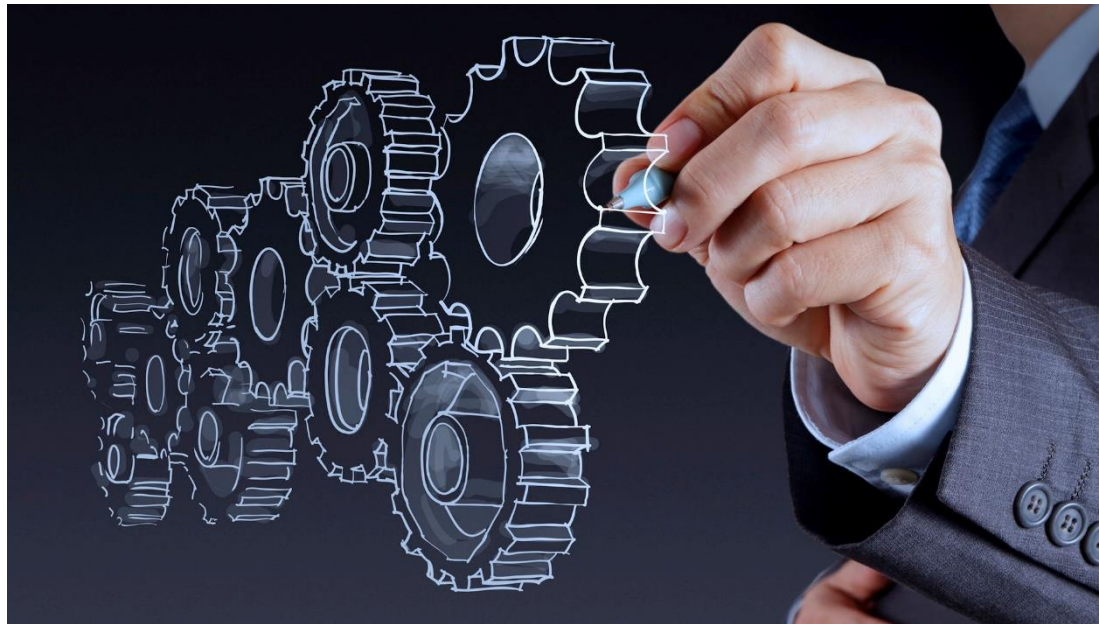




INTERNATIONAL  
HELLENIC  
UNIVERSITY

## DEPARTMENT OF MECHANICAL ENGINEERING

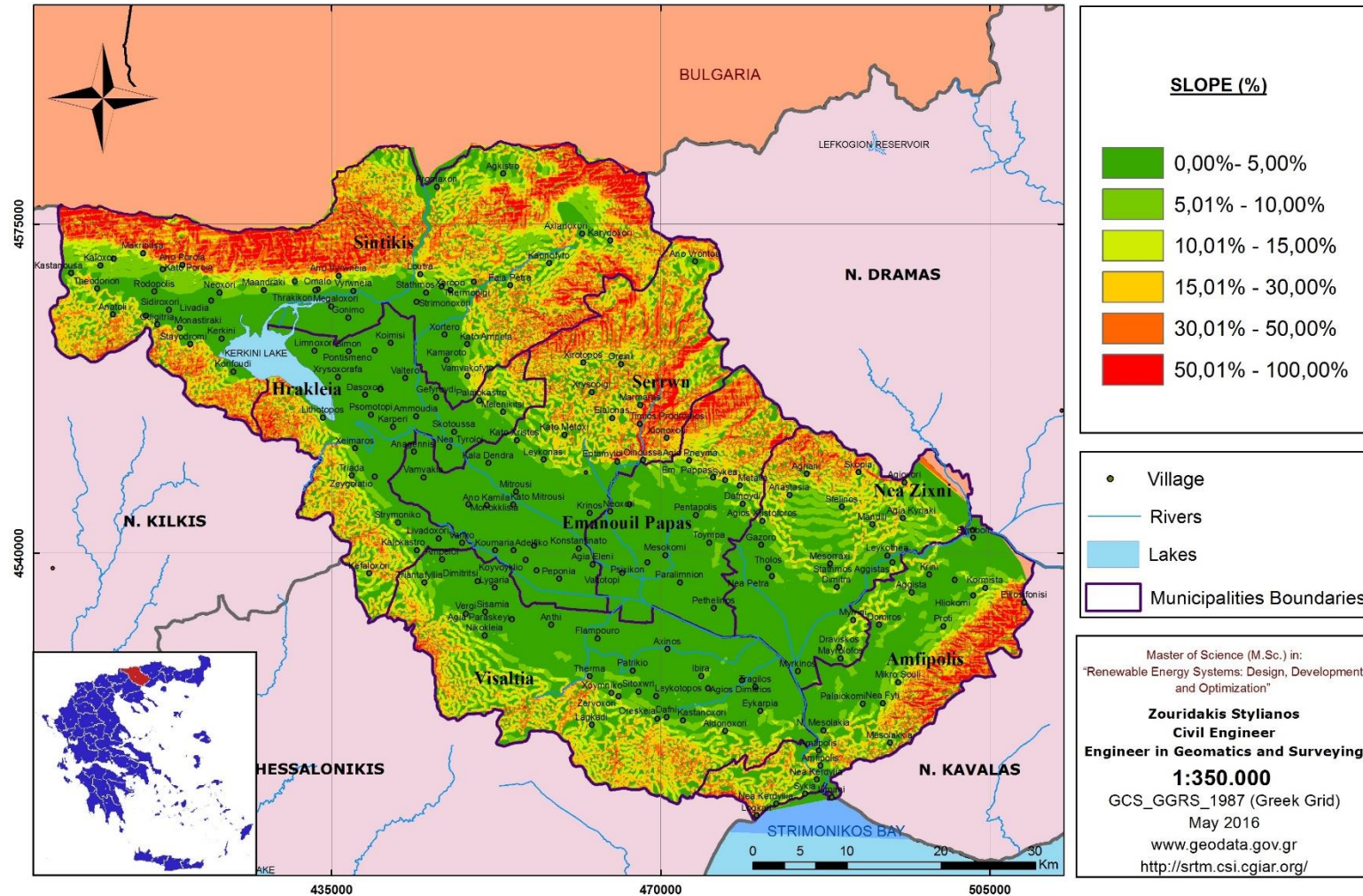
### @ SERRES, GREECE



# The Administrative Region (Prefecture) of Serres

Serres is a lush and fertile Region, located at the Greek-Bulgarian borders!...

Slope Map in Prefecture of Serres





# The City of Serres



*The “valley” of Serres*

With population approaching to 100,000 people, Serres is **one of the biggest cities of Northern Greece!**

Most of its residents are landowners and farmers, something that makes them financially sound (if not wealthy)!...

*The Prefecture Building of Serres*





Serres is a beautiful city, **with many sights,...**



*The Town Hall*



*Zinzirli Mosque*

...which is famous for **its night life,**  
...mostly, **because of the students!...**

*Serres at dusk*







*The Town-Hall Square*

**of natural beauty and cultural inheritance,**  
such as...

*The “Pedestrian” Crossing*

**(from North to South...)**



Moreover,...

Serres is known, also, for **a number of places...**



## Kerkini Lake (National Park)

A lake of unique beauty, with a **one-of-a-kind fauna!**



*Flamingoes*



*Feeding Pelicans*



*Wild Buffaloes*



# Laelia's Ski Resort

One of the most **popular Ski Resorts in Greece!**...



*Laelia's Ski Slope*



*Ice climbing terrain*

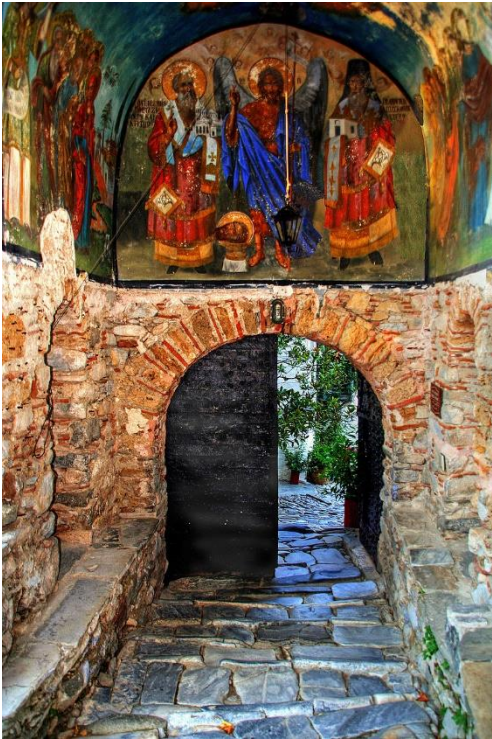
*Laelia's at Summer*





# St. Prodrome's Monastery

Built back in 1,270 A.D., it is **a Byzantine monument of unique beauty!...**



*Inside the Monastery*



## Aggitis Canyon (National Park)

One of the most spectacular **canyons of Greece!**..





## Alistrati Cave (an UNESCO Monument)

A breathtaking, **15 million years old cave!**...



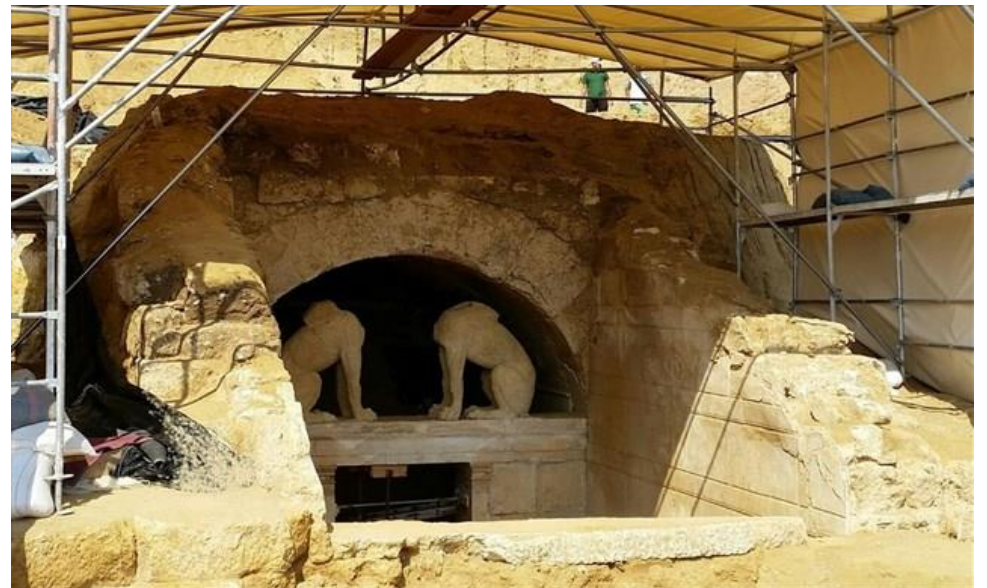


## Kasta Tomb @ Amphipolis (UNESCO)

With the exception of Vergina's Tombs (i.e., the tomb of Philip the 2<sup>nd</sup> – father of Alexander the Great) this is, perhaps, **the most significant Macedonian Tomb ever found!...**



*The entrance of the Tomb, back in 2014*





The entrance of the tomb “*was guarded*”  
by two Sphinxes!...



The ceiling of the second hall was supported by two Caryatids!...



*Artistic representation of the Tomb's interior*





The third hall, **where the sarcophagus was found**, was sealed by a marble door!...

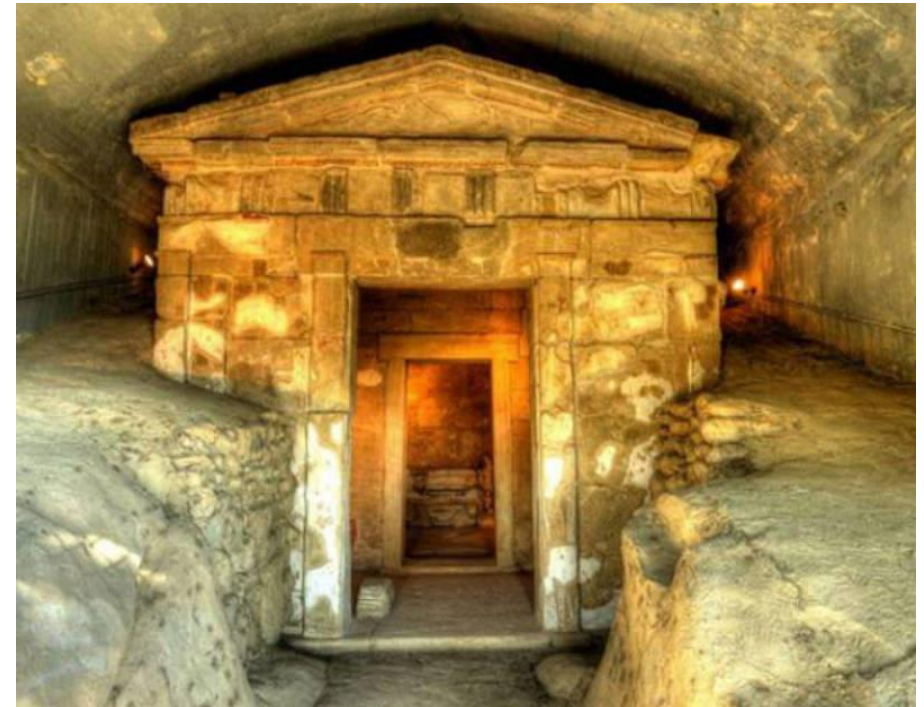


*3D reproduction of the Tomb*



At the top of the Tomb “stood” **the Lion of Amphipolis**, which was found in pieces back in 1916 by English soldiers fighting for Greeks during the World War I. It was re-assembled in 1936!...

It is now believed that the Tomb was a memorial, dedicated to **the dearest friend (and a General) of Alexander the Great, Hephaestion!**...





## Tuzla Beach

The most known beach of Serres, **awarded by the EU with the blue flag!...**



*Tuzla Beach Facilities*

Its green-blueish waters are **breathhtaking**, the fish in the local taverns is **fresh**, and the appetizers **simply delicious!...**





## Back to School @ IHU Serres Campus



*IHU Campus at Serres, Greece*

The International Hellenic University (IHU) Campus at Serres consists of four Departments of the Faculty of Engineering, two Departments of the School of Economics, and one Department of the School of Applied Arts, accommodating **almost 12,000 students!**

- A, B: Classrooms
- Γ, Δ, E, Z: Laboratories & Offices
- K: Administration Building
- Λ: Conference Center
- M: Campus Main Library
- N: Students' Restaurant & Dormitories
- O: Computer Center
- Π: Canteen
- P: Open Theater
- Σ: Informatics & Geo-informatics Departments



**15 newly-built installations founded in 3 stages (1994 - 2001 - 2012) – Total area: 65 acres  $\approx$  265,000 m<sup>2</sup>!...**



# Department of Mechanical Engineering

## Contact:

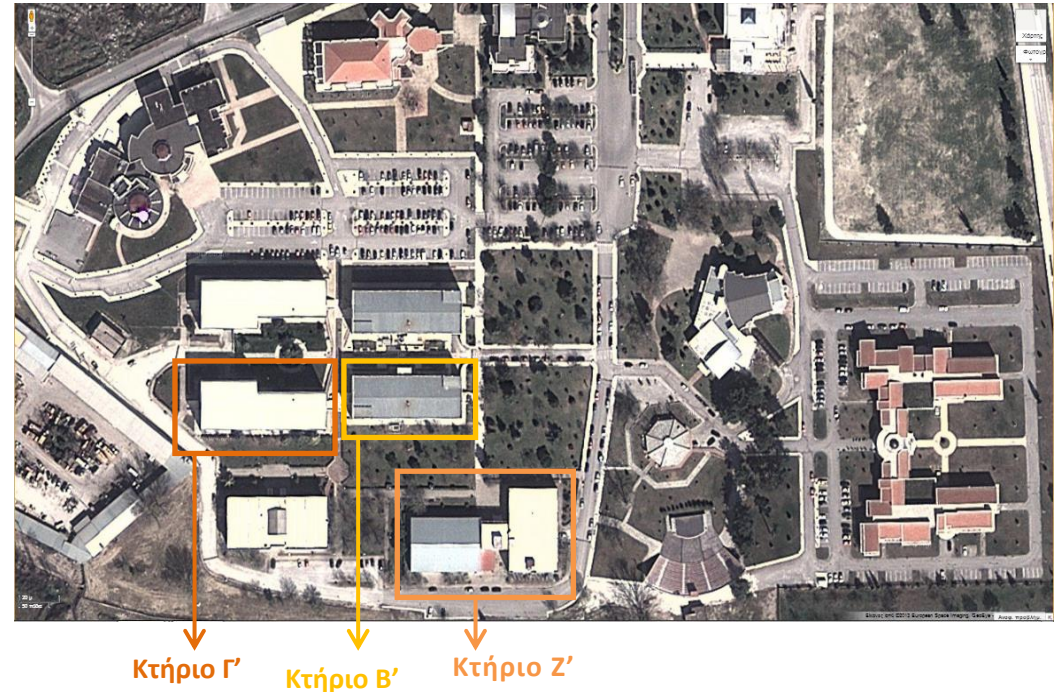
Mechanical Engineering Department, International Hellenic University, Serres Campus, 621.24 Serres, Greece.

**tel.:** +30-23210-49124 & -49125

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**e-mail:** [info@mech.ihu.gr](mailto:info@mech.ihu.gr)

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This is a journey to **the current activities of our Department**. We really hope that you will enjoy the ride!...

Currently, the staff of the IHU Mechanical Engineering Dept. consists of **fourteen (14) faculty members** at all levels, **two** people in the administration office, and **six** members of technical staff. **Seven** adjunct professors (teaching and laboratory assistants) are also employed, under one- to three-year contracts, so as the educational needs of the Department are met!...

**Staff to Students Ratio: 1/62, on a total of 1,275 undergraduate students, 20 postgraduate students and 5 Ph.D. students!..**



The main **research activities** of the IHU Mechanical Engineering Department faculty members involve the following topics:



*Production Systems Lab*

- ✓ Computational mechanics & structural optimization
- ✓ Manufacturing technologies & robotics
- ✓ Modeling of machining processes
- ✓ Reverse engineering
- ✓ Composite mechanics
- ✓ Materials' properties
- ✓ Design and optimization of renewable energy systems
- ✓ Heat and mass transfer in multi-phase systems
- ✓ Computational fluid dynamics, et c..

Most of the research is performed **using the infrastructure currently available** in the IHU Dept. of Mechanical Engineering!...

**Installation facilities total area: 6,250 m<sup>2</sup>**

**Installed equipment value: 7.3 million €.**



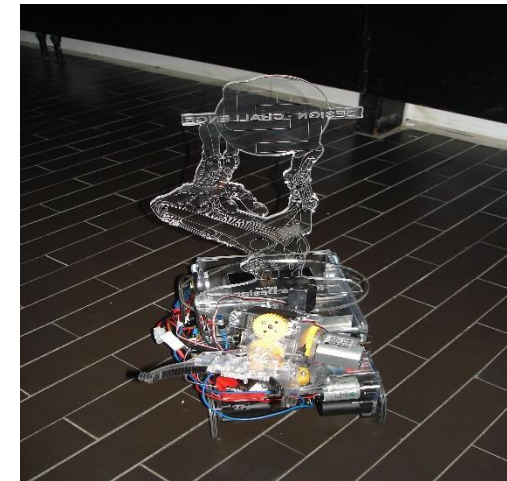
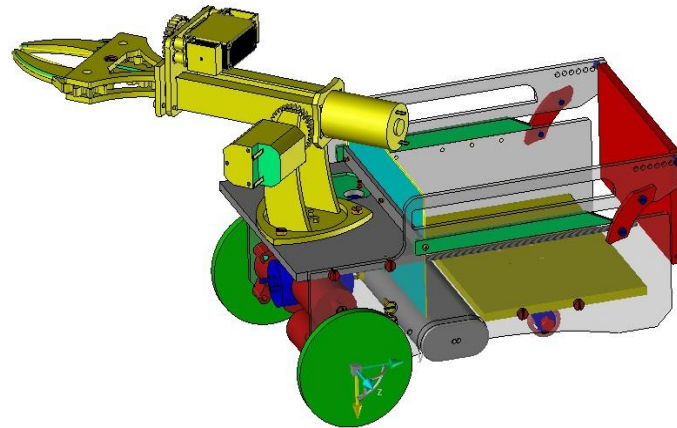
## A glimpse at the past – May 2012:

**18<sup>th</sup> International Student Contest "Design Challenge"**, May 7 – 8, 2012, at Jade Hochschule – Wilhelmshaven – Germany:

**1<sup>st</sup> Prize** to the team **ROBOSER** from our Department, for designing and developing a remotely controlled ROBOT that constitutes an integrated solution of **readiness level 8**, i.e., ready for production!...



*The ROBOSER Team with the Prize*





**June 2012:**

**Department's evaluation** by an External Experts Committee from **England** (Brunel University), **USA** (Universities of Illinois and Texas A&M), and **Canada** (Concordia University), **under the auspices of the Hellenic Quality Assurance Agency!...**

---

The associated EEC Final Report was particularly **laudatory and positive**, especially regarding the Department's laboratory equipment, as, e.g.,

*"The manufacturing labs are equivalent to the ones of good schools of Mechanical Engineering in the world, and, in general, most of the teaching laboratories are of exceptionally good quality..."*

*External evaluation report, p. 9 (July 6, 2012)*





July 2012:

**International Summer School** on “**Advanced Composite Materials**”, in collaboration with:

- ✓ Texas A&M University (Houston, TX, USA),
- ✓ The scientific software company Alpha Star Co (San Diego, CA, USA),

under the auspices of the **USA National Science Foundation (NSF)**!...



*Werth Tomoscope HV Compact 225 3D  
CNC in the MT Lab*

The summer school was attended

by postgraduate students and post-doctoral fellows from **NINE (9) Countries** around the world, namely, **China, Cyprus, Greece, India, Italy, Mexico, Puerto Rico, USA, and Vietnam!**...

**TEI SERRES**  
Technological Education Institute of Serres

**Application Info:**  
<http://engineering.telser.gr>  
**Application deadline:**  
June 1st, 2012

Applicants may be graduate students, post docs or IIMEC junior faculty

**Instructors:**  
Texas A&M University  
Ramesh Talreja, Theo Baxeavanis  
Alpha Star Co, USA  
Frank Abdi  
University of Ioannina  
Aikiviadis Palpetis  
TEI of Serres  
Pascal K. Gotsis, Constantine David

**PROGRAMME COMMITTEE**  
R. Talreja (Texas A&M)  
P. K. Gotsis (TEI of Serres)  
C. David (TEI of Serres)  
**ORGANIZING COMMITTEE**  
K. Kleidis, A. Moissiadis

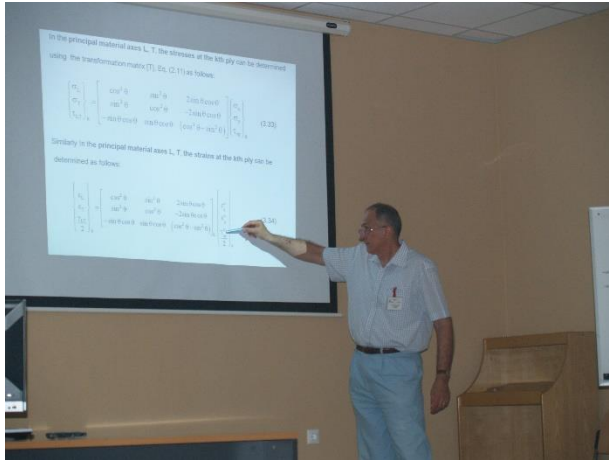
**01 Mechanics of Composite Materials**  
**02 Damage and Failure Analysis**  
**03 Fatigue Theory/Experiments**  
**04 Damage Simulation Using GENOA**  
**05 Multifunctional Composites**

**ATM NSF TEI SERRES**

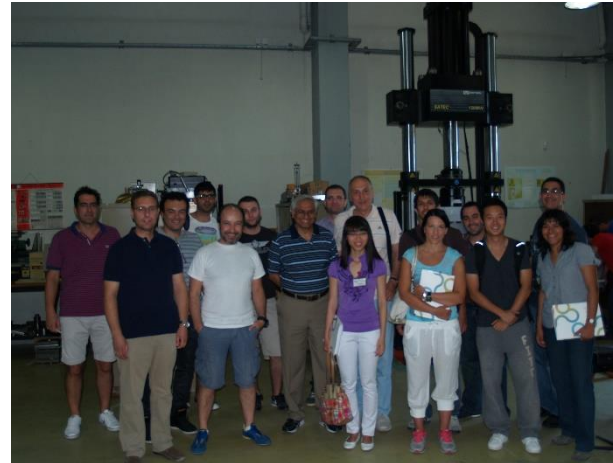
**Contact Info:**  
Ramesh Talreja (talreja@tam.u.edu)  
Pascal K. Gotsis (pkgotsis@telser.gr)



# Highlights:



*Professor Gotsis in action!...*



*At Department's Labs!...*



*Chilling out on a music event!...*



*Attending lessons!...*



*Graduation!...*



*Excursion to Alistrati Cave!...*



## Back to the present!...

The primary scope of our Department is, to **inspire the young people** that Mechanical Engineering can give them the exhilarating power to participate, not passively as spectators and consumers, but as **the active explorers and the innovators who will design the future!...**



*Attending a Lesson*



### Our Department's Curricula:

**1 B. Sc. Program** in Mechanical Engineering

**1 M. Sc. Program** in **Renewable Energy Systems**

**4 Ph. D. Programs** in -Mechanical design & optimization (1)

-Industrial automation & robotics (1)

-Vehicle Technology (1)

-Advanced composite materials (2)





*Applied Mathematics Lab*

One of the main objectives of our curricula is to offer academic education with an emphasis, also, **on the job market!...**

*HVAC Lab*



Our Department provides extensive opportunities for the students to **engage in advanced studies** and, collaborating with our faculty members, to **grow as successful Mechanical Engineers!...**





*Internal Combustion Engines Lab*

In this way, **our graduates can fill the gap** between the growing industry demand for specialized expertise and **the skills currently available in the job market!...**

*Hydraulics Lab*

Education is well balanced between the development of a solid theoretical background and the acquisition of technical skills, through workshop courses & training in **well-equipped laboratories!**







*Materials Science Lab*

This task involves industrial placements, consultancy work and development of customised applications by academics, researchers, and students. In this context, the students' **Fieldwork Practice** is of paramount importance!

**Promotion and transfer of modern technology** to various sections of social and economic activity is of fundamental importance!...

*Machining Technology (MT) Lab*







*MT Lab 2*

For this purpose, over the past few years the Department of Mechanical Engineering has developed **strong links with Universities and Institutes** in Greece and abroad, as well as with several domestic industrial units!...

**Development and distribution of scientific knowledge** by the faculty members and the students is also a scope of our Department's curricula!...

*MT Lab 3*







The undergraduate studies program is organized on a basis of **ten semesters courses**, discriminated as compulsory, compulsory-elective, and elective courses!...

*CNC Lab*

They **all** are essential for Mechanical Engineering and must be attended by **all** students! Compulsory-elective courses, in particular, are related to **the selection of a specialization area!..**

*Industrial Measurements Lab*







*Mechanical Design Lab*

During the **last two (9<sup>th</sup> & 10<sup>th</sup>) semesters**, the students can perform their **Fieldwork Practice** (the minimum duration of which is 16 weeks), along with their **Diploma Thesis!...**

*In a classroom*

There are **two specialization areas** in our Department, i.e., **Energy and Manufacturing**. At the beginning of the **seventh semester**, our students must choose one of these two areas and attend the corresponding compulsory-elective courses!...

Elective courses, on the other hand, offer an in-depth study of specific fields within the chosen area!...







*The Library of Serres Campus*

In view of all the above it is expected that, **upon graduation**, each and every student at the International Hellenic University Mechanical Engineering Department will have acquired all the necessary scientific knowledge and technical skills, to work as an executive employee in associated companies and organizations!...

The **Diploma Thesis** is considered to be a keystone of the student's graduate experience; hence, it must be a subject related to actual industrial applications, performed under the supervision of a faculty member!

*The Library of Serres Campus 2*







*Graduation Day*

This is reflected also in the **job-market statistics** carried out by IHU's Public Relations Office. The corresponding data suggest that more than **85% of our graduates** enter in the work sector **within the first twelve (12) months!...**

**Kostas Kleidis**

Head of the Department

### Graduates Employment Status

