



Co-funded by the
European Union

**Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)**

Agreement number 2023-1-RO01-KA220-HED-000155412

European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



MULTIPLIER EVENT ME2

National University of Science and Technology POLITEHNICA Bucharest, Romania

18 June 2024

Assoc. Prof. Dr. Eng. Băilă Diana-Irinel

National University of Science and Technology POLITEHNICA Bucharest, Romania

Faculty of **Industrial Engineering and Robotics**



Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)

Agreement number 2023-1-RO01-KA220-HED-000155412



***European Network for Additive Manufacturing in Industrial Design for
Ukrainian Context – Acronym AMAZE***

Project Partners:

- 1- National University of Science and Technology Politehnica Bucharest (Romania) – Project Coordinator: Assoc.Prof. Diana Băilă
- 2- Yuriy Fedkovych Chernivtsi National University (Ukraine) – Mr. Dean Prof. Igor Fodchuk
- 3- Poznan University of Technology (Poland) – Project Responsible Mr. Prof. Remigiusz Labudzki
- 4- Edibon International S.A. (Spain) – Project Responsible Mrs Mirian Judit Bonilla





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Project activities– www.amaze2023.eu



AMAZE kick-off meeting

Bucharest
27-29 Nov 2023

[Flyer](#)
[Agenda](#)
[Minutes](#)
[Dissemination](#)



1st Multiplier Event

Madrid, Spain
25 Apr 2024

[Flyer](#)
[Agenda](#)
[Minutes](#)
[Report](#)



Staff training session

Madrid, Spain
7 - 10 May 2024

[Flyer](#)
[Agenda](#)
[Minutes](#)
[Report](#)

[Transnational Kick-off meeting Report](#)

[1st Multiplier Event Report - Madrid, Spain, 25 Apr 2024](#)

[Staff training session Report - Madrid, Spain - 7-10 May 2024](#)



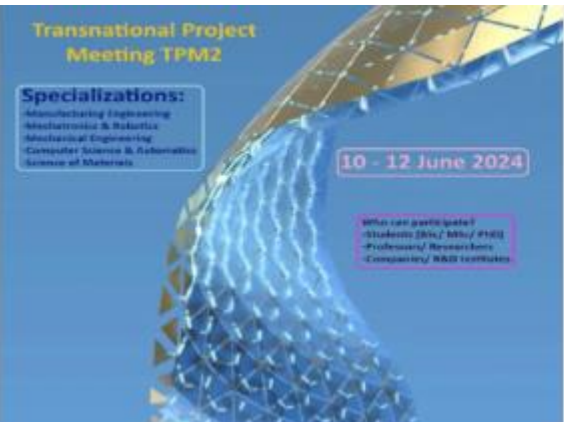


Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Project activities– www.amaze2023.eu



To come ...

2nd Transnational Project Meeting

**Poznan, Poland
10 -12 Jun 2024**

[Flyer](#)
[Agenda](#)



To come ...

2nd Multiplier Event

**Bucharest, Romania
18 Jun 2024**

[Flyer](#)
[Agenda](#)



To come ...

3rd Multiplier Event

**Chernivtsi, Ukraine
20 Jun 2024**

[Flyer](#)



To come ...

Summer School

**Bucharest, Romania
8 - 17 Jul 2024**

[Flyer](#)





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Project activities– www.amaze2023.eu



To come ...

3rd Transnational Project Meeting

**Madrid, Spain
4 - 6 Sep 2024**

[Flyer](#)



To come...

4th Multiplier Event

**Poznan, Poland
4 Nov 2024**

[Flyer](#)





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Project activities– www.amaze2023.eu



Transnational Project Meeting TPM2

Specializations:
Manufacturing Engineering
Mechatronics & Robotics
Mechanical Engineering
Computer Science & Automation
Science of Materials

10 – 12 June 2024


Who can participate?
Students (BSc/ MSc/ PhD)
Professors/ Researchers
Companies/ R&D Institutes

To come ...


2nd Transnational Project Meeting

Poznan, Poland
10 -12 Jun 2024

Flyer
Agenda



Co-funded by the
European Union



Programme in Romania Financed by Erasmus+
2023 Cooperation Projects in Higher Education Area (KA220-HED)
AMAZE - European Network for Additive Manufacturing in Industrial Design for Ukrainian Context, contract nb. 2023-1-RO01-KA220-HED-000155412

Transnational Project Meeting – TPM 2
hosted by Poznań University of Technology - PUT

10th – 12th of June 2024 – Poznań / POLAND

Monday 10th June - Poznań University of Technology - PUT, starting at 9:00

1. Opening and Welcome ceremony: Prof. Olaf CISZAK, Dean of the FME of Poznan University of Technology
2. Presentation of the Agenda and welcome speech: Prof. Remigiusz Łabudzki, Poznan University of Technology
3. Summary of midterm project results, setting up and clarifying goals of the meeting (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager)
4. Project management (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager)
 - Important aspects related to the interim report preparation and submission
 - Collection of activity reporting by the coordinator: organization and calendar (timesheets, deadlines/milestones)
 - Collection of results of Intellectual Outputs and status of delivery
 - Other project management issues

10:30 - 10:45 Coffee break

- Intellectual Outputs – status and summary of currently prepared deliverables (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager)
- Validation of the status of tasks - Each partner will present the plan and status for each activity they have ownership (15 minutes per presentation)

13:00 - 14:00 Lunch

- Q&A with partners, comments and discussion, possible work in groups. Laboratory visit.

16:00 End of the session



Co-funded by the
European Union



Tuesday 11th of June – Poznań University of Technology - PUT, starting at 9:00

Financial and administration rules (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager) - Status related to the activity reported so far (timesheets + fulfilling the timesheets) (all partners) - Status about financial expenses (financial balance) (all partners) - Aspects related to the next future expenses (that are eligible) and reporting of timesheets

10:30 - 10:45 Coffee break

Communication, Dissemination and Exploitation (incl. Multiplier Events) + status of files uploaded on Teams / drives related to the AMAZE project (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager).

Setting updates, tasks and responsibilities - Effects of the production of the Intellectual Output 1 and 2 / aspects that must be considered for the IO1/ IO2 to be finalized - Plans and discussion on ideas and responsibilities of the Intellectual Output 3 (Leading organisation Edibon International S.A.) - Disseminating plan (in the frame of the IO4), status of papers, current and planned work (Prof. Remigiusz Łabudzki, PUT responsible)

13:00 - 14:00 Lunch

Setting of details related to the next following activities to be organized on the AMAZE project - Organizing of ME2 and ME3, activity in June 2024 (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager) and (Prof. Igor Fodchuk, YFCNU)

- Organizing of Learning Teaching Training activity (summer school) in the July 2024 at the Politehnica Bucharest, Romania (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager). Organizing of ME4, activity in November 2024 (Prof. Remigiusz Łabudzki, PUT responsible). Organizing of TPM3, activity in September 2024 (Edibon International S.A., Madrid, Spain).

Q&A with partners comments and discussions about financial, dissemination, implementation, future activities planes to be organized in the AMAZE project, responsibilities etc.

16:00 End of the session

Wednesday 12th of June – Poznań University of Technology - PUT, starting at 9:00

Final conclusions / ending of session. Conclusions. Visiting of laboratories at Poznań University of Technology

11:30 End of the Transnational Project Meeting.





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Co-funded by the
European Union



Programme in Romania Financed by Erasmus+
2023 Cooperation Projects in Higher Education Area (KA220-HED)
AMAZE - European Network for Additive Manufacturing in Industrial Design for Ukrainian Context, contract nb. 2023-1-RO01-KA220-HED-000155412

Transnational Project Meeting – TPM 2
hosted by Poznań University of Technology - PUT

10th – 12th of June 2024 – Poznań / POLAND

Monday 10th June - Poznań University of Technology - PUT, starting at 9:00

1. Opening and Welcome ceremony: Prof. Olaf CISZAK, Dean of the FME of Poznan University of Technology
2. Presentation of the Agenda and welcome speech: Prof. Remigiusz Łabudzki, Poznan University of Technology
3. Summary of midterm project results, setting up and clarifying goals of the meeting (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager)
4. Project management (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager)
 - Important aspects related to the interim report preparation and submission
 - Collection of activity reporting by the coordinator: organization and calendar (timesheets, deadlines/milestones)
 - Collection of results of Intellectual Outputs and status of delivery
 - Other project management issues

10:30 - 10:45 Coffee break

- Intellectual Outputs – status and summary of currently prepared deliverables (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager)
- Validation of the status of tasks - Each partner will present the plan and status for each activity they have ownership (15 minutes per presentation)

13:00 - 14:00 Lunch

- Q&A with partners, comments and discussion, possible work in groups. Laboratory visit.

16:00 End of the session



Co-funded by the
European Union



Tuesday 11th of June – Poznań University of Technology - PUT, starting at 9:00

Financial and administration rules (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager) - Status related to the activity reported so far (timesheets + fulfilling the timesheets) (all partners) - Status about financial expenses (financial balance) (all partners) - Aspects related to the next future expenses (that are eligible) and reporting of timesheets

10:30 - 10:45 Coffee break

Communication, Dissemination and Exploitation (incl. Multiplier Events) + status of files uploaded on Teams / drives related to the AMAZE project (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager).

Setting updates, tasks and responsibilities - Effects of the production of the Intellectual Output 1 and 2 / aspects that must be considered for the IO1/ IO2 to be finalized - Plans and discussion on ideas and responsibilities of the Intellectual Output 3 (Leading organisation Edibon International S.A.) - Disseminating plan (in the frame of the IO4), status of papers, current and planned work (Prof. Remigiusz Łabudzki, PUT responsible)

13:00 - 14:00 Lunch

Setting of details related to the next following activities to be organized on the AMAZE project - Organizing of ME2 and ME3, activity in June 2024 (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager) and (Prof. Igor Fodchuk, YFCNU)

- Organizing of Learning Teaching Training activity (summer school) in the July 2024 at the Politehnica Bucharest, Romania (Assoc. Prof. Diana Băilă, Politehnica Bucharest, project manager). Organizing of ME4, activity in November 2024 (Prof. Remigiusz Łabudzki, PUT responsible). Organizing of TPM3, activity in September 2024 (Edibon International S.A., Madrid, Spain).

Q&A with partners comments and discussions about financial, dissemination, implementation, future activities planes to be organized in the AMAZE project, responsibilities etc.

16:00 End of the session

Wednesday 12th of June – Poznań University of Technology - PUT, starting at 9:00

Final conclusions / ending of session. Conclusions. Visiting of laboratories at Poznań University of Technology

11:30 End of the Transnational Project Meeting.



Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Project management
-important aspect related to the interim report submission

- The Interim Report was submitted.



Raluca Stefania Boldan
From: raluca.boldan@anpcdefp.ro
To: Diana Baila

Buna ziua

Am verificat si termenul de depunere a raportului intermediar este 13.07.2024.
Cand credeti ca ati terminat raportul va rog sa ma anuntati sa il verific inainte de a da submit. Scurtam astfel din timpul de evaluare.

O zi buna
Raluca Boldan

EXPERT - DEPARTAMENT PROIECTE ÎNVAȚAMÂNT UNIVERSITAR
Agentia Nationala pentru Programe Comunitare in Domeniul Educatiei si Formarii Profesionale
t: (+4) 021 201 0749
f: (+4) 021 312 1682
w: [Erasmus+](#), [ANPCDEFP](#)
a: Splaiul Independentei 313, Bibl. Centrala a
UPB, Corp A, Etaj 1 Bucuresti, S6, 060042,
Romania



Raluca Stefania Boldan
From: raluca.boldan@anpcdefp.ro
To: Diana Baila

Mon, May 20 at 10:36 AM ☆

Buna ziua

Raportul pare ok. Il puteti incarca pe platforma. Va trebui sa descarcati si sa semnati declaratia de onoare.

Nu uitati sa completati si descrierile din fiecare pachet de lucru.

O zi buna

Raluca Boldan

EXPERT - DEPARTAMENT PROIECTE ÎNVAȚAMÂNT UNIVERSITAR
Agentia Nationala pentru Programe Comunitare in Domeniul Educatiei si Formarii Profesionale
t: (+4) 021 201 0749
f: (+4) 021 312 1682
w: [Erasmus+](#), [ANPCDEFP](#)
a: Splaiul Independentei 313, Bibl. Centrala a
UPB, Corp A, Etaj 1 Bucuresti, S6, 060042,
Romania





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Project management

-important aspect related to the interim report submission

- **The Interim Report** was submitted.
- Activities presented – Kick off meeting Politehnica Bucharest (TPM1), ME1 Edibon International S.A. And STTE Edibon International S.A. And Intellectual Output IO1 – e-book
- **Final Report Deadline: 13 janv 2025**

The screenshot displays the Erasmus+ project management interface. The top navigation bar includes a 'Home' link and a user profile for 'Baila Diana'. The main section is titled 'Project Activities and Budget Details'. It shows the 'Grant Agreement No.' as 2023-1-RO01-KA220-HED-000155412 and the 'Awarded/Reported Budget' as 120 000 € / 73 662 €. The project is marked as 'Project ongoing' with a 'Deadline: 13 janv. 2025' and '234 days left!'. A 'Content menu' on the left lists various project components, with 'Progress reports' selected. The 'Progress reports' section shows a timeline with three stages: 'Draft % completed' (12-05-2024 22:00:28), 'Submission in progress' (24-05-2024 18:05:08), and 'Submitted' (24-05-2024 18:09:09). Each stage is marked with a green checkmark. Below the timeline are buttons for 'View Report' and 'Download Report'. A 'History' section is also visible at the bottom.





Co-funded by the
European Union

**Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)**
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



**Impact, quality and reporting in the new
KA220-HED projects, Bucharest,
Romania**

Thanks for submitting your contact info!

Handbook on the lump sum funding model

**Key Action 2 – Partnerships for Cooperation – Call
2024**



**IMPACT, QUALITY AND REPORTING IN THE NEW KA220-HED
PROJECTS**
20 - 21 June 2024 / Bucharest

19 th June	Arrival
19:00 – 21:00	Welcome dinner at Pullman Hotel, Bucharest
20 th June	
09:00 – 09:30	Registration
09:30 – 11:00	Welcome and introduction! Exploring KA2 examples: achievements, challenges, solutions
11:00 – 11:30	Coffee break
11:30 – 13:00	Particularities of the KA220 HED reporting phase Result – Effects – Impact
13:00 – 14:00	Lunch
14:30 – 16:00	Defining the reporting methodology The 'Lump sums' approach
16:00 – 16:30	Coffee break
16:30 – 18:00	The Final report and additional resources Conclusions and preparation for the next day
21 st June	
09:30 – 11:00	Reconnecting with Day 1 Additional resources in drafting the Final report
11:00 – 11:30	Coffee break
11:30 – 13:00	Drafting the final methodology on monitoring and reporting for KA220 HED projects Conclusions and additional recommendations
13:00 – 14:00	Lunch



Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Multiplier Event ME2 – hosted by Politehnica Bucharest, 18 JUNE 2024

<https://upb.ro/comunicat-de-presa-european-network-for-additive-manufacturing-in-industrial-design-for-ukrainian-context-amaze/>

The screenshot shows a press release from Politehnica Bucharest titled "Comunicat de Presa European Network for Additive Manufacturing in Industrial Design for Ukrainian Context – AMAZE". The text describes the event as a multiplier event (ME2) for the Erasmus+ project "European Network for Additive Manufacturing in Industrial Design for Ukrainian Context". It mentions the event will take place on June 18, 2024, at the Central Library of UPB, Sala A2.2. The press release lists the event's goals, the invited audience (students, professors, and companies), and the specializations covered: Manufacturing Engineering, Industrial Design & Architecture, Mechatronics & Robotics, Mechanical Engineering, Computer Science & Automatics, and Science of Materials. It also lists the partners: Politehnica Bucharest, Poznan University of Technology, and Yuriy Fedkovych Chernivtsi National University.





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Collection of activity reporting by the coordinator: organization and calendar (timesheets, deadlines/milestones)

Multiplier Event ME2 – POLITEHNICA Bucharest, Romania, on 18 June 2024






To come ...

2nd Multiplier Event

Bucharest, Romania
18 Jun 2024

Flyer
Agenda

 Co-funded by the European Union		 
Erasmus+ Programme Key Action 2 Cooperation Partnerships for Higher Education (KA220-HED) Agreement number 2023-1-RO01-KA220-HED-000155412 <i>European Network for Additive Manufacturing in Industrial Design for Ukrainian Context</i>		
MULTIPLIER EVENT OF APPLIED RESEARCH METHODS FOR ADDITIVE MANUFACTURING IN INDUSTRIAL DESIGN		
Organized by National University of Science and Technology POLITEHNICA Bucharest, Romania in cooperation with the AMAZE project consortium partners		
Agenda Schedule		
Date: 18.06.2024, between 9.00-16.00, Central Library - UNSTPB, sala 2.2, starting at 9:00, Bucharest, Romania		
Hour	Activity	
9:00	Registration of participants to the Multiplier Event	
9:15	Opening and Welcome ceremony – National University of Science and Technology POLITEHNICA Bucharest – Head of Department: Mr. Prof. Ionescu Nicolae Project Coordinator: Mrs. Assoc.Prof. Băilă Diana	
9:40	AMAZE project overall presentation – progress, actions, KPIs, perspectives / details about the event Assoc. Prof. Diana Băilă (National University of Science and Technology Politehnica Bucharest, Romania)	
10:00	AMAZE – Applied research methods for Additive Manufacturing in Industrial Design – e-toolkit - Yuriy Fedkovych Chernivtsi National University, Ukraine Mr. Dean Prof. Igor Fodchuk/ Mrs. Prof. Mariana Borchă	
10:20	AMAZE – Applied research methods for Additive Manufacturing in Industrial Design – e-toolkit – Poznan University of Technology, Poznan, Poland Mr. Prof. Remigiusz Labudzki/ Mrs. As. Prof. Natalia Wierzbicka	
10:50	AMAZE – Applied research methods for Additive Manufacturing in Industrial Design – e-toolkit – EDIBON International S.A., Madrid, Spain Mrs. Mirian Bonilla	
11:30	Coffee Break	
12:00	LEYKOM Company Bucharest - presentation (Additive manufacturing and different 3D parts: SLM, SLA, SLS, etc) – Mr. Dragoş Voineag	
13:00	ADMASYS Company Târgu Mureş, Romania – presentation – Mr. Molnár Endre	
14:00	NUTechnologies Company Timişoara, Romania – presentation – Mr. Cristi Florin	
15:00	Industrial Design – Vector for Product Meaning Prof. Andrei Dumitrescu (National University of Science and Technology Politehnica Bucharest)	
15:30	Q&A with partners comments and discussions on the possibility of joining different projects / EU consortium / Horizon Europe open calls Networks Closing words / ending of Multiplier Event / Press Conference	
16:00	Light lunch	





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Multiplier Event ME2 – POLITEHNICA Bucharest, Romania, on 18 June 2024 – 20 participants – budget UPB = 2000 euros

MULTIPLIER EVENT OF APPLIED RESEARCH METHODS FOR ADDITIVE MANUFACTURING IN INDUSTRIAL DESIGN

Organized by National University of Science and Technology
POLITEHNICA Bucharest, Romania
in cooperation with the AMAZE project consortium partners

Agenda Schedule

Date: 18.06.2024, between 9.00-16.00, Central Library - UNSTPB, sala 2.2, starting at 9:00,
Bucharest, Romania

Hour	Activity
9:00	Registration of participants to the Multiplier Event
9:15	Opening and Welcome ceremony– National University of Science and Technology POLITEHNICA Bucharest – Head of Department: Mr. Prof. Ionescu Nicolae Project Coordinator: Mrs. Assoc.Prof. Băilă Diana
9:40	AMAZE project overall presentation – progress, actions, KPIs, perspectives / details about the event Assoc. Prof. Diana Băilă (National University of Science and Technology Politehnica Bucharest, Romania)
10:00	AMAZE – Applied research methods for Additive Manufacturing in Industrial Design – e-toolkit - Yuriy Fedkovych Chernivtsi National University, Ukraine Mr. Dean Prof. Igor Fodchuk/ Mrs. Prof. Mariana Borchia
10:20	AMAZE – Applied research methods for Additive Manufacturing in Industrial Design – e-toolkit – Poznan University of Technology, Poznan, Poland Mr. Prof. Remigiusz Labudzki/ Mrs. As. Prof. Natalia Wierzbicka
10:50	AMAZE – Applied research methods for Additive Manufacturing in Industrial Design – e-toolkit – EDIBON International S.A., Madrid, Spain Mrs. Mirian Bonilla

11:30	Coffee Break
12:00	LEYKOM Company Bucharest - presentation (Additive manufacturing and different 3D parts: SLM, SLA, SLS, etc) – Mr. Dragoș Voineag
13:00	ADMASYS Company Târgu Mureș, Romania – presentation – Mr. Molnár Endre
14:00	NUTechnologies Company Timișoara, Romania – presentation – Mr. Cristi Floral
15:00	Industrial Design – Vector for Product Meaning Prof. Andrei Dumitrescu (National University of Science and Technology Politehnica Bucharest)
15:30	Q&A with partners comments and discussions on the possibility of joining different projects / EU consortium / Horizon Europe open calls Networks Closing words / ending of Multiplier Event / Press Conference
16:00	Light lunch





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Multiplier Event ME3 – Yuriy Fedkovych Chernivtsi National University (Ukraine) , on 20 June 2024 – 20 participants – budget YFCNU = 2000 euros

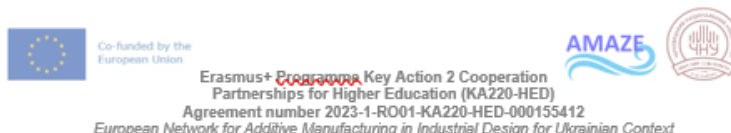


To come ...

3rd Multiplier Event

Chernivtsi, Ukraine
20 Jun 2024

Flyer



**MULTIPLIER EVENT OF APPLIED RESEARCH METHODS FOR ADDITIVE
MANUFACTURING IN ARCHITECTURAL DESIGN**

Organized by Yuriy Fedkovych Chernivtsi National University (Ukraine)
in cooperation with the AMAZE project consortium partners

Agenda Schedule

Date: 20.06.2024, between 9.00-16.00, Yuriy Fedkovych Chernivtsi National University
(Ukraine), starting at 9:00, Chernivtsi, Ukraine

Hour	Activity
9:00	Registration of participants to the Multiplier Event ME3
9:15	Opening and Welcome ceremony - Yuriy Fedkovych Chernivtsi National University (Ukraine), Dean Prof. Igor Fodchuk
9:40	AMAZE project overall presentation – progress, actions, KPIs, perspectives / results and details about the event – Additive Manufacturing & Sensors and Electronics Assoc. Prof. Diana Băilă (National University of Science and Technology Politehnica Bucharest, Romania)
10:00	AMAZE – Applied research methods for Additive Manufacturing in Architectural and Industrial Design/ CAD/CAM /CAE & Smart (Intelligent) Materials – e-toolkit - Yuriy Fedkovych Chernivtsi National University, Ukraine Mr. Dean Prof. Igor Fodchuk/ Mrs. Prof. Mariana Borchia
10:20	AMAZE – Applied research methods for Additive Manufacturing in Architectural and Industrial Design/ Reverse Engineering/ Smart (Intelligent Materials) – e-toolkit – Poznan University of Technology, Poznan, Poland Mr. Prof. Remigiusz Labudzki/ Mrs. As. Prof. Natalia Wierzbicka
10:50	AMAZE – Applied research methods for Virtual Reality/Augmented Reality/ Computer Programming – e-toolkit – EDIBON International S.A., Madrid, Spain Mrs. Mirian Bonilla
11:30	Coffee Break
12:00	LEYKOM Company Bucharest - presentation (Additive manufacturing and systems used in Industry and Architecture: SLM, SLA, SLS, etc) – Mr. Dragoş Voineag
13:00	ADMASYS Company Târgu Mureş, Romania – presentation – Mr. Molnár Endre
14:00	Industrial Design – Vector for Product Meaning Prof. Andrei Dumitrescu (National University of Science and Technology Politehnica Bucharest)
15:00	Q&A with partners comments and discussions on the possibility of joining different projects / EU consortium / Horizon Europe open calls Networks Closing words / ending of Multiplier Event / Press Conference
16:00	Light lunch



Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Summer School –will be hosted by POLITEHNICA Bucharest, during 8-17 July 2024 (participants students and staff from AMAZE consortium)

Agenda for Summer School on “Virtual e-learning platform for Additive Manufacturing in Industrial Design”, hosted by
National University of Science and Technology POLITEHNICA Bucharest, Romania, 8-17 July 2024



To come ...

Summer School

Bucharest, Romania
8 - 17 Jul 2024

Flyer

h	Monday 8.07.2024	Tuesday 9.07.2024	Wednesday 10.07.2024	Thursday 11.07.2024	Friday 12.07.2024	Saturday 13.07.2024	Sunday 14.07.2024	Monday 15.07.2024	Tuesday 16.07.2024	Wednesday 17.07.2024
10	Opening ceremony and project presentation	CAD – Lecture (UPB+YFCNU)	Smart (Intelligent) Materials used in architecture (YFCNU)	CAE – lecture (YFCNU)	Enterprise dynamics (workshop)	Progress report (preparing of the interim report for Monday - working on smaller groups)	Progress report (preparing of the interim report for Monday - working on smaller groups)	General progress of W1 and W2	Finalizing progress report, preparing final presentation	Presentations made by students for companies involved in the summer school - evaluation and feedback on behalf of the companies, defining of common ideas of future diploma projects
11	Participants' presentation and program guidelines for summer school	Industrial Design (UPB)	Reverse Engineering (PUT)	Developing of VR/AR applications (EDIBON)	Presentation of Levkom Bucharest and Admasys Targu Mures companies from Romania	Progress report (preparing of the interim report for Monday - working on smaller groups)		Presentation of NU Technologies company from Timisoara, Romania	Final test, final questionnaires and <u>feedbacks</u>	
12	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time
13	Introduction in Additive Manufacturing (UPB)	Workshop 3D / Launching of case studies	Sensors and Electronics (UPB)	Precision and control used for industrial parts	Trip at Bran Castle/ Sinaia Castle	Trip at Black Sea	Trip at Black Sea	Workshop Additive Manufacturing	Finalizing work on assembly, preparing final presentation	Closing and awarding ceremony, future perspectives of AMAZE project
14	Visiting UPB laboratories	Smart (Intelligent) Materials used for industrial products (PUT)	Workshop 3D CAD	Workshop 3D CAE					Final student presentations, live demonstrations, test corrections	
15	Visiting CAMPUS laboratories	Computer Programming (EDIBON)						Case studies particularities and specific tests for the industrial parts		Free time, sightseeing
Week 1								Week 2		



Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Kick off Meeting – Transnational Project Meeting TPM1 – UNSTPB Bucharest, 27-29 nov 2023

Project Results:

Results: What project results and other outcomes do you expect your project to have?

The project will achieve the following results: IO1 – AMAZE e-book for developing of complex design industrial parts, IO2 – AMAZE e-toolkit manual for digital learning in producing of complex design industrial parts, IO3 – AMAZE e-learning VR/AR platform, IO4 – AMAZE e-case studies.

-1 open acces book

-1 open acces toolkit manual

-2 academic **papers** (in journals with high visibility, open-acces) and 2 **papers** in International Conference open-acces and 1 patent submitting application.





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Collection of results of Intellectual Outputs and status of delivery
Project activities– www.amaze2023.eu



AMAZE eBook

1. Additive Manufacturing
2. Smart (Intelligent) Materials
3. CAD CAM CAE Design
4. Reverse Engineering
5. Computer Programming
6. Sensors and Electronics
7. Virtual Reality (VR) and Augmented Reality (AR)

13th International Conference on Materials Science & Engineering - Brasov - 13-16 March 2024



E-book – published
with e- ISBN –
Publishing House
Printech Bucharest
and update on AMAZE
site





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



AMAZE Project Results

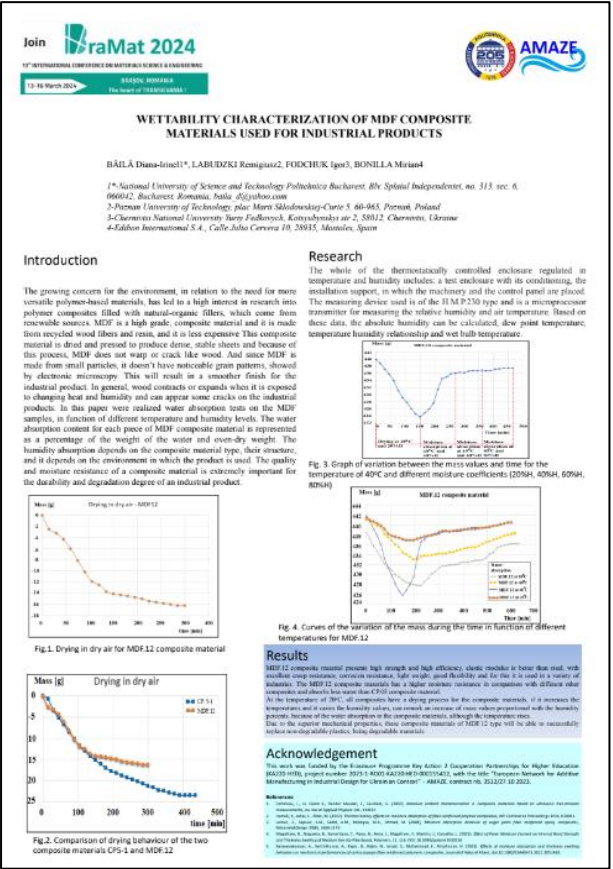
Project Results: 2 articles accepted for publishing in International Conferences
– BRAMAT 2024, Brasov, Romania, 13-16 March 2024
– KreativEU 2024, Targoviste, Romania, 16-17 May 2024

Acceptance Notification



Diana Irinel Băilă
Igor Fodchuk
Remigiusz Łabudzki
Myrian Bonilla

ACCURACY OF SLA AND MATERIAL MORPHOLOGY USED IN ARCHITECTURE





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



SUMMER SCHOOL – POLITEHNICA Bucharest,

8-17 July 2024, www.upb.ro

Participants: EDIBON International S.A. – Spain – 2 persons

From PUT - Poland

- 1. Teachers
 - - Prof. Natalia WIERZBICKA
 - - Prof. Remigiusz LABUDZKI
 -
- 2. Students
 - - Ms Iryna KACHURA-ZHECHYTSKA.
 - - Ms Klaudia Jańczak
 - - Ms Emilia Smolarek
 - - Mr Jakub Gapsa
 - - Mr Sebastian But

From YFCNU - Ukraine

- 1. Teachers
 - Dean. Igor FODCHUK
 - Prof. Mariana BORCHA
- 2. Students
 - Ms. Auryte Anastasiia
 - Ms. Bazyniak Vita
 - Ms. Kolodrivska Sofiia
 - Ms. Pauk Volodymyra
 - Ms. Panivnyk Nataliia





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



3D Printers that will be used in AMAZE Project - University POLITEHNICA of Bucharest

E-case studies – 3D MODELS for design and 3D Printing



Hybrid 3D Printer Zmorph 2.0 SX Full SET
- FDM (Fused Deposition Modeling)



Photocentric Liquid Crystal
- DLP (Digital Light Processing)



Phenix Systems – PXS&PXM
- DMLS (Direct Metal Laser Sintering) –
collaborating company)





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Summer School – Bucharest- 8-17 July 2024

Peleş Castle – Sinaia, Romania





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Summer School – Bucharest- 8-17 July 2024

Casa Poporului, Bucharest, Romania Castelul Kretulescu, Bucharest, Romania





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Summer School –
Bucharest- **8-17 July 2024**
Black Sea





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Summer School – Bucharest- 8-17 July 2024

Dracula Castle – Bran, Romania





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Project Budget

Expenditure	Grant (Euro)
1, Project management and implementation	23978
2. Short term transnational mobility activities of ind	40382
3 Intellectual outputs	43040.00
4, Multiplier events	12600
5. Special needs	0
6, Exceptional costs	0
Total requested from EEA Grants 2014-2021	120000.00





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Kick off Meeting – Transnational Project Meeting TPM1 – UNSTPB Bucharest, 27-29 nov 2023

Project workpackages:

IO1 - AMAZE e-book for developing of complex design industrial parts (15.11.2023 – 14.03.2024) – Leading organisation - UNSTPB

IO2 - AMAZE e-toolkit manual for digital learning in producing complex design industrial parts (15.03.2024 – 14.06.2024) – Leading organisation CHNU

IO3 - AMAZE e-learning VR/AR platform for virtual laboratory (15.06.2024 – 14.09.2024) - Leading organisation Edibon International S.A.

IO4 – AMAZE e-case studies for project-based learning method used in developing, testing and manufacturing of customized industrial parts by Additive Manufacturing technologies (some 3D models, cases of design or architectural models) (15.09.2024-14.11.2024) – Leading organisation PUT

Project Management and Dissemination Results (15.11.2023 – 14.11.2024)





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Kick off Meeting – Transnational Project Meeting TPM1 – UNSTPB Bucharest, 27-29 nov 2023

Project workpackages:

IO1 - AMAZE e-book for developing of complex design industrial parts (15.11.2023 – 14.03.2024) – Leading organisation – UNSTPB

comprising the next module courses:

1-Additive Manufacturing (UPB); - UPB

2-Smart (Intelligent) Materials (YFCNU+PUT); - YFCNU

3-CAD/CAM/CAE design (YFCNU);

4- Reverse Engineering (PUT);

5-Computer Programming (Edibon);

6-Sensors and Electronics (UPB); - UPB

7-Virtual Reality/Augmented Reality (Edibon)

Multiplier EVENT ME1 -1 day (40 persons from different companies and 8 foreigners) – EDIBON International S.A. – 25th April 2024





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Kick off Meeting – Transnational Project Meeting TPM1 – UNSTPB Bucharest, 27-29 nov 2023

Project workpackages:

IO2 - AMAZE e-toolkit manual for digital learning in producing complex design industrial parts (15.03.2024 – 14.06.2024) – Leading organisation CHNU

comprising the next toolkit modules:

- 1-Additive Manufacturing (UNSTPB);
- 2-Smart (Intelligent) Materials (YFCNU+PUT);
- 3-CAD/CAM/CAE design (YFCNU);
- 4- Reverse Engineering (PUT);
- 5-Computer Programming (Edibon);
- 6-Sensors and Electronics (UNSTPB);
- 7-Virtual Reality/Augmented Reality (Edibon)

Multiplier Events:

ME2 – 1 day hosted by UNSTPB (ROM) (20 persons out from UNSTPB) and 18 June 2024

ME3 – 1 day hosted by YFCNU (UKR) (20 persons from outside of university) – 20 June 2024

Training staff feedbacks EDIBON (SP) during 4 days, participating from each partner institution 4 persons (in total 16 persons) – 7 May – 12 May 2024

For TPM2 –hosted by PUT (POL) will participate 2 staff, professors, key persons by each institution involved in project (Total 8 pers) and others – 3 days (10 – 12 June 2024)





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Kick off Meeting – Transnational Project Meeting TPM1 – UNSTPB Bucharest, 27-29 nov 2023

Project workpackages:

IO3 - AMAZE e-learning VR/AR platform for virtual laboratory (15.06.2024 – 14.09.2024) - Leading organisation Edibon International S.A.

Summer School feedbacks given by students and staffs involved in AMAZE project – UNSTPB – 10 days (staffs and students) – 8-17 July 2024

TPM3 (3 days), hosted by Edibon company (8 persons – 2 persons/institution) – 4-6 sep 2024





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Kick off Meeting – Transnational Project Meeting TPM1 – UNSTPB Bucharest, 27-29 nov 2023

Project workpackages:

IO4 – AMAZE e-case studies for project-based learning method used in developing, testing and manufacturing of customized industrial parts by Additive Manufacturing technologies (some 3D models, cases of design or architectural models) **(15.09.2024-14.11.2024) – Leading organisation PUT**

Multiplier Event ME4 realized at **PUT (POL)**, having invited 20 persons from different companies, universities, research centers (out of PUT) and 5 foreigner's participants – **4 nov 2024**





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Dissemination Results

SLS – material PA12

FDM – PEEK, PLA, PLA Silk Rainbow, PLA Silk Like Kingfisher Rainbow Colours (Silicone properties)

DLP, SLA – biocompatible photopolymer resins

DMLS/SLM – Ti6Al4V, superalloys INCONEL and Co-Cr

Analysis Test recommended for the materials used for the components:

SEM (Scanning Electron Microscopy)

TEM (Transmission Electron Microscopy)

EDAX (Energy Dispersive X-ray Analysis)

XRD (X-Ray Diffraction)

FTIR (Fourier Transform Infrared Spectroscopy)

RAMAN (Raman Spectroscopy)

AFM (Atomic Force Microscopy)

Contact angle test

Mechanical tests





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



IO2 - E-toolkit - Politehnica Bucharest (Romania)

Hydraulic pump body – SLDPRT. file Politehnica Bucharest Partner

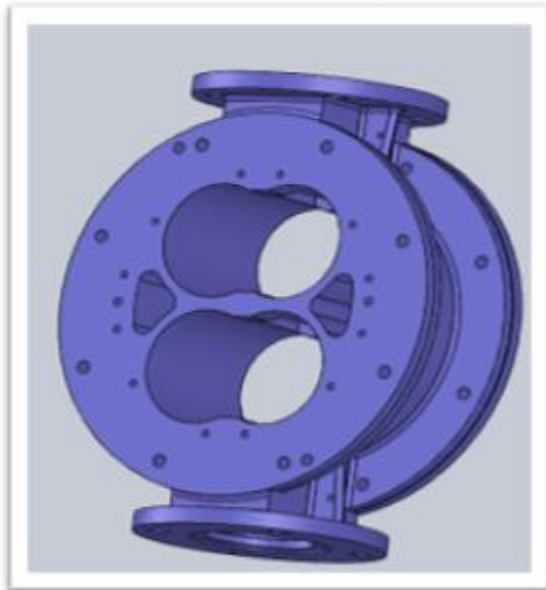


Fig.1. Hydraulic pump body

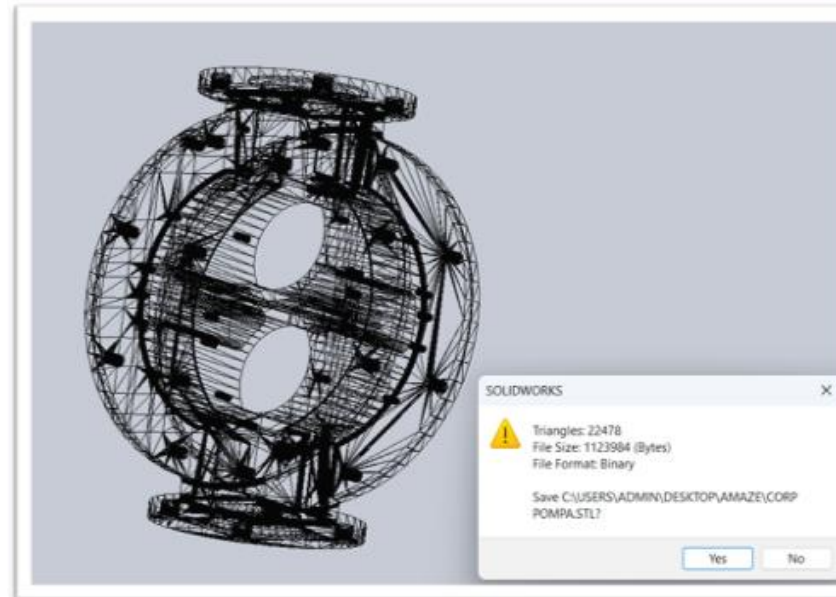


Fig.4. Hydraulic pump body meshing – STL. file



Fig.19. Hydraulic pump body printed by FDM technology





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



IO2 - E-toolkit - Politehnica Bucharest (Romania)



Figure 4. Arduino MEGA 2560 board.

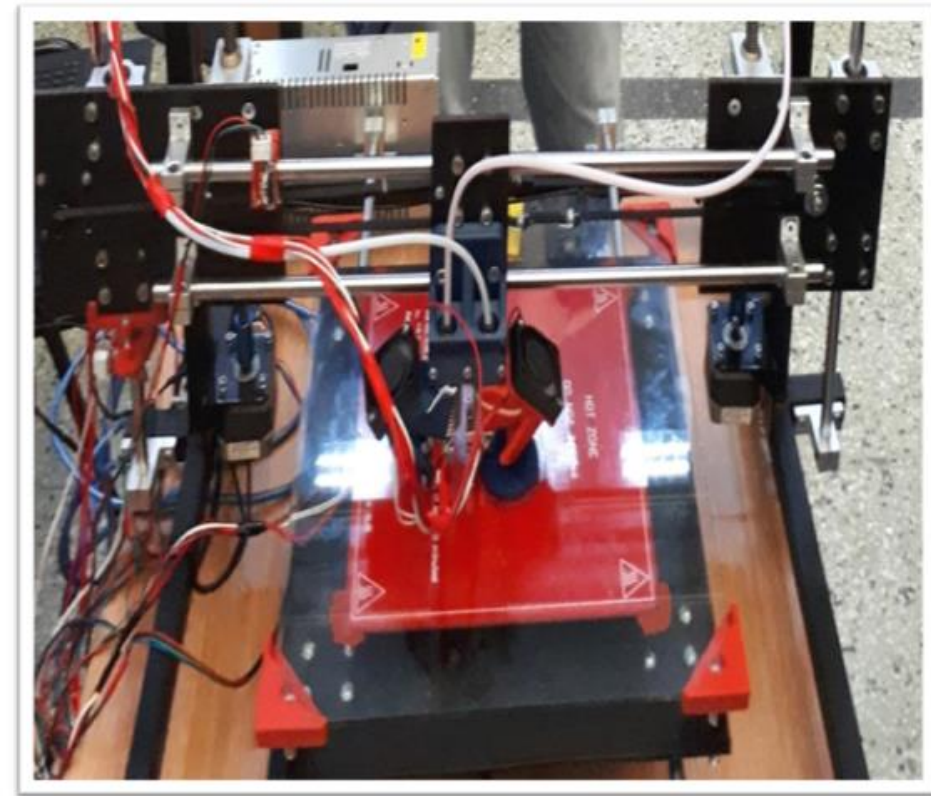


Figure 18. FDM extruder on the 3D hybrid printer





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



IO2 - E-toolkit - Poznan University of Technology (Poland)

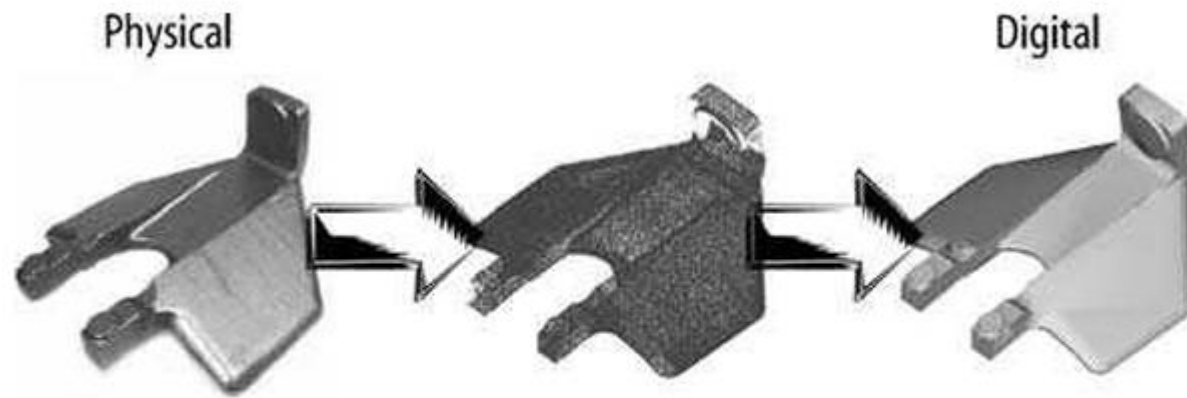


Figure 1.3 Physical-to-digital process



Figure 1.6. Optical scanning device.





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



IO2 - E-toolkit - Poznan University of Technology (Poland)

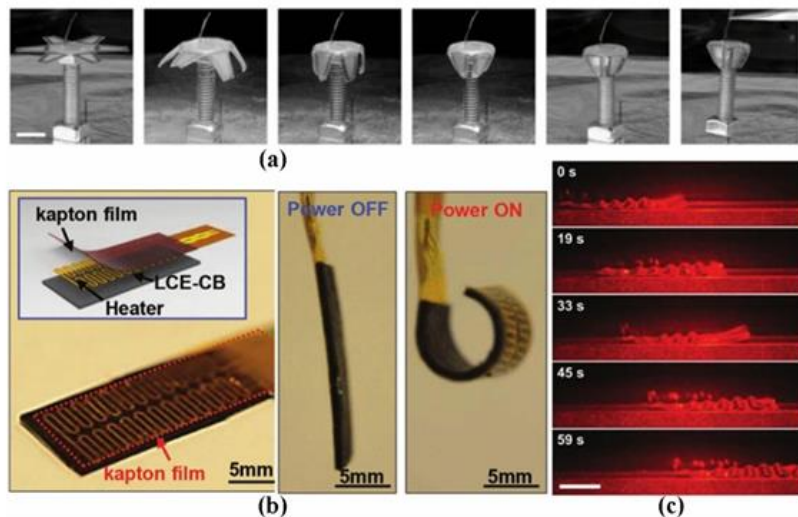


Fig. 2. Applications of thermally responsive actuators/devices in the robots: a A gripper made of thermoplastic polystyrene sheets for grasping objects under the light; b A fully soft robot mimicking an inchworm that can sense the environment and crawl the body adaptively c An LCE light-driven soft robot for mimicking caterpillar locomotion (Hao et al., 2022)

3.1 Piezoelectric materials

The smart materials showcase extraordinary properties setting them apart from conventional materials. They exhibit transiency, responding to various external stimuli; immediacy, with rapid response times; self-actuation, the ability to autonomously alter appearance and shape; selectivity, offering a divided and expected response; directness, with responses confined to the activating event; shape-changing capabilities, adjusting form based on external stimuli; self-diagnostic features, automatically detecting surface cracks; and self-healing characteristics, capable of autonomous repair when damaged or repairable (Bahl et al., 2020).

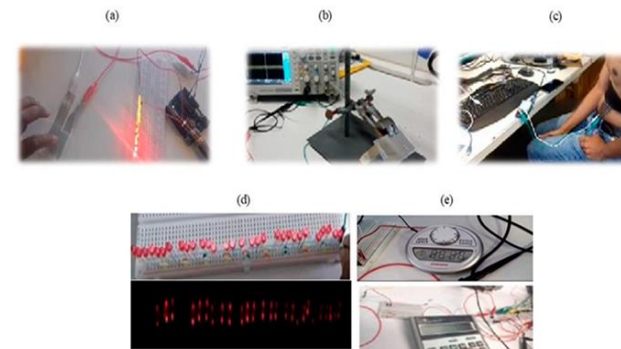


Fig. 6. Demonstration of the PSTS as (a) a touch sensor; (b) water droplets for voltage generation; (c) breathing detection; (d) a PSTH lightening 32 LEDs in the dark (bottom) and at daylight (top); and (e) stored energy powering electronics such as a timer and calculator in operation. (Hossain et al., 2022)





Co-funded by the
European Union

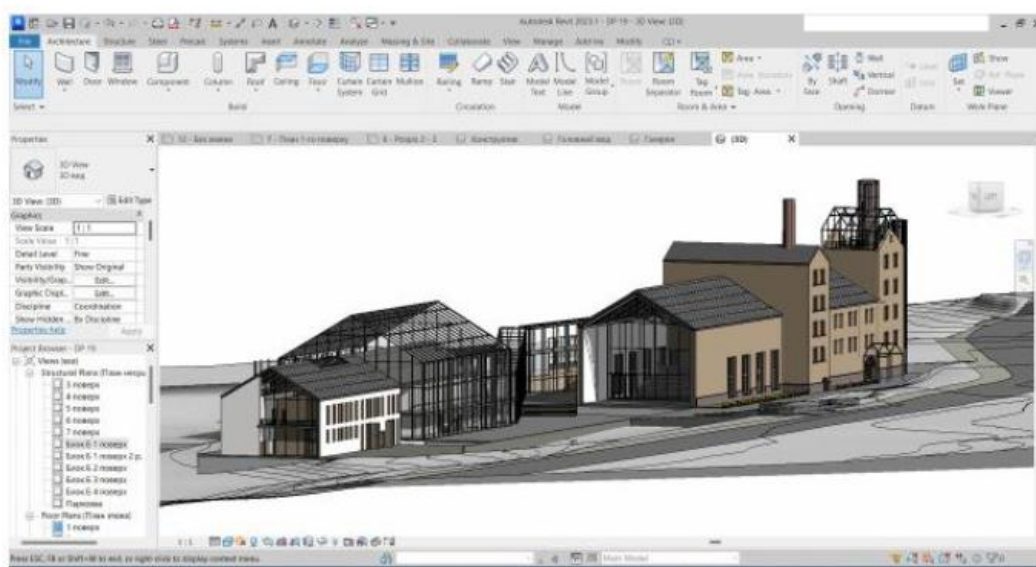
Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



IO2 - E-toolkit - Yuriy Fedkovych Chernivtsi National University (Ukraine)

2 Autodesk Revit interface

The program interface is largely similar to standard Autodesk programs such as AutoCAD,



Inventor, 3D MAX [2, 5] (Fig. 1.).

Fig. 1. Elements of the Revit interface [7]

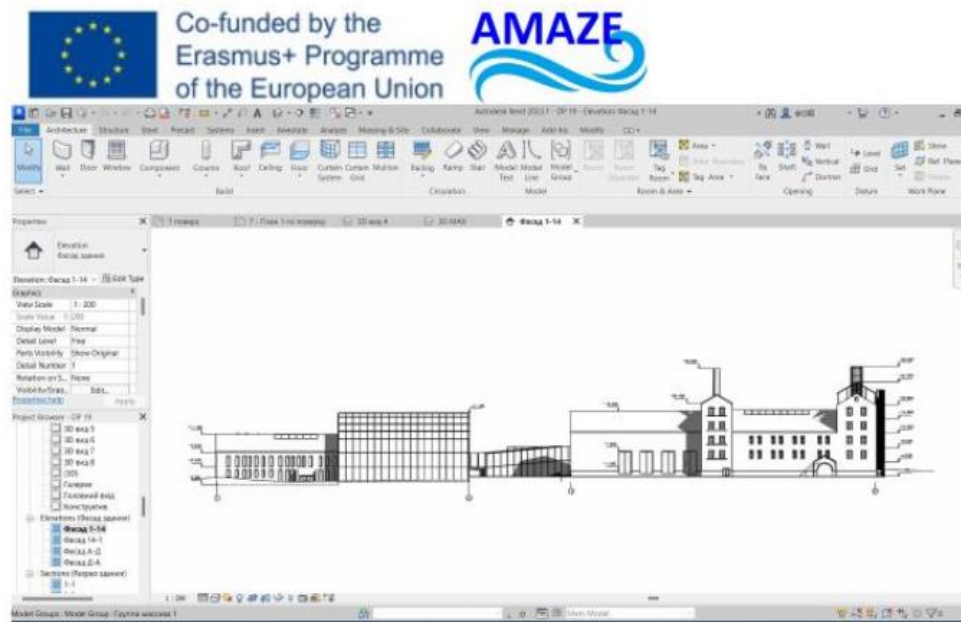


Fig. 4. Levels on the Facades tab [7]





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



IO2 - E-toolkit - Yuriy Fedkovych Chernivtsi National University (Ukraine)

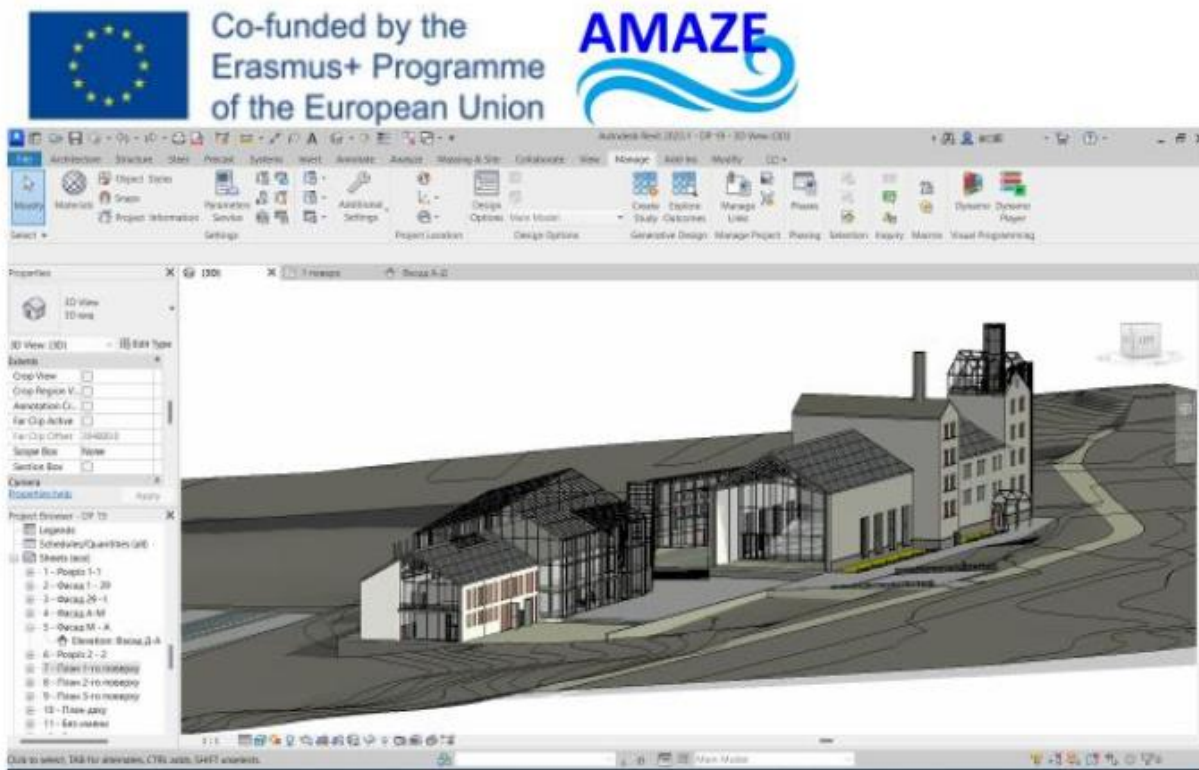


Fig. 9. Realistic style [7]

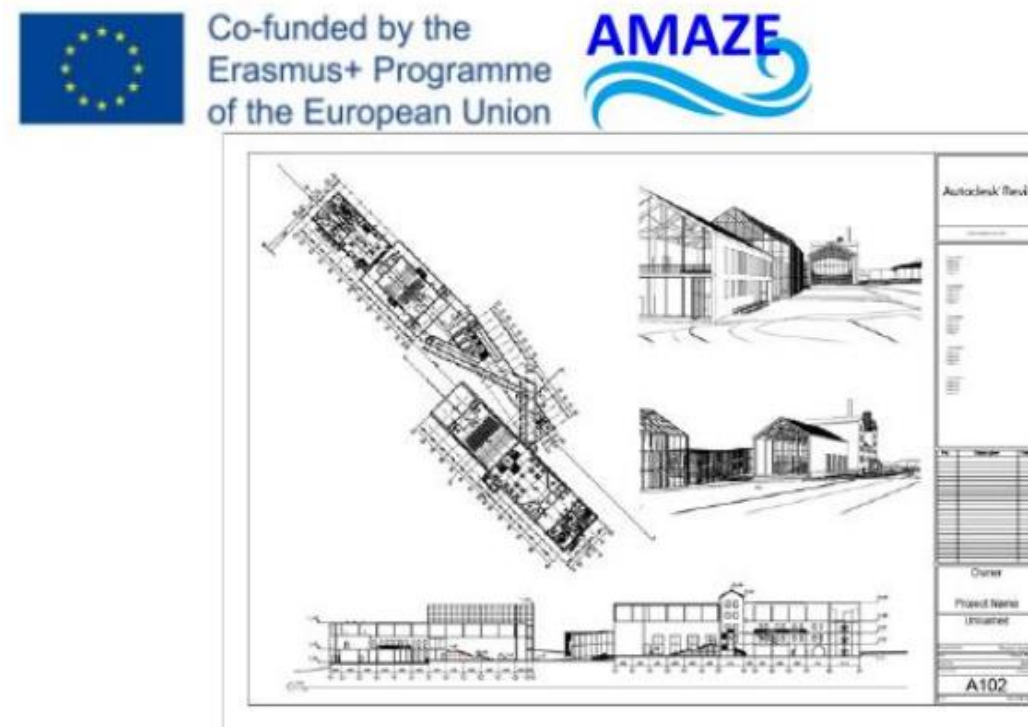


Fig. 20. Completed sheet





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



IO2 - E-toolkit - Yuriy Fedkovych Chernivtsi National University (Ukraine)

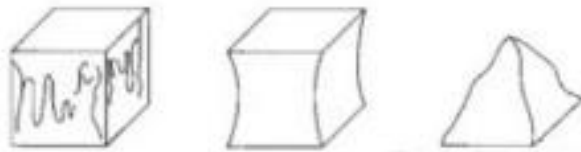


Fig. 4.3. Normal types of destruction of cubic samples [2]

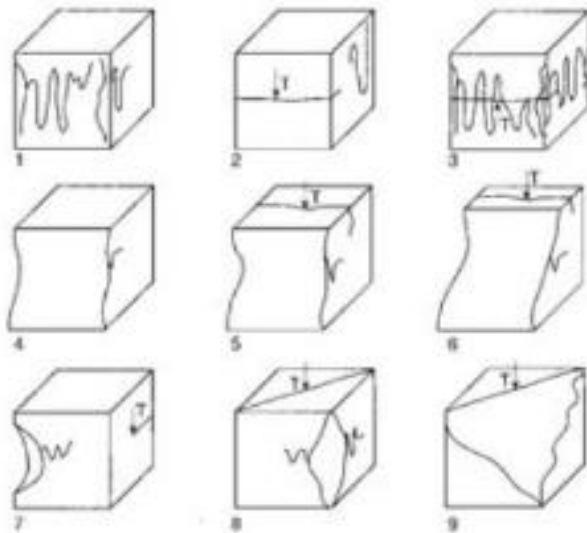


Fig. 4.4. Examples of unusual types of fractures on cubes [2]

4.4. Tools and equipment

1. TMC-3224 automatic compression testing machine for compression testing according to 206-1:2001-07 load speed controller or load speed indicator or stopwatch [6];



Fig. 4.1. TMC-3224 automatic compression testing machine





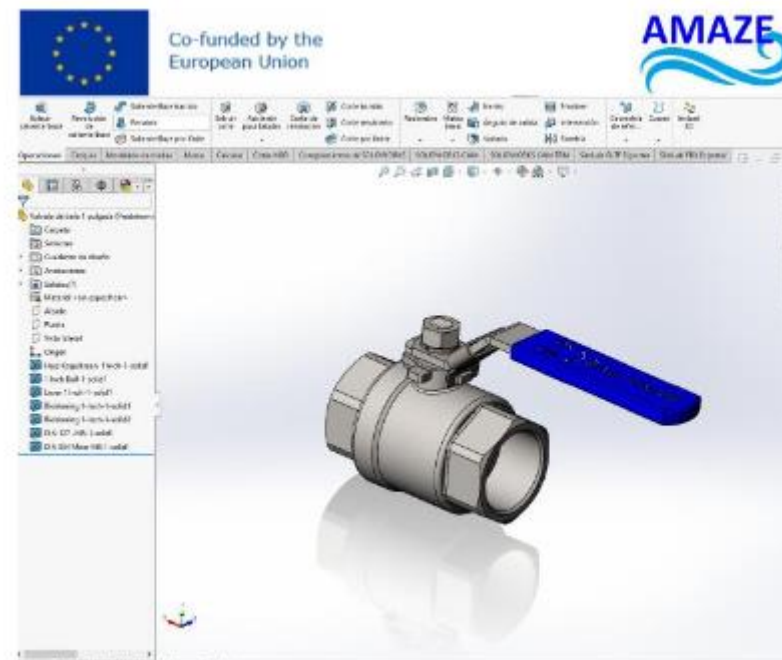
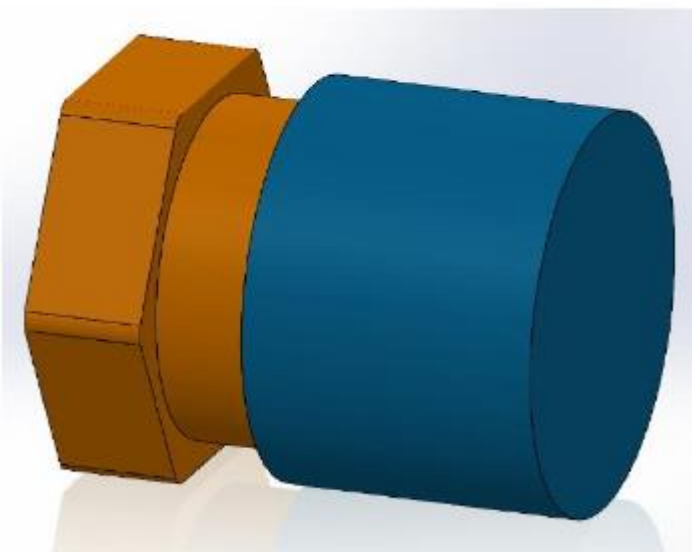
Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



IO2 - E-toolkit - Edibon International S.A. (Spain)

1.5 Optimization and Automation of the Printing Process





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context

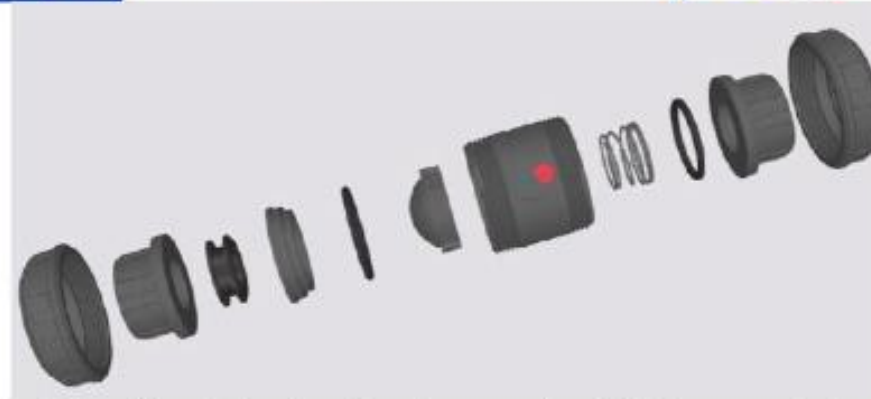


IO2 - E-toolkit - Edibon International S.A. (Spain)

1 Programming in Virtual Reality



Co-funded by the
European Union



Onirix is scalable and allows for collaboration on AR projects, facilitating teamwork. The applications of Onirix span marketing and advertising, education and training, tourism and culture, and retail and e-commerce. Brands can create interactive experiences for advertising campaigns, educational institutions can develop immersive learning tools, museums can offer interactive tours, and stores can allow customers to visualize products in their environment before purchasing. In summary, Onirix simplifies the creation and distribution of AR experiences, making it an attractive option for developers and businesses.



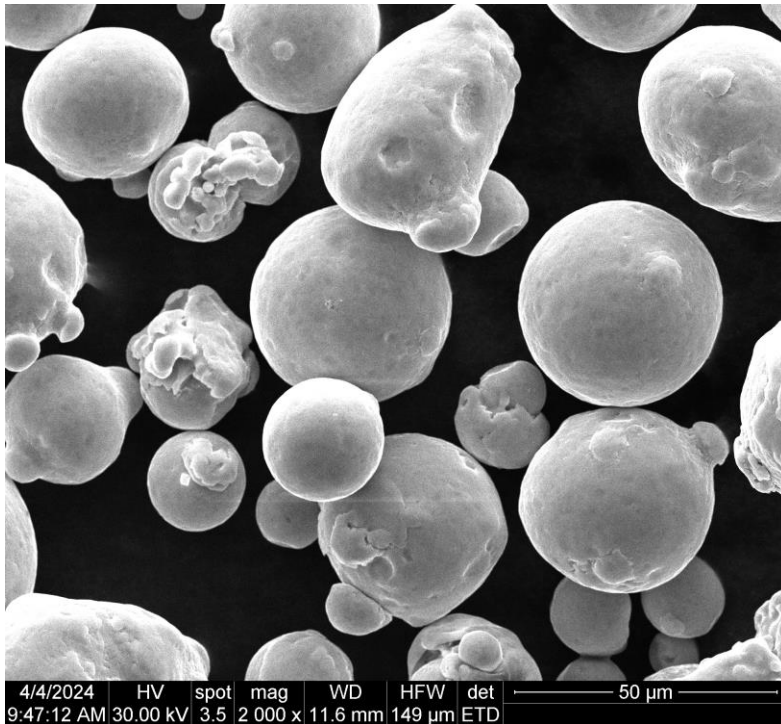


Co-funded by the
European Union

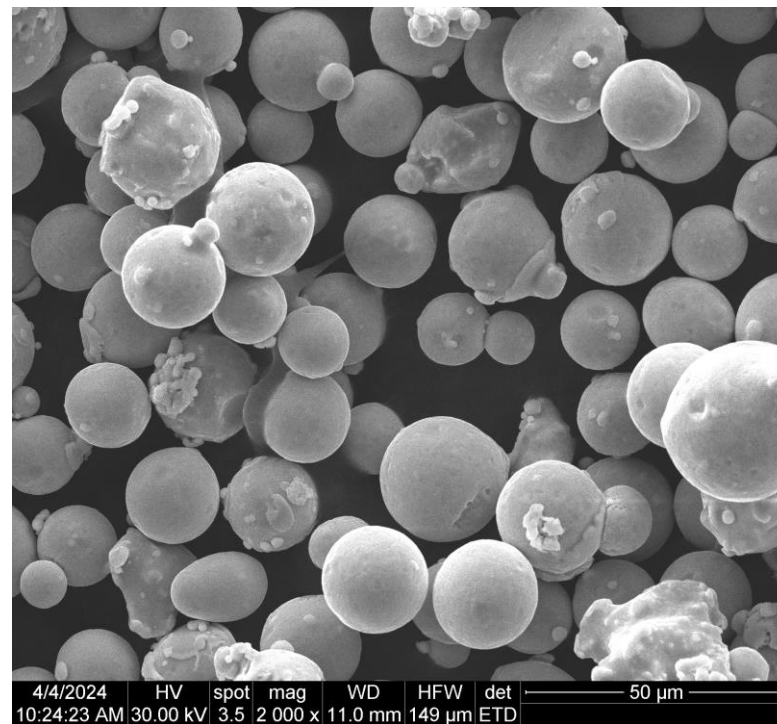
Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



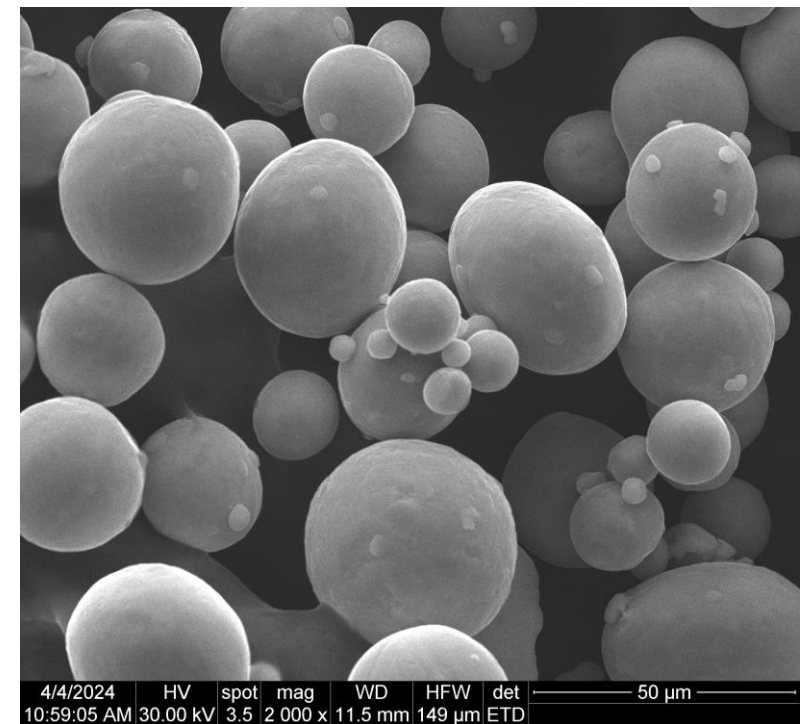
Metallic powders used in SLM (SELECTIVE LASER MELTING)



625 INCONEL



718 INCONEL



Ti6Al4V



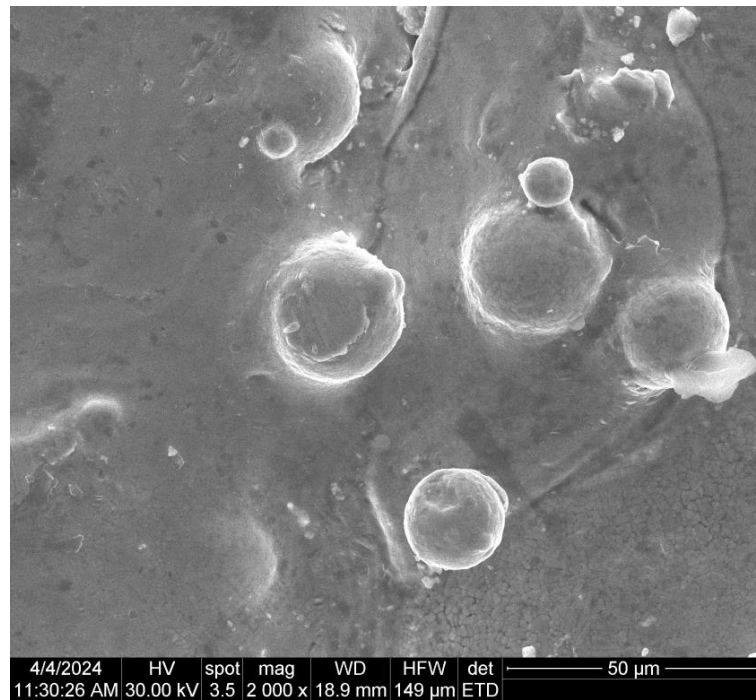


Co-funded by the
European Union

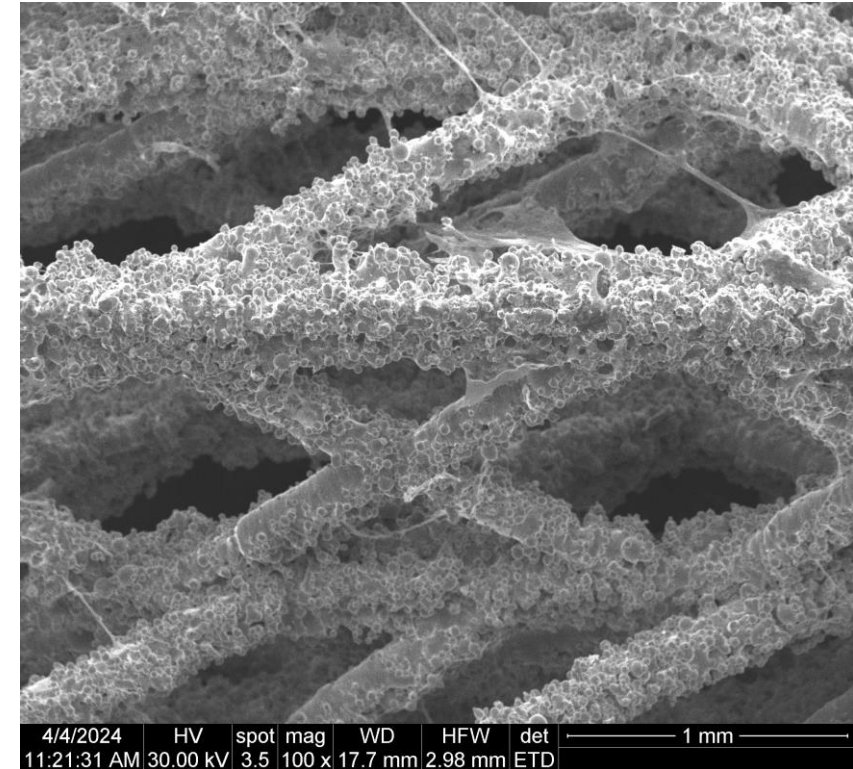
Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Sintered parts used in SLM (SELECTIVE LASER MELTING)



625 INCONEL



Ti6Al4V



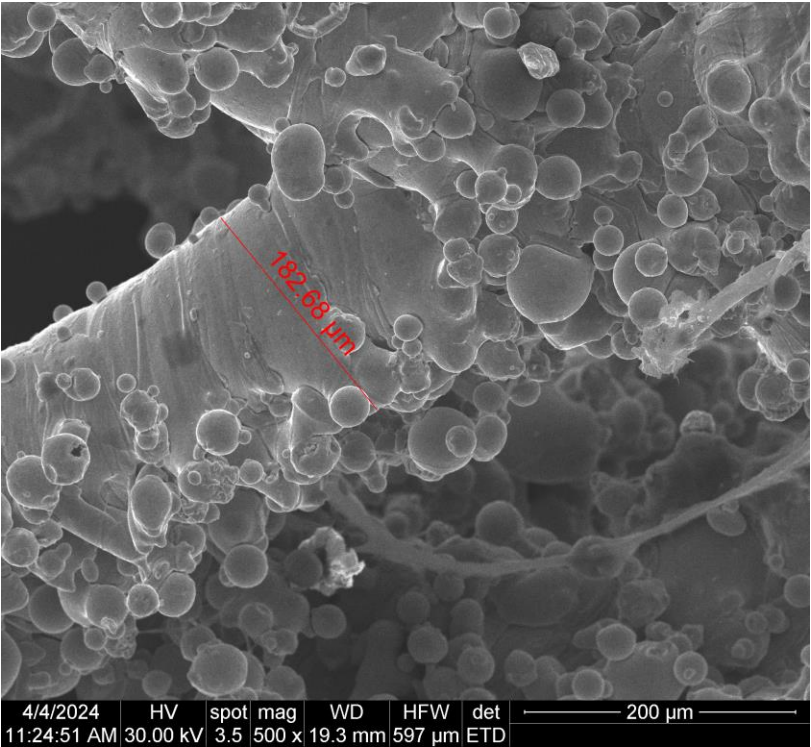
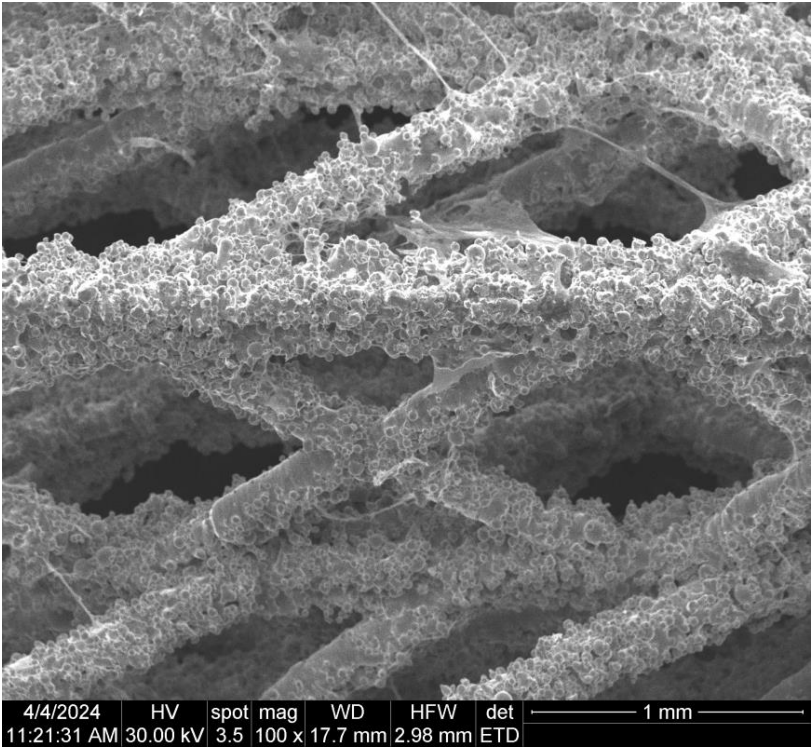
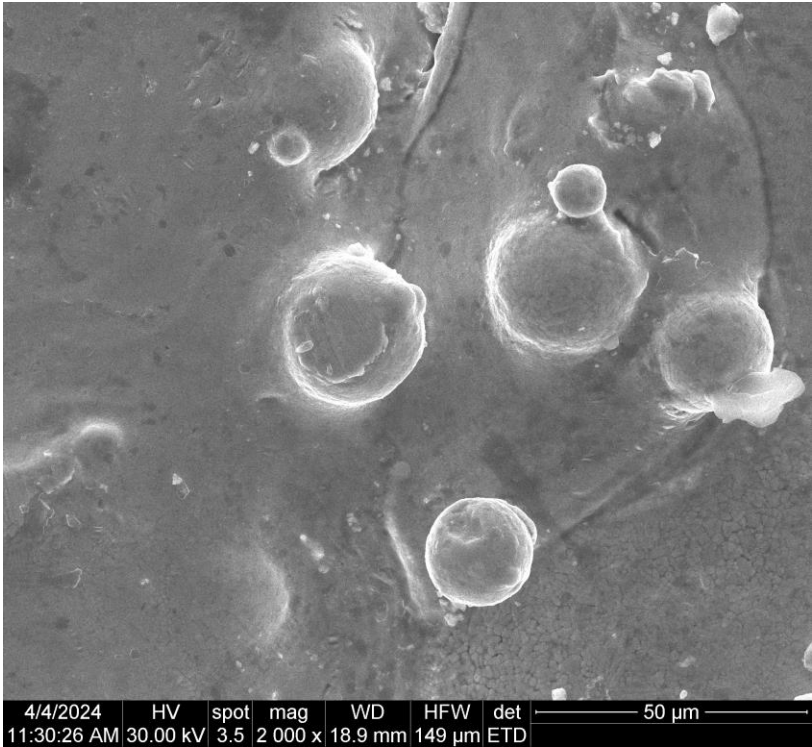


Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Sintered parts used in SLM (SELECTIVE LASER MELTING)



625 INCONEL



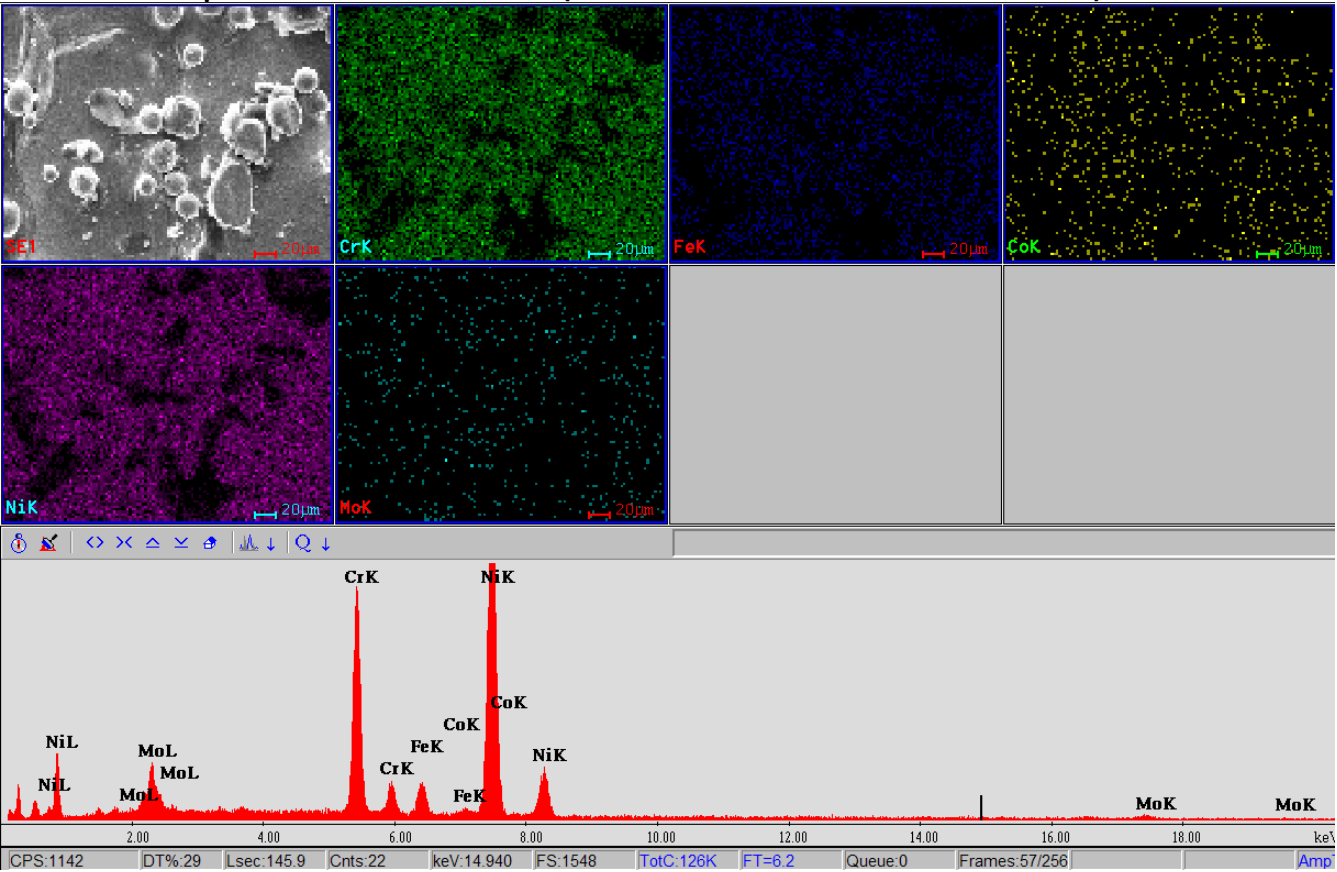


Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Sintered parts used in SLM (SELECTIVE LASER MELTING)



625 INCONEL



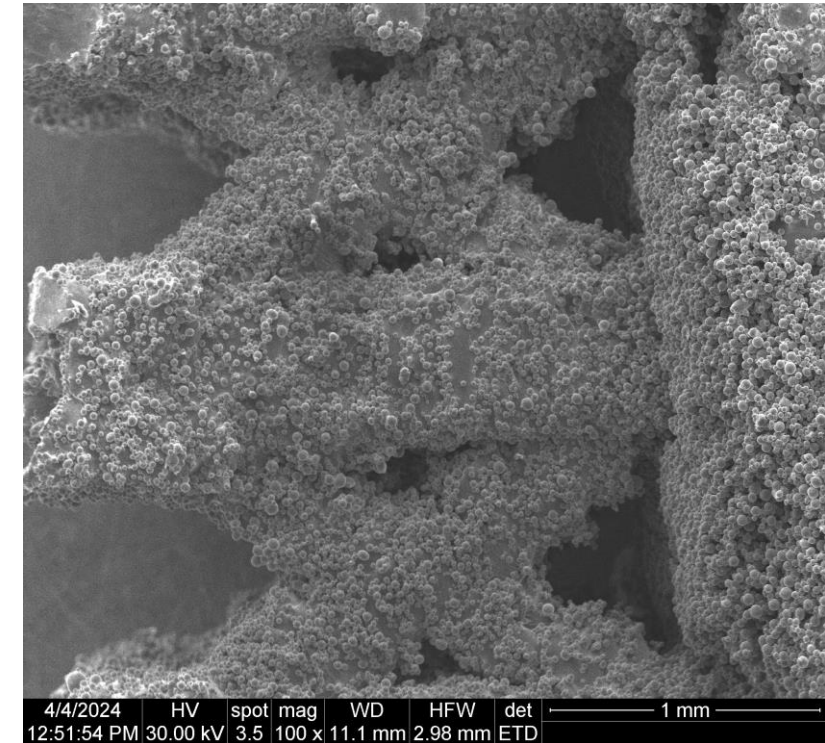
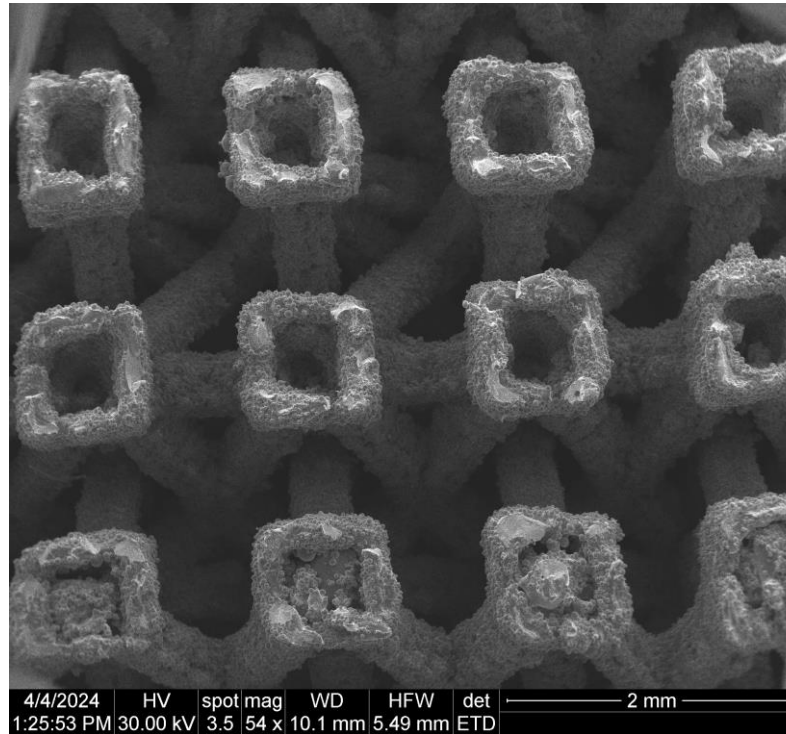
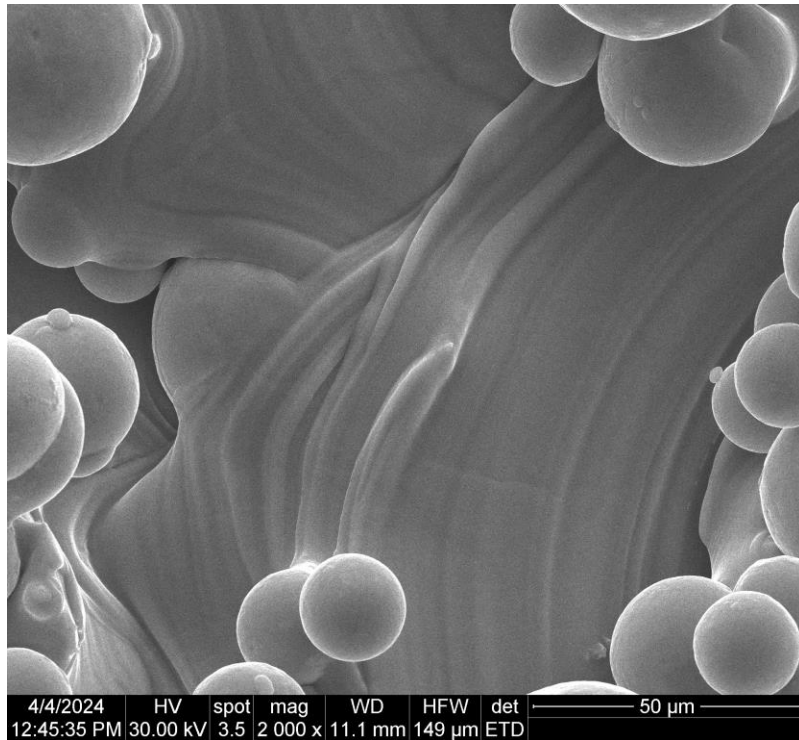


Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Sintered parts used in SLM (SELECTIVE LASER MELTING)



Ti6Al4V



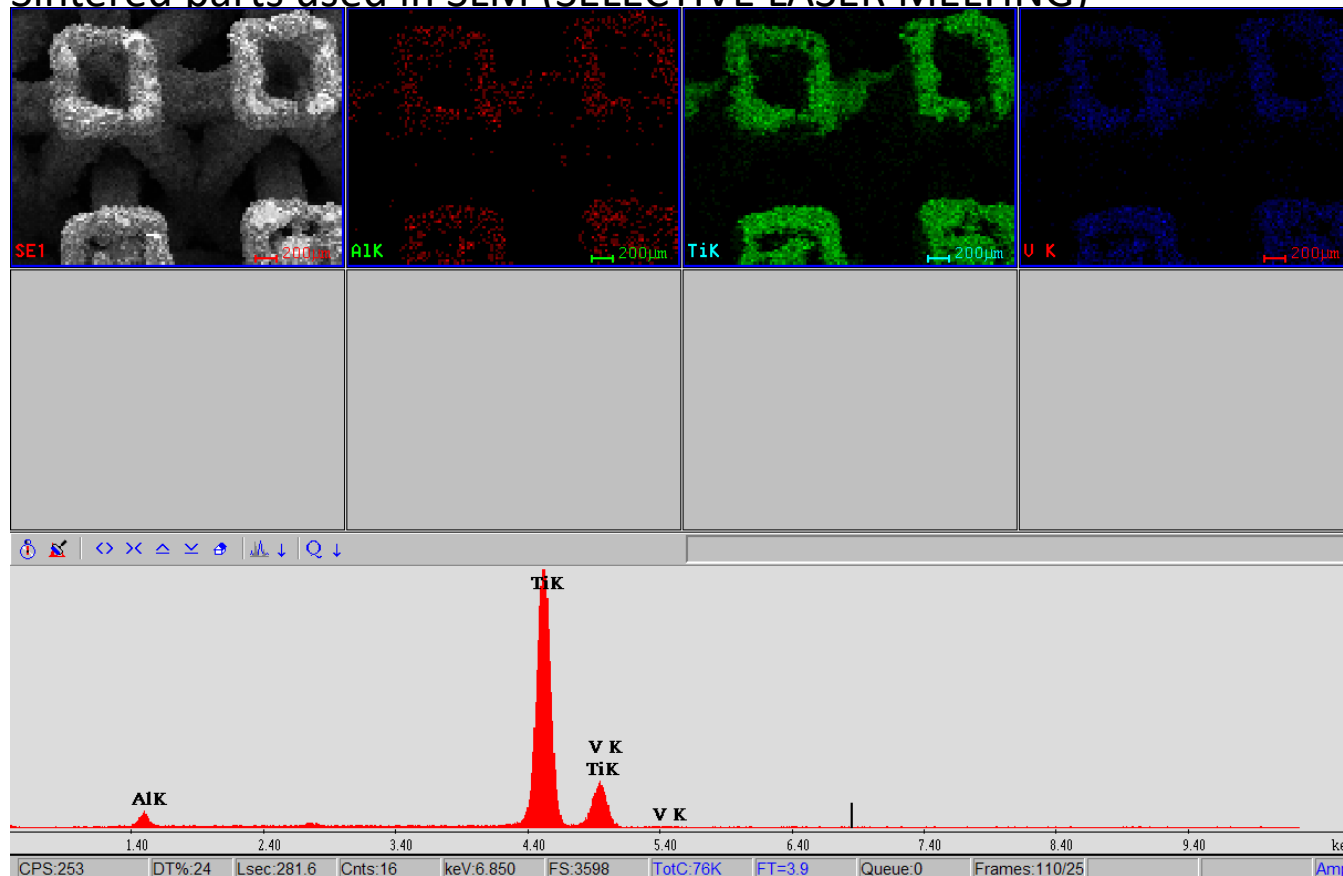


Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



Sintered parts used in SLM (SELECTIVE LASER MELTING)



Ti6Al4V





Co-funded by the
European Union

Erasmus+ Programme Key Action 2 Cooperation Partnerships
for Higher Education (KA220-HED)
Agreement number 2023-1-RO01-KA220-HED-000155412
European Network for Additive Manufacturing in Industrial Design for Ukrainian Context



AMAZE PROJECT - RESEARCH DIRECTIONS

This project will lead to the opening of new topics and research directions that will be capitalized in projects such as:

- HORIZON 2020
- CORDIS EU
- EEA GRANTS
- EUROSTARS (EUREKA)
- TEMPUSV
- ERASMUS-MUNDUS ACTION3, etc.



Thank you!

Thank you!