PROCEEDINGS OF THE 1st INTERNATIONAL CONFERENCE ON EDUCATION AND TRAINING IN GEO-ENGINEERING SCIENCES: SOIL MECHANICS, GEOTECHNICAL ENGINEERING, ENGINEERING GEOLOGY AND ROCK MECHANICS, CONSTANTZA, ROMANIA, 2–4 JUNE 2008

Education and Training in Geo-Engineering Sciences

Soil Mechanics, Geotechnical Engineering, Engineering Geology and Rock Mechanics

Edited by

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Table of Contents

2	Introduction	XI
	1. Invited papers	
	What should geotechnical engineers be able to do and how should they acquire these skills? J. Atkinson	3
	New generation geo-engineering F.B.J. Barends	9
	Teaching rock mechanics in the classroom and on the UNI-Nettuno Network G. Barla	23
	Personal reflections on the teaching of soil mechanics <i>J.B. Burland</i>	35
0.000.000000000000000000000000000000000	Geotechnical engineering collaboration between clients, consultants, contractors and universities: A European perspective <i>M. Devriendt</i>	49
10,000 (100 (100	Engineering geology at University Complutense of Madrid: 30 years of postgraduate courses L.I. González de Vallejo & M. Ferrer	55
	A multi-faceted approach to geotechnical engineering education <i>M.B. Jaksa</i>	59
SARGES CERTIFICACE	Let's get together I.M. May	73
Conference and a	Geo-engineering education and training. The past and the future <i>R. Oliveira</i>	79
constructions and	Geotechnical education and Eurocode 7 T.L.L. Orr	87
ter in wet to be address to be	Competency-oriented curricula development in geo-engineering with particular reference to engineering geology <i>N. Rengers & H. Bock</i>	101
d es ven vijnis protes reles	Education and professional recognition of engineering geologists and geological engineers in Canada and the United States <i>A.K. Turner</i>	111
on-to-solar shallows	Training engineering geologists in developing countries: South African perspectives and challenges J.L. van Rooy	119
a bittown og anne draid, aktober	2. Reports on education and training in geo engineering sciences in various countries	
belant (c). Artist	First and second cycle degree programme and impact of the Bologna process in Albania <i>L. Bozo</i>	131
Manufacture and address	Geo-engineering education in Australia M.B. Jaksa, S.G. Fityus, J.K. Kodikara, S.T.S. Yuen & M.A. Woodward	135
92		

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The geotechnical education in Bulgaria A. Totsev & J. Jellev	141
Report on geotechnical engineering from Chile R. Verdugo & C. Foncea	145
Introduction to education of rock mechanics in China M.F. Cai	147
Historical review and current status of civil engineering education in China <i>Y. Qiu</i>	151
Education and training in geo-engineering sciences in Croatia V. Szavits-Nossan	159
Education and training in geo-engineering sciences in France R. Kastner & F. Emeriault	165
German education and training in geo-engineering sciences U. Arslan & H. Huber	171
Geotechnical and geoenvironmental engineering education and training in Germany R. Katzenbach, B. Astheimer & S. Wachter	177
Education and training in geo-engineering sciences in Ghana S.I.K. Ampadu & S.K.Y. Gawu	181
Geotechnical engineering education and training in Greece and links with the geo-engineering sciences <i>M. Pantazidou, G. Tsiambaos & D.K. Atmatzidis</i>	187
Geo-engineering sciences education in Hong Kong L.G. Tham	193
Geotechnical and geoenvironmental education in India R.K. Srivastava, S.H. Abbas, S. Saxena, S. Singh & P. Bala Ramudu	199
Geotechnical education in Ireland – 2008 national report B.A. McCabe, D.T. Phillips, T.L.L. Orr & S.P. Murray	203
Geotechnical engineering education in Israel S. Frydman	209
Report on the education and training in geo-engineering sciences in Italy D.C.F. Lo Presti & F. Silvestri	213
Geo-engineering education in Lithuania K. Dundulis & V. Stragys	221
Geotechnical engineering education and training in Mexico R. Rivera-Constantino	227
Report on the education and training in geo-engineering sciences for New Zealand J.D. St. George	231
Education and training in geo-engineering sciences in Romania I. Manoliu, Cr. Mărunțeanu & D. Stematiu	237
Education and training in Geo-engineering sciences in the Republic of South Africa (RSA) G. Blight	245
Geotechnical engineering education and training in Switzerland M. Caprez, S.M. Springman, G. Anagnostou & A.M. Puzrin	247
Geotechnical engineering education in Thailand K. Piriyakul	253
Report on education and training in geo-engineering sciences in the United States of America A.L. Welker & A.J. Puppala	257

Geotechnical engineering education in the United States T.F. Zimmie & R.D. Holtz	263
3. Curricular matters in geo-engineering education	
Teaching geotechnics at the Faculty of Civil Engineering, VŠB-Technical University Ostrava after Destructuralisation of University Study in the Czech Republic J. Aldorf, J. Horky & E. Hrubesova	269
The relevance of geo-engineering in civil engineering education and practice in Ghana S.I.K. Ampadu	275
Geotechnics subjects in the curricula of Civil Engineering courses in the University of Beira Interior (Portugal) L.M. Ferreira Gomes, R. Kowalczyk, P. Gabriel de Almeida, L.J. Andrade Pais, I.M.G. Falorca & E. Mendes	281
Education, training and learning in geo-sciences for Civil Engineering I. Lungu, A. Stanciu, N. Boti & O. Donciu	293
Geotechnics for Civil Engineering in an Integrated Master Course E. Maranha das Neves	297
"Design and Construction of Underground Works". A postgraduate course in the National Technical University of Athens P.G. Marinos	301
Teaching geotechnical engineering B. Moussai	305
Bridging Geomatics and Geo-Engineering D.J.M. Ngan-Tillard, B.G.H. Gorte, A.A.A. Verhagen & E. Verbree	307
Geo-engineering, a co-production of Applied Earth Sciences and Civil Engineering D.J.M. Ngan-Tillard, J.P. Oostveen & C.M.J. van Kuijen	313
Some aspects of comparison of geo-engineers education at the universities of Germany and Russia A. <i>Ponomaryov & R. Katzenbach</i>	319
Complex education in underground structures at CTU in Prague I. Pruška, S. Chamra & R. Vašíček	325
Geotechnics and the University degree structure reform in Helsinki O.T. Ravaska	329
Selected aspects of teaching geo-engineering sciences at the Faculty of Civil Engineering, Warsaw University of Technology 4. <i>Siemińska-Lewandowska & W. Gilewski</i>	333
Contribution of numerical methods in the education of geosciences: mplementation on two-tier study programs E. Vairaktaris, G. Metaxas & D. Damigou	337
Geo Risk Management – A new engineering education approach M.Th. van Staveren	345
Education of the risk in Civil engineering L. Vinet	351
t. Teaching, learning and assessment in geo-engineering education	
project based approach to teaching geotechnical engineering	357

VII

Effective teaching of geo-engineering subjects via project-based approach . CM. Chan & A. Suratkon	363
Geotechnical engineering education in METU and computer aided learning resources <i>E. Cokca</i>	369
From teaching to assistance for project N. Faure, JF. Thimus & RM. Faure	375
Demonstration experiments in geotechnical education I. Herle & S. Gesellmann	379
Improving graduates' soft skills through laboratory teamwork D. Ionescu	383
Using ICT in Geo-Engineering education: The case of UPC at Barcelona, Spain A. Ledesma & P.C. Prat	389
Combining Geographical Information Systems and geo-engineering education. Practical aspects and lessons learned at TEI of Serres (Greece) C. Papatheodorou, A. Konstantinidis & E. Mouratidis	393
Case study importance in geotechnical engineering – educational approach A. Popa, V. Farcas & N. Ilies	397
Use of an interactive approach and case studies in Geo-engineering education S. Singh	405
Improving rock mechanics education by using case studies analyses <i>D. Stematiu</i>	409
DIDACTU and DIDACPENTE, e-learning tools for underground works and slope stability J-F. Thimus & RM. Faure	415
5. Challenges to geotechnical engineering education	
Experiences from advanced teaching in Geotechnics under Erasmus programme <i>M. Drusa & D. Sitányiová</i>	421
Geotechnical aspects of the final year "Technical project" in the Civil Engineering Department of INSA Lyon, France F Emeriault, G. Debicki & R. Kastner	427
Geotechnical engineering practice and the implementation of Eurocode approach in Italy D.C.F. Lo Presti & N. Squeglia	435
Launching geotechnical education into the 21st century D.T. Phillips & B.A. McCabe	439
Challenges and responses in the geo-engineering education <i>P. Scharle</i>	443
Some thoughts on the interplay between theory and practice in geotechnical engineering education within the frame of the new modularized university education system <i>C. Vrettos</i>	447
6. Issues in education and training in Engineering Geology	
Training in Geological Engineering. The experience of University of Évora (Portugal) I.M.R. Duarte, A.B. Pinho, P.A.G. Faria, J.L.G. Lopes & P.M.M.P. Nogueira	453
Engineering Geology a basic tool for civil engineering works E. Marchidanu & R. Stanescu	459

	100
Pragmatic training in Engineering Geology D.J.M. Ngan-Tillard, P.M. Maurenbrecher, J. van der Schrier, A. Venmans & R. Schmitz	463
Engineering geological education – Practical aspects from Civil Engineering Department at TEI of Serres (Greece) <i>C. Papatheodorou & A. Papazisi</i>	
7. The link university professional world in geo-engineering	
Requirements of the construction industry with regard to the university education and training of graduates in geo-engineering P. Arz, W. Steinhaeusl & Ch. Scheld	481
Introduction about the plan of course system in lectures of Japanese Geotechnical Society H. Furuya & A. Iizuka	489
Is Geotechnical education meeting industry demands? The Irish position B.A. McCabe & D.T. Phillips	493
Program of Continuing Professional Development for geotechnical engineers by Japanese Geotechnical Society M. Nakano & N. Suemasa	499
Industry-Academia collaboration produces geotechnical case studies for undergraduate instruction: An example, a proposal M. Pantazidou, G.A. Anagnostopoulos & C. Tsatsanifos	505
Author index	513

VIII .

IX

Introduction

On 12–14 June 2000, the Romanian Society for Soil Mechanics and Foundation Engineering organized in Sinaia the First International Conference on Geotechnical Engineering education and Training which knew a great success, being attended by teachers and professionals from 37 countries and 6 continents. The Proceedings of the Conference were published by A.A. Balkema.

Eight years after the Sinaia Conference, another event of this kind, with a wider scope, is organized in Constantza, on 2–4 June 2008, by the Romanian Society for Soil Mechanics and Geotechnical Engineering, addressing this time not only Soil Mechanics and Geotechnical Engineering but also other geo-engineering sciences: Engineering Geology and Rock Mechanics.

Put under the auspices of the International Society for Soil Mechanics and Geotechnical Engineering – ISSMGE, the Conference was endorsed immediately by the Joint Technical Committee on Education and Training of the three "Sister Societies": ISSMGE, the International Association for Engineering Geology and Environment – IAEG, and the International Society for Rock Mechanics – ISRM, which met for the first time in September 2006 in Nottingham. A European Technical Committee on Education and Training of ISSMGE, founded at the beginning of 2007, was also involved in the organization of the Conference.

Since the initiation of the Conference and the date when this Introduction is written (March 12th, 2008) an important development took place. Following the favourable votes, expressed in September 2006 by the Council of IAEG, in November 2006 by the Council of ISRM and in October 2007 by the Council of ISSMGE, a Cooperation Agreement was concluded between the three Sister Societies, leading to the foundation of a Federation of International Geo-engineering Societies (FIGS). One major aim of Federation is to coordinate scientifical and technical activities in areas with overlapping interest between the Members. Since education and training is, obviously, such an area, the Conference in Constantza can be rightfully considered as an event supporting FIGS in carrying out its functions for the international geo-engineering community.

Papers submitted for publication for the Conference in Constantza cover a broad range of topics, such as curricular matters in geo-engineering education, teaching, learning and assessment in geo-engineering education, challenges in geotechnical engineering education, issues in education and training in Engineering Geology, the link university – professional world in geo-engineering, topics to whom distinct parts of this volume are devoted.

A significant number of papers were prepared by distinguished representatives of the three Sister Societies, who kindly answered to the invitation of the organizers to share their most valuable experience and to provide sources of inspiration for teachers of geo-engineering subjects around the world.

The volume includes also a number of reports on education and training in geo-engineering sciences in 23 countries. Some of them have the character of national reports covering all or part of the geo-engineering sciences. Others provide an insight on the present status of geo-engineering sciences in the respective country. There are also several cases in which two such reports, which complement each other, were received from the same country.

faculty who teach topics outside their main research focus and area of professional expertise.

It is further proposed that this need be addressed by collaborating teams of consultants and faculty members. A suitable team will include a faculty member, whose role will be to make sure that the produced instructional material is "teachable", a junior consultant intimately involved with the case, who will compile the needed information, and a senior consultant, who will devote only some minimal time, providing his/her knowledge of the "big picture" of the project.

To make the proposal tangible, the authors presented in this paper some representative results of a pilot consulting-university collaboration which produced instructional material for a reinforced earth retaining structure. All the information is included in the completed template and a PowerPoint presentation, available on the internet (www.pangaea.gr and users.ntua.gr/mpanta). It should be noted that the authors chose a modest-scale project within a highprofile project, i.e., the Egnatia Highway, bypassing on purpose the majestic bridges and the long tunnels of Egnatia, for a project that involved some calculations most students would follow in an undergraduate geotechnics class. At the same time, the project is rich enough to also include some analyses suitable for an advanced course on soil improvement.

In order to encourage similar collaborations, the authors finally discuss measures necessary to ensure the viability of a consulting-university collaboration: streamlining the production of the instructional materials, providing visibility ideally through a national geotechnical society and instituting a system of incentives on both sides.

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Author index	
--------------	--

Abbas, S.H. 199 Airey, D.W. 357 Aldorf, J. 269 Ampadu, S.I.K. 181, 275 Anagnostopoulos, G.A. 505 Anagnostou, G. 247 Andrade Pais, L.J. 281 Arslan, U. 171 Arz, P. 481 Astheimer, B. 177 Atkinson, J. 3 Atmatzidis, D.K. 187

Bala Ramudu, P. 199 Barends, F.B.J. 9 Barla, G. 23 Blight, G. 245 Bock, H. 101 Boti, N. 293

Bozo, L. 131 Burland, J.B. 35 Cai, M.F. 147 Caprez, M. 247 Chamra, S. 325 Chan, C.-M. 363

Cokca, E. 369

Damigou, D. 337 Debicki, G. 427 Devriendt, M. 49 Donciu, O. 293 Drusa, M. 421 Duarte, I.M.R. 453

Dundulis, K. 221 Emeriault, F. 165, 427

- Falorca, I.M.G. 281 Farcas, V. 397 Faria, P.A.G. 453 Faure, N. 375 Faure, R.-M. 375, 415 Ferreira Gomes, L.M. 281 Ferrer, M. 55 Fityus, S.G. 135 Foncea, C. 145 Frydman, S. 209 Furuya, H. 489
- Gabriel de Almeida, P. 281 Gawu, S.K.Y. 181

St. George, J.D. 231 Gesellmann, S. 379 Gilewski, W. 333 González de Vallejo, L.I. 55 Gorte, B.G.H. 307

Herle, I. 379 Holtz, R.D. 263 Horky, J. 269 Hrubesova, E. 269 Huber, H. 171

Iizuka, A. 489 Ilies, N. 397 Ionescu, D. 383

Jaksa, M.B. 59, 135 Jellev, J. 141

Kastner, R. 165, 427 Katzenbach, R. 177, 319 Kodikara, J.K. 135 Konstantinidis, A. 393 Kowalczyk, R. 281 van Kuijen, C.M.J. 313

Ledesma, A. 389 Lo Presti, D.C.F. 213, 435 Lopes, J.L.G. 453 Lungu, I. 293

Manoliu, I. 237 Maranha das Neves, E. 297 Marchidanu, E. 459 Marinos, P.G. 301 Mărunţeanu, Cr. 237 Maurenbrecher, P.M. 463 May, I.M. 73 McCabe, B.A. 203, 439, 493 Mendes, E. 281 Metaxas, G. 337 Mouratidis, E. 393 Moussai, B. 305 Murtay, S.P. 203

Nakano, M. 499 Ngan-Tillard, D.J.M. 307, 313, 463 Nogueira, P.M.M.P. 453

Oliveira, R. 79 Oostveen, J.P. 313 Orr, T.L.L. 87, 203

Pantazidou, M. 187, 505 Papatheodorou, C. 393, 473 Papazisi, A. 473 Phillips, D.T. 203, 439, 493 Pinho, A.B. 453 Piriyakul, K. 253 Ponomaryov, A. 319 Popa, A. 397 Prat, P.C. 389 Pruška, J. 325 Puppala, A.J. 257 Puzrin, A.M. 247

Qiu, Y. 151

Ravaska, O.T. 329 Rengers, N. 101 Rivera-Constantino, R. 227 van Rooy, J.L. 119

Saxena, S. 199 Scharle, P. 443 Scheld, Ch. 481 Schmitz, R. 463 van der Schrier, J. 463 Siemińska-Lewandowska, A. 333 Silvestri, F. 213 Singh, S. 199, 405 Sitányiová, D. 421 Springman, S.M. 247 Squeglia, N. 435 Srivastava, R.K. 199 Stanciu, A. 293 Stanescu, R. 459 van Staveren, M.Th. 345 Steinhaeusl, W. 481 Stematiu, D. 237, 409 Stragys, V. 221 Suemasa, N. 499 Suratkon, A. 363 Szavits-Nossan, V. 159

Tham, L.G. 193 Thimus, J.-F. 375, 415 Totsev, A. 141 Tsatsanifos, C. 505 Tsiambaos, G. 187 Turner, A.K. 111

Vairaktaris, E. 337 Vašíček, R. 325 Venmans, A. 463

Verbree, E. 307

Verdugo, R. 145 Verhagen, A.A.A. 307 Vinet, L. 351 Vrettos, C. 447

Yuen, S.T.S. 135

Wachter, S. 177 Welker, A.L. 257 Woodward, M.A. 135 Zimmie, T.F. 263