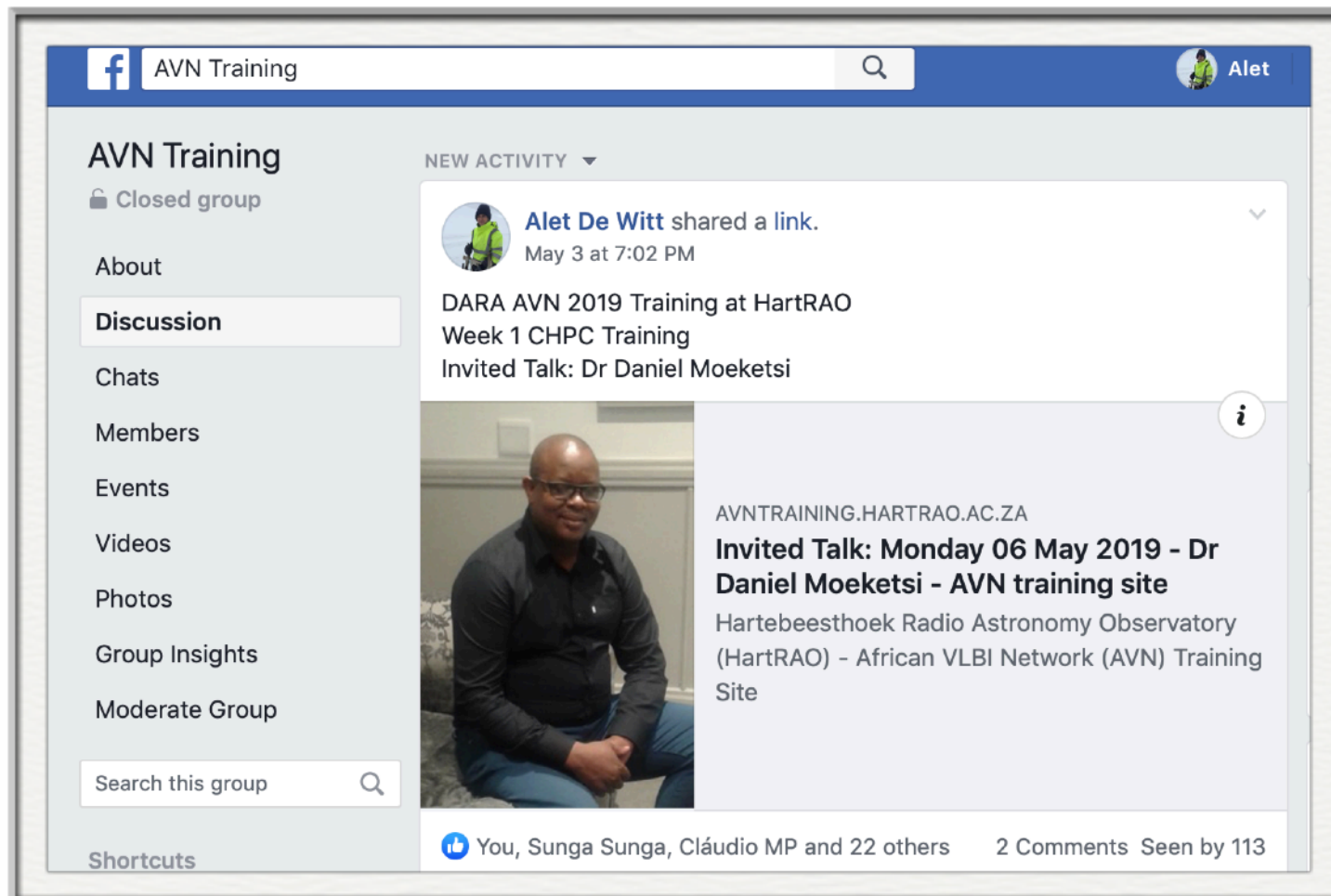
- **Facebook page:**
<https://www.facebook.com/groups/avntraining/>



The screenshot shows the Facebook interface for the 'AVN Training' group. The top navigation bar includes the Facebook logo, the group name 'AVN Training', a search icon, and navigation options: 'Alet', 'Home', and 'Create'. On the left, a sidebar menu lists group features: 'About', 'Discussion' (highlighted), 'Chats', 'Members', 'Events', 'Videos', 'Photos', 'Group Insights', and 'Moderate Group'. Below the menu is a search bar for the group and a 'Shortcuts' section with 'IVS 2016' and 'AVN Training'. The main content area features a large group photo of approximately 20 people standing on a grassy field with a fence and industrial structures in the background. Below the photo are buttons for 'Joined', 'Notifications', 'Share', and 'More'. A post creation bar offers options for 'Write Post', 'Add Photo/Video', 'Live Video', and 'More'. Below this is a text input field with a profile picture and the text 'Write something...'. At the bottom of the post area are buttons for 'Photo/Video', 'Watch Party', 'Tag Friends', and a 'More' menu. On the right side, there is an 'INVITE MEMBERS' section with an 'Embed Invite' link and an input field for names or email addresses. Below that is a 'MEMBERS' section showing '201 Members' and a row of six member profile pictures.

Logistics


- **Facebook page:**
<https://www.facebook.com/groups/avntraining/>



The screenshot shows the Facebook interface for the 'AVN Training' group. The group is a 'Closed group' and has a search bar at the top. The left sidebar contains navigation options: About, Discussion (selected), Chats, Members, Events, Videos, Photos, Group Insights, and Moderate Group. The main content area shows a post by 'Alet De Witt' shared on May 3 at 7:02 PM. The post text reads: 'DARA AVN 2019 Training at HartRAO Week 1 CHPC Training Invited Talk: Dr Daniel Moeketsi'. Below the text is a photo of Dr. Daniel Moeketsi, a man with glasses wearing a dark shirt and blue pants. To the right of the photo is an information icon and the text: 'AVNTRAINING.HARTRAO.AC.ZA Invited Talk: Monday 06 May 2019 - Dr Daniel Moeketsi - AVN training site Hartebeesthoek Radio Astronomy Observatory (HartRAO) - African VLBI Network (AVN) Training Site'. At the bottom of the post, it says 'You, Sunga Sunga, Cláudio MP and 22 others' and '2 Comments Seen by 113'.

Logistics

- **Website:**
<http://avntraining.hartrao.ac.za>



NRF SARAO
National Research Foundation South African Radio Astronomy Observatory

African VLBI Network Training Site

[Home](#) | [News & Events](#) | [Schools & Projects](#) | [Material](#) | [Contact Us](#) | [INTERNAL](#)


You are here:

Home

The African VLBI Network (AVN) Training Site - HartRAO

Published: Monday, 16 March 2015 07:31 | [Print](#) | [Email](#) | [Edit](#) | Hits: 56607

The [African VLBI Network \(AVN\)](#) is a project to build an African [Very Long Baseline Interferometric \(VLBI\)](#) network, partly by converting redundant satellite Earth-station antennas across Africa to use for radio astronomy. [SKA-SA](#) and [HartRAO](#) have converted the redundant 34-m telecommunications antenna in Ghana to a radio telescope. The Ghanaian radio telescope will be the second element, HartRAO is the first, of what will eventually become the AVN. There are 29 documented 30-m class telecommunications antennas in 19 African countries though some no longer exist. It is proposed that more of these can be converted and added to the AVN. Each addition will improve the present global VLBI networks. Currently there are plans, to convert two more antennas in Kenya and Zambia and some new built antennas are also considered.



[SKA-SA](#) and [HartRAO](#) are providing the basis for developing the AVN both for hardware development and technical and scientific human capacity development. The image on the left shows the 26-m radio telescope at HartRAO.

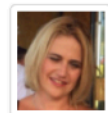
The next AVN Training School will be from 06-31 May 2019

Development in Africa for Radio Astronomy (DARA)

The [DARA](#) project aims to develop high tech skills using radio astronomy in a number of African countries. Radio astronomy

CB Login

Hi, Aletha de Witt
(aletdewitt)



Latest news

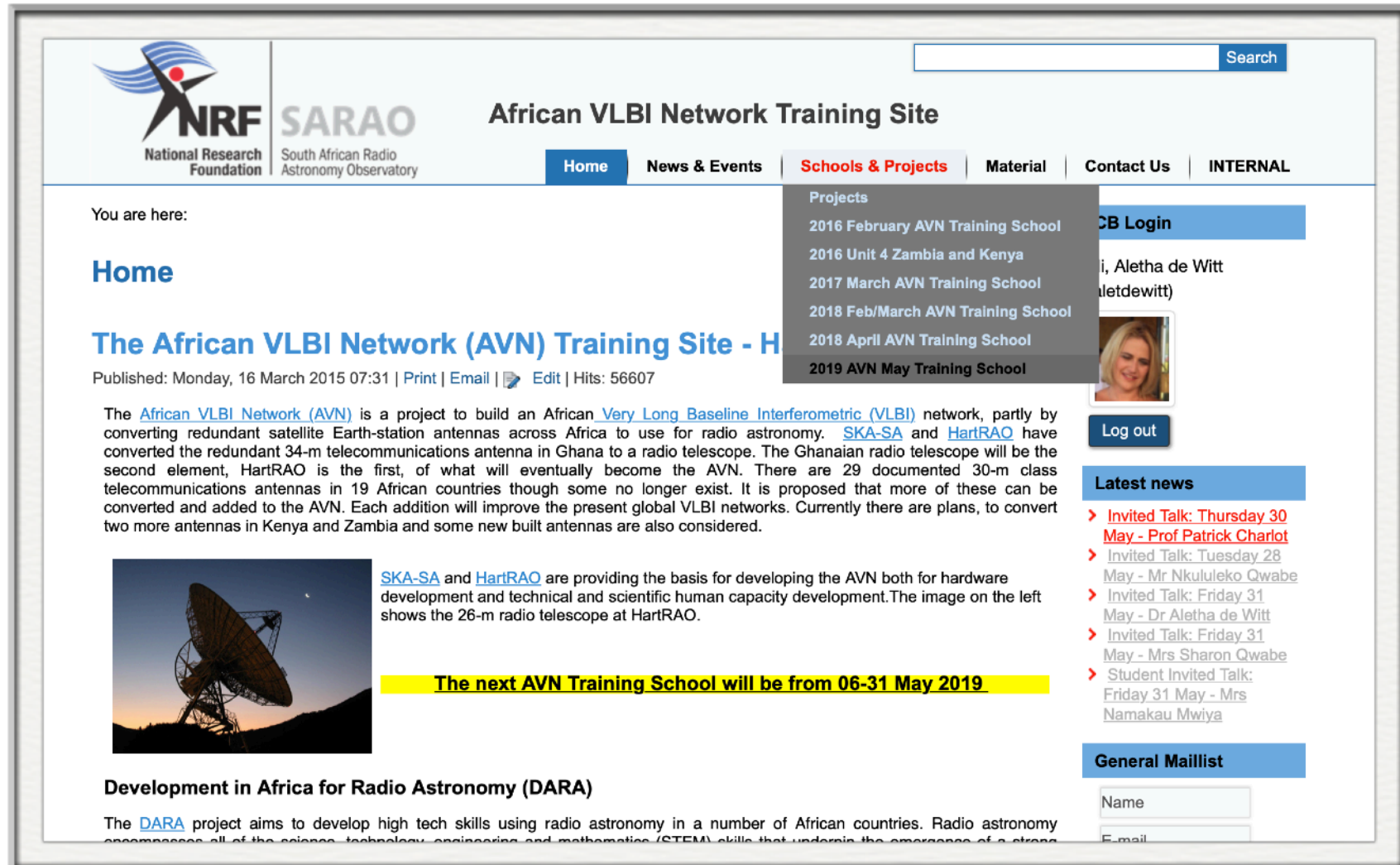
- > [Invited Talk: Thursday 30 May - Prof Patrick Charlot](#)
- > [Invited Talk: Tuesday 28 May - Mr Nkululeko Qwabe](#)
- > [Invited Talk: Friday 31 May - Dr Aletha de Witt](#)
- > [Invited Talk: Friday 31 May - Mrs Sharon Qwabe](#)
- > [Student Invited Talk: Friday 31 May - Mrs Namakau Mwiya](#)

General Maillist

Name

Logistics

- Website: AVN 2019 Training



The screenshot shows the website for the African VLBI Network Training Site. The header includes the NRF and SARAO logos, a search bar, and navigation links: Home, News & Events, Schools & Projects, Material, Contact Us, and INTERNAL. The 'Schools & Projects' menu is open, listing training schools from 2016 to 2019, with the 2019 AVN May Training School highlighted. The main content area features a 'Home' link, a title 'The African VLBI Network (AVN) Training Site - H...', and a paragraph describing the AVN project. A photograph of a radio telescope is shown, with a caption stating 'The next AVN Training School will be from 06-31 May 2019'. The right sidebar contains a 'CB Login' section with a user profile for Aletha de Witt, a 'Log out' button, a 'Latest news' section with a list of invited talks, and a 'General Maillist' section with input fields for Name and E-mail.


You are here:

[Home](#)

The African VLBI Network (AVN) Training Site - H

Published: Monday, 16 March 2015 07:31 | [Print](#) | [Email](#) | [Edit](#) | Hits: 56607

The [African VLBI Network \(AVN\)](#) is a project to build an African [Very Long Baseline Interferometric \(VLBI\)](#) network, partly by converting redundant satellite Earth-station antennas across Africa to use for radio astronomy. [SKA-SA](#) and [HartRAO](#) have converted the redundant 34-m telecommunications antenna in Ghana to a radio telescope. The Ghanaian radio telescope will be the second element, HartRAO is the first, of what will eventually become the AVN. There are 29 documented 30-m class telecommunications antennas in 19 African countries though some no longer exist. It is proposed that more of these can be converted and added to the AVN. Each addition will improve the present global VLBI networks. Currently there are plans, to convert two more antennas in Kenya and Zambia and some new built antennas are also considered.



[SKA-SA](#) and [HartRAO](#) are providing the basis for developing the AVN both for hardware development and technical and scientific human capacity development. The image on the left shows the 26-m radio telescope at HartRAO.


The next AVN Training School will be from 06-31 May 2019

Development in Africa for Radio Astronomy (DARA)

The [DARA](#) project aims to develop high tech skills using radio astronomy in a number of African countries. Radio astronomy encompasses all of the science, technology, engineering and mathematics (STEM) skills that underpin the emergence of a strong

CB Login

i, Aletha de Witt
letdewitt)



[Log out](#)

Latest news

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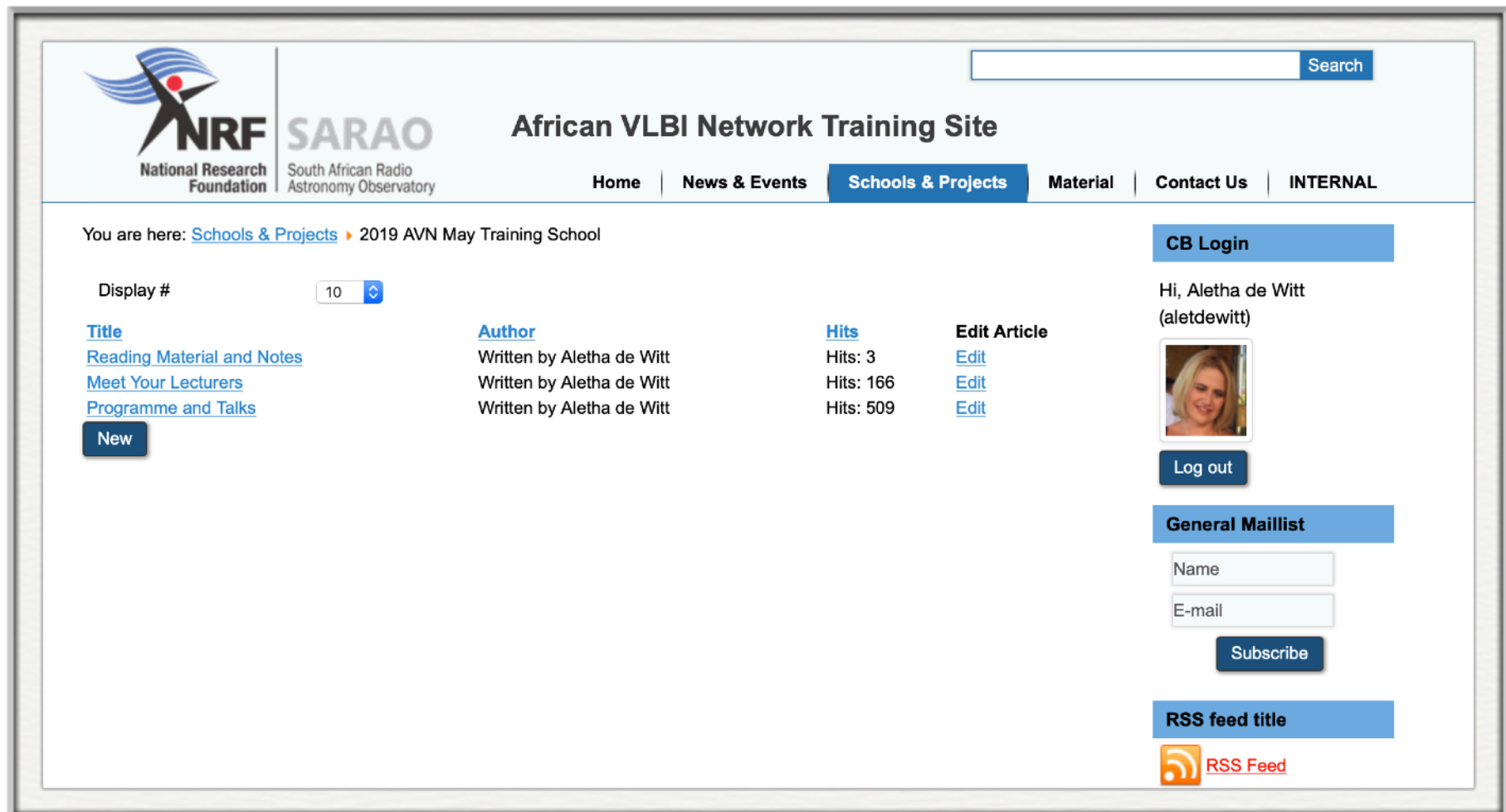
General Maillist

Name

E-mail

Logistics

- Website: AVN 2017 Training



The screenshot shows the website interface for the African VLBI Network Training Site. At the top left is the NRF SARAO logo. A search bar is located at the top right. The main navigation menu includes Home, News & Events, Schools & Projects (which is highlighted), Material, Contact Us, and INTERNAL. Below the navigation, a breadcrumb trail reads: You are here: [Schools & Projects](#) > 2019 AVN May Training School. On the left side, there is a 'Display #' dropdown menu set to 10, a 'New' button, and a list of links: [Reading Material and Notes](#), [Meet Your Lecturers](#), and [Programme and Talks](#). The main content area features a table with columns for Title, Author, Hits, and Edit Article. The table lists three entries, all written by Aletha de Witt, with 3, 166, and 509 hits respectively. On the right side, there is a 'CB Login' section with a user greeting 'Hi, Aletha de Witt (aletdewitt)', a profile picture, and a 'Log out' button. Below that is a 'General Maillist' section with input fields for Name and E-mail, and a 'Subscribe' button. At the bottom right, there is an 'RSS feed title' section with an RSS icon and the text 'RSS Feed'.

NRF SARAO
National Research Foundation South African Radio Astronomy Observatory

African VLBI Network Training Site


Home | News & Events | **Schools & Projects** | Material | Contact Us | INTERNAL

You are here: [Schools & Projects](#) > 2019 AVN May Training School


Display # 10

Title
[Reading Material and Notes](#)
[Meet Your Lecturers](#)
[Programme and Talks](#)
New

Title	Author	Hits	Edit Article
	Written by Aletha de Witt	Hits: 3	Edit
	Written by Aletha de Witt	Hits: 166	Edit
	Written by Aletha de Witt	Hits: 509	Edit

CB Login
Hi, Aletha de Witt (aletdewitt)

Log out

General Maillist
Name
E-mail
Subscribe

RSS feed title
 RSS Feed

- **Website: Download and view your presentations on your screen**

2019 AVN May Training School

Programme and Talks

Published: Tuesday, 08 January 2019 14:43 | [Print](#) | [Email](#) | [Edit](#) | Hits: 511

Download the *DRAFT AVN 2019 Training Programme* [here](#)

Programme Overview: 2019 AVN Training School:

Sunday 05 May: Arrival


- 10:30 - 14:30: Arrival of trainees
- 12:30 - 13:30: Lunch
- 18:30 - 19:30: Dinner

PART I:
CHPC Training - Basic Introduction to Linux and Python

Monday 06 May: Welcome and Introduction, CHPC Training: Linux

- 07:00 - 08:00: Breakfast
- 08:00 - 08:30: Registration
- 08:30 - 10:00: Welcome & Introduction <download> <download> <download>
- 10:00 - 10:30: Tea/Coffee break
- 10:30 - 11:30: Participants to introduce themselves
- 11:30 - 12:30: Introduction to CHPC-DARA
- 12:30 - 13:30: Lunch
- 13:30 - 14:30: Running commands and getting help
- 14:30 - 15:30: Browsing the file system and bash shell

Hi, Aletha de Witt
(aletdewitt)



[Log out](#)

General Maillist

Name

E-mail

[Subscribe](#)

CB Online


- > [Aletha de Witt \(aletdewitt\)](#)
- > [Christopher Mwila \(Christopher Mwila Mateo\)](#)

Online Polls

- > [Latest Polls](#)
- > [Featured Polls](#)

Logistics

- Website: Reading Material and Notes



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You are here: [Schools & Projects](#) > [2019 AVN May Training School](#) > Reading Material and Notes

2019 AVN May Training School

Reading Material and Notes

Published: Sunday, 05 May 2019 22:19 | [Print](#) | [Email](#) | [Edit](#) | Hits: 4


General Notes on Radio Astronomy:
[Radio Astronomy notes.pdf](#)
[Online lecture notes](#)

[Next](#)

Category: *2019 AVN May Observational and Technical Radio Astronomy Training School*

CB Login

Hi, Aletha de Witt (aletdewitt)



[Log out](#)

General Maillist

Name

E-mail









[Subscribe](#)

CB Online

> [Aletha de Witt \(aletdewitt\)](#)

Logistics

- Website: Lecturers

			
Dr Arnold de Beer (AdB)	Dr Aletha de Witt (AdW)	Dr Andrew Gill (AG)	Dr Alex Pollak (AP)
			
Mr Andre van der Merwe (AvdM)	Mr Daniel Hayden (DH)	Dr David Mayer (DM)	Dr Daniel Moeketsi (DaM)

Log out

General Maillist

Name

E-mail

Subscribe

CB Online

- > [Aletha de Witt \(aletdewitt\)](#)
- > [Christopher Mwila \(Christopher Mwila Mateo\)](#)

Online Polls



- > [Latest Polls](#)
- > [Featured Polls](#)

• Website: Lecturers Info and Invited Talks


News

International Lecturers: 2019 AVN DARA Training

Published: Wednesday, 01 May 2019 20:24 | [Print](#) | [Email](#) | [Edit](#) | Hits: 83

	<p>Mr Daniel Hayden (DH): <invited talk></p> <p>Currently I am working as the system engineer for the SKA1 Low telescope, which is the low frequency array that will be built in the Australian desert (while the mid frequency array will be built in SA in the Karoo). I live close to hills, dry stone walls and many sheep, and I can see a 70m radio telescope from the window where I work.</p>
	<p>Dr David Mayer (DM): <invited talk></p> <p>David Mayer studied Advanced Geodesy and Geophysics and obtained his Master's degree from the Technische Universität Wien (TU Wien) in 2015. Continuing his studies at the TU Wien, he finished his Ph.D. Since 2019 he has been employed by the Austrian Federal Office of Metrology and Surveying (BEV) where he supervises a data and analysis center of the EUREF Permanent GNSS Network.</p>

Hi, Aletha de Witt (aletdewitt)



[Log out](#)

Latest news

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Online Polls

• Website: Invited Talks

News

Invited Talk: Friday 31 May 2019 - Mr Daniel Hayden

Published: Friday, 03 May 2019 16:30 | [Print](#) | [Email](#) | [Edit](#) | Hits: 14

31 May 2019 14:15 - 15:15

Title: System Engineering at SKAO

Author: Mr Daniel Hayden
System engineer for SKA1 Low Telescope
SKA Organisation
Jodrell Bank Observatory
England

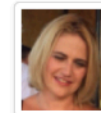
Abstract:

The Square Kilometre Array (SKA), when built, will be the largest scientific facility in the world. Phase 1 of the SKA will consist of two radio telescopes, one in South Africa made up of 197 dishes, and one in Australia made up of 130 000 antennas. These will consist of millions of parts and are being designed by thousands of engineers in numerous different locations and environments. How then do we ensure that all the jigsaw pieces will come together properly, to a very high degree of precision, and that the telescopes that emerge will enable the science that we expect? This is the role of systems engineering, and this talk will give a flavour of some day-to-day system engineering activities in the SKA project.

More about the author:



Hi, Aletha de Witt
(aletdewitt)



[Log out](#)

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CB Online

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Logistics



- **Website: Please help us improve the AVN training by completing our weekly and daily surveys**

A large radio telescope dish is silhouetted against a sunset sky. The dish is the central focus, with its complex metal structure and large parabolic surface clearly visible. The sky transitions from a deep orange near the horizon to a dark blue at the top. A few other smaller telescope structures are visible in the background, also silhouetted.

Thank You

Contact Details

Aletha de Witt
alet@hartrao.ac.za

Image credit: Lynne Arnold, 2019