


Ε.Κ.Ε.Φ.Ε. “Δημόκριτος”
Ινστιτούτο Πληροφορικής και Τηλεπικοινωνιών
Net Media Lab - Mind & Brain R&D


**"Ο Καταλυτικός Ρόλος των Γυναικών, των Ψηφιακών Τεχνολογιών και των Δεξιοτήτων του 21ου Αιώνα στην Αναβάθμιση του Σχολείου και της Κοινωνίας",
εισαγωγή**

Dr. Athanasios Drigas
Research Director
Engineer & Psychologist
Net Media Lab - Mind & Brain R&D
I.I.T. – N.C.S.R. “Demokritos”

<http://imm.iit.demokritos.gr/>

<http://imm.iit.demokritos.gr/wp-content/uploads/2021/02/drgr.pdf>

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 **Net Media Lab**
Mind & Brain R&D

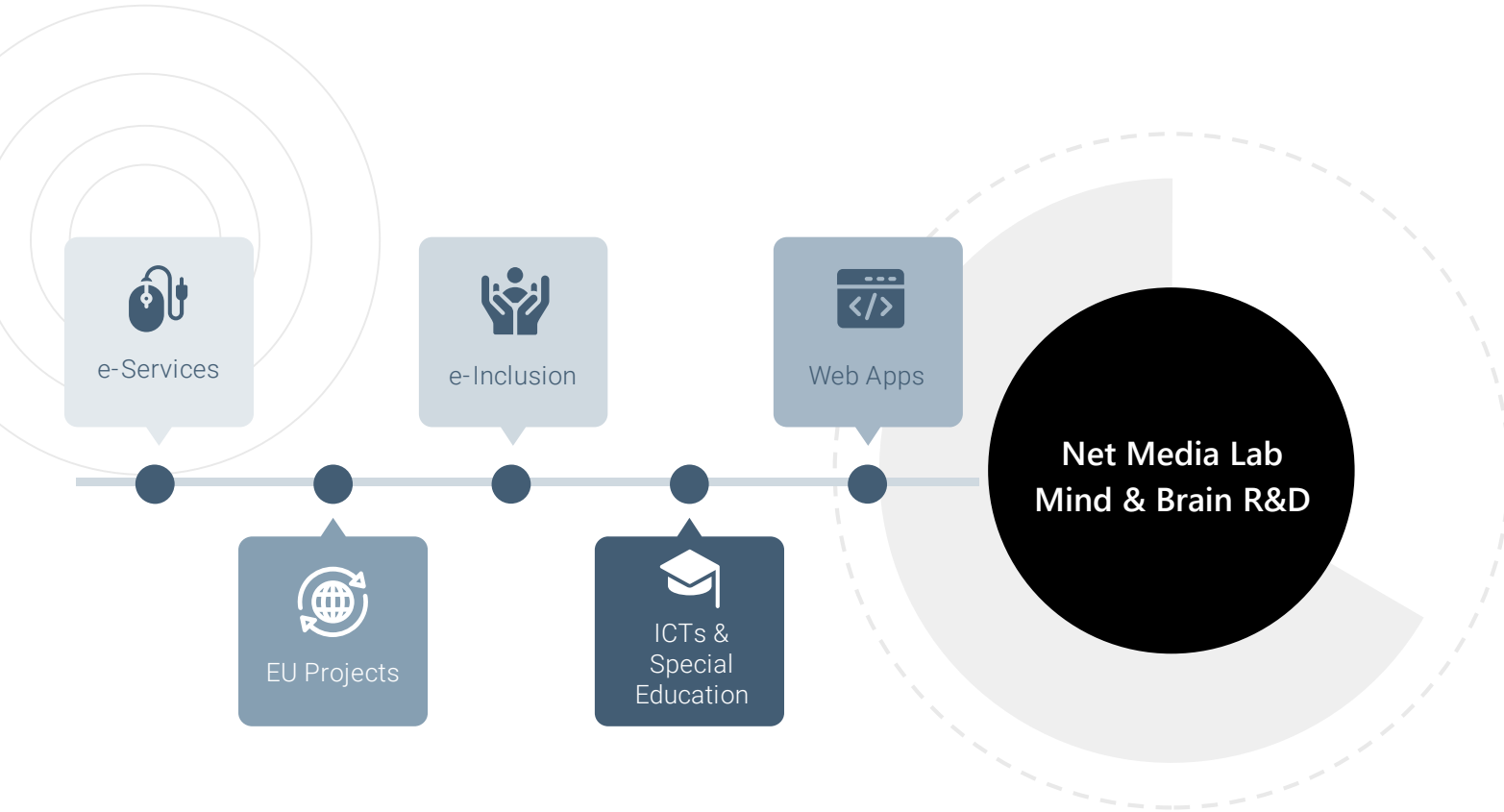
[HOME](#) [THE LAB](#) ▾ [R&D](#) ▾ [EDUCATION](#) ▾ [DISTINCTIONS](#) [THE TEAM](#) [NEWS](#) [CONTACT](#)

Net Media Lab

Mind & Brain R&D

[POSTGRADUATE DEGREE](#) [SEMINARS](#)

Net Media Lab, Mind & Brain, R&D: <http://imm.iit.demokritos.gr/>



Education

Interinstitutional - Interdepartmental **Postgraduate Programme** organized by the Department of Greek Philology of the Democritus University of Thrace and the Institute of Informatics & Telecommunications (I.I.&T.) of the National Centre for Scientific Research "Demokritos" entitled "**Specialization in ICTs and Special Education: Psychopedagogy of Inclusion**"

<http://specialedu.iit.demokritos.gr/>

Many PhD Degree Theses Researches, Studying ICTS for Cognition and for Various Fields in Special Education

<http://imm.iit.demokritos.gr/team/>

Annual Seminars on "Specialization in ICTs and Special Education":

<https://edu4u.iit.demokritos.gr/>

Training Activities within EU Projects

- ROBOTICS4DEAF
- CODESKILLS4ROBOTICS
- 3D2ACT
- DRONES@STEAM
- JOBS4ALL

<http://imm.iit.demokritos.gr/education>



NEOI ΚΥΚΛΟΙ ΕΠΙΜΟΡΦΩΤΙΚΩΝ ΜΑΘΗΜΑΤΩΝ, ΑΠΡΙΛΙΟΣ 2023

Επιμορφωτικό Πρόγραμμα 1: ΕΙΔΙΚΗ ΑΓΩΓΗ ΚΑΙ ΜΑΘΗΣΙΑΚΕΣ ΔΥΣΚΟΛΙΕΣ; ΨΗΦΙΑΚΕΣ ΤΕΧΝΟΛΟΓΙΕΣ, ΣΥΝΑΙΣΘΗΜΑΤΙΚΗ ΝΟΗΜΟΣΥΝΗ, ΔΙΑΤΡΟΦΗ, ΒΙΤΑΜΙΝΕΣ
{SPECIAL EDUCATION AND LEARNING DIFFICULTIES; DIGITAL TECHNOLOGIES EMOTIONAL INTELLIGENCE, NUTRITION, VITAMINS}

Επιμορφωτικό Πρόγραμμα 2: ΑΥΤΙΣΜΟΣ, ΔΕΠΥ; ΨΗΦΙΑΚΑ ΕΡΓΑΛΕΙΑ, ΡΟΜΠΟΤΙΚΗ, ΣΥΝΑΙΣΘΗΜΑΤΙΚΗ ΝΟΗΜΟΣΥΝΗ, ΔΙΑΤΡΟΦΗ, ΒΙΤΑΜΙΝΕΣ
{AUTISM, ADHD; DIGITAL TOOLS, ROBOTICS, EMOTIONAL INTELLIGENCE, NUTRITION, VITAMINS}

 [ΚΑΝΤΕ ΤΩΡΑ ΠΡΟ-ΕΓΓΡΑΦΗ](#)

για το **Επιμορφωτικό Πρόγραμμα 1** ή το **Επιμορφωτικό Πρόγραμμα 2** ή **ΓΙΑ ΤΑ ΔΥΟ ΜΑΖΙ!**
(για να πάρετε τη μεγαλύτερη έκπτωση αλλά και τα περισσότερα μέρια)

ΚΑΙΝΟΤΟΜΑ ΕΠΙΜΟΡΦΩΤΙΚΑ ΣΕΜΙΝΑΡΙΑ

Μοριοδοτούμενα Εξ αποστάσεως Επιμορφωτικά Προγράμματα ΤΠΕ στην Ειδική Αγωγή

Έμφαση στα: Θεωρητικό πλαίσιο, Εργαλεία Διάγνωσης, Εργαλεία Παρέμβασης, Διατροφή, Τοξίνες, Νευροδιαβιβαστές, Ορμόνες, ICT tools, Robots, ZAC Browser, "Kahoot", Serious games, ΛΑΜΔΑ, Επιτελώ, Κοινωνικές ιστορίες, Το Δελφίνι, ΠΡΟΣΒΑΣΙΜΟ, The Transporters, M-CHAT, Arcademic Skill Builders, GCompris, Sebran, Tux Paint, Cmap, Evernote, wordwall, liveworksheets, learningapps, 2+2 mathforkids, Αερόστατο Παιδικό Ιχθυογράφημα, Τεστ-Α κ.α.

Από το **Ε.Κ.Ε.Φ.Ε. Δημόκριτος** και το **ΠΑΝΕΠΙΣΤΗΜΙΟ ΙΩΑΝΝΙΝΩΝ**

Τα Σεμινάρια διεξάγονται από έμπειρους καθηγητές Πληροφορικής & Ειδικής Αγωγής (Υποψήφιους Διδάκτορες, Σχολικούς Συμβούλους, Πανεπιστημιακούς Καθηγητές)



MORE THAN 400 PUBLICATIONS



- **Intervention program using a robot for children with Autism Spectrum Disorder**
- **Metacognition, Mindfulness and Robots for Autism Inclusion**
- **Robotics in Autism Intervention**
- **Artificial intelligence in special education: A decade review**
- **Artificial Intelligence (AI) in Autism**
- **A Review on Artificial Intelligence in Special Education**
- **Artificial Intelligence in Autism Assessment**
- **Incorporation of Artificial Intelligence Tutoring Techniques in Mathematics**
- **A Review on ICTs, E-Learning and Artificial Intelligence for Dyslexic's Assistance**
- **Artificial Techniques for Language Disorders**
- **Decade Review (1999-2009): Artificial Intelligence Techniques in Student Modeling**
- **Decade review (1999-2009): progress of application of artificial intelligence tools in student diagnosis**

Publications

https://www.researchgate.net/profile/Athanasios_Drigas/research

MORE THAN 400 PUBLICATIONS



- Women's Leadership via Digital Technology and Entrepreneurship in business and society
- Women with Special Educational Needs. Policies & ICT for Integration & Equality
- Emotional Intelligence & ICTs for Women and Equality
- Female Entrepreneurship and Employability in the Digital Era: The Case of Greece
- ICT-based Innovation and Employability for Women
- Online Research for the Impact of ICTs on Greek Women's Employability and Entrepreneurship

Distinctions

<http://imm.iit.demokritos.gr/distinctions>

A Net Media Lab Study has been included in a German National Policy Report for AI @Education

A Net Media Lab Mind-Brain R&D's Research on AI in Special Education has been included in a Policy Document by the National Research Council of Canada. 2021.

A Net Media Lab Mind-Brain R&D's Research on AI in Special Education has been included in a Strategic Policy Recommendation by OECD. 2021.

1

A new policy report of **European Commission** includes a Net Media Lab's Study for ICT's and **AI in Special Education (2019)**

2

A Net Media Lab's study was cited by the American Governmental report entitled: "**Environmental scan of educational technology** in **U.S. public schools**" (2018)

3

A Net Media Lab's study-article has been included in the **CIPD** Strategic Study entitled: "Rapid evidence review. Impact of **artificial intelligence**, robotics and automation technologies on work, targeting Global **Labor Market**" (2017)

4

The Net Media Lab's **project ieWomen** is the unique project from Greece that is referenced in the Europe's Digital Progress Report (**EDPR**) 2017 Country Profile Greece and has assigned the title "Highlight of the year 2017".

5

A Net Media Lab's study-article has been included in the **OECD** Strategic Proposal entitled: "Making Innovation Benefit All: Policies **for Inclusive Growth**, targeting Country Members" (2017)

6

A NET MEDIA LAB's study - article has been included in a report on Virtual Learning Environments VLEs & **DYSLEXIA** for **National Policy in UK** (2016)



A Net Media Lab's study – article has been included in a U.S.A. Congress, Disability National Council's Inclusion Policy Report for 2007-2014 submitted to the U.S.A. President. 2007

A Net Media Lab's study has been included in a "white paper" – strategic proposal for blockchain economy – virtual coins, and inclusive-supportive activities for people with disabilities.

http://imm.iit.demokritos.gr/wp-content/uploads/2022/02/Distinctions_2005-2022.pdf

Erasmus+ Projects

JOBS
4ALL



DRONES
STEAM



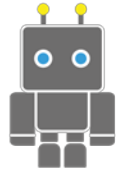
3D2 CT



DigiTeaL



STEAM ALL



CODESKILLS
4ROBOTICS

MY
grant

metamorphosis

ROBOTICS
& Deaf

MeLDE



Seniors
GoDigital



prmeTECH



Co-funded by
the European Union

<http://imm.iit.demokritos.gr/projects>

JOBS4ALL:

Strengthening the Employability and Key Competences of Young People with Disabilities Through the Digital Transformation and Modernization of Youth Work

AIMS

- Strengthen Young People with Disabilities (YPwDs) employability skills by improving existing training programmes integrating technology-based tools to enable young people into adulthood & effectively support their integration into the labour market.
- Advance training opportunities offered for a vulnerable group of the population through the advancement of Youth programmes on Employability Skills.

CONSORTIUM

P1: N.C.S.R. "Demokritos" –

Greece

P2: Associação Portuguesa para as Perturbações do Desenvolvimento e Autismo de Coimbra –

Portugal

P3: Learning Center for Youth –

Cyprus

P4: Metropolisnet-European

Metropolis Employment Network EWIV –

Germany

P5: Emphasys Centre –

Cyprus

P6: 2 EPAL Agias Paraskevis –

Greece

P7: Special School in Ignaców –

Poland



Strategic Partnerships for
Youth Education
2021-2-EL02-KA220-YOU-000049207

30 months
(2/5/2022 - 1/11/2024)



Co-funded by
the European Union

<https://jobs4all-project.eu/>

3D2ACT:

Fostering Industry 4.0 and 3D Technologies through Social Entrepreneurship:
An Innovative Programme for a Sustainable Future

AIMS

- Support VET trainers and educators in an attempt to strengthen their profiles with the acquisition of new skills, the development of targeted material, the collection of tools and resources.
- Create opportunities for linking VET schools with the labour market building on synergies and partnerships with established organizations using industry 4.0 and automation or 3D printing and Robotics.

CONSORTIUM

P1: N.C.S.R. “Demokritos” –
Greece

P2: European Digital Learning
Network –
Italy

P3: Politeknika Ikastegia Txorierrri –
Spain

P4: Emphasys Centre –
Cyprus

P5: Incubator Leeuwarden –
Netherlands

P6: Regional Directorate of
Primary and Secondary
Education of Crete –
Greece

P7: University of Crete –
Greece



3D2 CT

Strategic Partnerships for
Vocational Education and Training
2020-1-EL01-KA202-078957

30 months
(1/12/2020 - 31/5/2023)



Erasmus+

<https://3d2act.eu/> | <https://3d2act.iit.demokritos.gr/>

DRONES@STEAM:

Fostering Digital Transformation in VET Schools and Creating New Job Prospects in the Labour Market

AIMS

- Promote high digital skills which appear to be missing from VET curricula and are currently needed to enter the labour market and be included in VET job profiles.
- Promote targeted 'wide and deep' digital competences and the use of technologies leading to the 4.0 industry.
- Promote job specific VET related skills for various fields and sectors which are not offered as work-based learning opportunities or include danger or hazards for the workers.

CONSORTIUM

P1: University of Crete –

Greece

P2: ECAM-EPMI –

France

P3: Cyprus Computer Society –

Cyprus

P4: Politeknika Ikastegia Txorierrri –

Spain

P5: N.C.S.R. "Demokritos" –

Greece

P6: Emphasys Centre –

Cyprus

P7: Regional Directorate of Primary and Secondary Education of Attica –
Greece



ΠΑΝΕΠΙΣΤΗΜΙΟ ΚΡΗΤΗΣ
UNIVERSITY OF CRETE

ECAM EPMI



CYPRUS
COMPUTER
SOCIETY



POLITEKNIKA IKASTEGIA
TXORIERRI
1999



DEMOKRITOS

Emphasys
CENTRE



DRONES STEAM

Strategic Partnerships for
Vocational Education and Training
2021-1-EL01-KA220-VET-000034686

28 months
(28/2/2022 - 27/6/2024)



Co-funded by
the European Union

<http://dronesteam.eu/>

STEAM4ALL:

Supporting the Digital Inclusion of All Students Through An Inter-disciplinary Programme For A Sustainable Future

AIMS

- o Design, pilot-test and produce an inclusive multimedia toolkit to support students with fewer opportunities.
- o Help students with fewer opportunities to acquire a combination of digital (Coding and Robotics) and STEAM competences based on an interdisciplinary approach that will promote environmental education and sustainable development.

CONSORTIUM

P1: Culture Goes Europe (CGE) – **Germany**

P2: European Digital Learning Network – **Italy**

P3: 2nd E.K. of Piraeus – **Greece**

P4: Stichting Amsterdam European Mobility – **Netherlands**

P5: Emphasys Centre – **Cyprus**

P6: N.C.S.R. “Demokritos” – **Greece**

P7: Gemeinschaftsschule Campus Efeuweg – **Germany**



STEAM4ALL

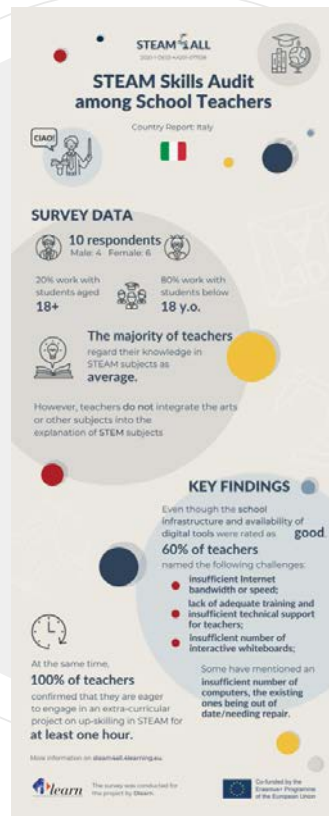
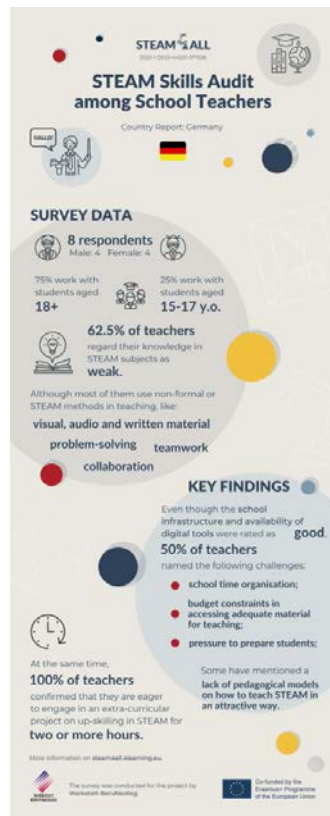
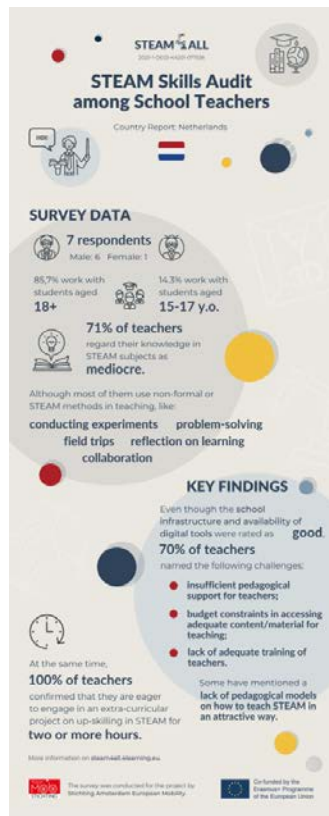
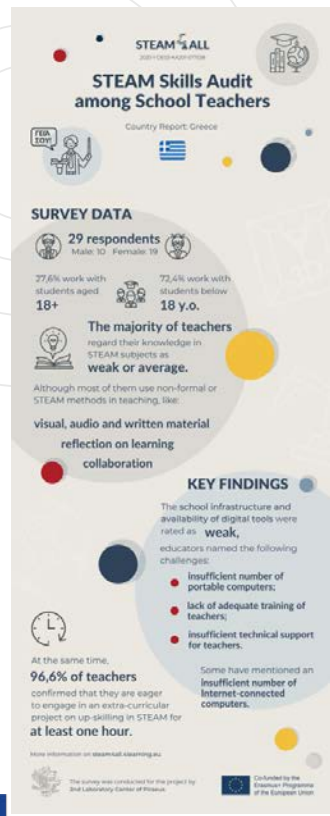
Strategic Partnerships for
School Education
2020-1-DE03-KA201-077538

30 months
(1/10/2020 - 31/3/2023)



STEAM4ALL:

IO1-A2: PREPARATION OF THE ON-LINE SKILLS AUDIT TOOL



STEAM4ALL:

IO1-A4: STEAM4ALL COMPETENCE FRAMEWORK



STEAM4ALL:

IO2-A2: STEAM4ALL INTER-DISCIPLINARY EDUCATIONAL TOOL KIT: TEACHING AND LEARNING MATERIAL



DEMOKRITOS

Introduction of 3D Printing

3D Printing Guide

3D Printing Team – Educational Material Development

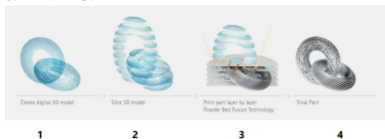
1.1 ADDITIVE MANUFACTURING.

What is "additive manufacturing?"

Additive manufacturing (AM) is defined by the ASTM society as "a process of joining materials to make objects from 3D model data, usually layer upon layer, as opposed to subtractive manufacturing methodologies."

Although 3D printing is often spoken of as a new technology, it has actually been around for over 30 years.

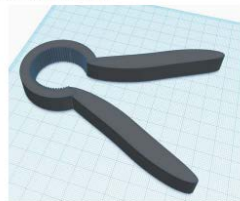
Around 8 years ago, patents around 3D printing began to expire and 3D printing opened up to mass audiences. The landmark point for its commercial adoption came from the open source RepRap project – a 3D printing initiative with the goal of creating low cost, self replicating 3D printers. Being open source, all the files were freely available online and in the following years we saw a large number of startups creating their own 3D printers, inspired by the RepRap project. Let's take a look at the steps required in the typical 3D printing process:



⁴ This project has been funded with support from the European Commission. This communication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein. Submission Number: 2020-1-DE03-KA201-077538

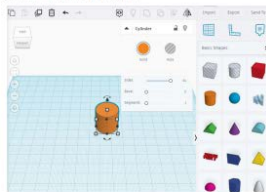
Introduction

In this tutorial, you'll be designing an assistive bottle opener. The tutorial is aimed to guide you but we encourage you to create your own unique design!



Bottle Opener Profile

Let's begin by designing a profile for the bottle opener. This is the part of the model that will 'grip' the screw cap bottle. Drag a 'cylinder' shape onto the workplane.



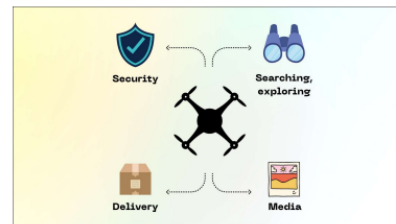
³ This project has been funded with support from the European Commission. This communication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein. Submission Number: 2020-1-DE03-KA201-077538

1. What is a drone?

A drone is an aerial vehicle that flies without a crew. There are drones of different sizes and for different purposes. However, it is important to point out that this type of machine has been around for a long time, even though they were expensive to manufacture and did not have the features they have today.

The most outstanding feature of a drone is that its flight is controlled by remote control, although there are some that are driven by software intervention and not directly by a pilot from the ground.

These devices have their origins in the military context, as it was there that this type of aerial robot with cameras, GPS and all kinds of sensors was designed to be used as a weapon for combat or surveillance missions. However, nowadays, the use of these aircraft goes beyond the pursuit of a military purpose; their sale and distribution is oriented towards various uses, as they can move quickly over uneven or rough terrain and overcome any type of obstacle, offering images or capturing other types of data from a bird's eye view, thanks to the devices they can carry (cameras, sensors, etc.) without risk to people.



³ This project has been funded with support from the European Commission. This communication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein. Submission Number: 2020-1-DE03-KA201-077538



STEAM4ALL:

IO2-A3: DESIGN THE ECO-SYSTEM FOR THE IMPLEMENTATION AND USE OF THE OPEN BADGES



**3D Design
& 3D Printing**

Starters Level



**3D Design
& 3D Printing**

Movers Level



**3D Design
& 3D Printing**

Experts Level



**Drone Piloting &
Programming**

Starters Level



**Drone Piloting &
Programming**

Movers Level

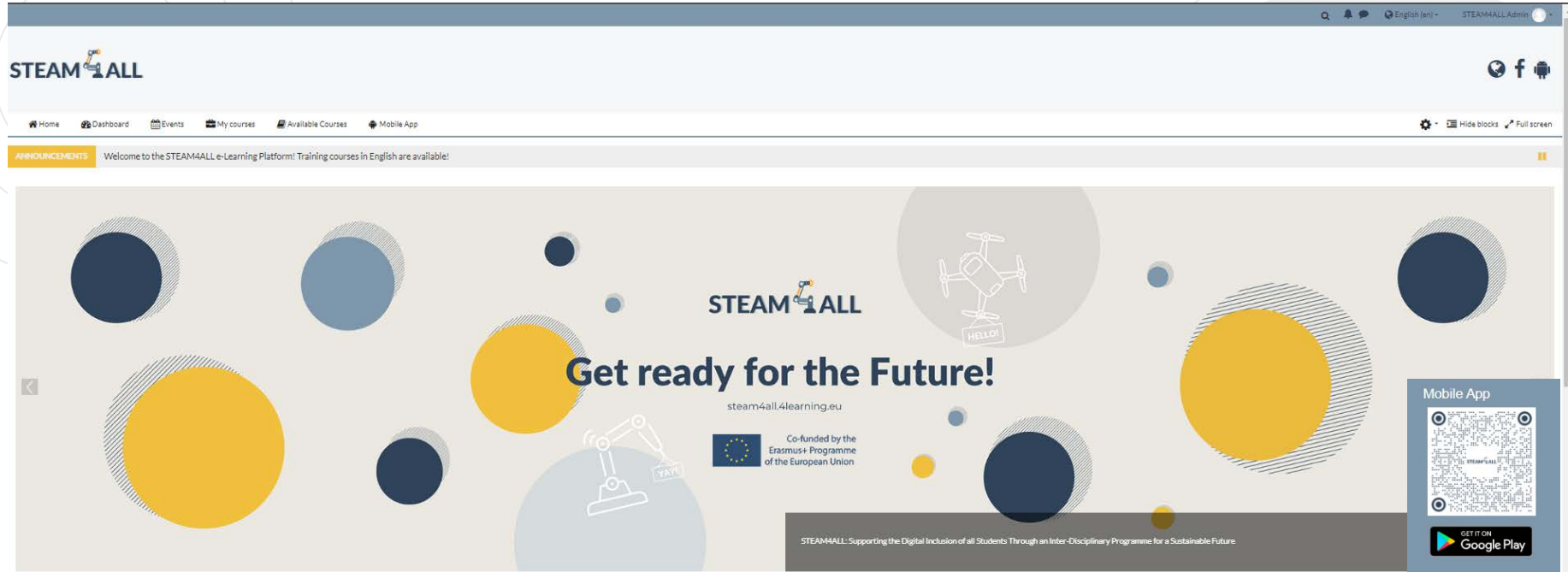


**Drone Piloting &
Programming**

Experts Level

STEAM4ALL:

IO3-A2: STEAM4ALL MOBILE APP



The screenshot shows the STEAM4ALL website interface. At the top left is the STEAM4ALL logo. Below it is a navigation menu with links for Home, Dashboard, Events, My courses, Available Courses, and Mobile App. An announcement banner reads: "ANNOUNCEMENTS Welcome to the STEAM4ALL e-Learning Platform! Training courses in English are available!". The main content area features a large banner with the text "Get ready for the Future!" and the URL "steam4all.4learning.eu". To the right of the URL is the European Union flag and the text "Co-funded by the Erasmus+ Programme of the European Union". On the right side of the banner, there is a "Mobile App" section with a QR code and a "GET IT ON Google Play" button. At the bottom of the banner, a small text reads: "STEAM4ALL: Supporting the Digital Inclusion of all Students Through an Inter-Disciplinary Programme for a Sustainable Future".



Ευχαριστώ για την προσοχή σας

Any questions?

You can find me at

✉ dr@iit.demokritos.gr

<http://imm.iit.demokritos.gr/>