



Xanthi, Greece
18-19 October 2024

Geosynthetics Education Training Program

Educate the Educators

Report

November 2024

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Introduction

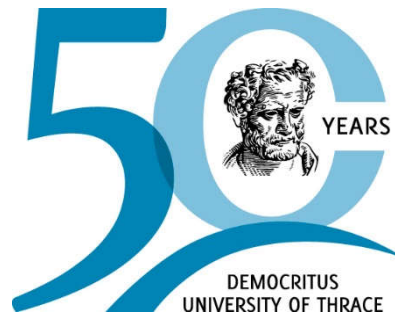
IGS Greece (Hellenic Geosynthetics Society, HGS) successfully organized for the first time in Greece, the “Educate the Educators” (EtE) program in Xanthi, between 18-19 October 2024.

The training program was organized with the support and sponsorship of the:

- International Geosynthetics Society (IGS), and the
- International Geosynthetics Society Foundation (IGS Foundation),



under the auspices of the Democritus University of Thrace (DUTH), which is celebrating the 50th anniversary of its foundation.



This was the fourth EtE to be held in Europe since its establishment in 2013 (Argentina, 27 – 28 May 2013); the first one in-person in Europe since 2015 (Portugal, 29 – 30 June 2015).

It was also the first time that the new “Sustainability assessment: Methodology and geosynthetic-based applications” lecture was presented; it could potentially be used as an example to follow for future EtE programs in other countries.

Another innovative educational activity was the “Conceptual design workshop” which is introduced for the first time in an EtE program.

The venue

The EtE training program took place at the Social Center "STAVROS CHALIORIS", located at the central square of Magiko, approx. 5km from Xanthi.

The Social Center "STAVROS CHALIORIS" is a non-profit corporation, founded in 2010, and based in Magiko, at the Municipality of Avdira. It is named after the late Stavros Chalioris, Founder and President of the "THRACE PLASTICS" Group.



www.kksxalioris.gr



Image 1: Location of the venue Social Center "STAVROS CHALIORIS"

The instructors

The instructors of the “Educate the Educators” (EtE) training program in Xanthi were Prof. Jorge G. Zornberg, Mrs. Patricia Guerra-Escobar, and Dr. Ivan Puig Damians. IGS Greece is honored by their presence, and wishes to express the warmest thanks to them, because their assistance and support to the program were remarkable.



Image 2: Prof. Jorge G. Zornberg in the EtE, IGS Greece 2024



Image 3: Mrs. Patricia Guerra-Escobar, Chair of IGS-ERAC, in the EtE, IGS Greece 2024



Image 4: Dr. Ivan Puig Damians, Chair of IGS TC-Reinforcement, in the ETE IGS Greece 2024



Image 5: ETE instructors and IGS Greece Board

The sponsors

Apart from the sponsorship of IGS Foundation, EtE of IGS Greece was supported by the following sponsors, to whom IGS Greece express its deepest appreciation.

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Participants

The “Educate the Educators” (EtE) training program in Xanthi, was attended by 33 academic professors, educators, and researchers, representing eleven (11) universities from Greece, Cyprus and the UK.








Image 6; EtE participants, Xanthi, IGS Greece 2024



Image 7: EtE participants at THRACE NG premises, Xanthi, IGS Greece 2024

The participants per university are as follows:

University	Participants
 <p>Democritus University of Thrace</p>	10
 <p>National Technical University of Athens</p>	6
 <p>University of Thessaly</p>	4
 <p>Aristotle University of Thessaloniki</p>	3
 <p>University of Patras</p>	3
 <p>Technical University of Crete</p>	2
 <p>University of West Attica</p>	1
 <p>International Hellenic University</p>	1
 <p>Hellenic Air Force Academy</p>	1
 <p>Cyprus University of Technology</p>	1
 <p>University of Oxford</p>	1

EtE in Greece

EtE was offered in a 2-days intensive training sessions. The program's schedule is presented hereafter.

Thursday, October 17, 2024
Arrival and reception of participants

SCHEDULE: Friday, October 18, 2024		
TIME	ACTIVITY	SPEAKER
9:00 – 9:10	Opening: Welcome and Introductions	Ioannis N. Markou
9:10 – 9:15	IGS Greece Chapter Presentation	
9:15 – 9:30	Discussion: Teaching geosynthetics in undergraduate classes. Objectives and philosophy of the “Educating the Educators” program	Jorge G. Zornberg
9:30 – 10:30	Topic 1: Introductory class: Types and functions of geosynthetic materials	Jorge G. Zornberg
10:30 – 10:45	Discussion: Incorporating GS topics into UG courses	
10:45 – 11:00	Coffee Break	
11:00 – 12:00	Topic 2: Geosynthetic properties and Test procedures	Patricia Guerra-Escobar
12:00 – 13:00	Workshop: Recognizing different geosynthetic materials	EtE Organizers
13:00 – 13:30	Educational Activity “Conceptual design workshop,” Part 1	Jorge G. Zornberg
13:30 – 15:30	Light lunch and Technical Tour at the Thrace NG facilities	
15:30 – 16:30	Topic 3: Fundamentals of geosynthetics for soil reinforcement	Ivan P. Damians
16:30 – 16:45	Discussion: Incorporating GS topics into UG courses	
16:45 – 17:45	Topic 4: Geosynthetic-reinforced soil walls and slopes	Ivan P. Damians
17:45 – 18:00	Coffee Break	
18:00 – 18:20	Case Histories: Presented by EtE sponsor	Thrace NG
18:20 – 19:20	Topic 5: Geosynthetics for hydraulic applications	Patricia Guerra-Escobar
19:20 – 19:30	Discussion: Incorporating GS topics in UG courses	
21:00 – 23:00	Dinner	

	Introductory topic
	Discussion on incorporating GS in courses
	Support activity/presentation
	Educational activity

Instructors:

Dr. Jorge G. Zornberg
Mrs. Patricia Guerra-Escobar
Dr. Ivan P. Damians

SCHEDULE: Saturday, October 19, 2024		
TIME	ACTIVITY	SPEAKER
9:00 – 10:00	Topic 6: Geosynthetics in roadway applications	Patricia Guerra-Escobar
10:00 – 10:15	Discussion: Incorporating GS topics in UG courses	
10:15 – 10:35	Case Histories: Presented by EtE sponsor	Huesker
10:35 – 10:50	Coffee Break	
10:50 – 11:50	Topic 7: Geosynthetics for waste containment (e.g., landfills, tailings)	Jorge G. Zornberg
11:50 – 12:00	Discussion: Incorporating GS topics into UG courses	
12:00 – 13:00	Topic 8: Sustainability assessment: Methodology and geosynthetic-based applications	Ivan P. Damians
13:00 – 13:10	Discussion: Incorporating GS topics in UG courses	
13:10 – 13:30	Case Histories: Presented by EtE sponsor	Maccaferri
13:30 – 14:30	Lunch: Working lunch with group breakouts and networking	
14:30 – 15:20	Educational Activity “Conceptual design workshop,” Part 2	Jorge G. Zornberg
15:20 – 15:30	Discussion: Closing educational and curriculum discussion	
15:30 – 16:30	Bonus Track: Regulations for geosynthetics in Europe / Introduction to the 2 nd Generation of Eurocode	Ivan P. Damians

- Introductory topic
- Discussion on incorporating GS in courses
- Support activity/presentation
- Educational activity

Instructors:

Dr. Jorge G. Zornberg
Mrs. Patricia Guerra-Escobar
Dr. Ivan P. Damians



Image 8: EtE training course, Xanthi, IGS Greece 2024

An opening ceremony took place on the previous evening, Thursday the 17th October, at the Old Town Hall of Xanthi, where the participants, the educators, the sponsors and the IGS Greece Board members had the opportunity to meet and have a pleasant time.



Image 9: Reception ceremony at the old Town Hall of Xanthi, Thursday 17.10.2024



Image 10: Reception ceremony at the old Town Hall of Xanthi, Thursday 17.10.2024

The training program included several, dedicated presentations and discussions between the instructors and the attendees, and a technical visit at the premises of THRACE NG.



Image 11: ETE training in Xanthi, IGS Greece 2024



Image 12: ETE training in Xanthi, IGS Greece 2024

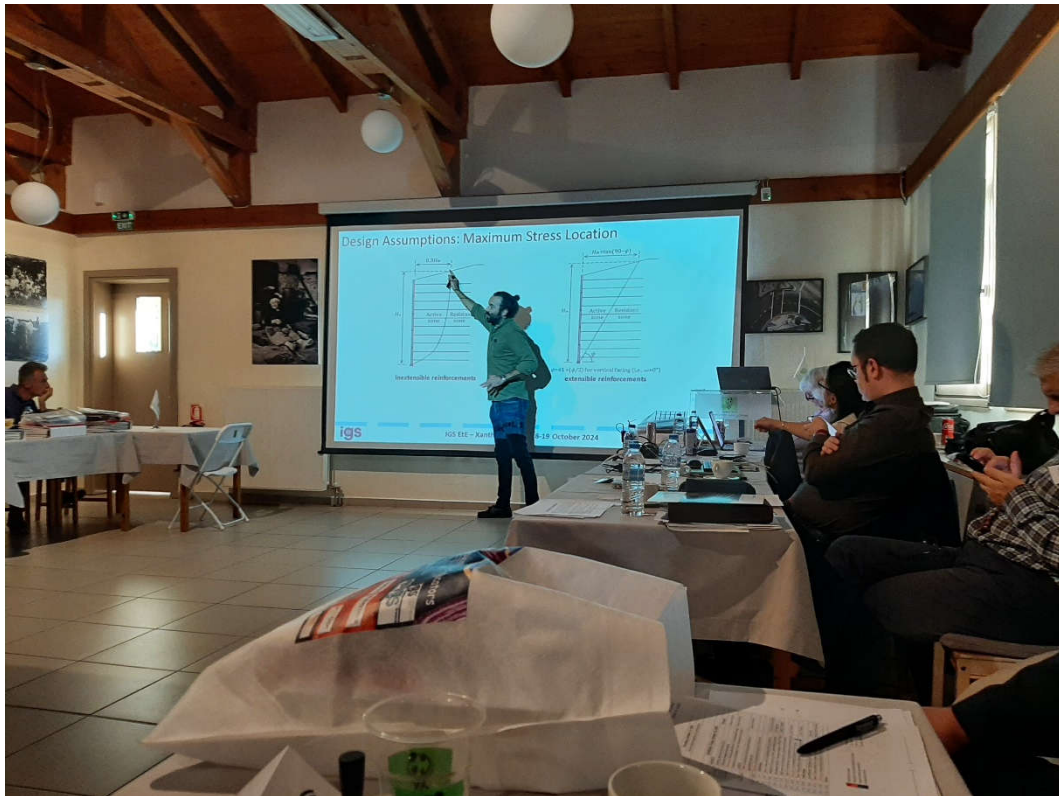


Image 13: EIE training in Xanthi, IGS Greece 2024



Image 14: Technical visit at THRACE NG premises, Xanthi, IGS Greece 2024

A couple of educational activities were introduced for the **first time** in the EtE program; the “**Sustainability assessment: Methodology and geosynthetic-based applications**”, and the “**Conceptual design workshop**”.

They were enriched by the extremely interesting Workshop “**Recognizing different geosynthetic materials**”.



Image 15: Workshop “Recognizing different geosynthetic materials”, IGS Greece 2024



Image 16: Workshop “Recognizing different geosynthetic materials”, IGS Greece 2024



Image 17: Workshop “Recognizing different geosynthetic materials”, IGS Greece 2024



Image 18: Workshop “Recognizing different geosynthetic materials”, IGS Greece 2024

Future use: extend the golf course

Case History: A Superfund Site

A Problem: You and your next-chair colleagues are retained by a group of PRPs to evaluate the final closure system for a Superfund site. The site includes 12 unlined pits filled with highly acidic waste sludge. The bearing capacity on top of the sumps is very low, and semi-liquid sludge has been observed to seep through the soil both laterally and vertically. The Superfund site is located in a hilly, densely populated area. The groundwater level is deep.

Seeking a Solution: As a geosynthetic specialist, your task is to conceive a conceptual closure system for the site. Take 10 min. to:

- (1) make sure you understood the problem, *→ pollution, contaminated land • seepage • bearing capacity*
- (2) identify the main design issues in this project, *→ barrier on top / increase stiffness / drainage*
- (3) identify the components of a closure system for the site (conceptual level) *to isolate the contaminated soil from run-off water. ∴ lateral barrier.*

Seeking a Solution, Part (B):

- (4) Reassess your original conceptual closure system, accounting for information gathered throughout this EtE program
- (5) list a series of advantages and disadvantages of the identified alternative

*drainage → geonet
top barrier → geotextile / geomembrane*

stiffness → geogrids

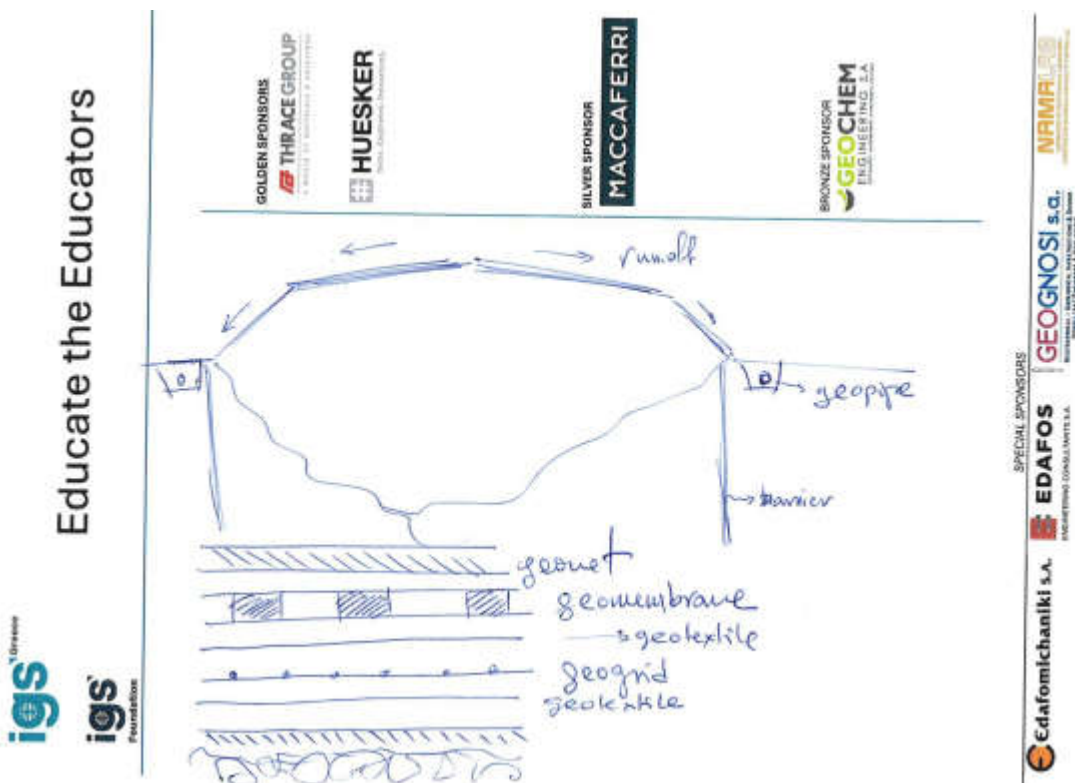


Image 19: Conceptual design workshop, draft solution manuscripts of one of the participants' team", IGS Greece 2024

The interaction between the participants, the instructors, the industry representatives, and the IGS Greece Board members (acting as “coaches”) was outstanding, thus adding a live sense in the program itself.

The sponsors of EtE of IGS Greece shared a series of case studies presentations, covering some of the main topics presented by the instructors.



Image 20: Sponsor presentation: THTRACE NG, delivered by Dr. Alexandros Droudakis

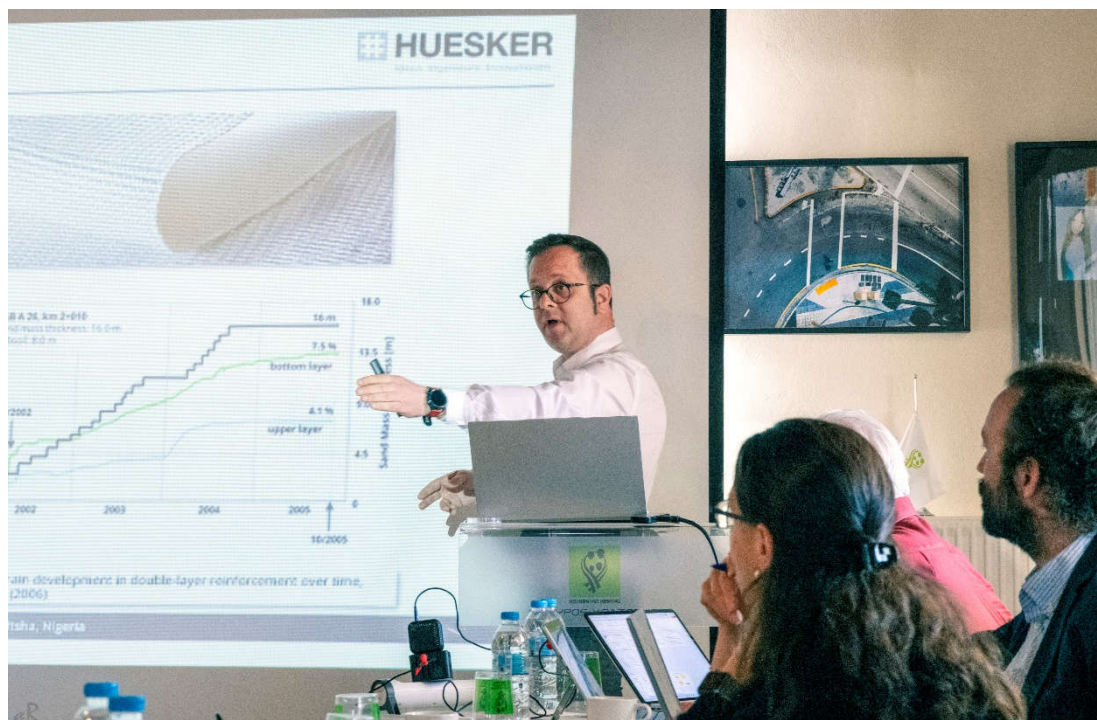


Image 21: Sponsor presentation: HUESKER, delivered by Dr. Ehsan Bordbar

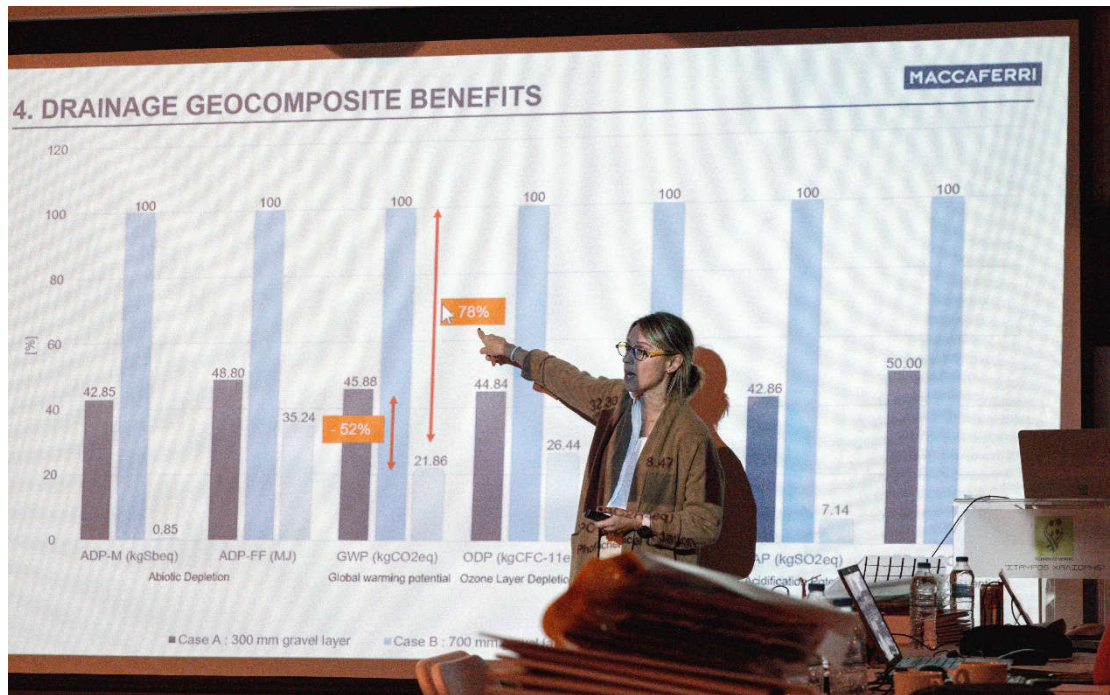


Image 22: Sponsor presentation: MACCAFERRI, delivered by Mrs. Giulia Lugli

IGS Greece considers that the initial objective of the EtE training program was achieved, which is to inform, activate and motivate academic teaching staff on the main functions of geosynthetics and the benefits of their application. The feed-back from the participants was more than enthusiastic!!!

An inquiry is to be circulated among the participants, to quantify the fulfilment of the program's objectives and their satisfaction in terms of organization, lectures content, workshops and supplementary activities efficiency.

The main objective of the EtE program is to be monitored in the following months, which is the inclusion of geosynthetics in academic curricula.

Among the participants, 28 of them travelled to Xanthi from other locations across Greece. The financial aid of the IGS Foundation made their travels more affordable, thus contributing the most at the success of the program.

The participants to receive IGS Foundation support is presented in the following table.

Table 1: List of attendees traveling to Xanthi with the financial support of IGS Foundation

#	Name	University
1	Chaloulos Ioannis	Aristotle University of Thessaloniki
2	Proutsali Stamatia	Aristotle University of Thessaloniki
3	Tika Theodora	Aristotle University of Thessaloniki
4	Pantelidis Lyssandros	Cyprus University of Technology
5	Charonitis Georgios	Hellenic Air Force Academy / University of Western Attica
6	Kirtas Emmanouil	International Hellenic University
7	Gerolymos Nikolaos	National Technical University of Athens
8	Loupasakis Konstantinos	National Technical University of Athens
9	Pantazidou Marina	National Technical University of Athens
10	Papadimitriou Achilleas	National Technical University of Athens
11	Pavlopoulou Eleni Maria	National Technical University of Athens
12	Tsiapas Ioannis	National Technical University of Athens
13	Pentari Despina	Technical University of Crete
14	Stiakakis Emmanouil	Technical University of Crete
15	Konstantinidis Dimitrios	University of Oxford
16	Depountis Nikolaos	University of Patras
17	Pantazopoulos Ioannis	University of Patras
18	Thomas Konstantinos	University of Patras
19	Christodoulou Dimitrios	University of Thessaly
20	Efremidis Georgios	University of Thessaly
21	Kallioglou Polyxeni	University of Thessaly
22	Tsinidis Grigorios	University of Thessaly
23	Belokas Georgios	University of Western Attica
24	Ritsos Apostolos	IGS Greece
25	Tsatsos Nikolaos	IGS Greece
26	Stratakos Christos	IGS Greece
27	Psimis Ioannis	IGS Greece
28	Fikiris Ioannis	IGS Greece

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UNDER THE AUSPICES OF

ΔΗΜΟΚΡΙΤΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΡΑΚΗΣ
DEMOCRITUS UNIVERSITY OF THRACE

50 YEARS
ΕΠΙΜΟΧΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΡΑΚΗΣ
EDMOCHEUS UNIVERSITY OF THRACE

Educate the Educators

Geosynthetics Education Training Program
Xanthi, Greece, October 18 - 19, 2024

Instructors:
Mrs. Patricia Guerra-Escobar
Dr. Jorge G. Zornberg
Dr. Ivan P. Damians

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more to come from IGS-Greece,
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