



**Thank You Tata Madiba
For Being the Greatest ENGINEER of our Democracy**

South African Institute of Electrical Engineers

December 2013

SAIEE KZN Centre: Chairman and Committee year-end message

HAVING TAKEN OVER the reins of the Kwa-Zulu Natal Centre in April 2013, the first priority was to compile an annual delivery plan for the committee, highlighting what we wanted to deliver to the 700 members of the centre. Knowing that the KZN centre was established in 1957 and had been successfully run by all the previous chairmen and committees we felt obligated to uphold that success and to deliver even more. To this end we set ourselves some very bold targets, knowing that with the contribution of industry and our members, failure was only a remote possibility.

As a committee we felt we could add value to the members who are professionally registered with the Engineering Council of South Africa (ECSA), by creating opportunities for them to attain CPD credits for Category 1: Developmental activities. A maximum of 4 credits may be accumulated annually under this category for attending Conferences, Congresses, Large group workshops, Lectures, Seminars, Refresher courses and Colloquiums. The committee planned to host 10 monthly-presentations giving members the opportunity to accumulate 1 CPD point for the year.

The committee successfully hosted 9 presentations with a total of 1.2 CPD point. Two of these presentations, namely the President's address and the Chairman's address were also delivered at the Pietermaritzburg satellite branch. The committee also planned to make available 3 courses with a total of 3 CPD points. In the 2013 year 3 courses were held, one of which was sponsored and free, making available a total of 3.5 CPD points. A presentation and site visit was arranged for Hazelmere CPV green energy plant. Members that attended the monthly presentations and courses could have easily accumulated 4 CPD points in Category 1.

The success of the centre depends largely on its membership. We had started the year with ± 700 members and set ourselves a target to grow this to 750 members within two



SAIEE KZN Centre Chairman Veer Ramnarain

years. Despite the normal resignations, we managed to grow our membership to 741 in less than a year. Considering that there are about 6000 members nationally, KZN contributes only about 12.5% to the national membership. In the coming year, we look forward to existing members growing the SAIEE membership as they draw in their colleagues and friends. Some small gains have also been made to resurrect the Student Chapter at Mangosuthu University of Technology, Durban University of Technology and University of Kwa-Zulu-Natal.

One aspect that we felt needed attention was our communication with the KZN membership. To improve this we introduced the electronic newsletter, *recharge* in May 2013 with our personal KZN branding. Together with the December edition we would have successfully distributed the newsletter to ± 800 people for 8 months of the year. We wish to thank our sponsors who supported this initiative by means of their paid advertorials.

An aspect that we grappled with over the past few years was maintaining current content on the previously outdated website. SAIEE launched a new website in 2013 and the KZN-Centre section is updated regularly for your benefit. Our plan is to start using other social media in the coming year, to keep you updated of your centre's activities.

We are thankful to *The Daily News* and *The Mercury* for the exposure they have given the KZN Centre. A number of significant activities of the centre were covered in the media for the first time in recent years. Reporters willingly attended some key events and promptly published articles in their newspapers.

To play a more active role in the development of the profession, KZN Centre successfully hosted a Chairman's Workshop on 13 November 2013. Leaders from major industries in KZN, academia from Mangosuthu University of Technology, Durban University of Technology and University of Kwa-Zulu-Natal, as well as electrical engineering consultants were invited to the workshop. Presentations were done by the Executive from ECSA, Dr Faroon Goolam, President of SAIEE, Paul Van Niekerk and Vice President of SAIEE, Dr Pat Naidoo. After the great passion expressed at the workshop, it was decided that a follow-up session would be held in 2014. We look forward to your support at this future workshop. Besides this workshop SAIEE KZN Centre contributed at numerous other forums and platforms.

Overall, as a committee we feel we have achieved most of what we set out to do in the past year. We have improved in some areas that needed attention and have laid the foundation for other areas that we may not have been as successful at. Considering that the committee members are all volunteers that give up many hours of their personal time attending meetings and arranging events, I think they deserve a pat on the back. To the members of SAIEE KZN Centre, we say thank you for contributing to our profession and the development of our country. To our supporters; the sponsors, advertisers, media and presenters, thank you for making 2013 a very successful year for the centre.

SAIEE KZN Centre wishes our members a safe and enjoyable festive season and a prosperous new year. It was great serving you in 2013.

SAIEE playing a role in addressing the skills gap in South Africa

THE ENGINEERING SKILLS GAP and the ill-preparedness of graduates for the workplace has become common boardroom talk in the past decade, and also used as a common reason for poor infrastructure development. On the other end of the spectrum academia expresses great concern about the lack of support from industry for students when it comes to experiential learning and practical exposure. With this in mind the South African Institute of Electrical Engineers (SAIEE) KZN Centre took it upon themselves to bring both interested parties together at a Chairman's Workshop on 13 November 2013. The intention of the Chairman, Veer Ramnarain was to get a better understanding of where these views come from and to find ways of bridging the gap between Industry, Academia, SAIEE and the Engineering Council of South Africa (ECSA).

Leaders from major industries in KZN, Academia from Mangosuthu University of Technology, Durban University of Technology and University of Kwa-Zulu-Natal, as well as electrical engineering consultants were invited to the workshop. Presentations were done by the Executive from ECSA, Dr Faroon Goolam, President of SAIEE, Paul Van Niekerk and Vice President of SAIEE, Dr Pat Naidoo.

In terms of the current skills situation ECSA currently has 43 674 registered professionals. To get an appreciation of the current skills gap, an ECSA comparison re-



Veer Ramnarain (SAIEE KZN Chairman), Dr Faroon Goolam (ECSA Executive), Paul Van Niekerk (SAIEE President) and Dr Pat Naidoo (SAIEE Vice-President)

vealed that in China there is one registered engineer per 130 citizens, whereas in South Africa there is one registered engineer per 3 166 citizens. Research undertaken identified that the seven levers that needed to be addressed are; school system, student selection, engineering curriculum, teaching and learning, student support, staffing and funding.

SAIEE sees itself as playing an active role in the National Development Plan, when it comes to improving the livelihoods of citizens, infrastructure development, education and training and the transition to a low carbon economy. SAIEE and ECSA had undertaken a survey into the current and future needs of graduates and the associated gaps. It is evident that SA needs a considerable increase in engineering throughput.

Of equal concern is that the bulk of the 5'743 members of SAIEE are in the 25-40 age group, which is not a normal distribution curve. Many of the younger active members SAIEE are black and many of the older SAIEE members are white. How can SAIEE play an active role in ensuring suitable skills transfer between its members? Mentorship is key to addressing the skills gap and throughput of graduates. SAIEE is embarking on a program to financially reward mentors who want to play an active role on mentorship, using CETA funding. Experienced professionals who are either active or retired are encouraged to register with SAIEE as mentors, so that they can play an active role in addressing the skill gap.

Industry leaders are encouraged to get more actively involved in the academic institutions and to volunteer to be part of the Advisory Committee for tertiary institutions. Becoming a member of SAIEE creates opportunities for interaction with other professionals so that work opportunities and mentorship opportunities can be explored. Being a member of SAIEE also keeps one active in the profession and contributes towards professionals maintaining their Professional registration by attaining Continuous Professional Development points.

In summary, the workshop was a huge success with great passion expressed by all those that attended. Due to the extensive debates that had taken place, it was decided that a follow-up workshop will be held in 2014

Veer N RAMNARAIN, Pr Eng,
The SAIEE KZN Centre Chairman
is the author of this article.



SAIEE 2014 Proposed Programme KZN CENTRE

Date	Presentation / Tutorial / Visit
January	
23 /01/14	Presentation: Introduction to Fibre Optic Communication by Subhash Jagannath RSVP to Gill Nortier, saiee@iafrica.com Venue: Lecture Theatre, eThekwin Electricity Training Centre, 17 Supply Road, Springfield, Durban
February	
4+5/02/14	2 day CPD Course: Mastering Power System Fault Calculations by Piet Swart Contact Gill Nortier, saiee@iafrica.com, for registration forms/costs Venue: Athlone Room, Durban Country Club

SAIEE KZN CENTRE – Validated Event Summary FOR 2013

Date	Name	Type	Presenter	SAIEE Validation No.	CPD Credits
21/02/13	An Update on the Basic Principles of Lightning Protection & Earthing	Presentation	Dave Richardson	SAIEE-1007-S	0.15
28/02/13	Electric Power Cables	1 Day CPD Course	Dick Hardie	SAIEE-0858-RV2	1
11/04/13	Consumer Response to Power Conservation	AGM & Chairman's Inaugural Address	Veer Ramnarain	SAIEE-1036-S	0.15
18/04/13	An investigation into the use of Mobile Data Communications for SCADA application	Presentation	Resham Singh	SAIEE-1037-S	0.15
16/05/13	Refrigeration	Presentation	Bert Chapman	SAIEE-1040-S	0.15
23/05/13	Consumer Response to Power Conservation	Repeat of Chairman's Inaugural Address (PMB)	Veer Ramnarain	SAIEE-1047-S	0.15
30/05/13	Hazelmere CPV Power Plant - "The Journey"	Presentation/Site Visit	Sinothi Sibisi	SAIEE-1042-S	0.10
5&6/06/13	Fundamentals in Power System Fault Calculations	2 Day CPD Course	Prof. Piet Swart	SAIEE-0952-V	2
12/06/13	Independent Power Production and Infrastructure Development	Repeat of 2013 SAIEE President's Address (PMB)	Paul van Niekerk	SAIEE-1050-S	0.10
13/06/13	Independent Power Production and Infrastructure Development	Repeat of 2013 SAIEE President's Address (DBN)	Paul van Niekerk	SAIEE-1050-S	0.10
18/07/13	What's all this Hype about a Standard in Asset Management and What Does it Mean in South Africa?	2013 Chairman's Invitation Lecture	Dean Griffin	SAIEE-1080-S	0.15
15/08/13	3D modeling, segmentation, quantification and visualization of cardiac MRI	Presentation	Yarish Brijmohan	SAIEE-1102-S	0.15
16/10/13	Design & Development of a Prosthetic Arm	Repeat of 2013 SAIEE President's Invitation Lecture	Easton LaChappelle	SAIEE-1153-S	0.10
13/11/13	SAIEE KZN Centre - Chairman's Breakfast Meeting	Business Breakfast / Workshop	SAIEE/DUT/Industry	---	---
21/11/13	Surge & Lightning Protection	Morning Seminar hosted by Phoenix Contact (Pty) Ltd	Tony Rayner	SAIMC_CPD_S071	0.5

See below for instructions on registering your CPD records on the ECSA website >>>

Using the ECSA Electronic System for Entering B CPD Records

Notes:

- The CPD Website is only compatible with Internet Explorer – you will not be able to access it with any other browser.
- The first time you access the website, you will have to set the compatibility view settings. Click on the [Tools: Compatibility View Settings] a pop up box will appear – add the ECSA CPD website. The procedure is explained on the CPD website.

Procedure:

- Access ECSA web at www.ecsa.co.za
- On the left hand side panel, Select [CPD : CPD WEBSITE [MAIN]]
- Enter your Registration No, your ID No and then press enter
- The screen is very full. Your name and registration number will be displayed as well as your original registration date and your CPD cycle.
- Only Category 1 Activities need to be validated – the rest rely on your integrity and code of conduct.
- Above Category 1 on the screen see the green block, click [C]. This brings up a pop up table with the CPD periods. Select the period you want, ie 2013

- Select "Click to list records below"
- A new screen appears that lists your Development Activities for that period or is blank if none have been entered.
- The Blue box is the Search facility. You can search on Activity name, Activity number or the Provider. If you type SAIEE in the blue box under activity and click on (click), all SAIEE Validated Activities will be listed. Similarly you can list validated activities for other Voluntary Associations, Tertiary providers and ECSA (only for ECSA activities and overseas activities). To view local activities enter SAIEE KZN in the search box.
- A search result pop-up will appear. Click on the required validation number on the LHS of the pop-up box, and the activity will be automatically entered into your record page.
- Select period in very right hand column. By clicking on [c] a pop up table will appear to assist you. Select the period you want for the record.
- Save the record by clicking on the box "Click here to Save/Enter each record" Note that there is also a box to clear the screen or to delete a record if you have made an error and wish to correct it.
- Repeat the above for each record you want to enter.
- Similarly Overseas Activities validated by ECSA will be listed by typing ECSA in the blue box.
- Category 2 Activities are entered by typing in the details in the designated rows. Pop up pages again are available to assist with dates and the period.
- Again the record needs to be saved as described in 12.
- Under Category 3 one can claim 1 CPD credit for being a member of a voluntary association. By clicking on "Click" next to the blue box under "Name of Voluntary Association" a list of the recognised voluntary association will appear in the blue box. Click on the one required and it will be selected. Enter the rest of the information required, your membership grade, your membership number, and the period. Then save as above.
- Category 3 Activities are entered in a similar way by typing the necessary information.
- Please note that one needs to repeat the above procedure for each period.

Mr Vincent Tiedt is the author of this guide. He is a SAIEE KZN Centre Committee Member

SAIEE KZN CENTRE REPORT CARD FOR 2013

KEY PERFORMANCE INDICATOR	TARGET	ACTUAL ACHIEVEMENT
Monthly presentations	Arrange 10 presentations (1 CPD point)	1. An Update on the Basic Principles of Lightning Protection and Earthing by Dave Richardson (0.15 CPD) 2. Chairman's inaugural address: Consumer Response to Power Conservation by Veer Ramnarain (0.15 CPD) 3. Use of mobile applications technology for SCADA by Resham Singh (0.15 CPD) 4. Electricity Pricing and Tariffs by Roy Wienand (0.15 CPD) 5. Hazelmore solar CPV by Sinothi Sibisi (0.1 CPD) 6. Presidents address: Independent Power Production and Infrastructure Development by Paul Van Niekerk (0.1 CPD) 7. Chairman's invitation lecture: What's all this Hype about a Standard in Asset Management by Dean Griffin (0.15 CPD) 8. 3D modeling, segmentation, quantification and visualisation of cardiac MRI by Yarish Brijmohan (0.15 CPD) 9. International presentation: Design and Development of a Prosthetic Arm by Easton LaChappelle (0.1 CPD) Total of 1.2 CPD
Courses	Arrange 3 courses (3 CPD points)	1. Electric Power Cables by Dick Hardie (1 CPD) 2. Fundamentals in Power System Fault Calculations by Prof. Piet Swart (2 CPD) 3. Surge and Lightning protection by Tony Rayner (0.5 CPD) Total of 3.5 CPD
Site visits	Arrange 2 site visits	1. Hazelmore CPV Power Plant – "The Journey" – Sinothi Sibisi
Membership	Grow current membership	1. Started the year with +/-700 members and currently have 741 members 2. Attempts have been made to resurrect the student chapter
Communication	Improve current communication to membership	1. Launched <i>recharge</i> and circulated 7 editions 2. Maintained centre website via Head Office 3. Presentation of both Chairman's and Presidents address at PMB satellite centre
Sponsorships	Establish relationships with sponsors	1. Attained sponsorships for all the <i>recharge</i> editions 2. Phoenix Contact sponsorship of seminar
Awareness of SAIEE	Market SAIEE	1. Distributing <i>recharge</i> to 800 members and interested persons since May 2013. 2. Handover of Chairmanship covered in The Daily News on 26 April 2013 3. Visit by Easton laChappelle covered in The Mercury on 18 October 2013 4. Chairman's Business breakfast covered in The Mercury on 15 November 2013 5. Design and Production of KZN centre brochure
Contribute to profession	Promote the engineering profession	1. Department of education teacher awareness in Maths and Science in May 2013 2. Attendance of Eskom Stakeholder Engagement Session with Eskom CEO and Chairman on 17 July 2013 3. Attendance of Eskom 90th Anniversary Celebrations at Mangosuthu University of Technology on 26 July 2013 4. Accreditation review of PMSA Infrastructure Project Management Congress on 16 – 17 September 2013 5. Presentation on Eskom Development Plan to students at DUT on 23 October 2013 6. SAIEE attendance of Department of Energy Integrated Energy Plan on 30-31 October 2013 7. Chairman's business breakfast held with ECSA, SAIEE, Tertiary Institutions and Industry on 13 November 2013 8. SAIEE Student Award for UKZN to be given on 7 December 2013
Finance	Operate centre within budget	Despite not having been allocated the 2013 budget as yet the centre has a positive bank balance as at 27 November 2013. This was possible due to the sponsorships attained and courses held.