

Anatolia  
College

ACSTAC

Μαθητικό Συνέδριο Επιστήμης & Τεχνολογίας



## 10th Conference Booklet

Thessaloniki, Greece • 19-20 | 4 | 2024



## ACSTAC Overview

### Friday, April 19, 2024

- 14:30 – 15:30: **Registration 1** (Macedonia Hall Foyer)
- 15:30 – 16:45: **Session A - Biology 1 & 2, and Interdisciplinary 1** (Macedonia)
- 15:30 – 18:00: **Exhibition 1 Setup** (Tsipos & Tracy Hall)
- 17:00 – 18:15: **F1 in Schools Team Launch** (Anatolia Gym)
- 18:15 – 20:00: **Workshops 1** (STEM Center & Kyrides)
- 20:00 – 21:00: **Stargazing** (Basketball courts in front of Macedonia)

### Saturday, April 20, 2024

- 08:00 – 09:00: **Registration 2** (Macedonia Hall Foyer)
- 08:00 – 09:00: **Exhibition 2 Setup** (Tsipos & Tracy Hall)
- 09:30 – 12:15: **Opening Ceremony** (Anatolia Gym)
  - 09:30 – 10:00: Greetings
  - 10:00 – 10:30: Keynote Speaker **Dr. Georgios Giannopoulos**  
“The EU and Space Exploration: Charting the Path for Innovation and Prosperity for Future Generations”
  - 10:30 – 12:00: **Social Entrepreneurship Hackathon**
  - 12:00 – 12:15: *eTwinning* Digital Magazine Presentation
- 12:15 – 14:30: **Exhibition Session 2** (Tsipos & Tracy Hall)
- 12:15 – 14:30: **Session B - Biology 3 & 4, Physics, Chemistry 1 & 2, Interdisciplinary 2 & 3, Technology 1 & 2** (Macedonia)
- 14:30 – 15:30: **Lunch Break**
  - Student Lunch (Canteen)
  - Teacher Lunch (Morley House)
- 15:30 – 17:30: **Workshops 2** (Macedonia, STEM Building & Eleftheriades Library)
- 18:00 – 19:00: **Closing Ceremony** (Anatolia Gym)

## Welcome to the 10th Anatolia College Science and Technology Annual Conference

Dear students, colleagues, and distinguished guests,

I extend a heartfelt welcome to each of you joining us for the landmark 10th edition of the Anatolia College Science and Technology Annual Conference. As we celebrate a decade of innovation, creativity, and exploration in science and technology, we reflect on the journey that has brought together over 5,000 students from across Greece. This year, we are particularly excited to welcome participants from Armenia and educators from Spain, adding new dimensions to our already vibrant community.

This year, we are proud to introduce the Social Hackathon, a testament to our commitment to fostering social entrepreneurship and sustainability among high school students. Participants are challenged to develop innovative solutions for real-world issues faced by their schools, emphasizing the principles of sustainable development and social responsibility. The projects, which showcase the incredible talent and creativity of our students, will be presented to a panel of esteemed judges during our opening ceremony, where we will celebrate the top ideas.



As the Head of STEM at Anatolia College, it brings me immense joy to see the passion and enthusiasm with which our community embraces the challenges and opportunities presented by STE(A)M education. This year's conference, with its focus on green education and the integration of sustainability and social responsibility, represents a significant step forward in our collective journey.

We are thrilled to have over 500 students participating in the 10th ACSTAC, demonstrating the rich diversity of ideas and projects that span the spectrum of STEM and align with the 17 UNESCO Goals for Sustainable Development. Our agenda is designed to foster collaboration, critical thinking, and inclusion, with a variety of sessions that encourage students to engage, share, and learn from each other.

Our conference would not be possible without the generous support of Dan & Helen Lindsay and the dedication of our speakers, educators, and student volunteers. Your commitment to ACSTAC ensures that we can continue to offer this incredible platform for learning and growth.

As we embark on this 10th ACSTAC, I am filled with hope and excitement for the days ahead. May this conference inspire you, foster new friendships, and deepen your love for science, technology, engineering, and mathematics.

Warmest regards,

Iro Koliakou

Head of STEM, Anatolia College

## The Anna Papageorgiou STEM Center

The Anna Papageorgiou STEM Center at Anatolia College is a facility dedicated exclusively to the STE(A)M approach (Science, Technology, Engineering, Arts, and Mathematics) and its connection to sustainable development, open to the entire educational community. It is designed to underscore the integration of science, technology, and engineering while respecting the environment and promoting sustainable development. Bioclimatically designed, with almost zero emissions and utilizing renewable energy sources, the building itself exemplifies the impact of architecture on energy consumption, serving as a model of environmental responsibility.



Through collaborations with organizations and research bodies, the Anna Papageorgiou STEM Center provides students with the opportunity to engage with cutting-edge technologies. At the same time, adhering to the principle of accessibility, the new building also offers broader community the chance to utilize new technologies, understand the benefits of "green" architecture, and participate in innovative educational activities focused on sustainability.

# ACSTAC People

## Organizing Committee

**Iro Koliakou**, PhD, Head of STEM, Anatolia College

**Leda Antoniou**, PhD, Director of Student Services, Anatolia College

**Zoe Riga**, MSc, Student Services Event Officer, Anatolia College

**Anastasia Charalampidou**, STEM Center Administrative Officer, Anatolia College

**Peggy Perakaki**, MSc, Coordinator of Social Responsibility Programs, Anatolia College

## Support

**Dimosthenis Chatziioannou**, Student, Head of Admin Staff, Anatolia College

## ACSTAC 2024 REVIEWERS

### Biology

**Head reviewer: Diamantis Sotiriou**

Nana Marmeloudi  
Maria Pappa  
Sofia Karavioti  
Georgia Paliouri  
Sofia Papadopoulou

### Mathematics

**Head reviewer: Marios Sotiropoulos**

Pantelis Gryparis  
Filippa Margiora

### Chemistry

**Head reviewer: Eleni Kosmidou**

Asterios Grigoroudis  
Elisavet Exintaveloni

### Interdisciplinary

**Head reviewer: Astrinos Tsoutsoudakis**

Foteini Tsereli  
Panagiota Perakaki

### Physics

**Head reviewer: Dimitrios Lorentzos**

Efstratios Valakos  
Pantelis Fragkoulidis  
Christos Toulakis

### Technology/Informatics

**Head reviewers: Andreas Kechagias  
& George Rouvas**

George Angelou  
Ourania Ntinou  
Stella Georgiou  
Christos Vonapartis Kosmidis  
Emmanouil Stamatakis

## Speaker Biography



### Georgios Giannopoulos

Dr. Georgios Giannopoulos holds a degree in Mechanical and Aeronautical Engineering, a PhD in Engineering from Vrije Universiteit Brussel and the Royal Military Academy of Belgium, and a Management degree from Solvay Brussels School in Economics and Management. He is currently the Head of the Technologies for Space, Security and Connectivity Unit working on security related topics, such as critical infrastructure risk and resilience, Galileo, 5G applications and implementation of the EU Space Programme. He is also the Deputy Director of the Space, Security and Migration Directorate at the Joint Research Centre of the European Commission. He is the author of more than 50 publications and book chapters and he has trained officials in several European countries in order to support their efforts to improve the protection of their technological systems and critical infrastructures.

## Social Entrepreneurship Hackathon

The SEH provides an exciting platform for high school students to unleash their creativity and innovation by addressing everyday challenges within their schools while championing sustainability. Seven standout projects have emerged as frontrunners, each offering unique solutions to pressing issues:

1. 1st Gymnasium of Papagou - ESG App for Schools by Leon Gkougkoulis
2. 1st Protypo Gymnasium of Mytilene "Byron Sivolapenko" - Digital Attendance Sheet by Georgios Petrellis, Michail Angelos Sarisavvas, and Panagiotis Stefanou
3. Anatolia College - EcoEye-Internet of Things by Christos Bakos
4. Anatolia College - Innovative Rainwater Collection and Conservation System by Georgios Tabouris
5. Costeas-Geitonas School - Digital Desks: A New Era in Education by Zoi Panteli
6. Greek-French School Ursulines - 12/17 Compost by Marios-Theodosios Douros, Elisavet Lakafosi, Stavroula Kontova, Dimitra Papadopoulou, and Maria Kourenta
7. Model General Lyceum of Heraklion - Aqua Reclaim by Vasilios Manioudakis, Petros Vasilikogiannakis, and Georgios Angelakis

These remarkable projects will be showcased to the judging committee during the ACSTAC opening ceremony, where the top three ideas will be honored with prizes. The esteemed members of the judging committee are:

- Helen E. Lindsay, Anatolia College Board Member since 2004
- Haido Samaras, Ph.D., Teacher Trainer at Center for Talented Youth Greece, Head of ECHA 2024 Organizing Committee
- Yannis Skoulikaris, Founder and Managing Director, PatentMind LTD, Former Director Patent Granting Process, Sector Information & Communications Technologies, European Patent Office
- Sofia Bomporidou, Senior Architect / Quality Control at Urban Soul Project Architecture Studio



# Workshop Descriptions, Friday, April 19, 18:15-20:00

## STEAMing the Future | Flexible Learning Space, STEM Center

GR

**Speakers:** Ilias Giannaros, Andreas Kechagias, Raphaelia Karamani, STEAMing the future teachers

The STEAMing the future program aims to strengthen the necessary skills for Industry 4.0 of students aged 14-18. These competencies are not only focused on the acquisition of knowledge, but also on the development of skills, attitudes and values. Digital skills, critical thinking, collaboration, tolerance, and gender equality are key to achieving the goals set by the United Nations for a sustainable future and are central to the program "STEAMing the Future". This workshop will present a part of the "STEAMing the Future" program focusing on the Internet of Things, Big Data and Citizen Science.

## Meet the European Molecular Biology Laboratory (EMBL) | Biology Lab, STEM Center

ENG

**Speakers:** Iro Koliakou Head of STEAM Anatolia College/ EMBL Ambassador, Adria Lockhart American College of Thessaloniki - ACT Department of Biology

The workshop "Exploring with EMBL: Interactive Learning through Nexus Island" aims to introduce students to the important work of the European Molecular Biology Laboratory (EMBL) and introduce the game "Nexus Island". This interactive activity is inspired by the scientific mission "TRaversing European Coastlines (TREC)" and aims to promote a deeper understanding of ecosystems, biodiversity, and their importance for the health of our planet. Through Nexus Island, students are challenged to revise their understanding of the environment by exploring the interactions between living organisms, non-living environmental elements and humans. The game focuses on highlighting biodiversity at the microscopic level and the vulnerability of microorganisms to the dynamics of a changing environment, as well as the critical role of research in providing data for the analysis and protection of ecosystems.

## Quantum | Physics Lab, STEM Center

ENG

**Speakers:** Annie Zountsa, Anatolia College/Activator at The Knowledge Society, Andreas Merkourio, Anatolia College Dimitris Lorentzos Physics teacher Anatolia College.

Get ready to leave the rules of classical physics behind and enter the mind-altering voyage into the quantum realm. Brace yourself for a journey where teleportation is real and particles exist in multiple states at once. In this workshop, we will explore the 101s of quantum computing and the principles of the quantum world that go alongside.

## Formula 1 | FabLab, Kyrides

GR

**Speakers:** ART Team

Meet the ART - Aristotle Racing Team, a team from the Department of Mechanical Engineering of Aristotle University of Thessaloniki, whose passion is designing, constructing, and testing a racing car in compliance with FSCA regulations.



# Workshop Descriptions, Saturday, April 20, 15:30-17:30

## Patent Office Simulation | Macedonia Room 218

GR

**Speaker:** Yannis Skoulikaris. Founder, CEO PatentMind LTD - Co-Founder, CEO Mind the Minds AMKE, and executives of Mind the Minds

In this workshop students will be asked to delve into the concept of patenting, explore the value of protecting an invention, and gain practical knowledge about completing a patent application. Students will organize themselves into teams and take on the role of inventors. Each team will be asked to write a technical description of their invention and submit it as a patent application to the "virtual patent office". Mind the Minds executives will be present as mentors to guide the inventors. This process will include sharing information, improving the application and arguing for the innovative elements of the invention, thereby simulating a real patenting process. Through this experience, students will have the opportunity to develop their creativity and imagination, understand the importance of protecting inventions, and become familiar with the processes and benefits of patenting, both domestically and internationally. In addition, they will strengthen their teamwork skills and learn about the career prospects in the field of certified patent consultants, legal advisors and patent examiners.

## Assembly - Wiring and Programming of a 4WD Remote Controlled Robotic Vehicle with Arduino | Green Lab, Kyrides

GR

**Speaker:** Petros Putos, Electrical & Computer Engineer, 1st EPAL of Salamina

In this project students of each group are asked to assemble a few parts from a 3D printed vehicle. They then wire up the sensors and motors to the Arduino microcontroller. Then they program the microcontroller, and finally they program an application on a mobile phone or tablet, with which they drive the vehicle via Bluetooth.

## Department of Rocketry: Design and Build Your Own Rocket! & Department of Aeronautics: Design and Construct Your Own Airplane Using Common Items | Chemistry Lab, STEM Center

GR

**Speaker:** Aristotle Space and Aeronautics Team (ASAT)

In the framework of this workshop, reference will be made to the way in which the design of the various parts of a rocket is approached, from the wings to the parachutes, while there will also be an interactive process of assembling the main parts of one of the high-powered rockets built by our team in the past.

## Department of Aeronautics: Design and Construct Your Own Airplane Using Common Items | Physics Lab, STEM Center

GR

**Speaker:** Aristotle Space and Aeronautics Team (ASAT)

In this workshop the participants will have the opportunity to learn about the way in which the design of an aircraft is approached by understanding the mathematical and physical tools used, while they will be able to apply their knowledge in practice through the construction of a sub - scale model of an airplane made of paper for models and wood.



# Workshop Descriptions, Saturday, April 20, 15:30-17:30

## 3D Design of Spaceship Interior Layout | Fab Lab, Kyridis

GR

**Speaker:** Hariton Polatoglou, Professor of Solid State Physics and Teaching of Physics, Department of Physics, Aristotle University of Thessaloniki (AUTH)

Embark on an intergalactic adventure with our exclusive 3D Spaceship Interior Design Workshop!

What you are expected to do:

- Hands-On 3D Design: Learn the fundamentals of 3D design software to create the spaceship interior of your dreams.
- Creative exploration: Unleash your imagination and design a futuristic space environment.
- Expert guidance: You will be guided by teachers who are interested in space and technology.

By monitoring you will:

- stimulate your creativity: Express your ideas in a cutting-edge design project
- discover a future career: Discover the exciting world of space design and technology.
- gain skills for the future: Develop valuable 3D design skills applicable in a variety of fields.
- you can interact with your classmates: Interact with your classmates and enjoy the design together.

Don't miss this opportunity to turn your imagination into virtual reality!

## Arduino - Essentials | Eleftheriades Library Seminar Room

GR

**Speaker:** Alji Tsanko, Coordinator of the Industrial Robotics Group of the Institute of Industrial Robotics (DIR)

Always wanted to make your own blinking LED or control objects with code? Then this beginner-friendly workshop is for you! Join the Xanthi Industrial Robotics team as we journey into the exciting world of Arduino, a versatile microcontroller platform used in countless projects worldwide. In this workshop you will discover what Arduino is and its endless possibilities. You will learn the basics of programming using the Arduino IDE. You will gain hands-on experience in building circuits and controlling LEDs. No previous experience is required! This workshop is open to everyone, whether you are a complete beginner or just curious about experimenting with electronics. We will provide all the necessary materials and instruction so you can focus on having fun and learning.

## Construction of a Simple Robotic Arm with Arduino | Eleftheriades Library Seminar Room

GR

**Speakers:** Industrial Robotics Group of the Institute of Industrial Robotics (DIR)

Brush up on your Arduino skills and build a real robotic arm! In this workshop, you'll learn how to combine programming, electronics, and engineering to create your own arm.

In this lab you will: Learn the principles of designing and moving a robotic arm. Assemble your robotic arm using simple materials and an Arduino. Program your arm to respond to commands and perform basic tasks. This lab requires some basic Arduino and programming knowledge. We recommend that participants complete the Arduino Basic Workshop - Essentials first. However, we will be there to guide you through more challenging aspects of this project.





## Workshop Descriptions, Saturday, April 20, 15:30-17:30

### Robotics Workshop Using FossBot Open Source Robot and Hardware | Flexible Learning Space, STEM Center

**Speakers:** Christos Chronis, Eleftheria Papageorgiou, Dimitris Charitos, Department of Informatics and Telematics, Harokopion University

GR & ENG

FossBot is an open software and hardware robot created by HELLA and Harokopion University, so that it can be used by teachers of all levels in the classroom. For the use and training of the robot, a special programming platform was created using Google Blockly, a simulator and the physical robot that is 3D printable and consists of electronic components easily available on the market.

During the workshop the participants will be divided into groups and will have the opportunity to test the FossBot. Participants will first get to know the robot through a short presentation about its construction and assembly. Afterwards, an introduction to the programming environment will be made and they will be asked to write some simple programs. The programs that will be created will be tested on the physical robot and on the simulator, and there will be a discussion around the experience of using them. Finally, a more complex scenario will be presented using a simulator that would not be feasible with the physical robot in order to understand the importance of simulation and how it can be connected to artificial intelligence and robotics in the real world.



## Workshop Descriptions (only for educators)

**Friday, April 19, 18:15-20:00**

**Presentation of Activities of Science on Stage Europe | Chemistry Lab, STEM Center**

ENG

**Speakers:** Astrinos Tsoutsoudakis, Professor of Natural Sciences PE04.01, Head of the 1st Laboratory Center for Natural Sciences of Heraklion, Crete / Anastasia Papakonstantinou, Professor of Biology, Gouvon High School

Presentation of activities of the program "Act Now for the UN Sustainable Development Goals (SDGs) in STEM Education" and the Future League competition of the organization Science on Stage Europe. The sustainability and protection of the environment are important issues in the daily lives of students and teachers. Science on Stage Europe brings together educators from across Europe to develop lesson plans. The workshop will present simple low-cost experiments related to the magical world of underwater as well as activities from the Act Now for the UN Sustainable Development Goals (SDGs) in STEM Education program.

<https://www.science-on-stage.eu/act-now-sdg>

**Saturday, April 20, 15:30-17:30**

**AI in Education | Flexible Learning Space, Eleftheriadis Library**

ENG

**Speaker:** Georgios Rouvas, Professor of Informatics & Educational Planning Consultant, Anatolia College

In this workshop, teachers will develop a solid understanding of Artificial Intelligence (AI) tools and will empirically explore the practical applications of AI in education. The workshop will begin by examining how Large Language Models (LLMs), such as Chat GPT, operate, focusing on their inherent flaws and exceptional capabilities, while also discussing the developments that have started and continue to fuel the revolution taking place in this field. Subsequently, a set of carefully selected AI tools will be presented, both for use by the educators themselves and for introduction in the classroom. In the final part of the workshop, participants will have the opportunity to experiment with the suggested tools and decide for themselves both their use and suitability.



# Friday, April 19, 2024

14:30 - 15:30 Registration 1 (Macedonia Hall Foyer)

15:00 - 18:30 Exhibition 1 Setup (Tsipos & Tracy Hall)

15:30 - 16:45 Session A | Biology 1 & 2 and Interdisciplinary 1

## Biology 1 (221)

**Chairs: Sofia Vasilikioti & Nana Marmeloudi**

### 15:30 Ανάπτυξη Φακής με Βάση το Λίπασμα

Manitaki Aikaterini, Christina Nianiou,  
Angeliki-Aimilia Parlapani | **Anatolia High School**

**Mentor:** Maria Tsaousidou

### 15:40 Η Επίδραση Διαφορετικών Αντιβιοτικών στην Ανάπτυξη των Βακτηρίων

Evangelia Anesiadou, Kleio Desinioti | **Anatolia High School**

**Mentor:** Panagiotis Deligiannidis

### 15:50 Η Επίδραση του Αλατιού στα Φυτά

Kalliopi Oikonomou, Evridiki Batzili Chrousala,  
Tzoulia Nar | **Anatolia High School**

**Mentor:** Panagiotis Deligiannidis

### 16:00 Ο Κανόνας των Πέντε Δευτερολέπτων

Nikoletta Veneti, Ioanna Akritidou, Christina Avgeri,  
Defne Azman, Eleftheria Tachynaki | **Anatolia High School**

**Mentor:** Maria Tsaousidou

### 16:10 Ο Ρόλος των Γενετικά Τροποποιημένων Τροφίμων ως Μέσο Αντιμετώπισης της Πείνας

Spyridon Kitsios | **Anatolia High School**

**Mentor:** Nana Marmeloudi

### 16:20 Ανθεκτικότητα Αντιβιοτικών με Διαφορετικό Τρόπο Δράσης στα Βακτήρια

Asterios Saoulis, Anna Ananiadou | **Anatolia High School**

**Mentor:** Maria Tsaousidou

### 16:30 Ανάπτυξη Μυκητών σε Τρόφιμα από Διαφορετικές Διατροφικές Ομάδες

Ilektra Morali, Nefeli Nikou, Boutzatza Christina | **Anatolia High School**

**Mentor:** Maria Tsaousidou

## Biology 2 (227)

**Chairs: Diamantis Sotiriou & Anastasia Papakonstantinou**

### 15:30 The Effectiveness of Different Antibiotic Agents as Determined by Measuring Zones of Inhibition on Bacterial Culture Plates

Elisabeth-Ifigenia Bainbridge, Iro Kantartzi | **Anatolia High School**

**Mentor:** Maria Tsaousidou

### 15:40 Καλλιέργεια Μικροβίων από Δείγματα Καλλυντικών

Frideriki Arapi, Maria-Stefania Koletta, Lydia Aslanidi,  
Sofia Kyrgia, Anna-Maria Leonidi | **Anatolia High School**

**Mentor:** Nana Marmeloudi

### 15:50 Χρυσάνθεμα και Ατμοσφαιρική Ρύπανση

Konstantina Angelaki, Ilektra Michailidou, Styliani Baxevani,  
Viktoria Mylona, Brekasi Zoi | **Anatolia High School**

**Mentors:** Diamantis Sotiriou, Eleni Antonakou

### 16:00 Investigation of GC-Content Variation in Relation to Sea Water Temperature: Case Study for Mediterranean Monk Seals

Christos Bakos | **Anatolia High School**

**Mentor:** Iro Koliakou

### 16:10 The Impact of Antibiotic Concentration on Bacterial Resistance: A Comparative Study

Aikaterini Panetsou, Alexandros Triglianos, Veroniki Totti,  
Athanasios Alexios Tsermos | **Anatolia High School**

**Mentor:** Panagiotis Deligiannidis

### 16:20 Δραστικότητα της Βιταμίνης C και των Υποκατάστατων της

Aikaterini Pasmatz, Aikaterini Fotiadou, Sofia Manola | **De La Salle College**

**Mentor:** Georgios Ntigkmpasani



## Interdisciplinary 1 (218)

**Chairs: Erasmia Papadopoulou & Georgios Rouvas**

**15:30 Σχολεία και Βιώσιμη Ανάπτυξη**

Ilektra Ilaira Athanasiou Antonakou, Maria Pappa,  
Olypia Sotiria Charitou | **Anatolia High School, Ekpedeftiria  
Vassiliadi, 2nd Gymnasium of Thessaloniki**  
**Mentor:** Eleni Antonakou

**15:40 "Α.Π.Ο.Ι.Κ.Ι.Α" Ένας Σταθμός στη Σελήνη - Μια Αρχή  
για Νέα Διαπλανητικά Ταξίδια;**

Efstratia Flamouri, Michaela Vogiatzi, Ioannis Katsantonis,  
Sofia Flamouri, Malvina Papoutsis, Ioanna Moutsou, Avgi  
Tektonidou | **1st Junior High School of Polichni, 1st General  
Lyceum of Polichni, 2nd General High School of Thessaloniki**  
**Mentor:** Christina Matentsidou

**15:50 How Much Does a Pair of Jeans "Cost" After All?**

Olga Margari | **Anatolia High School**  
**Mentor:** Peggy Perakaki

**16:00 Εξαλείφοντας την Πείνα**

Theodosia Tousis, Vasiliki Avgeri, Roza Ververidou,  
Emmanouil-Venizelos Filippidis | **Anatolia High School**  
**Mentors:** Eleni Antonakou, Diamantis Sotiriou



**17:00 - 18:15 F1 in Schools Team Launch (Anatolia Gym)**

**Speakers:** Aristotle Racing team, Kimon Drosos, Anatolia College Physics Professor, Nasos Papasarafianos, Philippos Vryzas, Naya Papasarafianou members of the Aegean Racing team

In the "F1 in Schools" workshop, the Aegean Racing team, a collaboration between Hellenic German Education and Anatolia College, will present the competition and its actions related to innovation and sustainability. The workshop will provide a unique opportunity for participants to explore the world of Formula 1 in schools, while teaching them how technology and innovation are linked to sustainability and environmental protection. Participants will have the opportunity to hear from Aegean Racing members about their challenges and successes, understand the process of designing and building a racing car model, as well as learn about the sustainability practices they incorporate into their actions. In addition, the Aristotle racing team will present the team's actions.

**18:15 - 20:00 Workshops (STEM CENTER)**

- ◆ STEAMing the Future | Flexible Learning Space, STEM Center
- ◆ Meet the European Molecular Biology Laboratory (EMBL) | Biology Lab, STEM Center
- ◆ Quantum | Physics Lab, STEM Center
- ◆ Presentation of Science on Stage Europe Activities (for Educators) | Chemistry Lab, STEM Center
- ◆ Formula 1 | Fab Lab, Kyridis

**20:00 - 21:00 Stargazing (Basketball courts in front of Macedonia)**



# Saturday, April 20, 2024

08:00 - 09:00 Registration 2 (Macedonia Hall Foyer)

09:30 - 10:30 Opening Ceremony (Anatolia Gym)

**Welcome Speaker** **Dr. Iro Koliakou**, STEM Coordinator, AC  
**Welcome Keynote Speaker** **Ms. Helen Lindsay**, Anatolia College Alum & Trustee  
**Welcome Keynote Speaker** **Mr. Theodoros Filaretos**, Vice President for Primary and Secondary Education, AC  
**Welcome Keynote Speaker** **Dr. Georgios Giannopoulos**  
 “The EU and Space Exploration: Charting the Path for Innovation and Prosperity for Future Generations”

10:30 - 12:00 Social Entrepreneurship Hackathon

12:00 - 12:15 Informational Meeting & eTwinning Digital Magazine Presentation (Anatolia Gym)

12:15 - 13:30 Session B | Biology 3 & 4, Chemistry 1 & 2, Physics and Technology 1 & 2

## Biology 3 (312)

**Chairs: Nana Marmeloudi & Alexia Dara**

**12:15 Bigger, Better, Burro: A Study for the Gigantic Radish**  
 Elisavet Kokkoni Lakafosi, Marios-Theodosios Douros |  
**Greek-Fresh School of Ursulines**  
**Mentor:** Elena Nikolopoulou, Xenopoulou Dimitra

**12:25 Minimal Waste, Maximum Change**  
 Spyridon Grigoriadis, Theodoros Karageorgakis,  
 Michalis Bouritis, Nikolaos Kokolios | **Doukas School**  
**Mentor:** Sofia Papadopoulou

**12:35 The Impact of Urban Traffic Noise and Natural Sounds on Brainwave Activity and Mental State: A Pilot Study**  
 Eleni Magkou | **Ekpedeftiki Anagennisi School**  
**Mentor:** Iordanis Xagoraris

**12:45 Antiseptic pH Experiment**  
 Panagiota Benisi, Anastasia-Karolina Katsarka | **Anatolia High School**  
**Mentor:** Maria Tsaousidou

**12:55 Πώς Επηρεάζει το Μπλε Φως των Οθονών την Καθημερινή μας Ζωή και τον Ύπνο μας**  
 Aikaterini Chalazia, Stavroula-Marina Leonidou | **Lycée Franco-Hellénique Eugène Delacroix**  
**Mentor:** Sofia Karavioti

## Biology 4 (313)

**Chairs: Sofia Karavioti & Maria Tsaousidou**

**12:15 Βιοπλαστικό: Εφαρμογές και Προοπτική**  
 Eirini Antonopoulou, Maria Vardaki, Maria-Persefoni Veneri |  
**Model General Lyceum of Heraklion**  
**Mentor:** Eleni Korakaki

**12:25 Είναι η Άλγη μια Νέα, Βιώσιμη Πηγή Ενέργειας;**  
 Filio Liva, Elli Theodoridou | **Lycée Franco-Hellénique Eugène Delacroix**  
**Mentor:** Sofia Karavioti

**12:35 Μικροπλαστικά - Η Αόρατη Απειλή**  
 Nefeli-Paraskevi Ili, Anna-Maria Ili, Christina-Dioni Ili,  
 Evangelia Tatsi | **1st Gymnasium of Ioannina - Zosimaia School**  
**Mentor:** Xenia I. Loizidou

**12:45 Μόλυνση των Ωκεανών - Ωκεανολογία**  
 Periklis-Gerasimos Kalampakos, Maria Gerolymatou,  
 Zoi Gkaniatsa | **Zografeio School of Ioannina**  
**Mentors:** Evangelia Natsika, Elisavet Vagena

**12:55 Μύθοι και Αλήθειες για το Βιοδιασπώμενο Πλαστικό**  
 Eirini Koufou, Argyri Papastefanou, Ioanna Papastefanou,  
 Sofia Giannioglou, Viktoria Psaropoulou, Evridiki Louka,  
 Dimitra Margariti, India Votsi | **1st Protypo Gymnasium of Mytilene “Byron Sivolapenko”**  
**Mentor:** Rallou Spanelli





**13:05 Μελέτη του Μικροβιακού Φορτίου σε Επιφάνειες Καθημερινής Χρήσης και Αξιολόγηση Μεθόδων Απολύμανσης**

Kalliopi Christodoulaki, Zoi Panteli, Elena Protonotariou, Emmelia Fragkou | **Costeas-Geitonas School**

**Mentor:** Konstantinos Papadopoulos

**13:15 Healthy Pallet**

Eleni Chantzi, Eleonora Koutsouveli | **1o Protypo Gymnasio Thessalonikis**

**Mentor:** Elisavet Tsaousi, Emmanouil Kosmidis

**Chemistry 1 (314)**

**Chairs: Maria Spyropoulou & Christos Atlasis**

**12:15 Ποσό Οικολογικό Είναι το Αντηλιακό σας;**

Anna Sereti, Kalliopi Mertziou, Maria Mavridou, Konstantinos Myroforidis | **Anatolia High School**

**Mentor:** Elisavet Exintaveloni

**12:25 Κατασκευή Φίλτρων Νερού από Υλικά Καθημερινής Χρήσης και Μελέτη της Ποιότητάς του**

Rafaella Zacharaki, Nikolaos Trimandylis, Christos Skylogiannis, Angelos Rallis | **Costeas-Geitonas School**

**Mentor:** Maria Gkritzali

**12:35 Οι Διαφορές στα Χαρακτηριστικά του Νερού του Θερμαϊκού Ανάλογα με το Σημείο Δειγματοληψίας**

Rozetta Pipini, Zografia Paschali, Danai Bourazani | **Anatolia High School**

**Mentor:** Nikolaos Soultogiannis

**12:45 Dye Sensitized Solar Cells**

Ariadni Zanni | **Anatolia High School**

**Mentors:** Asterios Grigoroudis, Georgios Sarafidis, Elisavet Exintaveloni

**12:55 Σύγκριση Αυθεντικών Κολωνιών με τις Απομιμήσεις τους**

Athanasios Bouzonas, Stella Morali, Andreas Rodokalakis, Anastasios Papanastasiou, Vasiliki Mitrou | **Anatolia High School**

**Mentors:** Asterios Grigoroudis, Elisavet Exintaveloni, Georgios Sarafidis

**13:05 Μελέτη στις Επιπτώσεις της Όξινης Βροχής στα Φυτά**

Ioannis Athanasakopoulos, Nikolaos Paloukis, Adam Papadopoulos, Leonidas Pitemis, Georgios Tsigenopoulos | **Anatolia High School**

**Mentors:** Diamantis Sotiriou, Eleni Antonakou

**13:15 Ένα Φίλτρο Νερού για τον Καθένα**

Zoi Soumelidou | **Anatolia High School**

**Mentor:** Vasileia Chatzinasiou

**13:25 Food Dye: Commercial vs. Environmental**

Stefanos Arsenis, Aggelos Aggelidis, Michalis Vogiatzoglou | **Anatolia High School**

**Mentor:** Asterios Grigoroudis

**13:35 Υδράργυρος**

Stavros Koufonikolas, Konstantinos Karkampounas, Christos Kontzidis | **Anatolia High School**

**Mentor:** Nikolaos Soultogiannis

**13:05 Όταν τα Κύτταρα Επαναστατούν... η Τεχνολογία Έχει την Λύση**

Nektaria Stavrianou, Panagiotis Pavlidis, Maria-Ioanna Kokkinou, Georgios Demenopoulos, Christos Veras, Vasiliki Tzioti | **Ekpedeftiria "I Elliniki Paideia"**

**Mentor:** Konstantinos Oikonomou

**Chemistry 2 (316)**

**Chairs: Nikolaos Soultogiannis & Elisavet Exintaveloni**

**12:15 A Study of the Water Pollution in the Area of Thessaloniki**

Evangelia Zoumpouli, Athanasia Firinidou, Anastasia Sykioti, Ioanna Thamnopoulou, Maria Christou Kleopatra Pagida |

**Anatolia High School**

**Mentors:** Diamantis Sotiriou, Eleni Antonakou

**12:25 Hand Warmers**

Lida Aikaterinari | **Anatolia High School**

**Mentor:** Afrodite Kalkani

**12:35 A Device to Produce Biodegradable Polymer Films**

Robert Beglaryan | **Ayb School**

**Mentor:** Derenik Danielyan

**12:45 Caffeine in tea leaves** Zihan-Mako Gu |

**Pinewood American International School**

**Mentor:** Iordanis Paschalidis

**12:55 Ad Astra**

Samvel Kerobyran | **Ayb School**

**Mentor:** Derenik Danielyan

**13:05 The Catalytic Effects of Ligands in the Decolorization of the Crystal Violet (CV) Dye by NaOH**

Markos Chigkas | **Anatolia High School**

**Mentor:** Eleni Antonakou

**13:15 Heavy Metals in Water**

Marianna Atayan | **Ayb School**

**Mentor:** Derenik Danielyan

**13:25 Formulation and Performance Evaluation of Polymeric Materials Using Recycled Polymers**

Maria Kanellopoulou | **Pinewood American International School**

**Mentor:** Clare Squires

**13:35 Powerfil**

Sofia Aramyan | **Ayb School**

**Mentor:** Derenik Danielyan



## Interdisciplinary 2 (227)

**Chairs: Anastasia Papakonstantinou & Eleni Antonakou.**

**12:15 Nudge Marketing: Μπορεί να μειώσει το αποτύπωμα CO<sub>2</sub> της Ελλάδας;**

Panagiotis Therrios, Panagiotis Voskakis, Anna Karolina Kanatouris, Efthymia Dimitriadi | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Sofia Karavioti

**12:25 Ανακύκλωση στον Τόπο Μας**

Georgios Kotsovasilis, Maria Eva Dritsa, Anastasios Dritsas, Eleftheria-Despoina Arvanitanti | **1st High School Markopoulo**

**Mentors:** Pantelis Gryparis, Ourania Ntinou

**12:35 Γιατί η Νόσος Alzheimer Έχει Τόσο Αυξημένη Κοινωνική, Οικονομική, Επιστημονική Επίπτωση σε Παγκόσμιο Επίπεδο & Πώς Μπορεί να Αντιμετωπιστεί**

Aikaterini Voudouri, Dimitra Tzima, Danaï Kontouli, Ariadni Varouta | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Sofia Karavioti

**12:45 Έφηβοι και Υπερκατανάλωση**

Natalia Tsiatsika, Lydia Tornari | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Panagiotis Bourlis

**12:55 Ζωγραφίζοντας και Φωτίζοντας**

Maria Kourenta, Stavroula Kontova, Dimitra Papadopoulou | **Greek-French School Ursulines**

**Mentors:** Dimitra Xenopoulou, Elena Nikolopoulou

**13:05 Καθαρό Νερό και Αποχέτευση στους Αναπτυσσόμενους Οικισμούς της Αφρικής**

Dimitra Kyriakou, Evangelia - Michaela Liadaki, Maria Saravanou, Melina Nikou | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Panagiotis Bourlis

**13:15 Μεταδοτικότητα Συναισθημάτων και Σχέση Κούρασης με Χασμουρητό**

Natalia Katari, Nikoleta Tsakoumi, Artemis Tsoutsoura | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentors:** Panagiotis Bourlis, Sofia Karavioti

**13:25 Η Διακριτική Σχέση της Μουσικής με τα Πλατωνικά Στερέα**

Dimosthenis Chatzis, Nikiforos Papafilippou, Kyratsos-Kyros Bariotas | **Experimental School of Aristotle University of Thessaloniki**

**Mentors:** Loukia Petrotsatou, Despoina Takentzidou, Maria

Patio



## Interdisciplinary 3 (305)

**Chairs: Eleni Kosmidou & Christos Toulakis**

**12:15 Διγλωσσία: Πρόβλημα ή Πλεονέκτημα;**

Georgios Manouselis, Georgios Alexopoulos, Angelos Michos, Konstantinos Stergiopoulos | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Sofia Karavioti

**12:25 Αντισύλληψη, Διακοπή της Κύησης και Ομοφυλοφιλία: Διερεύνηση των Αντιλήψεων των Εφήβων**

Ariadni Moutsouri, Vasiliki Papanastasiou, Efterpi Kanellou | **Costeas-Geitonas School**

**Mentor:** Dimitra Zoudiou

**12:35 Μουσική και Διάβασμα**

Nikoleta Kouloumenta, Karmen Psyrri, Melina Merkouri, Faidra Skopouli | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Sofia Karavioti

**12:45 Πώς η Χρήση των Social Media Σχετίζεται με την Ψυχολογία των Μαθητών**

Melina Lazaki, Christina Pateraki, Iliana Tsagournou | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentors:** Panagiotis Bourlis, Sofia Karavioti

**12:55 Βιώσιμη Διαχείριση του Νερού**

Petros Vasilikogiannakis, Vasileios Manioudakis, Georgios Angelakis | **Model General Lyceum of Heraklion**

**Mentor:** Eleni Korakaki

**13:05 Στο Ψάξιμο του Υδάτινου Θησαυρού: Πώς Καινοτόμες Λύσεις Αντιμετωπίζουν την Έλλειψη Νερού στα Νησιά;**

Zoi Gkika, Fani Mitrousi, Aikaterini Vasileiadi | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Sofia Karavioti

**13:15 Εξατομικευμένη Ιατρική: Φαντασία ή Πραγματικότητα;**

Olga Iatrou, Theodoros Stefanou, Roumpini Kantalati, Iuna Shaliu | **1st General Senior High School of Cholargos**

**Mentors:** Evangelia Koutsogiannouli, Maria Pappa

**13:25 Παραγωγή Σαπουνιού από Οικιακά Υλικά και Χρησιμοποιημένο Λάδι**

Thrasivoulos Kalabakos, Ermis Zoukas, Spyridon Papageorgiou, Christos Tzamouranos | **Zografeio School of Ioannina**

**Mentors:** Gerasimos Vrettos, Evangelia Gkiza

**13:35 Βιολογική Μπογιά - Μελέτη και Χρήση της**

Serafeim Stamou, Anna Georgiou, Andreas Stathis, Eirini Stathi, Anna Rempouskou, Konstantinos Mougios, Maria Michaela Pagkalini | **1st High School Markopoulo**

**Mentors:** Pantelis Gryparis, Ourania Ntinou

## Physics (317)

**Chairs: Athinodoros Bandis & Apostolos Michaloudis**

**12:15 Σώζοντας τα Θαλάσσια Πλάσματα με τον Μαγνητισμό**

Eleni Zarari, Koralia Kede Perganti | **Anatolia High School**  
**Mentor:** Kimon Drosos

**12:25 Saving Energy in the "Green School"**

Ioannis Tsiaras, Matthaïos Vasiloglou, Elissavet Theioka, Charalampia Theioka | **Experimental School of Aristotle University of Thessaloniki**  
**Mentors:** Alexandra Nikolaidou, Eleni Rossiou, Kyriakoula Maliara

**12:35 Predicting Weather Conditions from the ISS**

Chaido Eirini Katsanou | **Experimental Junior High School of the University of Macedonia**  
**Mentor:** Michael Blekas

**12:45 Absorption of Beta Particles by Different Materials**

Nikolaos Emmanouil Skevis, Anargyros Zosis, Theodoros Drossos | **Athens College High School, Psychico College High School**  
**Mentor:** Victoria Giakoumopoulou

**12:55 Κύκλωμα με Γραφίτη**

Eleni-Ilektra Kazantzidi, Christina Lavidia, Marielle Ntiglimpasani | **Anatolia High School**  
**Mentors:** Dimitrios Lorentzos

**13:05 Μελέτη της Απορροφητικής Ικανότητας Γυαλιών Οράσεως και Ηλίου στο Φάσμα της Υπεριώδους Ακτινοβολίας**

Christos Choutopoulos, Theodoros Salantis, Elisavet Apergi | **Costeas-Geitonas School**  
**Mentor:** Makis Papachristopoulos

**13:15 Ο Εξηλεκτρισμός της Υδραυλικής**

Zoi Laou, Maria Makri, Constantinos Mastellos, Andreas Lamprinopoulos | **Athens College High School**  
**Mentor:** Konstantinos Arvanitis

**13:25 Μηχανική: Αρχιμήδης των Συρακουσών**

Georgios Gymnopoulos | **Anatolia High School**  
**Mentor:** Eleni Antonakou

**13:35 Επηρεάζεται η Διάρκεια της Ημέρας από την Ηλικία της Γης;**

Antonia Efthymiakou | **Lycée Franco-Hellénique Eugène Delacroix**  
**Mentor:** Sofia Karavioti

**13:45 Εναρμονίζοντας τη Σιωπή: Αποκαλύπτοντας τα Θαύματα του Συστήματος ANC (Active Noise Cancelling) - Εξερευνώντας τα Βασικά Στοιχεία του, τις Εφαρμογές και τη Φυσική που το Κάνουν Εφικτό**

Nikolaos Paloukis | **Anatolia High School**  
**Mentor:** Periklis Chatzistavridis

## Technology 1 (218)

**Chairs: Vasileia Chatzinasiou & Anastasia Kyriakidou**

**12:15 Ο Δρόμος προς το Τέλος**

Nikolaos Varvarousis | **Arsakeio High School of Ioannina**  
**Mentor:** Villy Zacharopoulou

**12:25 Η Αφαλάτωση ως Μέσο Αντιμετώπισης της Αδυναμίας Πρόσβασης σε Πόσιμο Νερό**

Giacomo Sirio Ragazzini | **3rd Gymnasium of Kos**  
**Mentor:** Evangelia Dimitrakopoulou

**12:35 Ηλεκτρικός Φορτιστής Πατινιών**

Ioannis Gaganis | **7th High School of Chania**  
**Mentor:** Antonis Lyronis

**12:45 Νέα Τεχνολογία και Έγκαιρη Διάγνωση Ασθενειών**

Ifigeneia Basiou, Artemis-Despoina Theodori, Athanasia Effrosyni Panagiotopoulou, Sofia Geitona | **Zografeio School of Ioannina**

**Mentor:** Katerina Gkiaka

**12:55 Το Όχημα του Μέλλοντος - Μελέτη και Προσπάθεια Ανάδειξης του Ιδανικότερου Τύπου Αυτοκινήτου**

Dimitrios Baibaktaris, Evangelos Baliouisis, Philippos Bebezias, Nikolaos Mendrinou, Zacharias Karagkiozidis, Maria Douvleka, Ioanna Kostellou, Anna Orfanou, Elena Baliouisi, Myrsini Lamprinidou, Nikolaos Oikonomou, Ilias Spyarakos, Leonel Xhela | **1st High School Markopoulo**

**Mentors:** Pantelis Gryparis, Ourania Ntinou

**13:05 Πώς Παράγεται η Προκατάληψη της Τεχνητής Νοημοσύνης (Μία Ματιά στην Εκπαίδευση των Αλγορίθμων)**

Leon Gkougkoulis | **1st Gymnasium of Papagos**  
**Mentor:** Kallitsa Tziourtzioti

**13:15 Math Mavericks by eTeam Schimatariou**

Ermioni Panagoulia | **General Lyceum of Schimatari**  
**Mentor:** Atmatzidou Aikaterini, Gkorav Mall Tarlok

**13:25 Wearable-Tech Glove Translating Sign Language**

Davidoula Georgopoulou | **Arsakeio High school of Ioannina**  
**Mentor:** Maria Matsouka



**Chairs: Aikaterini Daoultzoglou & Stella Georgiou**

**12:15 3D Printing - Ιατρική**

Christina Prifti | **2nd Model Lyceum of Volos**

**Mentor:** Eirini - Zacharoula Andreakou

**12:25 Scape The Sculptrix - A Yanoulis Chalepas Tribute**

Rafail Palalakis, Rafail Tsesmetzis, Konstantinos Peteinarakis,  
Dionysios Ntonas Spourtoutdis | **Music School of**

**Thessaloniki**

**Mentors:** Ioakeim Georgoudas, Giannoula Tsioumperi

**12:35 The Integration of A.I. in Everyday Life**

Anastasia Stamou, Afroditi Tente, Eleni Dimitriou, Aikaterini  
Mitrousi | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Sofia Karavioti

**12:45 Εφαρμογή Επιλογής Ασφαλών Πεζοπορικών  
Διαδρομών για Μαθητές με Χρήση Παιχνιδοποίησης**

Achilleas Spyridon Konidararis | **2nd Day General Lyceum of  
Argostoli Kefalonia - "Panagiotis Vergotis"**

**Mentor:** Paraskevi Peteinatu

**12:55 REECE**

Afroditi Tsoumou | **Lycée Franco-Hellénique Eugène  
Delacroix**

**Mentor:** Sofia Karavioti

**13:05 Καινοτόμο Σύστημα Συγκέντρωσης και  
Εξοικονόμησης Νερού στον Τομέα της Γεωργίας**

Georgios Tambouris | **Anatolia High School**

**Mentor:** Iro Koliakou

**13:15 Μηχανική Μάθηση και Εργονομία - Η Εφαρμογή  
ErgoSmart**

Dimitrios Blekas, Dimitrios Merekos, Spyridon Petrou,  
Nikoleta Ziori, Kleoniki Sintori, Elpidia Zikou, Sotiria Sintou,  
Nikoleta Katsiki | **Zografeio School of Ioannina**

**Mentor:** Yulie Papastavrou



## eTwinning Digital Magazine

**Panagiotis Angelopoulos**

Panagiotis (Takis) Angelopoulos is a Teacher PE 86 and Coordinator of the Pedagogical Team of the National Support Service for eTwinning. During his career, he has worked in various roles related to education and technology, holding important positions in digital governance and educational technology policy in Greece. As of June 2020, he has been serving in the Applications & Services Analysis Department at the National Network of Infrastructures for Technology and Research. He has served as a teacher specializing in computer science and mathematics, as well as in administrative and analytical roles in public education agencies. Since 2010, he has served as co-manager and Pedagogical Coordinator of the National eTwinning Support Service in Greece, where he has been responsible for the management and organisation of all eTwinning educational activities in the country. He is also the GFOSS representative in the European Project "Scientix". He has been involved in the evaluation of IT education projects, in the development of e-learning activities, and in the organisation of professional development workshops and international seminars. He holds two Master's degrees, one in Telematics from the University of Sheffield and one in Artificial Intelligence from the University of Bristol, and is a graduate of the Department of Mathematics of the University of Athens. His contribution to the field of education and technology is recognised through his authorship and participation in numerous publications and scientific conferences.





12:15 - 14:30

Exhibitions (Tsipos Hall)

Coordinators and Supervisors:	Georgios Rouvas Stelios Axarlis Diamantis Bitzilekis Astrinos Tsoutsoudakis	Periklis Chatzistavridis Dimitrios Lorentzos Afrodite Kalkani
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**1.3D Helmet**

Iason Kazamias, Nikolaos Spyridon Kanelis, Grigorios Bernardakis, Taxiarchis Papoutsis, Alexandra Tatakis, Angelos Petropoulos, Christangelos Giamougiannis, Adam Chatzicharalampous, Georgios Kechagias, Panagiotis Tsesmelis, Leonidas Lamprou, Panagiotis Aligiannis, Christos Psomas, Tasos Perdikellis, Evangelia Aretaki, Stavros Dimiroudis | **1st Protypo Gymnasium of Mytilene "Byron Sivolapenko"**

**Mentor:** Ignatios Laskaridis

**2. 3D Printed Wheels for Regolith and Beach Cleaning Rovers**

Patricio Ballesteros, Georgios Foutsitzis, Styliani Sigkou, Kalliopi Charistea | **Pinewood American International School**

**Mentor:** Christos Vonapartis Kosmidis

**3. A Comparative Analysis of Homemade and Store-Bought Foundations: A Multi-Faceted Approach with Social Impact**

Kalliopi Lazaridou, Sofia Tsoungari, Stefania Charalampous | **Anatolia High School**

**Mentors:** Iro Koliakou, Eleni Kosmidou

**3. Aegean Racing F1 in Schools**

Athanasios Marios Papasarafianos, Filippos Vryzas, Panagiota Papasarafianou | **Anatolia High School**

**Mentor:** Iro Koliakou

**4. Allergy-Friendly Recipes**

Eva Karellou Gleoudi | **Anatolia High School**

**Mentor:** Stella Georgiou

**5. Amelié Hotel**

Ilias Angelidis, Theodora Kalaitzi | **Anatolia High School**

**Mentor:** Nana Marmeloudi

**6. ARTePhysial Vessels**

Thalia Delistavrou | **De La Salle College**

**Mentor:** Pantelis Fragkoulidis

**7. BioF1-Car**

Angelos Rigopoulos, Georgios Vasileios Tzitzikostas | **Anatolia High School**

**Mentor:** Iro Koliakou

**8. BleedBrave**

Ilektra Maria Chatzikallinikidou, Magdalini Tarasidou | **Anatolia High School**

**Mentor:** Georgios Rouvas

**9. Chem-Pen**

Sotirios Kranias, Rodanthi Chatzidaki, Vasileios Davilas | **Model General Lyceum Agion Anargyron, Leonteios School of Athens**

**Mentor:** Miltiadis Metaxas

**10. Drone για Φιλτράρισμα του Αέρα στις Πόλεις**

Evangelia Karakinari, Danai Kanellou | **Anatolia High School**

**Mentor:** Iro Koliakou

**11. Drug Detecting Nail Polish**

Maria Eleni Dipla | **Anatolia High School**

**Mentor:** Georgios Rouvas

**12. Eco Friendly Strings**

Charikleia Aliaga, Chrysanthi Kapachtsi | **Anatolia High School**

**Mentor:** Nikolaos Soultogiannis

**13. Energy Production from Carbohydrates**

Diego Triantafyllos, Theofilos Pieris, Michaela Grigorita | **Ionios School**

**Mentor:** Georgios Angelou

**14. Facial Recognition Program**

Alessandro Stefan Tiron, Dimitrios Tsoukalas, Gavriil Paparounis, Alexios Loukas Tzitzikostas | **Anatolia High School**

**Mentor:** Andreas Kechagias

**15. Floating Cabinet**

Dimitrios Kyriakou, Maria-Lida Chatziangelidou, Stefania Syropoulou | **Anatolia High School**

**Mentors:** Andreas Kechagias, Georgios Rouvas

**16. Gesto Glove**

Theodosios Pesmatzoglou, Giannis Karanikolas, Athanasios Angelos Dimitriadis, Ilias Angelidis | **Anatolia High School**

**Mentor:** Georgios Rouvas

**17. GreenAir Pods: Smart Urban Air Purification**

Nefeli Mimi, Michaela Theodoridi, Dimitris Parkinson Rombis, Michaela Loukia Krasnidou, Konstantinos Vanaroudis, Chaido Eirini Katsanou, Chrysi Kyrou, Amalia Vasileiou, Vasileios Kaimakis | **Anatolia High School, Arts Gymnasium Ampelokipon, 1st EPAL Neapolis, 1st Model Gymnasium of Thessaloniki, Gymnasium Arnaia, 6th Gymnasium of Xanthi "Georgios Viziinos", Mandoulides Schools, Experimental Junior High School of the University of Macedonia, 40th Ioannidio Elementary School of Thessaloniki**

**Mentors:** Popi Papathoma, Vana Tsakmakidou, Maria Karagkouni, Charis Dimitrakopoulos, Aikaterini Karatzia, Emmanouil Kosmidis, Michalis Raptis, Maria Angelaki

**18. Hephaestus Drone**

Ignatios Doukarakos, Dimitrios Binopoulos | **1st Model General Lyceum of Kastoria**

**Mentor:** Apostolos Kioses



12:15 - 14:30

Exhibitions (Tsipos Hall)

Coordinators and Supervisors:	Georgios Rouvas Stelios Axarlis Diamantis Bitzilekis Astrinos Tsoutsoudakis	Periklis Chatzistavridis Dimitrios Lorentzos Afrodite Kalkani
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**19. Home4U**

Zoi Christodoulidou, Eftychia Stamataki, Celia Tsakona, Lydia Argyropoulou, Styliani Georgopoulou | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentors:** Lambrini Stratou, Konstantina Sarri, Panagiotis Bourlis

**20. Investigating the Effect of Different Light Colors on Plant Growth**

Ioanna-Theodora-Aliki Tsiridi, Dionysia Papaioannou, Elisavet-Lydia Saragioti | **Anatolia High School**

**Mentor:** Panagiotis Deligiannidis

**21. My School Eye**

Lucas Liço, Konstantinos Vafeiadakis | **Experimental School of Aristotle University of Thessaloniki**

**Mentor:** Nikos Gounaropoulos

**22. Neural Networks and Computer Vision in the Fight Against Wildfires**

Anna Zountsa | **Anatolia High School**

**Mentor:** Iro Koliakou

**23. Pj Sie - Wa**

Aliki Proiou, Nikolia Sidiropoulou, Maria Santinova, Athanasia Portokalidi | **Anatolia High School**

**Mentor:** Ioanna Myrto Chatzigeorgiou, Eleni Kosmidou,

**24. ReuseMe App**

Ioanna Karyofylli, Maria Eleni Dipla | **Anatolia High School**

**Mentor:** Georgios Rouvas

**25. Sea Bin**

Vasiliki Efstathiadou, Ioanna-Kyriaki Gklavina | **Anatolia High School**

**Mentor:** Kimon Drosos

**26. Siren**

Anastasios Tsakiridis, Andreas Papadopoulos, Elisavet Pepela, Athina Oraiopoulou | **De La Salle College**

**Mentor:** Pantelis Fragkoulidis

**27. Smart Bus Shelter**

Anastasia Xente, Anna Mavridou, Natalia Pavlidou | **Anatolia High School**

**Mentor:** Georgios Rouvas

**28. SmartSort - A.I. Powered Smart Trash Can for Sustainable Waste Management & Niki the AI Robot: Revolutionising Education with an Innovative Humanoid Robot and AI-Powered Language Learning Capabilities**

Vihaan Srivastava, Andrianos Botsios, Lakis Christos Lazos, Hasib Sabbagh | **ACS Athens**

**Mentor:** Spyros Arsenikos

**29. Smoke Turbine**

Faidon Farmakis | **Anatolia High School**

**Mentor:** Andreas Kechagias

**30. The Effect of Essential Oils on Microbial Growth**

Vasileia Voulgaropoulou, Michaela Maria Gkratziou | **Anatolia High School**

**Mentor:** Panagiotis Deligiannidis

**31. The Effect of Obesity in Teenage Girls on the Total Lung Capacity**

María Placer | **Pinewood American International School**

**Mentor:** Georgia Paliouris

**32. The HexFarm**

Adam Papadopoulos | **Anatolia High School**

**Mentor:** Diamantis Bitzilekis

**33. The Period Wellness Program**

Tzoulia Nar | **Anatolia High School**

**Mentor:** Georgios Rouvas

**34. The Robot that Measures Height**

Konstantinos Kapachtsis, Konstantinos Hassapis, Alkiviadis Pantazis, Athanasios Kolettas | **Anatolia High School**

**Mentor:** Aikaterini Daoultzoglou

**35. There is No Planet B**

Ioanna Karyofylli, Varvara Karakatsani | **Anatolia High School**

**Mentor:** Andreas Kechagias

**36. Ανακύκλωση στον Τόπο Μας**

Georgios Kotsovasilis, Maria Eva Dritsa, Anastasios Dritsas, Eleftheria-Despoina Arvanitanti | **1st High School Markopoulo**

**Mentors:** Pantelis Gryparis, Ourania Ntinou

**37. Water Filter**

Menelaos Arsenis, Alkiviadis Arampatzis, Kosmas Diolatzis, Pafsanias Galanis, Dimitrios Ousantzopoulos | **Anatolia High School**

**Mentor:** Iro Koliakou

**38. Ecovehicle**

Aristotelis Mandas, Konstantinos Panagiotopoulos, Loukas Lazakis, Stamatis Panagiotis Katsikas | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Sofia Karavioti



12:15 - 14:30

Exhibitions (Tracy Hall)

Coordinators and Supervisors:

Andreas Kechagias  
Christos Vonapartis Kosmidis  
Petros Poutos  
Ilias Giannaros

Kimon Drosos  
Diamantis Sotiriou  
Eleni Kosmidou

**39. Wind Turbines**Dimitrios Bakalmpasis | **Anatolia High School****Mentor:** Iro Koliakou**40. You Talk, We Listen**

Smaragda Karagiannaki, Phoebe Kletsidou, Eleni Theofanidou

| **Anatolia High School****Mentor:** Andreas Kechagias**41. Αλμυρό Νερό ως Καύσιμο**Polyxeni Symeonidi, Athina Kiouka, Maria-Niki Souliadi,  
Sourpoui Paschaleri Atamian, Zoi Pentzou, Polyxeni Tsoka |**Anatolia High School****Mentor:** Nana Marmeloudi**42. Αυτόματο Πότισμα με Υγρασιόμετρο**Nikoletta Chanoumidou, Anna Toufa, Melina Triantafyllou,  
Stavros Orestidis, Savvida Tsachali, Athanasia Tsakalidou |**De La Salle College****Mentor:** Pantelis Fragkoulidis**43. Γέφυρες**Vasileios Katakalos | **Anatolia High School****Mentor:** Konstantinos Katakalos**44. Διάδρομος Γυμναστικής με Πιεζοηλεκτρικά Πλακάκια**Dimitra Karypidou | **Anatolia High School****Mentor:** Vasileia Chatzinasiou**45. Εξέταση Ευλυγισίας Τοξωτής Γέφυρας**Filippos Kalemkeridis | **Anatolia High School****Mentor:** Kimon Drosos**46. Εργοστάσιο Παραγωγής Βιοαερίου**Chrysanthi Neta | **Anatolia High School****Mentor:** Vasileia Chatzinasiou**47. Εὔ Ζῆν**Ioannis Panagiotis Loizos, Kalentis Konstantinos | **Costeas-****Geitonas School****Mentor:** Filippos Tsimpris**48. Εθισμός, Εξαρτήσεις και το Κυνήγι της Ντοπαμίνης**Konstantina Liapi, Efstathia Koutsoukou, Spyridon Bairaktaris,  
Georgia Karavasileiou | **Ekpedeftiria "I Elliniki Paideia"****Mentor:** Konstantinos Oikonomou**49. Η Επίδραση Διαφορετικών Υγρών στην Τερηδόνα**Margarita-Ourania Konstandinidou, Maria Kantartzi | **Anatolia High School****Mentor:** Panagiotis Deligiannidis**50. Ηλεκτρικό Κύκλωμα**Dimitrios Kalaitzis, Nikolaos Ziakas | **Anatolia High School****Mentor:** Kimon Drosos**51. Ηλεκτρικό Κύκλωμα με Γραφίτη**Maria-Ariel Ntiggmpasani | **Anatolia High School****Mentor:** Dimitrios Lorentzos**52. Ιοί - Ασθένεια ή Θεραπεία**Ioanna Maria Kotsopoulou | **Anatolia High School****Mentor:** Iro Koliakou**53. Κατασκευή Μετεωρολογικού Σταθμού**

Charalampos Apostrakis, Michail Angelos Sarisavvas, Stergios Petsas, Ioannis Bakogiannis, Eleni Liadaki, Panagiotis Katsouris, Charalampos Giannellis, Myrsini Andreou, Nikolaos Koursounis, Malamatenia Tyropoli, Panagiotis Pittos, Georgios Koulmpanis |

**1st Prototypos Gymnasium of Mytilene "Byron Sivolapenko"****Mentors:** Efstratios Valakos, Foteini Matara**54. Κατασκευή Μιας Οικογειτονιάς**Thaleia Maria Athanasiou, Elisavet Kokkoni Gymnopoulos, Ilektra Ilaira Athanasiou Antonakou | **Anatolia High School****Mentor:** Periklis Chatzistavridis**55. Κινητό Τηλέφωνο για Ατομα με Προβλήματα Ακοής**Iliana Giontzi, Christina Avgeri, Stefania-Anna Potamianaki, Stamatina- Eirini Eleftheriadou | **Anatolia High School****Mentor:** Elisavet Exintaveloni**56. Κοινωνικό Χημικό Πείραμα με Στόχο την Κατασκευή Ενός Φιλικού προς το Περιβάλλον Αρώματος και την Προώθησή του**Nikoleta Rafailidou, Evangelia-Eleni Syka, Lida Aikaterinari, Lida Georgia Topouzi, Kyriaki Tsanaktsidou | **Anatolia High School****Mentor:** Eleni Kosmidou**57. Κουδούνι**Alexios Tsioulas | **1st Gymnasium Toumpas****Mentor:** Dimitrios Nastoulas

12:15 - 14:30

Exhibitions (Tracy Hall)

Coordinators and Supervisors:

Andreas Kechagias  
Kosmidis  
Petros Poutos  
Ilias Giannaros

Kimon Drosos  
Diamantis Sotiriou  
Eleni Kosmidou

**58. Βιολογική Μπογιά - Μελέτη και Χρήση της**

Serafeim Stamou, Anna Georgiou, Andreas Stathis, Eirini Stathi, Anna Rempouskou, Konstantinos Mougios, Maria Michaela Pagkalini | **1st High School Markopoulo**

**Mentors:** Pantelis Gryparis, Ourania Ntinou

**59. Λιποσώματα: Ένας Σύγχρονος «Δούρειος Ίππος» Καταπολέμησης του Καρκίνου**

Anastasia Skolariki, Maria - Theopisti Tsami, Konstantina Politi, Nikolaos Michail, Appolina Spanodimou, Vlasis Pachios, Triantafyllia Sakisli | **2nd Model Lyceum of Volos**

**Mentor:** Eirini - Zacharoula Andreakou

**60. Μετατρέποντας Μη Πόσιμο Νερό σε Πόσιμο Χωρίς Χημικά**

Konstantinos Savvas, Panagiotis Tsitsopoulos, Dimitra Siafikou, Nikolaos Pressas | **Greek-French School Ursulines**

**Mentor:** Stasinos Giannas

**61. Μέτρηση του Χρόνου με Κλεψύδρα**

Ellas Viktoria Moutsi, Magdalini Biou | **Anatolia High School**

**Mentor:** Iro Koliakou

**62. Μοριακή Κουζίνα**

Ioannis Salvaridis | **Anatolia High School**

**Mentor:** Iro Koliakou

**63. Ο Άνθρωπος του Μέλλοντος**

Zoi Aravani, Styliani Skouroliakou, Alexandra Dimou, Errika Daska | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Sofia Karavioti

**64. Παραγωγή και Αποθήκευση Ενέργειας με Χρήση ΑΠΕ**

Sofia Noli | **Anatolia High School**

**Mentor:** Iro Koliakou

**65. Math Mavericks by eTeam Schimatariou**

Ermioni Panagoulia | **General Lyceum of Schimatari**

**Mentors:** Atmatzidou Aikaterini, Gkorav Mall Tarlok

**66. The Effect of pH on the Activity of Enzymes**

Foivos-Michail Voulgaris, Panagiotis Paraskevopoulos, Chara Patsi, Nefeli Mygiaki | **Anatolia High School**

**Mentor:** Maria Tsaousidou

**67. Πλημμύρες και Φράξεις: Στρατηγική για την Προστασία των Περιοχών**

Vasiliki-Panagiota Tsamoutalou, Melina Chandrinou, Antiopi Stratantonaki, Konstantis Kosmidis | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentors:** Sofia Karavioti, Panagiotis Bourlis

**68. Το Όχημα του Μέλλοντος - Μελέτη και Προσπάθεια Ανάδειξης του Ιδανικότερου Τύπου Αυτοκινήτου**

Dimitrios Baibaktaris, Evangelos Baliouis, Philippos Bebezias, Nikolaos Mendrinou, Zacharias Karagkiozidis, Maria Douvleka, Ioanna Kostellou, Anna Orfanou, Elena Balioussi, Myrsini Lamprinidou, Nikolaos Oikonomou, Ilias Spyarakos, Leonel Xhela | **1st High School Markopoulo**

**Mentors:** Pantelis Gryparis, Ourania Ntinou

**69. ΣΑΦ (Συσκευή περαιτέρω Αυτοματοποίησης Δρομικών Φωταγωγών)**

Dimitrios Mavrakis, Iason Kasimatis | **Anatolia High School**

**Mentor:** Andreas Kechagias

**70. Το Αποτύπωμα των Πλαστικών στη Θάλασσα**

Ioli Eleni Vournazou, Myrta Tziliali, Panagiotis Meligonitis, Georgios Syvris, Panagiotis Tsesmelis, Ilianna Argyrou, Georgios Frantzeskos, Adamantia Maria Stefanou | **1st Prototypos Gymnasium of Mytilene "Byron Sivolapenko"**

**Mentor:** Ioanna Trypatzi

**71. Το Νοσοκομείο του Μέλλοντος**

Chloi Sideropoulou, Sofia Papageorgiou, Renata Parlavantza | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Sofia Karavioti

**72. Το Οικολογικό Σπίτι του Μέλλοντος**

Ariadni Manouseli, Anna Sofia Marinou, Ioanna Koliou, Eirini Katsoni | **Lycée Franco-Hellénique Eugène Delacroix**

**Mentor:** Sofia Karavioti

**73. Φως στο Σκοτάδι**

Filippa-Zoi Chariskou, Christina-Kanella Tambouri | **Anatolia High School**

**Mentor:** Iro Koliakou

14:30 - 15:30

Lunch Break

15:30 - 17:30

Workshops (Macedonia Hall, STEM Building &amp; Eleftheriades Library)

- ◆ **Patent Office Simulation | Macedonia Room 218**
- ◆ **Assembly-Wiring and Programming of a 4WD Remote Controlled Robotic Vehicle with Arduino | Fab Lab, STEM Center**
- ◆ **Department of Rocketry: Design and Build Your Own Rocket! & Department of Aeronautics: Design and Construct Your Own Airplane Using Common Items | Chemistry Lab, STEM Center**
- ◆ **Department of Aeronautics: Design and Construct Your Own Airplane Using Common Items | Physics Lab, STEM Center**
- ◆ **3D Design of Spaceship Interior Layout | Kyrides Green Lab**
- ◆ **Arduino - Essentials | Eleftheriades Library Seminar Room**
- ◆ **Construction of a Simple Robotic Arm with Arduino | Eleftheriades Library Seminar Room**
- ◆ **Robotics Workshop Using FossBot Open Source Robot and Hardware | Flexible Learning Space, STEM Center**
- ◆ **Science on Stage Europe: Science of the Submarine World | Chemistry Lab, STEM Center**
- ◆ **AI in Education (only for Educators) | Flexible Learning Space, Eleftheriades Library**

18:00 - 19:00

Closing Ceremony (Anatolia Gym)

**THINK OUTSIDE THE BOX**