



Federation of International Geoengineering Societies FEDIGS

**Joint Technical Committee on Education
JTC3**

Chair: Professor Anna SHIDLOVSKAYA

Joint Technical Committee on Education, JTC3

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What was done from 2006 to 2015?

What has been done since Sept 2015?

What is planned for the future?

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Members of the JTC3

Chair 2006-2009: Luis González de Vallejo (Spain)

ISSMGE:

Prof. Mark Jaksa (Australia), Prof. Waldemar Hachich (Brazil), Prof. Iacint Manoliu (Romania)

ISRM:

Prof. Marek Kwasniewski (Poland), Prof. Cai Meifeng (China), Prof. Heinz Konietzky (Germany)

IAEG:

Prof. A.K. Turner (USA) , Prof. Rafiq Azzam (Germany) , Prof. Hyeong-Dong Park (Korea)

- Report in 2009 on summary of activities and accomplishments
- Established terms of reference
- Met yearly at international conferences
- Adaptation of the ASCE Body of Knowledge Competency Approach to the Assessment of Education and Training Needs in Geo – Engineering (2010). K. Turner and N. Rengers
- Rocks Mechanics Curriculum Guide (2009) M. Kwasniewski
- Engineering Geology at the RWTH – Aachen and TU-Berlin (2009) R. Azam and J. Tiedemann
- Geotechnical Engineering Competencies (2009) M. Jaksa

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Chair 2010-2014: Professor Keith Turner (USA)

- Contributions of papers to conferences by JTC3 leadership members



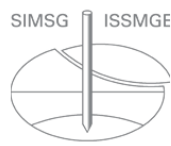
FEDERATION OF INTERNATIONAL
GEO-ENGINEERING SOCIETIES

President **Jean-Louis BRIAUD**



International Society
of Rock Mechanics (ISRM)
2015-2019 President **Eda QUADROS**

Commission on
Education
Chair **Meifeng Cai**



International Society of Soil Mechanics
and Geotechnical Engineering (ISSMGE)
2013-2017 President **Roger FRANK**

Committee on
Education of ISSMGE
Chair **Waldemar
HACHICH**



International Geosynthetics Society
(IGS)
2015-2019 President **Russell JONES**

Council Committee on
Education
Chair **Chungsik Yoo**



International Association of
Engineering Geology (IAEG)
2014-2018 President **Scott BURNS**

Commission on
Education and Training
Chair **Fred Baynes**

Joint Technical Committee on Education
(JTCE) Chair **Anna SHIDLOVSKAYA**

Joint Technical Committee on Education, JTC3

Chair: Anna SHIDLOVSKAYA

Chair 2015-present: Anna Shidlovskaya (Russia)

Vice Chair	Scott Burns	IAEG	USA
Secretary	Anna Timchenko	IAEG	Russia
Member	Waldemar Hachich	ISSMGE	Brazil
Member	Michele Calvello	ISSMGE	Italy
Member	Chungsik Yoo	IGS	Korea
Member	Martin Ziegler	IGS	Germany
Member	K. Rajagopal	IGS	India
Member	Seokwon Jeon	ISRM	Korea
Member	Shuca Li	ISRM	China
Member	Tatiana Rotonda	ISRM	Italy

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The goal of JTC3 is to contribute to broad cooperation between international geo-engineering societies and their members in teaching, training, and outreach facilities. JTC3 addresses to education (institution educators, graduate and undergraduate students) and industry.

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Terms of reference and activities:

1. To promote the exchange of information on the courses and their content that are taught on geotechnical engineering/engineering geology/rocks mechanics/geosynthetics in different institutions
2. To develop a list of recommended textbooks on geotechnical engineering/engineering geology/rocks mechanics/geosynthetics
3. To develop a list of the refereed journals on geotechnical engineering/engineering geology/rocks mechanics/geosynthetics
4. To inform the members about international conferences on geo-engineering education
5. To present information on the history of geo-engineering schools (engineering geology, geotechnical engineering, soil and rock mechanics, geosynthetics) in the world – request to international societies and institutions

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Terms of reference and activities:

6. To establish an educator award for FedIGS member institutions (the Jean-Louis Briaud Award) which recognizes excellence in educational services to the FedIGS community
7. Information on outreach activities for students and teachers regarding careers
8. To cooperate with employers on the efficiency of geo-engineering education in practice
9. To interact with all technical committees of FedIGS to prepare lecture notes, PowerPoint slides, photos, videos, questions and answers on geo-engineering
10. To develop the electronic interaction between the committees

Accomplishments since September 2015

- **Website jtc3.com**
- **Books list**
- **Journals list**
- **Videos list**
- **Interaction and support of member societies**
- **Paper on “Modern syllabus for introduction to geoengineering “**
- **Collaboration through the program “Visiting professor” (Pr. Briaud at University of Mines, St. Petersburg, 2013-2015 and Pr. Shidlovskaya at Texas A&M University, 2014-2015)**

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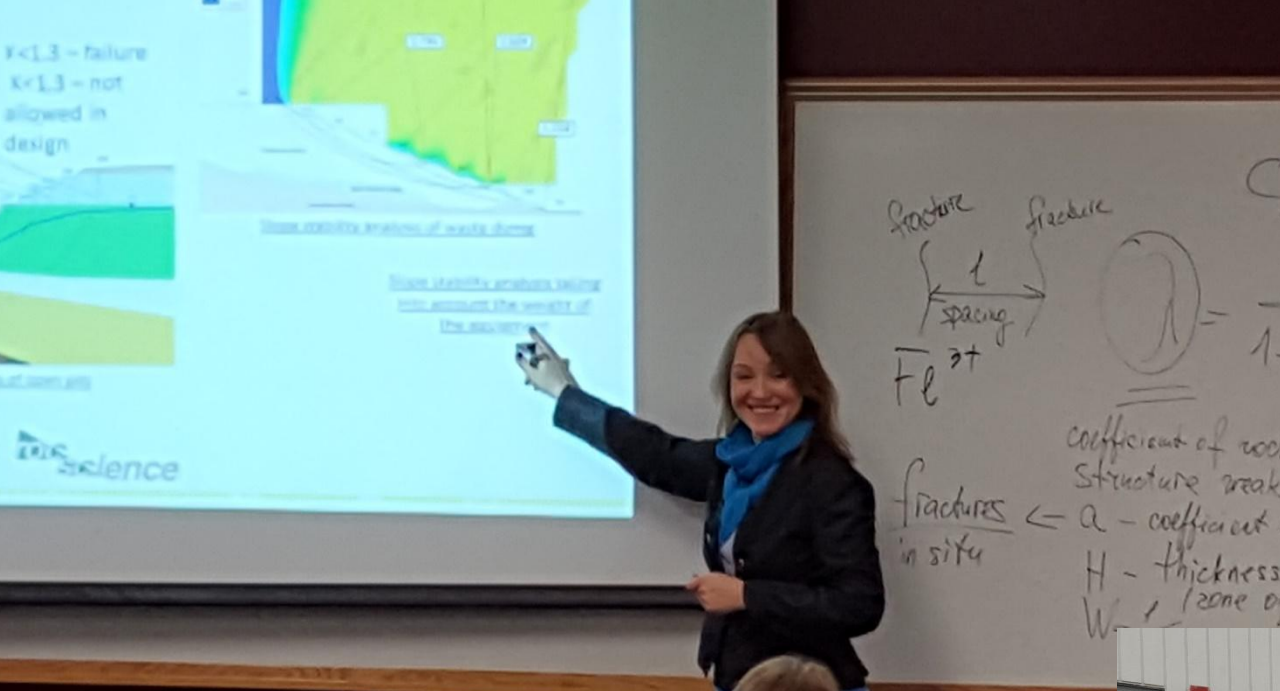
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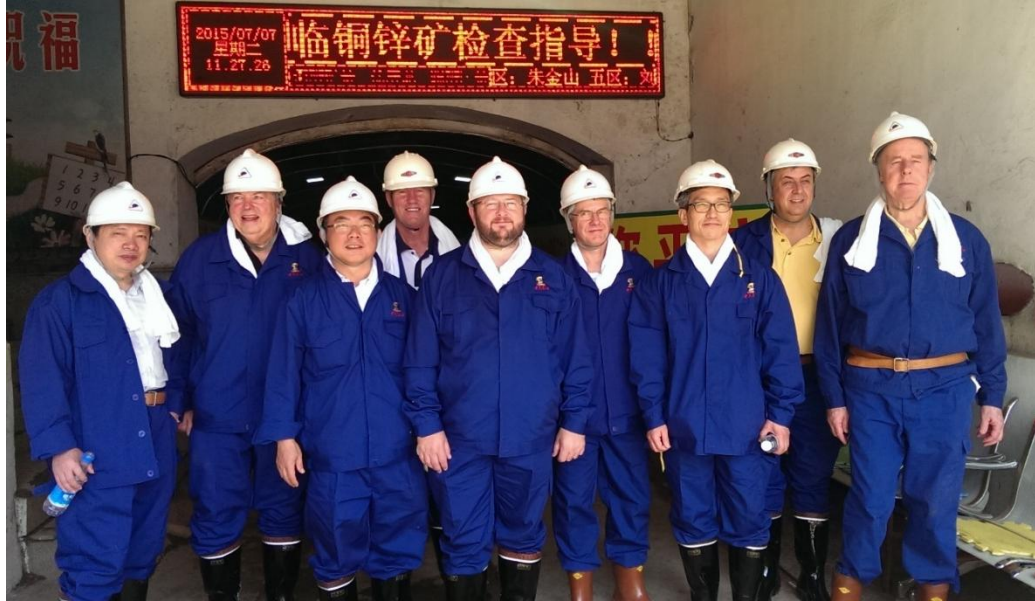
Paper on “Modern syllabus for introduction to geoen지니어ing “

1. History of geotechnical engineering
2. Engineering geology and rocks
3. Elements of geophysics
4. Sampling and in situ testing
5. Soil particles and mineralogy
6. Weight volume relationships
7. Compaction
8. Classification and tests
9. Stresses and strains in soils
10. Soil constitutive models
11. Flow of fluids through soils (parameters and laws)
12. Flow of fluids through soils (lab and field tests)
13. Flow of fluids through soils (Flow nets and applications)
14. Compressibility of soils (elasticity and the modulus of soils)
15. Compressibility of soils (consolidation tests and settlement magnitude)
16. Compressibility of soils (time rate of consolidation)
17. Shear strength of soils (effective stress case)
18. Shear strength of soils (undrained case)
19. Shear strength of soils (tests and typical values)
20. Shallow foundations
21. Deep foundations
22. Slopes
23. Retaining walls
24. Innovations (reinforced earth, soil improvement)
25. Innovations (geo-environmental, geosynthetics)
26. Innovations (earthquakes, floods)
27. Probability and risk in geotechnical engineering

FUTURE ACTIVITIES AND IDEAS

1. Discuss the web site content with the members
2. Improve, complete, enhance the book list
3. Improve, complete, enhance the videos list
4. Improve, complete, enhance the journals list
5. Contribute to the success of ISSMGE, ISRM, IAEG, IGS conferences on education
6. Develop recommendations for modern curriculum in geoengineering
7. Develop list of internship opportunities for students
8. Develop list of research needs for young professors and practitioners to cooperate
9. Propose a state of the practice and state of the art series
10. Reach out to the practitioners for their influence on education





JTC3 meeting in Miami during the conference Geo-Americas 2016, Miami, 13 March 2016

