



ISSMGE TECHNICAL COMMITTEE REPORT

Period covered by this report: October 2013 – April 2017

To be sent back to the TOC (pierre.delage@enpc.fr - soqa@berkeley.edu) by 31 May 2017

Prepared by:

Name of the Technical Committee:	Engineering practice of risk assessment and management(TC304)
Chair:	Kok-Kwang Phoon
Vice-Chair:	Gordon A. Fenton
Secretary:	Jianye Ching
Date of submission:	29 May 2017

	Query	Comment
1	Are you happy with the Terms of Reference of your TC on the ISSMGE website?	Yes
2	Is your List of Members satisfactory?	Yes
3	How many members do you have in your TC?	67 (45 formal members + 22 corresponding members) – refer to list at the end of this report
4	Do you have a TC website?	Yes (http://140.112.12.21/issmge/tc304.htm)
5	Did you hold TC administrative meetings during the period? Please give details (date, location, participation,...)	<p>2013</p> <p>1. Dec 5, Hong Kong, China, 23 attendees</p> <p>2014</p> <p>2. March 3-8 (email meeting)</p> <p>3. May 23, Taipei, Taiwan, 9 attendees</p> <p>4. July 15, Liverpool, UK, 15 attendees</p> <p>5. Oct 20-24 (email meeting)</p> <p>2015</p> <p>6. May 18-22 (email meeting)</p> <p>7. June 15-26 (email meeting)</p> <p>8. July 14, Vancouver, Canada, 13 attendees</p> <p>9. Oct 14, Rotterdam, the Netherlands, joint meeting with TC205, TC212, and TC302, 40 attendees</p> <p>10. Nov 10, Fukuoka, Japan, 9 attendees</p> <p>2016</p> <p>11. Feb 22-26 (email meeting)</p> <p>12. May 28, Shanghai, China, 17 attendees</p> <p>13. Oct 3-7 (email meeting)</p> <p>2017</p> <p>14. Feb 13-17 (email meeting)</p> <p>15. June 4 2017, Denver, CO, USA</p> <p>16. Sep 20 2017, Seoul, Korea</p>

**16 meetings
between 2013 and
2017**

<p>6</p>	<p>Did you organise any event (conference, workshop, short course,...) during the period? Please give details (date, location, participation,...)</p> <p>31 events between 2013 and 2016</p>	<p>2013</p> <ol style="list-style-type: none"> 1. 4th International Symposium on Geotechnical Safety and Risk (4ISGSR), Hong Kong, Dec 4-6, 2013 (LM Zhang) 2. Short course on "Geotechnical Risk Management", Dec 9, 2013, Taipei, Taiwan (Martin van Staveren) <p>2014</p> <ol style="list-style-type: none"> 3. Technical Session "Role of Probabilistic Methods in Geotechnical Sustainability" in ASCE GeoCongress 2014, Feb 23-26 2014, Atlanta, USA (A Stuedlein, A Rodriguez-Marek, LM Zhang & DV Griffiths) 4. Short course on "Risk Assessment in Geotechnical Engineering", GeoCongress 2014, Feb 23 2014, Atlanta, Georgia, USA (DV Griffiths & GA Fenton) 5. TC304 Special session in ISRERM 2014, May 20-24, 2014, Taipei, Taiwan (JR Chen & WC Huang) 6. Special session on "Soil Variability in Engineering Applications" in EGU 2014, April 27-May 2 2014, Vienna, Austria (G Vessia, W Pula, KK Phoon & J Pieczynska) 7. ICVRAM 2014 sessions organized by TC304 in Liverpool, UK, Jul 13-16, 2014: <ol style="list-style-type: none"> a. Mini-symposium on "Geotechnical Risk, Uncertainty & Decision Making" (J Ching & Y Wang) b. Mini-symposium on "Monte Carlo Methods and Engineering Applications" (Y Wang, Z Cao & Ivan Au) c. Mini Symposium on "Risk Assessment and Management of Infrastructure Projects" (HW Huang & Martin van Staveren) 8. 3rd China National symposium on Engineering Risk and Insurance, August 1-3, 2014, Yichang, Hubei Province, China (HW Huang) 9. Mini - symposium "Modelling Spatial Variability in Geotechnical Engineering" in 14IACMAG, Sep 22 - 25, 2014, Kyoto, Japan (J Huang & DV Griffiths) 10. General Assembly of the European Geoscience Union (EGU), Vienna, 12-17 April, 2015: <ol style="list-style-type: none"> a. Session SSS11.3 on "Statistical, computational and visualization tools for assessing and communicating soil complexity and variability" (R Falconer, G Vessia, J Isaacs, S Hapca, AM Tarquis, W Pula, B Ghanbarian & B Zimmermann) b. Short course on "Methods and criteria to recognize the variability structure of soil properties" (G Vessia & W Pula) <p>2015</p> <ol style="list-style-type: none"> 11. Short course "Bayesian & statistical inference", July 2-3, 2015, Wuhan, China (DQ Li, Ivan Au & Z Cao) 12. TC304 Mini-Symposium in 12th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP 12), July 12-15, 2015, Vancouver, Canada (KK Phoon, GA Fenton & J Ching) 13. TC304 sessions in 15 Asian Regional Conference (15 ARC), Sep 9 - 13, 2015, Fukuoka, Japan (Shin-ichi Nishimura) 14. 16th European Conference on Soil Mechanics and Geotechnical Engineering (XVI ECSMGE 2015), Sep 13-17, 2015, Edinburg, UK (B Simpson) 15. Short course on "Quantitative risk assessment in geotechnical engineering: theory and applications, with emphasis on landslides, geohazards, offshore foundations and dams", Geoquebec 2015, Sep 20-23, 2015, Quebec City, Canada (F Nadim and S Lacasse) 16. 5th International Symposium on Geotechnical Safety and Risk (ISGSR), Oct 13-16, 2015, Rotterdam, Netherlands (P Cools, Martin van Staveren & T Schweckendiek): <ol style="list-style-type: none"> a. Session on "Application of Bayesian Methods in Geotechnical Engineering" (J Zhang & Z Cao) b. Session on "Probabilistic Slope Stability Analysis: The State of Play" (J Huang & DV Griffiths) c. Session on "Risk Assessment in Offshore Geotechnical Engineering" (Zhongqiang Liu & Jinhui Li) d. Session on "Uncertainty and Variability in Landslide Hazard Models" (G Vessia & M Rossi) e. Session on "Geotechnical Risk Management and Risk Communication -
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		<p>Demands" (L Olsson) management</p> <p>f. Short course on "Reliability Analysis and Updating in Geotechnical Engineering" (GA Fenton & T Schweckendiek)</p> <p>g. Short course on "Geotechnical Risk Management", including the results and tools of the Dutch Geo-Impuls program on geotechnical failure reduction (Martin van Staveren)</p> <p>17.TC304 special session in 2015 Symposium on Reliability of Engineering Systems (SRES), Oct 21 - 24, 2015, Taipei, Taiwan (J Ching)</p> <p>18.3rd International Conference on Materials and Reliability (ICMR), Nov 23-25, 2015, Jeju, Korea - Mini-Symposium on Advances in Reliability Analysis and Risk Management of Material and Structural Systems (JH Park)</p> <p>19.XV Panamerican Conference of Geotechnical Engineering, Buenos Aires, Argentine, Nov 15-18, 2015 (A Rodriguez-Marek)</p> <p>2016</p> <p>20.ASCE Geo-Structural Congress, Feb 14-17, 2016, Phoenix, AZ:</p> <p>a. Short course on "Risk Assessment in Geotechnical and Structural Engineering" (DV Griffiths & GA Fenton)</p> <p>b. Session on "Managing risk in geotechnical and structural analysis and design" (LM Zhang)</p> <p>21.Short course on "Risk Assessment in Geotechnical Engineering", May 9-10, 2016, Vancouver Geotechnical Society (GA Fenton & DV Griffiths)</p> <p>22.1st International Symposium on Reducing Risks in Site Investigation, Modeling and Construction for Rock Engineering (GeoSafe 2016), May 25-27, 2016, Xi'an, China (HW Huang).</p> <p>23.6th Asian-Pacific Symposium on Structural Reliability and its Applications: (APSSRA 2016), May 28-30, 2016, Shanghai, China (HW Huang & Jie Li)</p> <p>a. Suzanne Lacasse Lecture (DV Griffiths)</p> <p>b. Session on "Probabilistic Software Demonstration" (KK Phoon, J Ching & GA Fenton)</p> <p>24.Short course on "Quantitative risk assessment in geotechnical engineering – Theory and applications, with emphasis on landslides, dams, offshore foundations and geohazards", June 1-2, 2016, Hangzhou, China (S Lacasse, F Nadim, Li-Zhong Wang & Qing Lü)</p> <p>25.Short course on "Bayesian & statistical inference ", July 18, 2016, Wuhan, China (DQ Li, Ivan Au & Z Cao)</p> <p>26.5th International Symposium on Reliability Engineering and Risk Management (ISRERM 2016), August 17-20, 2016, Seoul, Korea</p> <p>a. Session: Geotechnical Engineering – 1 (Y Wang & DW Kim)</p> <p>b. Session: Geotechnical Engineering – 2 (KKPhoon & JH Park).</p> <p>27.4th China National symposium on Engineering Risk and Insurance, Aug 26-28, 2016, Wuhan University, Hubei, China (HW Huang, KK Phoon & DQ Li).</p> <p>28.ASCE Workshop on Resiliency of Urban Tunnels and Pipelines, Sep 1, 2016, Reston, VA (M Beer, B Ayyub & HW Huang)</p> <p>29.Recent Trends in Geotechnical Engineering and Education, Workshop No. 3, September 15-16, 2016, Brisbane, Australia (DV Griffiths & J Huang); short course on "Statistics and Probabilistic Methods in Geotechnical Engineering–the Fundamentals" (DV Griffiths).</p> <p>30.Short course on "Quantitative Risk Assessment in Geotechnical Engineering", Colombian Geotechnical Society, Oct 2016 (DV Griffiths)</p> <p>31. National Young Scientists Symposium on Risk Analysis and Control, Oct 21-22, 2016, Shanghai, China (LL Zhang & J Zhang)</p>
7	Did you assign some work tasks to TC members?	<p>1. Organize 31 events between 2013 and 2016 (see item 6 above)</p> <p>2. TC304 Glossary and translation into traditional Chinese (J Ching & CH Juang), simplified Chinese (HW Huang, DQ Li, Y Wang, J Zhang & LM Zhang), Spanish (R Jimenez, Z Medina-Cetina & CR Rodriguez), German (D Straub & C Birkhahn), French (A-H Soubra), Persian (A Noorzad), Japanese (Shin-ichi Nishimura & M Suzuki), Korean (Hyunki Kim) http://140.112.12.21/issmge/doc_2010.htm</p> <p>3. Compilation of guidelines and other technical resources (DV Griffiths & GA Fenton) http://140.112.12.21/issmge/TC304_refs_v9.html</p>

8	<p>Did you produce any deliverable (State of the art report, State of practice report, Guidelines,...) ?</p> <p>23 deliverables including:</p> <ol style="list-style-type: none"> 1. 1 ISSMGE Technical Report 2. 1 ISSMGE Honour Lecture 3. 6 design codes & guidelines 4. 7 books 5. 8 special issues 	<ol style="list-style-type: none"> 1. ISSMGE Technical Report of the Joint TC205/TC304 Working Group on "Discussion of statistical/reliability methods for Eurocodes" <ul style="list-style-type: none"> • Aug 2016 – Published Preliminary Draft, 227 p. • April 2017 – Published First Draft, 250 p. (undergoing public consultation) • Sep 2017 – Published ISSMGE Technical Report (to be circulated in 19ICSMGE) <p>Preliminary and First drafts: http://140.112.12.21/issmge/tc304.htm</p> 2. TC304 Guidelines, Information, and Technical Resources (DV Griffiths & GA Fenton) http://140.112.12.21/issmge/TC304_refs_v9.html 3. Establishment of ISSMGE Honour Lecture - Suzanne Lacasse Lecture (Inaugural Lecturer: DV Griffiths (APSSRA2016, Shanghai, China), USA; 2nd Lecturer: GB Baecher (Georisk 2017, Denver, USA); 3rd Lecturer: F Nadim (19ICSMGE, Seoul, South Korea)) 4. ISO2394:1973/1986/1998/2015. General principles on reliability for structures. International Organization for Standardization, Geneva, Switzerland – Annex D (Reliability of Geotechnical Structures) [Drafting group: J Ching, M Dithinde, KK Phoon (Chair), JV Retief, T Schweckendiek, Y Wang & LM Zhang] 5. CAN/CSAS614:2014. Canadian Highway Bridge Design Code, Canadian Standards Organization, Mississauga, Ontario, Canada (GA Fenton) 6. National Research Council, National Building Code of Canada, 2019 Edition, (GA Fenton) 7. Japan Technical Standards for Port and Harbor Facilities revised in 2007 and 2018, and Specifications for Highway Bridges in 2018 (Y Honjo and M Shirato) 8. Swedish guidelines on risk management for geotechnical risks in projects (Hantering av geotekniska risker i projekt - krav Metodbeskrivning) – English version "Risk management in geotechnical engineering projects – requirements Methodology", translated into English by Johan Spross & Lars Olsson. Available for downloading on the Swedish Geotechnical Societys website, www.sgf.net 9. "Modern Geotechnical Design Codes of Practice", IOS Press, 2013 (Eds. P Arnold, GA Fenton, MA Hicks, T Schweckendiek & B Simpson) 10. "Risk and Reliability in Geotechnical Engineering", CRC Press, 2015 (Eds. KK Phoon & J Ching) 11. "Reliability of Geotechnical Structures in ISO2394", CRC Press/Balkema, 2016 (Eds: KK Phoon & JV Retief) 12. "Reliability of Geotechnical Structures in ISO2394" (Chinese translation), China Water & Power Press, October 2017, DQ Li, XS Tang & Z Cao 13. "Dam Failure Mechanisms and Risk Assessment", Wiley, 2016 (LM Zhang, M Peng, D Chang & Y Xu) 14. "Rainfall-Induced Soil Slope Failure: Stability Analysis and Probabilistic Assessment", CRC Press, 2016 (LL Zhang, J Li, X Li, J Zhang & H Zhu) 15. Lloyd's Register Foundation Foresight Review on the Public Understanding of Risk (KK Phoon & E Weber) http://lrfoundation.org.uk/news/2017/nus-foresight-consult.aspx 16. Special Issue in honour of Professor Wilson Tang, Structural Safety, 49, 2014 (Guest Ed. KK Phoon) 17. Georisk Special Issue on "Methods and models for dealing with spatial variability in soil and rock characterization: Design, management and related hazards", 9(4), 2015 (Guest Eds. Giovanna Vessia and Wojciech Pula) 18. Georisk Special Issue "Modelling Spatial Variability in Geotechnical Engineering", 10(1), 2016 (Guest Eds. J Huang & DV Griffiths) 19. Georisk Special Issue on "Distinctive and Critical Elements in Geotechnical Risk and Reliability", 10(4), 2016 (Guest Eds. Y Wang, DQ Li & Z Cao) 20. Georisk Special Issue on "10th Anniversary Issue for Georisk", 11(1), 2017 (Guest Ed. KK Phoon) 21. Special issue on "Probabilistic and Soft Computing Methods for Engineering Geology" in Engineering Geology, 203, 2016 (Guest Eds. DQ Li, KK Phoon, J Zhang & C Gokceoglu) 22. Special issue on "Probabilistic Site Characterization" in ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems: Part A, 2017 (Guest Ed. KK Phoon) 23. ASCE GSP in honouring Professor Wilson Tang, 2017 (Eds.: CH Juang, B Gilbert, LM Zhang, J Zhang & LL Zhang)
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9	Did you have any interactions with other TCs?	<ol style="list-style-type: none"> 1. ISSMGE Joint TC304/TC205/TC212/TC 302 meeting, Oct 14 2015, Rotterdam, the Netherlands (report of the meeting was published in ISSMGE Bulletin Volume 10, Issue 1, February 2016, pp. 21-22) 2. ISSMGE Joint TC205/TC304 Working Group on “Discussion of statistical/reliability methods for Eurocodes” (B Simpson & KK Phoon) consisting of 10 discussion groups (refer to item 8 on schedule for publication of an ISSMGE Technical Report from this joint working group) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">No.</th> <th style="text-align: left;">Lead discussor</th> <th style="text-align: left;">Topic</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Malcolm Bolton (mdb@eng.cam.ac.uk)</td> <td>Limitations of reliability analysis</td> </tr> <tr> <td>2</td> <td>Jianye Ching, TC304 (jyching@gmail.com)</td> <td>Transformation uncertainties & multivariate soil data</td> </tr> <tr> <td>3</td> <td>Peter Day, TC205 (day@jaws.co.za)</td> <td>Practical geotechnical design using reliability based design methods</td> </tr> <tr> <td>4</td> <td>Kerstin Lesny, TC205 (kerstin.lesny@hcu-hamburg.de)</td> <td>Evaluation and consideration of model uncertainties in reliability based design</td> </tr> <tr> <td>5</td> <td>Dianqing Li, TC304 (dianqing@whu.edu.cn)</td> <td>Incorporating spatial variability into geotechnical reliability based design</td> </tr> <tr> <td>6</td> <td>BK Low, TC304 (CBKLOW@ntu.edu.sg)</td> <td>EXCEL-based direct reliability analysis and its potential role to complement Eurocodes</td> </tr> <tr> <td>7</td> <td>Sónia H. Marques, TC205 & TC304 (sonia.h@fe.up.pt)</td> <td>Imprecise probabilistic and interval approaches applied to partial factor design</td> </tr> <tr> <td>8</td> <td>Brian Simpson, TC205 & TC304 (brian.simpson@arup.com)</td> <td>Robustness</td> </tr> <tr> <td>9</td> <td>Yu Wang, TC304 (yuwang@cityu.edu.hk)</td> <td>Selection of characteristic values for rock and soil properties using Bayesian statistics and prior knowledge</td> </tr> <tr> <td>10</td> <td>Jie Zhang, TC304 (cezhangjie@gmail.com)</td> <td>Bayesian method: a natural tool for processing geotechnical information</td> </tr> </tbody> </table>	No.	Lead discussor	Topic	1	Malcolm Bolton (mdb@eng.cam.ac.uk)	Limitations of reliability analysis	2	Jianye Ching, TC304 (jyching@gmail.com)	Transformation uncertainties & multivariate soil data	3	Peter Day, TC205 (day@jaws.co.za)	Practical geotechnical design using reliability based design methods	4	Kerstin Lesny, TC205 (kerstin.lesny@hcu-hamburg.de)	Evaluation and consideration of model uncertainties in reliability based design	5	Dianqing Li, TC304 (dianqing@whu.edu.cn)	Incorporating spatial variability into geotechnical reliability based design	6	BK Low, TC304 (CBKLOW@ntu.edu.sg)	EXCEL-based direct reliability analysis and its potential role to complement Eurocodes	7	Sónia H. Marques, TC205 & TC304 (sonia.h@fe.up.pt)	Imprecise probabilistic and interval approaches applied to partial factor design	8	Brian Simpson, TC205 & TC304 (brian.simpson@arup.com)	Robustness	9	Yu Wang, TC304 (yuwang@cityu.edu.hk)	Selection of characteristic values for rock and soil properties using Bayesian statistics and prior knowledge	10	Jie Zhang, TC304 (cezhangjie@gmail.com)	Bayesian method: a natural tool for processing geotechnical information
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10	Are there any future activities being considered? <div style="background-color: #e0ffff; padding: 5px; width: fit-content;"> 12 future activities for 2017 and beyond </div>	<ol style="list-style-type: none"> 1. 19 ICSMGE, Sep 17-22, 2017, Seoul, Korea <ol style="list-style-type: none"> a. Suzanne Lacasse Lecture (F Nadim) b. Joint TC205/TC304 Workshop (H Kim). 2. Short course on “Probabilistic Methods in Geotechnical Engineering” May 8-12, 2017, Norwegian Geotechnical Institute (GA Fenton & DV Griffiths) 3. Georisk 2017/ISGSR 2017, June 4-6 2017, Denver, Colorado (Conference Chair: DV Griffiths, co-Chair GA Fenton) <ol style="list-style-type: none"> a. Suzanne Lacasse Lecture (GB Baecher) b. Discussion session on “Reports from Joint TC205/TC304 working group on “Discussion of statistical/reliability methods for Eurocodes” (KK Phoon, B Simpson & J Ching) c. Short course on “Risk Assessment in Geotechnical Engineering” (DV Griffiths & GA Fenton) d. Short course on “Bayesian Analysis and Reliability Updating in Geotechnical Engineering” (GB Baecher & T Schweckendiek) e. Short course on “Understanding Geotechnical Reliability-based Design and Its Complementary Role to Partial Factors Design Approach” (BK Low & KK Phoon) 4. 27th International European Safety and Reliability Conference (ESREL2017) on Safety and Reliability Theory and Application, Portorož, Piran, Slovenia, June 18-22, 2017; 2 sessions chaired by Sónia H. Marques. 																																	

		<ol style="list-style-type: none"> 5. 2nd International Workshop on Resilience of Urban Tunnel and Pipeline, July 15, 2017, and 2nd International Workshop on Monitoring and Inspection on Metro Tunnel, July 16, 2017 (HW Huang). 6. Short course “Bayesian & statistical inference ” July 25-26, 2017, Wuhan, China (DQ Li, Ivan Au, Ikumasa Yoshida, & Z Cao). 7. Workshop on Frontiers of Big Data and Risk Management, August 9, 2017, RESA Center, 1 Research Drive, Greenville, South Carolina, USA (J Zhang). 8. TC304/TC205/GI-RAM/GEOSNet mini-symposium “Reliability of geotechnical structures” in 12th International Conference on Structural Safety and Reliability (ICOSSAR2017), 6-10 August, 2017, Vienna, Austria (KK Phoon, J Ching & GA Fenton) 9. 15th International Conference of the International Association for Computer Methods and Advances in Geomechanics (15 IACMAG), Oct 19-23, 2017, Wuhan, China - session on “Computational probabilistic geomechanics” (KK Phoon, DQ Li & M Beer) 10. Sixth International Symposium on Reliability Engineering and Risk Management (6ISRERM), Singapore, 31 May – 1 June, 2018 (KK Phoon) 11. 5th China National symposium on Engineering Risk and Insurance, Aug 2018, Harbin Institute of Technology Harbin, China (Dagang LV & HW Huang) 12. International Symposium for Geotechnical Safety & Risk (ISGSR 2019), Dec 12-13, 2019, Taipei, Taiwan (J Ching)
11	What do you think about the SoA/SoP survey managed by the CAPG with the TOC?	<p>The SoA/SoP survey provided a valuable overview of geotechnical practice to the geotechnical community. We have cited this survey in the introduction of Chapter 10 of our Report of the Joint TC205/TC304 Working Group on “Discussion of statistical/reliability methods for Eurocodes”:</p> <p>The ISSMGE Global Survey on the State of the Art (SoA) and the State of the Practice (SoP) in geotechnical engineering was conducted between 10 March and 30 April 2017. To quote the words of ISSMGE President Roger Frank in his message to the Society on 27 February, this survey is intended to support the main goal of ISSMGE, which pertains to “transferring to practice more results from the academic research and, reciprocally, help better feeding the academic research with the needs of practice”. The President noted that the “ISSMGE Technical Committees (TCs) are, obviously, the main tool for achieving this important goal.” The link to the survey is: https://www.surveymonkey.com/r/CAPG_SoA_SoP_survey. The surveys for TC205 and TC304 are reproduced at the end of this chapter.</p> <p>This Report constitutes a partial response from TC205 and TC304 to facilitate exchange of ideas between researchers and practitioners. It does not claim to be comprehensive in coverage or to offer a definitive resolution to any topics. It does assemble a fairly substantial portion of our recent literature that is regarded by various contributors as potentially useful to practice. We strongly encourage the reader to participate in the same spirit as the ISSMGE Global Survey, which the President has aptly described as: “to identify important areas for improvement as well as... recognising achievements our profession has made! This is why it is very important that as many geotechnical engineers as possible take part in the survey and contribute to the best possible understanding of the situation in our great profession.” The contributions collated in this Chapter would inform activities for the next TC205 and TC304. Although it is useful to keep the topics raised in this Report and the questions in the ISSMGE Global Survey in mind, there is no obligation to respond to any topic, Chapter, or survey question.</p>
12	Do you prepare a TC Workshop for the 19 th ICMSGE in Seoul?	Yes. An ISSMGE Joint TC205/TC304 Workshop on Discussion of statistical/reliability methods for Eurocodes” has been organized by Hyunki Kim (TC304 member, South Korea). Ten presentations are prepared for this joint workshop. The time and venue are as follows. Time: 9:00~12:30 AM on September 20, 2017, Venue: Room E5, KOEX
13	If any, are you happy with your contribution to the organisation of a Discussion session	TC304 received 13 technical papers from the members at this time and one discussion session is being organised. Hyunki Kim (General Reporter) has developed an excellent discussion session with the help of the TC304 committee.

	<p>on your topic for the 19th ICSMGE in Seoul?</p>	
<p>14</p>	<p>Any further comment</p> <p>TC304 seeks support from ISSMGE to continue for another term</p>	<p>TC304 looks forward to continuing its contribution to the geotechnical community in the future.</p> <p>It is a very active committee – 16 meetings between 2013 and 2017, 31 events organised between 2013 and 2016, 23 deliverables (including 1 ISSMGE Technical Report and 1 ISSMGE Honour Lecture), and 12 future activities being planned for 2017 and beyond.</p> <p>TC304 is also impacting on practice through its work in reliability-based design codes such as:</p> <ol style="list-style-type: none"> 1. CAN/CSAS614:2014. Canadian Highway Bridge Design Code, Canadian Standards Organization, Mississauga, Ontario, Canada (GA Fenton) 2. National Research Council, National Building Code of Canada, 2019 Edition, (GA Fenton) 3. ISO2394:1973/1986/1998/2015. General principles on reliability for structures. International Organization for Standardization, Geneva, Switzerland (KK Phoon) 4. Japan Technical Standards for Port and Harbor Facilities revised in 2007 and 2018, and Specifications for Highway Bridges in 2018 (Y Honjo and M Shirato) <p>TC304 seeks support from ISSMGE to continue for another term. A meeting would be held in Georisk 2017, Denver, 4 June 2017, to discuss the nomination of next Chair.</p>

TC304 Engineering Practice of Risk Assessment & Management (as of 29 May 2017)Website: <http://140.112.12.21/issmge/tc304.htm>

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