

The South African SKA Youth into Science and Engineering Programme

4th Annual Bursary and Fellowship Conference

Wednesday 2 December 2009 to Monday 7 December 2009

The Wallenberg Centre, Stellenbosch Institute for Advanced Study

Stellenbosch



Programme

Wednesday 2 December 2009

Time	Event
08h00 to 14h00	<ul style="list-style-type: none">• Arrival of delegates from outside Stellenbosch• Delegates and students check into accommodation
15h30 to 16h15	<ul style="list-style-type: none">• Registration for all delegates at the Wallenberg Centre, Stellenbosch Institute for Advanced study
16h30 to 21h00	<p style="text-align: center;">Opening Ceremony and Gala Dinner</p> <p>Master of Ceremony: Vice Rector (Research) of the University of Stellenbosch, Prof. Arnold van Zyl</p> <ul style="list-style-type: none">• 16h45: Welcome: Vice Rector (Research) of the University of Stellenbosch, Prof. Arnold van Zyl• 16h55: Address and opening of the conference by the Minister for Science and Technology, Mrs. Naledi Pandor• 17h15: Address by the President and Chief Executive Officer of the National Research Foundation, Dr. Albert van Jaarsveld• 17h40: Presentation by the Director of the South African SKA Project, Dr. Bernie Fanaroff• 18h30 to 18h50: Drinks on terrace and opportunity for media interviews• 19h00 to 21h00: Gala Dinner

Thursday 3 December 2009

Time	Event
08h00 to 10h50	<p><u>Session Chairperson: Prof. David Davidson</u></p> <p>08h00 to 09h00 Dr. Bernie Fanaroff <i>Project Director, South African SKA Project</i> <i>General discussion: project expectations of students and fellows, level and frequency of project – student interaction, other issues</i></p> <p>09h00 to 09h30 Dr. Nadeem Oozeer SKA South Africa supported postdoctoral fellow, The Hartebeesthoek Radio Astronomy Observatory <i>Ideas for networking and communications amongst peers in the SKA SA HCD Programme (facebook, summer schools etc.)</i></p> <p>09h30 to 10h00 Dr. Andrew Faulkner SKADS Project Engineer, University of Cambridge <i>Designing an optimal SKA around AAs at low frequencies plus offset dishes with single pixel feeds at higher frequencies – maximising the science output for a fixed cost</i></p> <p>10h00 to 10h30 Prof. Tony Brown Associate Dean, Faculty of Engineering and Physical Science: University of Manchester <i>Phased Array Antenna SKA</i></p> <p>10h30 to 10h50 Dr. Adrian Tiplady Manager, Site characterization and RFI: The South African SKA Project <i>Optimizing the SKA</i></p>
10h50 to 11h20	TEA
11h20 to 13h25	<p><u>Session Chairperson: Dr. Adrian Tiplady</u></p> <p>11h20 to 11h35 Mr. Phillip Kibet SKA South Africa supported PhD student, University of Stellenbosch <i>Characterization of radiated sparking noise in the SKA environment</i></p> <p>11h35 to 11h55 Mr. Paul van der Merwe SKA South Africa supported PhD student, University of Stellenbosch <i>Investigating EMC policies for the SKA</i></p> <p>11h55 to 12h10 Mr. Gideon Wiid SKA South Africa supported PhD student, University of Stellenbosch <i>Progress on lightning protection and RFI Mitigation for KAT-7</i></p>

	<p>12h10 to 12h25 Ms. Nancy Nongoni SKA South Africa supported MSc student, University of Cape Town <i>Neural cross correlation for Radio astronomy</i></p> <p>12h25 to 12h40 Mr. Jason Manley SKA South Africa supported PhD student, University of the Cape Town <i>Large N correlators</i></p> <p>12h40 to 12h55 Mr. Brandon Hamilton SKA South Africa supported PhD student, University of the Cape Town <i>An operating system for ROACH</i></p> <p>12h55 to 13h10 Mr. Arjun Radhakrishna SKA South Africa supported PhD student, University of the Cape Town <i>Accelerating pulsar dedispersion on GPUs for MeerKAT</i></p> <p>13h10 to 13h25 Mr. Shanly Rajan SKA South Africa supported MSc student, University of the Cape Town <i>Automated gateway discovery using open firmware</i></p>
13h30 to 14h15	LUNCH
14h15 to 15h45	<p><u>Session Chairperson: Ms. Ruby van Rooyen</u></p> <p>14h15 to 14h30 Mr. Sean Passmoor SKA South Africa supported PhD student, University of the Western Cape <i>The clustering of galaxies detected by neutral hydrogen emission</i></p> <p>14h30 to 14h45 Mr. Claudio Moises Paulo SKA South Africa supported MSc student, University of the Western Cape <i>The AGN component in the FLSv region: radio-optical analysis of multi-component radio sources</i></p> <p>14h45 to 15h00 Mr. Geoffery Okengo SKA South Africa supported MSc student, University of the Western Cape <i>Stellar pulsations in young brown dwarfs</i></p> <p>15h00 to 15h15 Ms. Ando Ratsimbazafy SKA South Africa supported MSc student, University of the Western Cape <i>AGE- Dating luminous red galaxies</i></p>

	<p>15h15 to 15h30 Mr. Solohery Randriamampandry SKA South Africa supported MSc student, University of the Western Cape <i>Stellar masses of star forming galaxies in galaxy clusters</i></p> <p>15h30 to 15h45 Mr. Fidy Ramamonjisoa SKA South Africa supported MSc student, University of the Western Cape <i>Modeling radio galaxies in millennium simulation</i></p>
15h45	TEA AND SNACKS
16h00	Meet at the conference venue for a walk in the surrounding area – wear comfortable shoes, shorts and bring water
16h15 to 17h15	Walk led by Stellenbosch University's Department of Electronic Engineering
NOTE: Thursday evening is a "free" evening. All dinner arrangements are to be made by the delegates and to be paid for by the delegates and not by the SKA SA Project	

Friday 4 December 2009

Time	Event
08h30 to 10h45	<p><u>Session Chairperson: Dr. Bernie Fanaroff</u></p> <p>08h30 to 09h00 Prof. Roy Booth Director: The Hartebeesthoek Radio Astronomy Observatory <i>MeerKAT Science</i></p> <p>09h05 to 09h35 Prof. Daniel James Pisano Assistant Professor, Department of Physics, University of West Virginia <i>Galaxy Formation, Evolution, and Transformation in Galaxy Groups</i></p> <p>09h40 to 10h10 Dr. Matt Jarvis Centre for Astrophysics, Science & Technology Research Institute: University of Hertfordshire <i>From radio to the short wavelength view of galaxy formation</i></p> <p>10h15 to 10h45 Mr. Oliver King PhD student, University of Oxford <i>The C-Band All-Sky Survey: Project overview, receiver design, and current progress</i></p>
10h45 to 11h15	TEA
11h15 to 12h50	<p><u>Session Chairperson: Prof. Erwin de Blok</u></p> <p>11h15 to 11h35 Prof. Bruce Bassett University of Cape Town <i>Cosmological results from the first year of the SDDS-II Supernova survey</i></p> <p>11h40 to 12h00 Prof. Pieter Meintjies University of the Free State <i>The UFS Multi-Wavelength Astrophysics Programme</i></p> <p>12h05 to 12h25 Dr. Somanah Radhakrishna Mauritius Radio Telescope GMRT observations of a sample of extragalactic radio sources at 618 MHz</p> <p>12h30 to 12h50 Prof. Chris Koen University of the Western Cape <i>Astrostatistics, and brown dwarfs</i></p>
13h00 to 14h00	LUNCH
14h00 to 15h00	<p><u>Session Chairperson: Dr. Antoine Bouchard</u></p> <p>14h00 to 14h15 Mr. Lwando Kondlo</p>

	<p>SKA South Africa supported MSc student, University of the Western Cape <i>Estimation of pareto distribution functions from samples contaminated by measurement errors</i></p> <p>14h15 to 14h30 Mr. Bradley Frank MSc student: University of Cape Town <i>Evaluation of the MeerKAT configuration for HI science</i></p> <p>14h30 to 14h45 Ms. Zara Randriamanakoto SKA South Africa supported MSc student, University of the Cape Town <i>Star formation in interacting galaxies</i></p> <p>14h45 to 15h00 Ms. Andri Prozesky SKA South Africa supported MSc student, University of South Africa <i>Atomic processes in gaseous nebulae</i></p>
15h00 to 15h30	TEA
<p>18h00 to 19h30 Public Talk, Prof. Roy Booth Radio Astronomy - a brief history: from Karl Jansky to the SKA STIAS</p>	
<p>NOTE: Friday evening is a "free" evening. All dinner arrangements are to be made by the delegates and to be paid for by the delegates and not by the SA SKA Project.</p>	

Saturday 5 December 2009

Time	Event
08h50 to 10h40	<p><u>Session Chairperson: Prof. Renee Kraan-Korteweg</u></p> <p>09h00 to 09h30 Prof. Justin Jonas Associate Director: Science and Engineering, The South African SKA Project <i>Building MeerKAT - Concept to Karoo</i></p> <p>09h35 to 10h05 Prof. Marc Verheijen Associate Professor: Kapteyn Astronomical Institute - University of Groningen <i>Westerbork ultra-deep HI observations at z=0.2 - prospects for MeerKAT</i></p> <p>10h10 to 10h40 Prof. Lister Staveley-Smith <i>Deputy-director (Science) of the International Centre for Radio Astronomy Research (ICRAR)</i> <i>TBD</i></p>
10h45 to 11h15	TEA
11h15 to 13h10	<p><u>Session Chairperson: Prof. Justin Jonas</u></p> <p>11h15 to 11h35 Dr. Girish Kumar Beeharry Head Department of Physics, Faculty of Science, University of Mauritius <i>The Southern Sky at 151.5 MHz: Latest results, first results from the new Callisto solar spectrograph and proposal for a low frequency array (< 1 GHz)</i></p> <p>11h40 to 12h00 Dr. Catherine Cress University of the Western Cape Galaxies, cosmology and the SKA</p> <p>12h05 to 12h20 Dr. Illani Loubser SKA South Africa supported postdoctoral fellow, University of the Western Cape <i>Unraveling the formation and evolution histories of most massive galaxies</i></p> <p>12h25 to 12h45 Dr. Andreas Faltenbacher SKA South Africa supported postdoctoral fellow, University of the Western Cape <i>The velocity shape alignment of clusters in the kinetic Sunyaev-Zel'dovich effect</i></p>

	<p>12h50 to 13h10 Ms. Sarah Buchner PhD student (Pulsar Timing) The Hartebeesthoek Radio Astronomy Observatory <i>Continuous Vela monitoring with XDM</i></p>
13h10 to 14h00	LUNCH
14h00 to 15h40	<p><u>Session Chairperson: Mr. Willem Esterhuyse</u></p> <p>14h00 to 14h20 Dr. Dirk de Villiers SKA South Africa supported postdoctoral fellow, University of Stellenbosch <i>Ultra wideband reflector antenna feeds</i></p> <p>14h20 to 14h40 Ms. Jacki van der Merwe SKA South Africa supported MSc student, University of Stellenbosch <i>Noise coupling in focal plane arrays</i></p> <p>14h40 to 14h55 Mr. Daniel Ludick SKA South Africa supported MSc student, University of Stellenbosch <i>Efficient Numerical Analysis of Focal Plane Antennas for the SKA and the MeerKAT</i></p> <p>14h55 to 15h10 Ms. Karla Schoeman SKA South Africa supported MSc student, University of Stellenbosch <i>Methods of moments formulation for tapered waveguides</i></p> <p>15h10 to 15h25 Mr. Frank Janse van Vuuren SKA South Africa supported MSc student, University of Stellenbosch <i>A hexapod mount for the PED Demonstrator</i></p> <p>15h25 to 15h40 Mr. William Walburgh SKA South Africa supported MSc student, University of Stellenbosch <i>Manufacturing optimization for MeerKAT</i></p>
15h40	TEA and SNACKS
<p>NOTE: Saturday evening is a "free" evening. All dinner arrangements are to be made by the delegates and to be paid for by the delegates and not by the SKA SA Project</p>	

Sunday 6 December 2009

Time	Event
09h00 to 10h40	<p><u>Session Chairperson: Dr. Sharmila Goedhart</u></p> <p>09h00 to 09h20 Mr. Kevin Govender SAAO <i>IYA 2009</i></p> <p>09h25 to 09h40 Mr. Edward Elson SKA South Africa supported PhD student, University of the Cape Town <i>New insights into the dynamics and evolution of the blue compact dwarf galaxy NGC 2915</i></p> <p>09h40 to 09h55 Ms. Kim McAlpine SKA South Africa supported PhD student, Rhodes University <i>Continuum imaging with GMRT</i></p> <p>09h55 to 10h10 Mr. Pheneas Nkundabakura SKA South Africa supported PhD student, University of the Free State <i>Unveiling the Nature of the Two Unidentified Blasar candidates through spectroscopy</i></p> <p>10h10 to 10h25 Ms. Nebiha Bedru SKA South Africa supported PhD student, University of the Witwatersrand <i>More surprises from NGC 3079</i></p> <p>10h25 to 10h40 Mr. Jacobus Diener SKA South Africa supported PhD student, Stellenbosch University <i>Ferromagnetism in nuclear matter applied to study neutron stars</i></p>
10h40 to 11h15	TEA
11h15 to 13h00	<p><u>Session Chairperson: Dr. Illani Loubser</u></p> <p>11h15 to 11h30 Mr. Patrice Okouma SKA South Africa supported PhD student, University of the Cape Town <i>Initial conditions and Baryon Acoustic Oscillations</i></p>

	<p>11h30 to 11h45 Mr. Bosco Oruru SKA South Africa supported PhD student, University of the Free State <i>The unusual propeller driven white dwarf pulsar AE Space Aquarii</i></p> <p>11h45 to 12h00 Ms. Wendy Williams SKA South Africa supported PhD student, University of the Cape Town <i>A Tully-Fisher survey in the zone of avoidance</i></p> <p>12h00 to 12h15 Mr. Brian van Soelen SKA South Africa supported PhD student, University of the Free State <i>Gamma-ray production in Be-XRBs</i></p> <p>12h15 to 12h30 Mr. Roger Ianjamasimanana SKA South Africa supported MSc student, University of Cape Town <i>The shapes of the THINGS HI profiles</i></p> <p>12h30 to 12h45 Mr. Darell Moodley SKA South Africa supported MSc student, University of KwaZulu-Natal <i>Selecting a mass function by way of the Bayesian Razor</i></p>
13h00 to 14h00	<u>LUNCH</u>
14h00 to 15h40	<p><u>Session Chairperson: Dr. Nadeem Oozeer</u></p> <p>14h00 to 14h15 Ms. Patricia Skelton SKA South Africa supported MSc student, University of South Africa <i>Modelling of Eclipsing Binaries</i></p> <p>14h15 to 14h30 Ms. Lientjie de Villiers SKA South Africa supported MSc student, North West University <i>An unusual T Tauri abundance in the southern high mass star forming region RCW 34</i></p> <p>14h30 to 14h45 Mr. Milton van Rooy SKA South Africa supported MSc student, University of Stellenbosch <i>Locating the inner edge of a neutron star crust</i></p> <p>14h45 to 15h00 Mr. Andry Rajoelimanana SKA South Africa supported MSc student, University of the Cape Town <i>Nature of high mass x-ray binaries in the magellanic clouds</i></p>
15h00	TEA AND SNACKS
15h30	Meet at the conference venue for the walk to the "sports field" – wear comfortable shoes, shorts and bring water

15h45 to 16h45	Volley Ball led by Stellenbosch University's Department of Electronic Engineering
18h30	Prize giving
19h00	Closing Dinner

Monday 7 December 2009

Time	Event
09h00 to 11h30	<p><u>Session Chairperson: Prof Roy Booth</u></p> <p>09h00 to 09h20 Dr. Antoine Bouchard SKA South Africa supported postdoctoral fellow, University of Cape Town <i>The undiscovered HI in the local universe</i></p> <p>09h25 to 09h45 Dr. Nadeem Oozeer SKA South Africa supported postdoctoral fellow, The Hartebeesthoek Radio Astronomy Observatory <i>Tracing cluster / subcluster history using bent radio sources</i></p> <p>09h50 to 10h10 Dr. Mathew Smith SKA South Africa supported postdoctoral fellow, University of Cape Town <i>Host galaxies of type LA supernova and their consequences for cosmology</i></p> <p>10h15 to 10h35 Dr. Se-Heon Oh SKA South Africa supported postdoctoral fellow, University of Cape Town <i>High resolution dark matter density profiles of THINGS dwarf galaxies</i></p> <p>10h40 to 11h20 Prof. Howard Reader Stellenbosch University <i>TBD</i></p> <p>11h25 to 11h30 Prof. Justin Jonas Closing and thanks</p>
11h30 to 12h00	TEA AND SNACKS
12h00	Depart for airport / home