

## **GEOTECHNICAL DIVISION**

*South African Institution of Civil Engineering*

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## **MINUTES OF THE 345<sup>TH</sup> MEETING OF THE GEOTECHNICAL DIVISION OF SAICE, HELD AT 14H30 ON 15 MARCH 2016 AT UNIVERSITY OF PRETORIA, PRETORIA.**

### **PRESENT**

|                   |                          |     |
|-------------------|--------------------------|-----|
| Trevor Green      | Chairman                 | TG  |
| Solly Phalannndwa | Secretary                | SP  |
| Heather Davis     | Treasurer                | HD  |
| Dan Avutia        | Marketing & Publications | DA  |
| Florian Hoertkorn | GIGSA rep to GeoDiv      | FH  |
| Jacobus Breyl     | Sponsorship & Codes      | JB  |
| Phil Paige-Green  | SAIEG rep to GeoDiv      | PPG |
| Nicol Chang       | Evening Lectures         | NC  |
| Marie Basson      | YGE                      | MB  |
| SW Jacobsz        | ISSMGE Awards            | SW  |
| Gerrit Smit       | Courses & Conferences    | GS  |

### **APOLOGIES**

|                |                       |    |
|----------------|-----------------------|----|
| Eduard Vorster | GeoDiv rep to SANCOLD | EV |
| Gabi Wojtowitz | CPD                   | GB |
| Rob Armstrong  | SANIRE rep to GeoDiv  | RA |
| Scott Gover    | Awards                | SG |

### **ADDITIONAL DISTRIBUTION**

|                  |                        |     |
|------------------|------------------------|-----|
| Denis Kalumba    | Cape Town rep          | DK  |
| Malcolm Jaros    | Durban rep             | MJ  |
| Peter Day        | Jones and Wagener      | PD  |
| Gavin Wardle     | Jones and Wagener      | GW  |
| Manglin Pillay   | CEO of SAICE           | MPi |
| Gerhard Heymann  | University of Pretoria | GH  |
| Chris Herold     | SAICE President        | CH  |
| Debbie Besseling | SAICE Secretary        | DB  |

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| Topic and Action  | Action By    |
|---|--------------|
| <p><b>1. MINUTES OF PREVIOUS MEETING</b></p> <ul style="list-style-type: none"> <li>• Minutes of the previous meeting were accepted by those present.</li> </ul>  | TG           |
| <p><b>2. MEMBERSHIP</b></p> <ul style="list-style-type: none"> <li>• SAICE membership list indicates 572 members for Geotechnical Division as of March 2016, of which 521 are “In Good Standing” and 51 are “On Hold”. Exact number fluctuates slightly each month.</li> <li>• HD to follow up with SAICE on members that are “On Hold”.</li> </ul>   | HD<br><br>HD |
| <p><b>3. FINANCES</b></p> <ul style="list-style-type: none"> <li>• Balance as of end of February 2016 is R1,924,811.00</li> <li>• No further business.</li> </ul>   | HD           |
| <p><b>4. CORRESPONDENCE</b></p> <p><b>4.1 ISSMGE</b></p> <ul style="list-style-type: none"> <li>• ISSMGE Awards Committee<br/>Nothing to report</li> <li>• ISSMGE Technical Committees<br/>Prof. Gerhard Heyman was previously nominated by the division to represent SAICE in the TC102 committee and due to other commitments he declined the nomination. Dr. Dennis Kalumba was instead nominated and his nomination was sent through to the ISSMGE’s Secretariat.</li> <li>• Student and Young Members Presidential Group (SYMPG)<br/>Daniel Avutia’s nomination to serve on YMPG 2016-2018 has been successful.</li> <li>• ISSMGE International Development Committee (IDC)<br/>Nothing to report</li> </ul> | SP           |

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**4.2 SAICE**

- Trevor Green and Solly Phalanndwa attended a meeting for SAICE division on 24 February 2016.
- Meeting Feedback  
The following items were discussed:

**4.2.1 Development and introduction of technical courses – both ‘face-to-face’ and ‘on-line’.**

**4.2.1.1 On-line courses**

- SAICE is in collaboration with UK’s ICE and ASCE
- Buy video material for courses, consisting of 30-45min on different topics.
- Get a local expert in the field to facilitate the course e.g. Pause every 10min to take questions and explain contents in detail.
- The course material costs +-\$400 US dollar, courses will be charged for and the facilitator will have to be paid from that. +-R300 per attendee
- SAICE will send the course material to each technical division for validation (review and approval) and each division will be given 5 days to respond on whether they are interested in the course or not. Each division is to approve the course before it is presented.
- **Purpose** is to grow income for each technical division and to market and make known all technical departments.

*The Division’s view: Already have free online courses/lectures via ISSMGE and therefore may not be too attractive to members.*

**4.2.1.2 Face-to-face courses**

- Each division to develop face-to face courses.

*The Division’s view: We still do specialist geotech courses ourselves but possibly look at using SAICE for courses marketed directly at other disciplines. E.g. Geotech for structural engineers, preparing scope & specifications for geotechnical investigations.*

SP/TG

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**4.2.2 Public Relations Service available at SAICE – some for free and some at cost.**

- SAICE can assist in sending out bulk emails to all the members as marketing for courses.
- Books – SAICE market all our published books in the SADC region, work on profit sharing with SAICE. SAICE has presence in Swaziland, Zimbabwe and Botswana.
- Debbie can assist with any admin work required by each division. Each division can start copying Debbie on all correspondence e.g. Minutes of the meeting.

*The Division's view: We do not require any PR facility at this stage as our current structure is adequate for marketing our own courses. Minutes of our meetings will be distributed to SAICE via Debbie.*

**4.2.3 Establishment of University and University of Technology rules and codes of 'good practice'.**

- SAICE to establish a code of 'good practice' for all the Universities/University of Technologies to assess the following:
  - Quality of education for each University/University of Technology
  - Content of the study material - to check its relevance to the industry
  - Quality of laboratory equipment
- SAICE will partner with engineers in the industries. Approach companies to undertake a survey on their preference when employing graduates. Certain companies have their preference in terms of institution – Which graduates do companies prefer to employ and the reasons. Some universities produce poor quality graduates due to lack of funding.

*How will this be achieved?*

- SAICE will have to audit the institutions every year to check their compliance.
- Will have to get division members or retired engineers to do the audits – challenge will be the funding.
- At the end SAICE will have to produce a Code of Practice document and then get the industries and the government to assist the educational institutions.

*The Division's view: The division feels it is a good initiative but too large a task for members that are serving in the committees as volunteers. A full-time committee will have to be set up specifically for this task. The committee also feels that this role should be played by ECSA.*

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**4.2.4 Setting up a list of principal specialists (in each discipline) reviewed by their peers – similar to that started by the structural and geotechnical divisions so far.**

- Several disciplines considering the option of setting up a panel of specialists to be included in the SAICE panel of experts. (*eg. Panel of experts like for dolomite and a contact person for SAICE*).
- We have to come up with a criteria for appointing these specialists.
- The idea is for SAICE to know who to contact when there is a query from the public or government.

*The Division's view: This would be easier if SAICE could just phone the Chairman of the division to be directed to a relative specialist.*

The Chair to report back to the SAICE divisions committee in the next quarterly meeting.

**4.3 General**

- New code for the NHBRC  
Comments were provided by GeoDiv, Council for Geoscience and SAIEG.  
The final document is out.
- Request received from SANS1936 committee to investigate the possibility of SAIEG and/or SAICE GeoDiv maintaining a list of Competency Level 4 candidates for dolomite.  
Three members to be nominated by SAICE GeoDiv:
  - Peter Day, Hendrick Kirsten, Fritz Wagener – TG to contact them and confirm in the next meeting.PPH to put forward three members from SAIEG.
- Meritorious research award: DR AAB Williams  
Dr. Williams received a prestigious award for his outstanding research efforts. Dr. Williams passed away in February 2016, his award will be received by FRANK NETTERBERG on his behalf at the Jennings' lecture in Pretoria. Dr. Fritz Wagener will introduce him.

TG



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|--|------------|
| <p><b>5.3 Sub-committee: Courses and Conferences</b></p> <ul style="list-style-type: none"> <li>▪ 1st South African Geotechnical Conference <ul style="list-style-type: none"> <li>○ To be held 5th &amp; 6th May 2016, at Sun City.</li> <li>○ Sub-committee chaired by Gerhard Heymann.</li> <li>○ Includes a Geoff Blight memorial lecture, by Andy Fourie.</li> <li>○ Gerhard to formally invite the ISSMGE President, Secretary and VP for Africa.</li> <li>○ New temporary venue to be provided by Sun City, as original venue was undergoing renovations. Temporary facility (which has been put up at a cost of R45million) has been inspected by the division's delegates and was found to be of a high standard with proper finishes. There is no point to move the conference to another venue.</li> <li>○ Sponsorship <ul style="list-style-type: none"> <li>▪ &gt; R200K sponsorship received to date.</li> <li>▪ No commercial adverts will be allowed in the conference proceedings.</li> <li>▪ Sponsors will be displayed in the program brochures.</li> <li>▪ RCA are closing in March 2016 and R40k has been paid to RCA to-date for organising the conference.</li> <li>▪ RCA's contract has been terminated and Selah Productions (Pty) Ltd will take over with immediate effect.</li> <li>▪ Verdicon's staff will be assisting Yolande in selling books at the conference.</li> <li>▪ Gold sponsors will be given an opportunity to put their company logos at the back of the proceedings.</li> <li>▪ Gold sponsors will also be given an option for a stand in exchange for advert in the proceedings.</li> </ul> </li> </ul> </li> </ul> | <p>GH</p>  |
| <ul style="list-style-type: none"> <li>▪ 17th African Regional Conference <ul style="list-style-type: none"> <li>▪ To be held 3rd to 6th September 2019, in Cape Town. Prelim booking done.</li> <li>▪ To be hosted in conjunction with the 7th African Young Geotechnical Engineers Conference.</li> <li>▪ Planning to commence 2017.</li> </ul> </li> </ul>  | <p>TBC</p> |
| <ul style="list-style-type: none"> <li>▪ Young Geotechnical Engineers Conference (YGE) <ul style="list-style-type: none"> <li>▪ To be held 12th to 15th September 2016. Possible venues to investigate are North coast in Durban or Eastern Cape</li> <li>▪ Planning to commence early 2016</li> </ul> </li> </ul>   | <p>MB</p>  |

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| <p><b>5.4 Sub-committee: Publications and codes of practice</b></p> <ul style="list-style-type: none"> <li>▪ CoP Lateral Support</li> <li>▪ Gavin Wardle is struggling to make progress on this. The committee to come up with a way to get this going</li> <br/> <li>▪ CoP Piling</li> <li>▪ We need to establish a committee to draft a piling code. Possibly get a weekend away and get the committee to write a code in one weekend</li> <li>▪ Need a champion to move this forward</li> <br/> <li>▪ SABS/SANS</li> <li>▪ TC98/SC006 (PD):<br/>See Table overleaf</li> <li>▪ SC59P (EV):<br/>Nothing to report</li> <br/> <li>▪ ISSMGE Technical Committees</li> <li>▪ See table overleaf:</li> </ul> | JB |
|---|----|

| <b>ISSMGE Technical Committees</b>    |                        |   |
|---------------------------------------|------------------------|---|
| <b>Committee</b>                      | <b>Member involved</b> | <b>Update from member</b>   |
| TC102<br>In-Situ<br>Testing           | No one                 | Nominating Dr. Denis Kalumba  |
| TC202<br>Transportation               | Phil Paige-Green       | Tatsuya Ishikawa, Secretary of TC202, sent out an email in March last year checking who was still willing to participate in TC202 and got about 10 responses. Since then there have only been a couple of communications, mostly announcing the ISSMGE newsletters, some conferences and some Webinars. No technical issues have been discussed.            |
| TC104<br>Physical<br>Modelling        | SW Jacobsz             | Nothing to report   |
| TC205<br>Safety and<br>Serviceability | Peter Day              | Remains very active with regular teleconferences. Last teleconference as at the beginning of March and was a joint meeting with TC304 (reliability based design under the leadership of KK Phoon). The main result of this was the setting up of a number of joint discussion groups on implementation of reliability based design. One of these discussion |



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|                              |                |   |
|------------------------------|----------------|---|
|                              |                | groups, to be headed by Peter Day and BK Low (of Low and Tang fame), will deal with practical implementation of reliability based design in geotechnical practice. The aim is to provide information of practical (spread-sheet based) methods of reliability analysis.   |
| TC212<br>Deep<br>Foundations | Nicol Chang    | <p>TC212 had its first meeting on 16th September 2015 (in Edinburgh) under newly elected Chairman Alessandro Mondolini (from Italy). There are currently 64 members; 35 (Europe), 20 (Asia), 3 (North America), 3 (South America), 2 (Australasia), 1 (Africa). The committee's main activities are 1) Disseminate and develop knowledge and practice within the TC's subject area, 2) Establish guidelines and technical recommendations, 3) assist with technical programs of international and regional conferences organized by ISSMGE, 4) interact with industry and overlapping organizations working in areas related to the TC's specialist area.</p> <p>Current initiatives include 1) An experimental site for behaviour prediction of different pile types and different loading conditions, 2) collection of available standards, codes and guidelines for evaluation, 3) effort to reduce the gap between State-of-the-Art and State-of-the-Practice. Task groups will be setup to fulfil these initiatives.</p> <p>TC 212 has established a website <a href="http://www.issmge.org/en/technical-committees/applications/157-deep-foundations">http://www.issmge.org/en/technical-committees/applications/157-deep-foundations</a>.</p> <p>The TC will propose to establish an honorary lecture.</p> |
| TC302<br>Forensic            | Peter Day      | The committee is trying to organize another international conference on Forensic Geotechnical Design in Bengaluru. Nothing much further is happening.   |
| Awards<br>Committee          | SW Jacobsz     | A call for nominations has been issued.   |
| TC59 SC03                    | Peter Day      | TC59 is the Construction Standards Committee. SC03 is a sub-committee working on the Dolomite Code with three working groups to revise SANS 1936.   |
| TC60                         | Gabi Wojtowitz | Currently on leave – could not be reached for update  |
| TC98                         | Peter Day      | This is the Structural and Geotechnical Design Committee and is chaired by Peter Day.<br>See below for updates of relevant Geotechnical sub-committees and working groups.  |

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| <b>ISSMGE Technical Committees</b>   |  |   |
|--|--|---|
| <b>Committee</b>   | <b>Member involved</b>   | <b>Update from member</b>   |
| TC98 SC06  | Peter Day  | This sub-committee is chaired by the SABS and has working groups – see below:   |
| TC98 SC06<br>SANS 207<br>Working<br>Group  | <b>Chair:</b><br>Eduardo<br>Zannoni.<br><br><b>Other<br/>members:</b><br>Eduard Vorster<br>Alan Parrock,<br>& Florian<br>Hoertkorn | Eduard Vorster reports as follows:<br>We have progressed quite well and have done a chapter by chapter clean-up of the document. The current document is substantially based on the old BS codes. We have done a deep review in regard to the differences between the new BS8006-1-2010 and SANS 207. It seems best to be able to adopt BS as the code to follow. We confirmed that we could take BS8006 as a base document and then merely change things that affect our local constraints. Each constraint need to be approved. The committee will address this in future meetings. |
| TC98 SC06<br>Geotechnical<br>Design<br>Working<br>Group  | Peter Day  | There have been a number of developments, including good progress made in reliability-based design in conjunction with Nico de Koker.   |
| <b>5.5 Sub-committee: SAICE Magazine</b> <ul style="list-style-type: none"> <li>2016 April edition of SAICE Magazine calling for articles/ case studies is now closed and good response received.</li> </ul>   |  | DA  |
| <b>5.6 Sub-committee: Awards</b> <ul style="list-style-type: none"> <li>2016 Barry van Wyk Award – A call for papers to be sent out in April 2016</li> <li>2016 Jennings Award – A call for papers to be sent out in April 2016</li> <li>2016 Geotechnical Gold Medal               <ul style="list-style-type: none"> <li>Potential candidates for 2016 Gold Medal (Prelim only and in no particular order):                   <ul style="list-style-type: none"> <li>Phil Paige Green</li> <li>Ettiene Terblanche</li> <li>Louis Mellis</li> <li>Harold Webber</li> <li>Heather Davis</li> <li>Mike Hadlow</li> <li>GV Price</li> <li>Lionel Moore</li> <li>Kobus Venter</li> <li>Terry Pigeon</li> <li>Clive Wilson</li> <li>Graham Howell</li> </ul> </li> </ul> </li> </ul> |  | SG  |

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| <ul style="list-style-type: none"> <li>• Need to nominate 3-4 additional fellows for 2016. TG to send list of potential fellows to GeoDiv committee for consideration.</li> </ul>   | TG  |
| <p><b>5.7 Sub-committee: Website and Communications</b></p> <ul style="list-style-type: none"> <li>• Verdicon PA now assisting with both website and emails.</li> <li>• Luzaan of Verdicon (<a href="mailto:luzaan@verdicon.co.za">luzaan@verdicon.co.za</a>) is now administering the website and she is doing a good job.</li> </ul>  | TG  |
| <p><b>5.8 Sub-committee: CPD</b></p> <ul style="list-style-type: none"> <li>• Completed CPD accreditations not available at the moment.</li> </ul>  | GW  |
| <p><b>5.9 Sub-committee: Marketing</b></p> <ul style="list-style-type: none"> <li>• Nothing to report</li> </ul>  | DA  |
| <p><b>5.10 Sub-committee: Sponsorship</b></p> <ul style="list-style-type: none"> <li>• Agreed that sponsors from previous year should have logo on the website. Can add sponsors for 1<sup>st</sup> SAGEC from January 2016.</li> <li>• JB has received sponsorship for 1<sup>st</sup> South African Geotechnical Engineering Conference (1<sup>st</sup> SAGEC). &gt; R200K received to date from different companies.</li> </ul>   | JB  |
| <p><b>6. LIAISON WITH OTHER SOCIETIES</b></p>   |     |
| <p><b>SANIRE</b></p> <ul style="list-style-type: none"> <li>• Nothing to report.</li> </ul>   | RA  |
| <p><b>SAIEG</b></p> <ul style="list-style-type: none"> <li>• 35<sup>th</sup> International Geology Conference to be held in Cape Town International Convention Centre on 27<sup>th</sup> August – 4<sup>th</sup> September 2016. The date for submitting abstracts closed on 28 February 2016. Total abstracts received are +-6500.</li> <li>• Sponsorship for exhibition is +-R8000.00</li> <li>• 40 parallel technical sessions are planned during the conference.</li> </ul> | PPG |
| <p><b>GIGSA</b></p> <ul style="list-style-type: none"> <li>• GIGSA have moved their next conference to 2017 to avoid clash with 1<sup>st</sup> SAGEC in May 2016.</li> <li>• Florian to head up a pre-conference course on tropical and unsaturated soils in Sun City.</li> <li>• Yolandi to give us a quotation for organising a pre-conference course for +- 100 delegates.</li> </ul>  | FH  |

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| <p><b>SANCOLD</b></p> <ul style="list-style-type: none"> <li>The committee has gone through a process of screening papers for the upcoming ICOLD 2016 conference.</li> </ul>   | EV                  |
| <p><b>7. GENERAL</b></p> <ul style="list-style-type: none"> <li><b>Eurocode Design Seminar</b><br/>The commercial Eurocode seminar course to be presented by Andrew Bond has been moved to July in Durban. The division may use this opportunity to invite Dr. Bond to deliver a short lecture for our members, if possible.</li> <li><b>Possible Geotechnical investigation course for non-geotechnical engineers</b><br/>Possibility to present a course for other technical divisions (eg. Joint structural divisions) but they will have to market the course themselves. There is an existing manual prepared by Heather Davies for the Department of Public works which can be used to deliver the course. GS to start looking into putting course together. <ul style="list-style-type: none"> <li>We could possibly look into a course on case studies, highlighting failures on geotechnical structures.</li> </ul> </li> </ul> | <p>TG</p> <p>GS</p> |
| <p><b>8. NEXT MEETING</b></p> <p>Next meeting on 9<sup>th</sup> June 2016 – 15h30 at SAICE Office, Midrand.</p>  | All                 |