Promoting academia-industry alliances for R&D through collaborative and open innovation platform - All4R&D

Co-funded by the Erasmus+ Programme of the European Union
Promoting academia-industry alliances for R&D through collaborative and open innovation platform - All4R&D
ALL4R&D
NPUA Team
Current State of All4R&D Project at NPUA
National Polytechnic University of Armenia
IIAP NAS RA
Institute for Informatics and Automation Problems
WWW
Information

Consortium Members

Program countries:

1. "Ss. Cyril and Methodius" University in Skopje – UKIM, North Macedonia
2. Institute for Environment, Civil Engineering and Energy – IECE, North Macedonia
3. Ruhr University Bochum – RUB, Germany
4. University of Vaasa – UVA, Finland
5. World University Service - Austrian Committee – WUS, Austria

Partner countries:

1. University of Sarajevo – UNSA, Bosnia and Herzegovina
2. Dzemal Bijedic University of Mostar – UNMO, Bosnia and Herzegovina
3. National University of Architecture and Construction of Armenia – NUACA, Armenia
4. National Polytechnic University of Armenia – NPUA, Armenia
5. Yerevan Telecommunication Research Institute – YeTRI, Armenia
6. Institute for Informatics and Automation Problems – IIAP, Armenia
7. Winner Project d.o.o. Sarajevo – WP, Bosnia and Herzegovina
8. HP Investing Mostar – HPM, Bosnia and Herzegovina

Project Work Packages

WP 1. Kick-off seminar and analysis of R&D&I potential (15.11.2018 (M1) - 30.01.2019 (M3)) - RUB

WP 2. Capacity building of units – Cooperative R&D Units (15.01.2019 (M3) - 30.08.2021 (M22)) - UKIM+IECE

WP 3. Creating Collaborative and Open Innovation Platform (15.01.2019 (M3) - 30.10.2021 (M35)) - IECE

WP 4. Trials, Pilot & Review (15-04-2020 (M13) - 14-11-2021 (M36)) - UNSA+NPUA

WP 5. Quality control, monitoring and evaluation (15-11-2018 (M1) - 14-11-2021 (M36)) - WUS

WP 6. Communication, Dissemination and Exploitation of project results (15-11-2018 (M1) - 14-11-2021 (M36)) - UNMO+NUACA

WP 7. Project management and coordination (15-11-2018 (M1) - 14-11-2021 (M36)) - UKIM

NPUA Team of ALL4R&D Project

1. Ruben Aghgashyan , Vice-Rector of International Relations and Development Program (Responsible for WP5, WP7)
2. Gevorg Margarov, Head of Information Security and Software Development (ISSD) Department (Responsible for WP2, WP3, WP4)
3. Robert Hakobyan, Associate Professor at ISSD Dep. (Responsible for WP1, WP6)
4. Areg Grigoryan, Vice -Rector for Scientific Affairs
5. Armine Avetisyan, Head of Research & Innovation Centre
6. Siranush Manukyan, Director at the Institute of Information and Communication Technologies and Electronics (IICTE)
7. Amalya Mkhitaryan, Deputy Director at the Institute of IICTE
8. Marine Usepyan, Assistant Professor at ISSD Department
9. Ella Hovhannisyan, Assistant Professor at ISSD Department
10. Hasmik Markosyan, Assistant Professor at ISSD Department
11. Ani Manukyan, Lecturer at ISSD Department

Participation in International Events

- ✓ Kick Off Meeting + Ist MC Meeting -
  Skopje, North Macedonia, 24-25 January 2019
  Ruben Aghgashyan, Gevorg Margarov
- ✓ Ist Workshop + 2nd MC Meeting -
  Vaasa, Finland, 13-15 May 2019
  Gevorg Margarov, Robert Hakobyan,
  Marine Usepyan, Hasmik Markosyan
- ✓ 2st Workshop + 3nd MC Meeting -
  Bochum, Germany, 02-04 December 2019
  Gevorg Margarov, Amalya Mkhitaryan

Meeting of the Academic Council of the IICTE

Հայաստանի Հանրապետության
Կրթության, գիտության, մշակույթի և
սպորտի նախարարություն

Հայաստանի Ազգային
Պոլիտեխնիկական
Համալսարան (Հիմնադրամ)

Տեղեկատվական և
հեռահաղորդակցական
տեխնոլոգիաների ու էլեկտրոնիկայի
ինստիտուտ

Republic of Armenia
Ministry of Education, Science,
Culture and Sport

Armenia's National Polytechnic
University (Foundation)

Institute of Information and
Communication Technologies and
Electronics

EXTRACT

from the minutes of the 12-th meeting of the Academic Council of the
Institute of Information and Communication Technologies and Electronics
(IICTE)
Yerevan, Armenia, 01 July 2019

26 members were present according to the list of attendance

AGENDA

1. Discussion of the implementation of the Erasmus+ project "**Promoting Academia-Industry Alliances for R&D through Collaborative and Open Innovation Platform**" (**All4R&D**)

Listened to:

1. The head of the Information Security and Software Development department, professor G. Margarov, who introduced the work packages and goals of the **Project**, and presented in detail the basic procedures for the implementation of the **Project** agreed on various levels at the **National Polytechnic University of Armenia (NPUA)** and the **Institute for Informatics and Automation Problems** of the National Academy of Sciences of the Republic of Armenia **(IIAP)**. In particular, the preliminary structure of the **Cooperative Research and Development Unit** planned for the establishment and its **location, research field of the Unit**, draft list of **new equipment** necessary for the **Unit** were presented. It was noted that within the framework of the **Project IIAP** will provide the **Unit** with a high-speed communication channel for Internet access and direct access to the National and European scientific and educational networks, as well as access to supercomputer resources. It is noteworthy that the unprecedented capabilities of the **Unit** will be able to use students and teachers of not only the **IICTE** and the **NPUA** as a whole, but also other universities.

Հայաստանի Հանրապետություն,
ք. Երևան – 375009, Տերյան 105
Հեռ. (374-2) 525 - 729

105 Terian St., Yerevan-375009,
Republic of Armenia
Tel.: (374-2) 525-729
Fax: (374-2) 151-068

In discussion took part:

the head of the Economics and Management department A. Tadevosyan, the head of the Computer Systems and Networks department G. Kirakosyan, the head of the Electronic Measuring Systems and Metrology department R. Vardanyan, the head of the Information Technology and Automation department S. Simonyan and others, who supported the idea of creating the **Unit** and expressed satisfaction with progress in implementation of the Project.

Decided:

1. **Create the Cooperative Research and Development Unit in the structure of the IICTE**
2. **For placement/location of the Unit provide, fully renovate and equip with necessary furniture 5 rooms in the right side of the 3rd floor of main building of the Institute (5th building)**
3. **Approve the research field of the Unit as *Educational and Research Application of Digital Technologies***
4. **Accept the draft structure of the Unit**
5. **Accept the draft list of new equipment necessary for the Unit**

Chairman of the Council S. Manukyan

Academic Secretary Ts. Hovhannisyan

Institute of Information and Communication Technologies and Electronics

(IICTE)

Yerevan, Armenia, 01 July 2019

26 members were present according to the list of attendance

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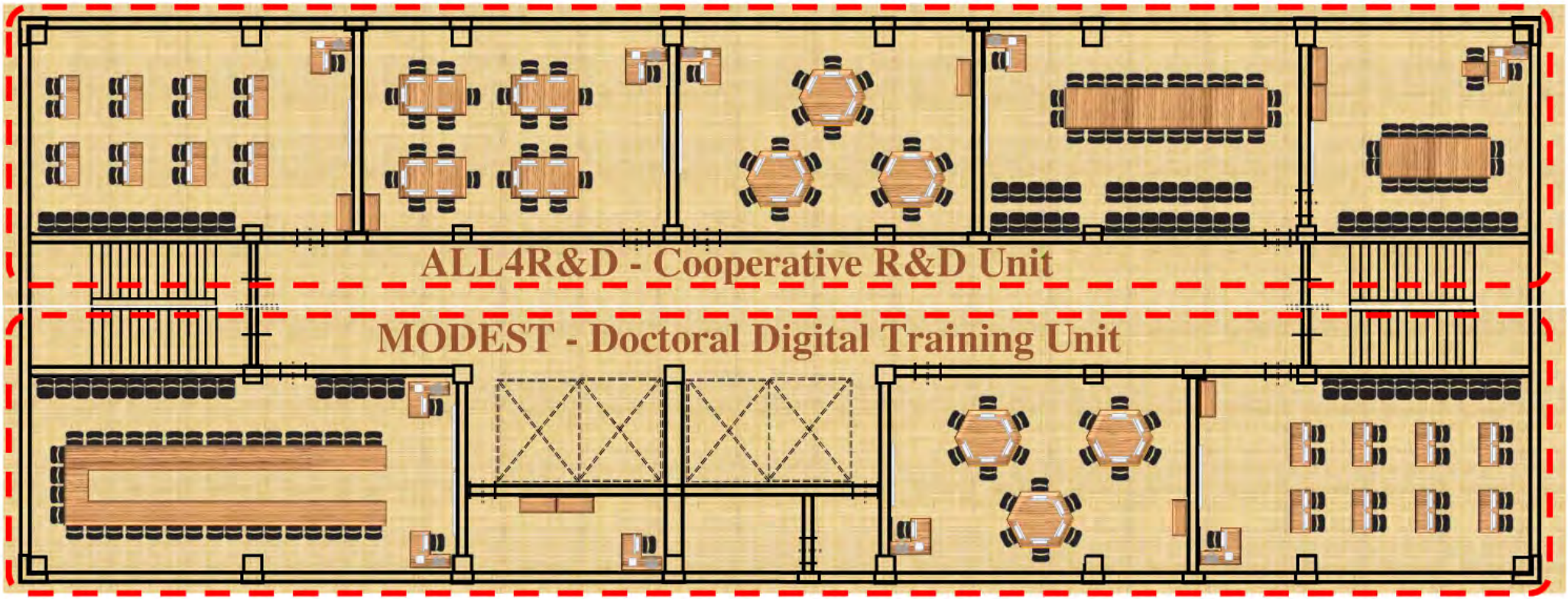
Chairman of the Council S. Manukyan

Academic Secretary Ts. Hovhannisyan

Structure of the NPUA Cooperative R&D Unit

Synergy with Erasmus+ project **MODEST (Modernization of Doctoral Education in Science and Improvement of Teaching Methodologies)**



Research field:

Educational and Research Application of Digital Technologies

Centre of Excellence in Digital Technology

Location of the Centre of Excellence in Digital Technology

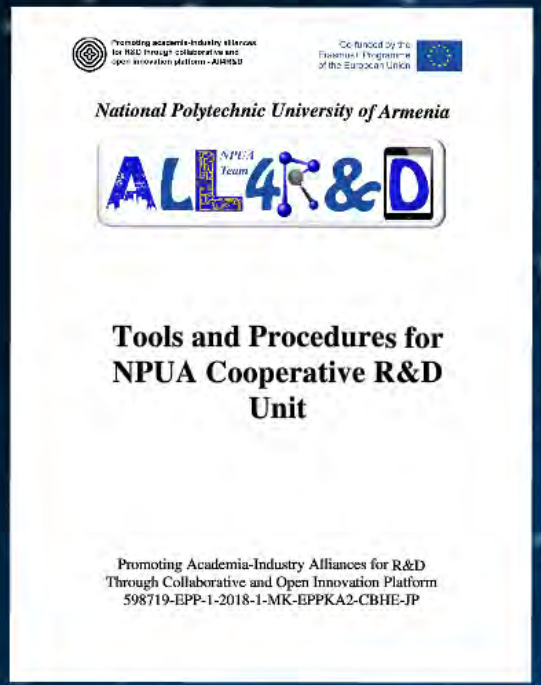
Main building of the ***Institute of Information and Communication Technologies and Electronics***

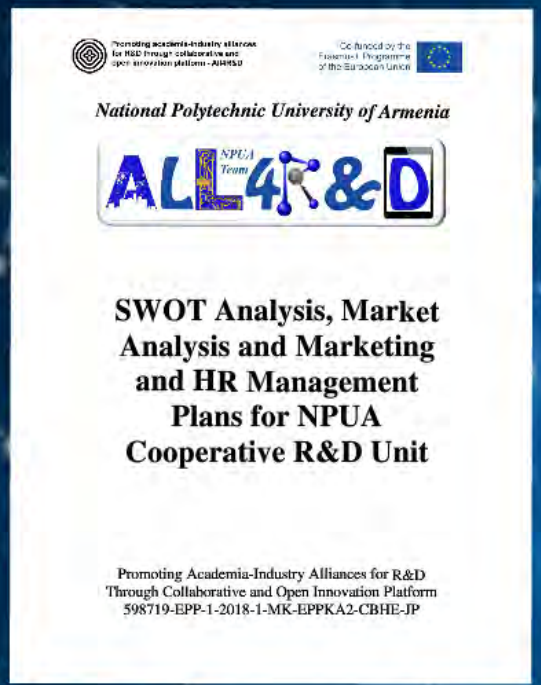
3rd floor – over 600 m²

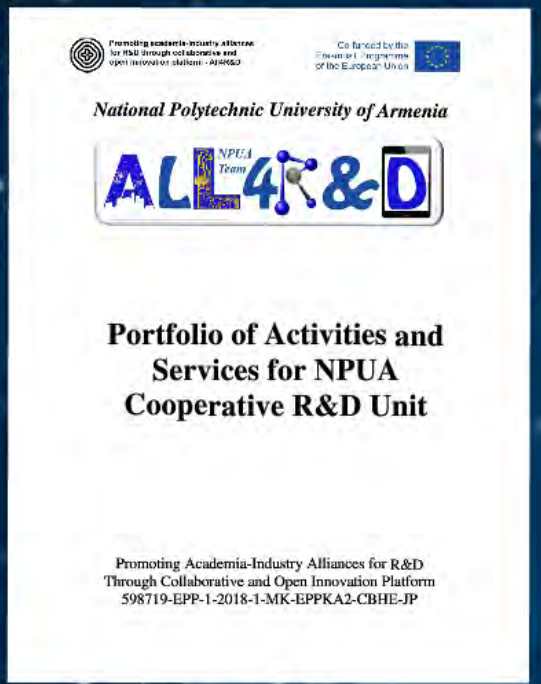
Preparation for Self Analysis

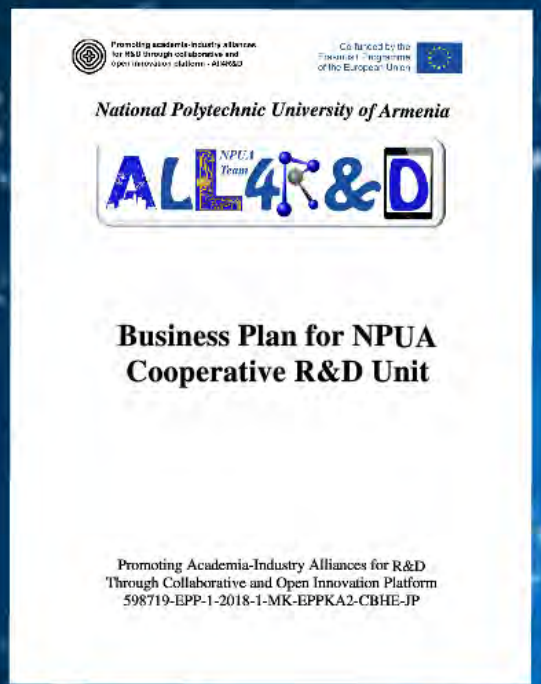
Strengths
Weaknesses
Opportunities
Threats

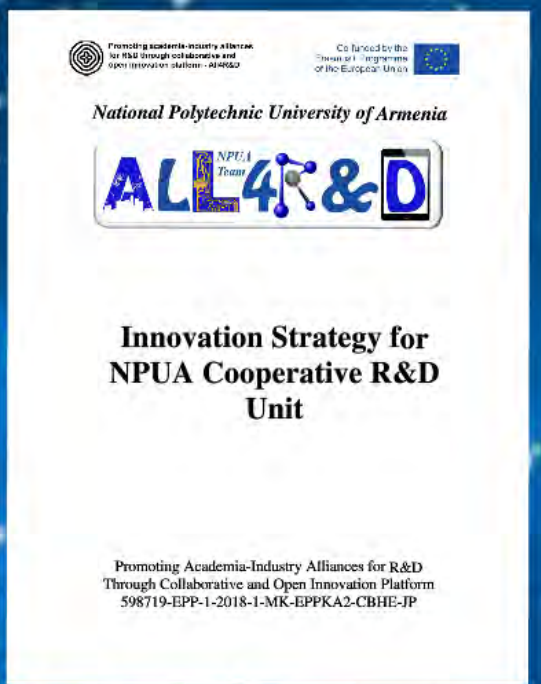
Development of Necessary Documents



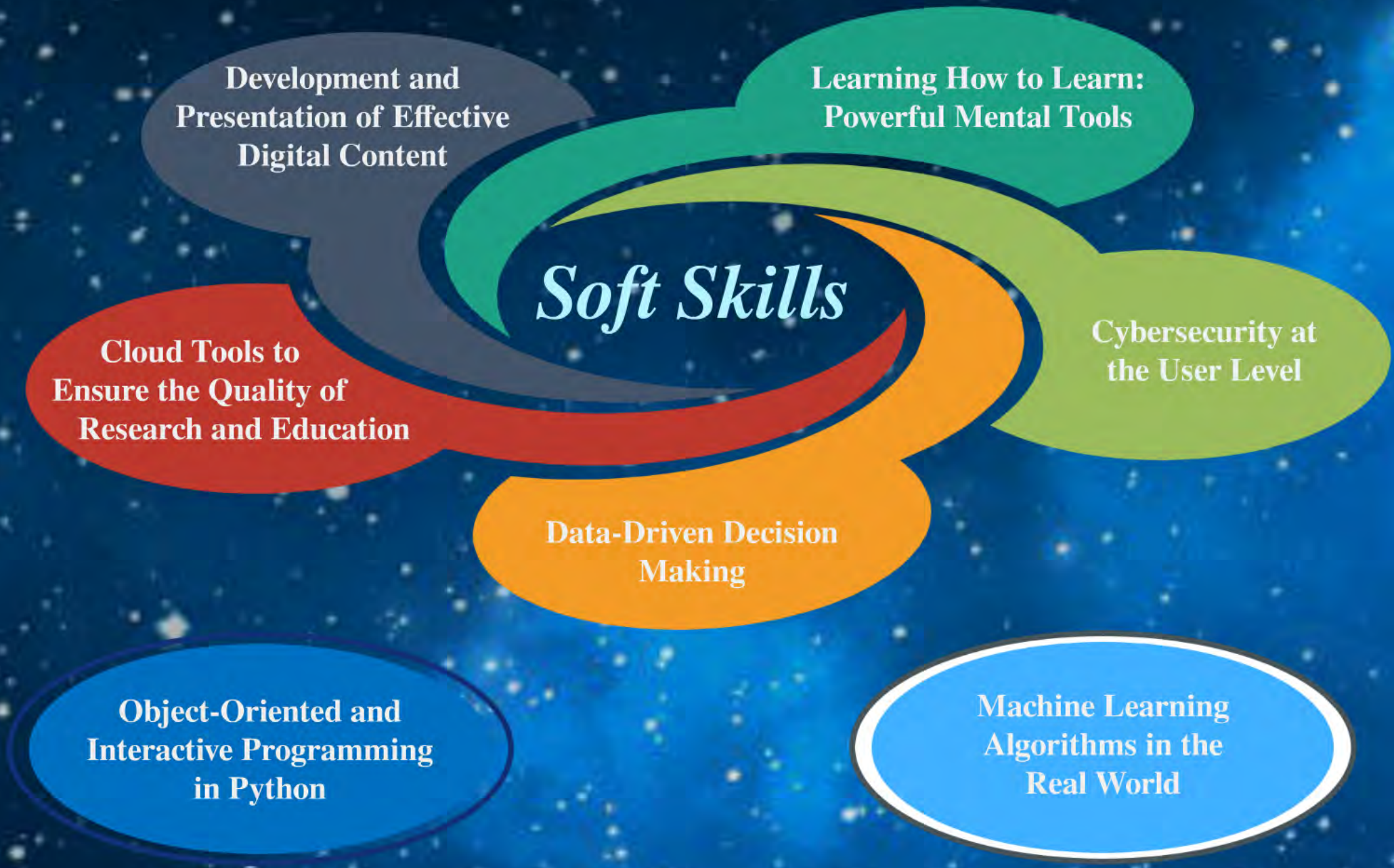






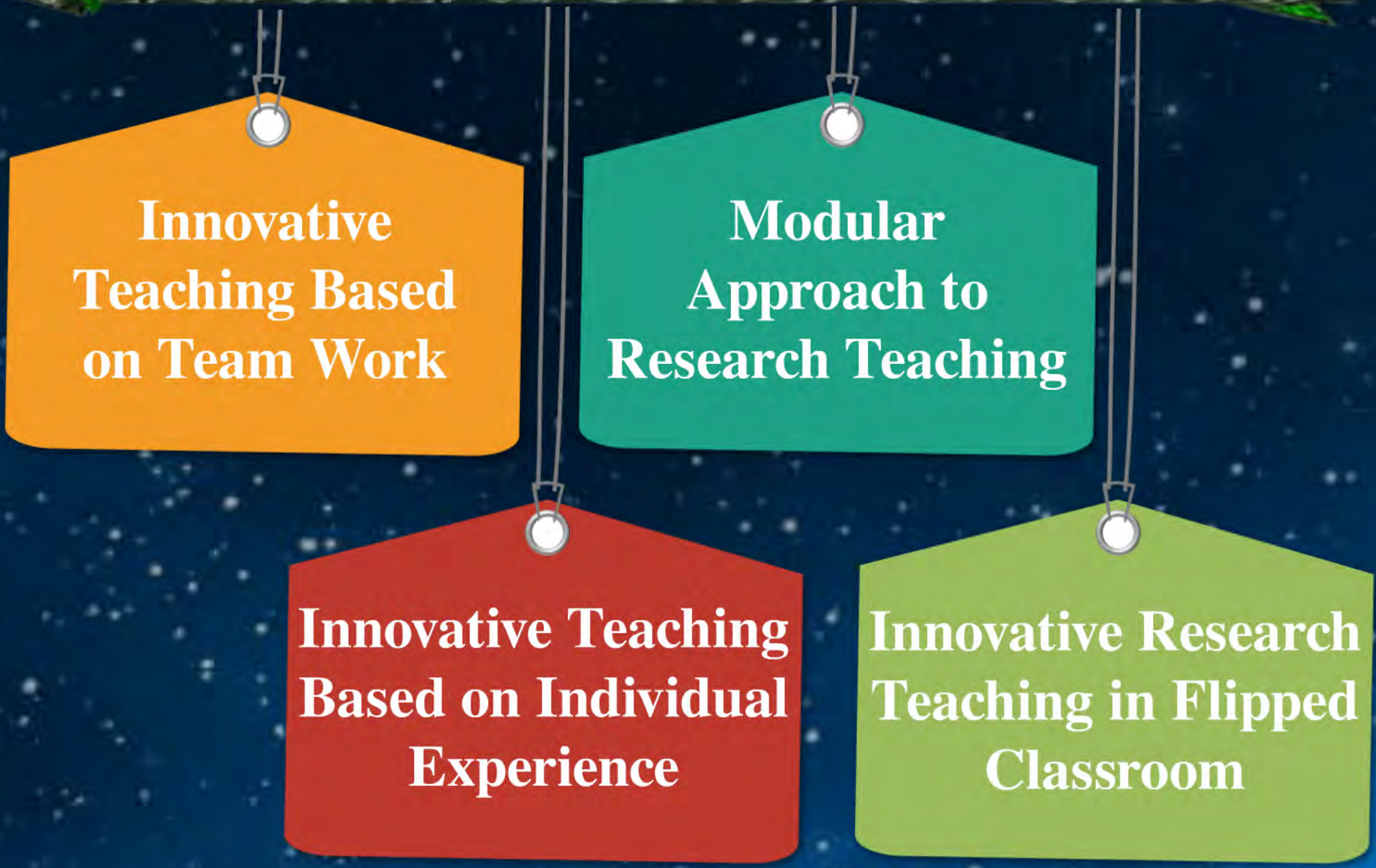


Proposal of LLL Courses

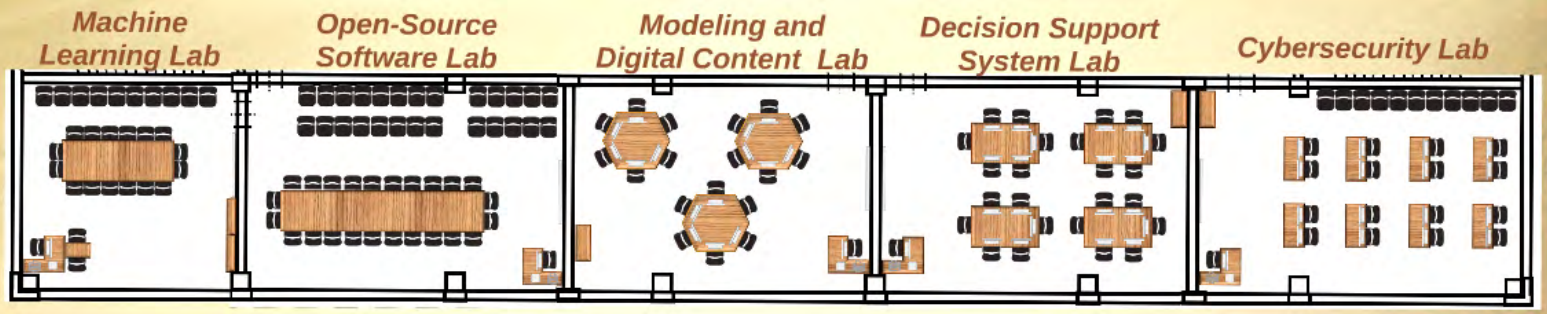


Proposal of Innovative Teaching Practices

Selected Innovative Teaching Practices



Research Projects in NPUA Cooperative R&D Unit



Current proposals:

- **Machine Learning Platform on Openstack (IIAP)**
- **Balancing IO and CPU in a Hadoop Infrastructure (IIAP)**
- **Process Modeling and Digital Content in Research and Education (Compass LLC)**
- **Decision Support System Based on Big Data Analysis (Microring LLC)**
- **Symmetric Cryptosystem with a High Level of Confidentiality and Productivity (IIAP)**

NPUA Approach to the Project Implementation

- To ensure the spread and sustainability specialized labs will be focused on joint research and development by university and industry collaboration
- To provide maximum flexibility of the structure of the Unit along with multi-level Wi-Fi network and BYOD policy, it's necessary to use an all-in-one computers, as well as projectors and printers with Wi-Fi capability, as the basis of the structure
- This will allow, if necessary, to quickly reconfigure the structure of the Unit in accordance with ongoing research projects to ensure maximum efficiency in the use of equipment and infrastructure
- With such organization of the infrastructure at all workplaces in labs of the Unit, even when users use their own devices, equal access to all internal and external resources will be ensured

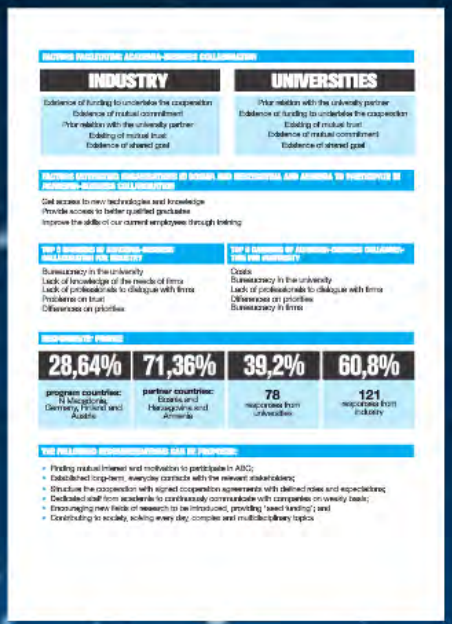
R&D Unit in the Structure of the University

The R&D Unit:

- becomes an integral part of the University structure and will maintain close cooperation with other units
- will ensure in the University continuous operational communication with the industry and carrying out research and development with the involvement of teachers, students (mainly Master and PhD) and alumni
- will implement regular education and extracurricular targeted trainings for students and alumni based on new innovative methods of active learning with the involvement of modern digital technologies

Dissemination Material Developed by NPUA Team

Dissemination Material Developed by Coordinator



NPUA Web Site of the Project (http://all4rd.polytechnic.am/)

National Erasmus+ Office in Armenia

International Projects

About Project | Consortium | Implementation & Events | News | Reports | Photo Album | Our Contacts

Co-funded by the Erasmus+ Programme of the European Union

ALL4R&D

Promoting Academia-Industry Alliances for R&D Through Collaborative and Open Innovation Platform

Innovative Character Of Project

This project is unique for various reasons.

Dissemination Events

E2 National Event – Yerevan, Armenia, 04 July 2019

Promoting academia-industry alliances for R&D through collaborative and open innovation platform - All4R&D

Co-funded by the Erasmus+ Programme of the European Union

Agenda for the E2 National Event

of the Erasmus + "*Promoting Academia-Industry Alliances for R&D through Collaborative and Open Innovation Platform*" (*All4R&D*) Project

National Polytechnic University of Armenia
Institute of Information and Communication Technologies and Electronics
Conference hall (2nd floor), Building 3, 105 Teryan str., Yerevan, Armenia
04 July 2019

13:00-13:30 Registration

13:30-14:00 Welcome addresses
- Areg Grigoryan, Vice-rector of NPUA
- Hrachya Astsatryan, Director of IIAP NAS RA
- Lana Karlova, Programme Coordinator of the Erasmus + office in Armenia

14:00-14:20 Presentation of the **All4R&D Project**, Ruben Aghgashyan

14:20-14:40 Presentation of the results from **ABC survey** analysis, Robert Hakobyan

14:40-15:00 Presentation of the **Collaborative and Open Innovation Platform**, Marine Usepyan

...e **NPUA Cooperative R&D Unit**'s Project, Gevorg...

Promoting academia-industry alliances for R&D through collaborative and open innovation platform - All4R&D

Co-funded by the Erasmus+ Programme of the European Union

2nd National Dissemination Event
ALL4R&D - Armenia

23 responses

1. Please indicate your specific expectation/s regarding the event and which presentations and experiences were the most useful for you.

23 responses

Dissemination Events

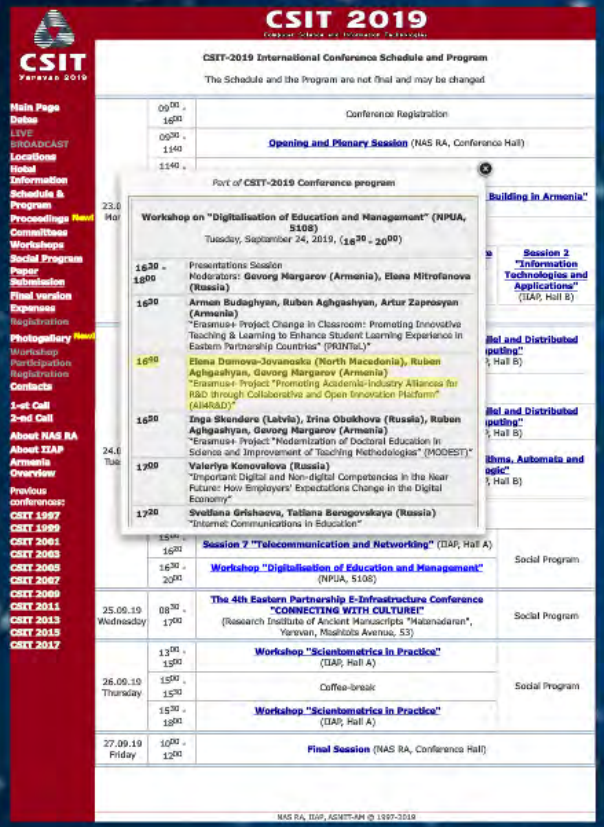
12th International Conference on Computer Science and Information Technologies (CSIT 2019) – Yerevan, Armenia, 23-27 September 2019, Workshop on "Digitalisation of Education and Management" 24 September 2019

CSIT 2019

CSIT-2019 International Conference Schedule and Program

The Schedule and the Program are not final and may be changed

23.09.19 Monday	09^{00} - 16^{00}	Conference Registration		
	09^{30} - 11^{40}	Opening and Plenary Session (NAS RA, Conference Hall)		
	11^{40} - 12^{00}	Coffee-break		
	12^{00} - 14^{00}	Round Table on "High Performance Computing Community Building in Armenia" (NAS RA, Conference Hall)		
	14^{00} - 15^{00}	Free Time / Lunch		
	15^{00} - 18^{00}	Special Session "Design and Test" (NAS RA, Conference Hall)	Session 1 "Discrete Mathematics and Combinatorial Analysis" (IIAP, Hall A)	Session 2 "Information Technologies and Applications" (IIAP, Hall B)
	20^{00}	Social Program and Welcome Reception		
24.09.19 Tuesday	09^{30} - 11^{30}	Session 3 "Artificial Intelligence: Machine Learning and Pattern Recognition" (IIAP, Hall A)	Session 4 "Parallel and Distributed Computing" (IIAP, Hall B)	
	11^{30} - 12^{00}	Coffee-break		
	12^{00} - 12^{40}	Session 3 "Artificial Intelligence: Machine Learning and Pattern Recognition" (IIAP, Hall A)	Session 4 "Parallel and Distributed Computing" (IIAP, Hall B)	
	12^{40} - 13^{00}		Session 6 "Algorithms, Automata and Logic" (IIAP, Hall B)	
	13^{00} - 14^{00}	Session 5 "Information Theory" (IIAP, Hall A)		
	14^{00} - 15^{00}	Free Time / Lunch		
	15^{00} - 16^{20}	Session 7 "Telecommunication and Networking" (IIAP, Hall A)		Social Program
	16^{30} - 20^{00}	Workshop "Digitalisation of Education and Management" (NPUA, 5108)		
25.09.19 Wednesday	08^{30} - 17^{00}	The 4th Eastern Partnership E-Infrastructure Conference "CONNECTING WITH CULTURE!" (Research Institute of Ancient Manuscripts "Matenadaran", Yerevan, Mashtots Avenue, 53)		Social Program
26.09.19 Thursday	13^{00} - 15^{00}	Workshop "Scientometrics in Practice" (IIAP, Hall A)		Social Program
	15^{00} - 15^{30}	Coffee-break		
	15^{30} - 18^{00}	Workshop "Scientometrics in Practice" (IIAP, Hall A)		
27.09.19 Friday	10^{00} - 12^{00}	Final Session (NAS RA, Conference Hall)		



CSIT 2019

CSIT-2019 International Conference Schedule and Program

The Schedule and the Program are not final and may be changed

Part of CSIT-2019 Conference program

Workshop on "Digitalisation of Education and Management" (NPUA, 5108)

Tuesday, September 24, 2019, (16^{30} - 20^{00})

16^{30} - 18^{00}	Presentations Session Moderators: Gevorg Margarov (Armenia), Elena Mitrofanova (Russia)
16^{30}	Armen Budaghyan, Ruben Aghgashyan, Artur Zaprosyan (Armenia) "Erasmus+ Project Change in Classroom: Promoting Innovative Teaching & Learning to Enhance Student Learning Experience in Eastern Partnership Countries" (PRINTeL)"
16^{50}	Elena Dumova-Jovanoska (North Macedonia), Ruben Aghgashyan, Gevorg Margarov (Armenia) "Erasmus+ Project "Promoting Academia-Industry Alliances for R&D through Collaborative and Open Innovation Platform" (AII4R&D)"
16^{50}	Inga Skendere (Latvia), Irina Obukhova (Russia), Ruben Aghgashyan, Gevorg Margarov (Armenia) "Erasmus+ Project "Modernization of Doctoral Education in Science and Improvement of Teaching Methodologies" (MODEST)"
17^{00}	Valeriya Konovalova (Russia) "Important Digital and Non-digital Competencies in the Near Future: How Employers' Expectations Change in the Digital Economy"
17^{20}	Svetlana Grishaeva, Tatiana Beregovskaya (Russia) "Internet Communications in Education"

CSIT CONFERENCE
Tuesday, September 24, 2019

16^{30}-20^{00} **Workshop on "Digitalisation of Education and Management"**

16^{30}-18^{00} Presentations Session (NPUA, 5108)

Moderators: Gevorg Margarov, Elena Mitrofanova

16^{30} Armen Budaghyan, Ruben Aghgashyan, Artur Zaprosyan (Armenia) "Erasmus+ Project "Change in Classroom: Promoting Innovative Teaching & Learning to Enhance Student Learning Experience in Eastern Partnership Countries" (PRINTeL)"

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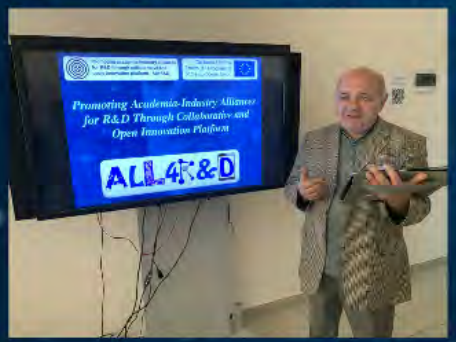
17^{00} Valeriya Konovalova (Russia) "Important Digital and Non-digital Competencies in the Near Future: How Employers' Expectations Change in the Digital Economy"

17^{20} Svetlana Grishaeva, Tatiana Beregovskaya (Russia) "Internet Communications in Education"

17^{40} Arusyak Harutyunyan, Narine Manukyan (Armenia) "First Initiative of Higher Education Digitization in Armenia: Issues and Challenges



Dissemination Events

NPUA Annual Conference – Yerevan, Armenia, 18-22 November 2019, Section "Methodical and Methodological Issues of Engineering Education" 20 November 2019

ՀԱՅԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ
ԿՐԹՈՒԹՅԱՆ, ԳԻՏՈՒԹՅԱՆ, ՄՇԱԿՈՒՅԹԻ ԵՎ ՍՊՈՐՏԻ
ՆԱԽԱՐԱՐՈՒԹՅՈՒՆ
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նոյեմբերի 18-22-ը

ՃԱՐՏԱՐԱԳԻՏԱԿԱՆ ԿՐԹՈՒԹՅԱՆ ՄԵԹՈԴԱԿԱՆ ԵՎ ՄԵԹՈԴԱԲԱՆԱԿԱՆ ՀԱՐՑԵՐ

Նախագահ՝ *պ.գ.թ., դոց. Ռ. Աղգաշյան*

նոյեմբերի 20-ին, ժամը 14:30, 17-րդ մասնաշենք,
Ա. Մարգարյանի անվ. դահլիճ

Տեղեկատվական տեխնոլոգիաների կիրառման օրինակներ բարձրագույն կրթության ոլորտում
պ.գ.թ., դոց. Մ. Նաջարյան (Վանաձոր)

Դասավանդում/ուսումնառություն գործընթացների մեթոդաբանական ժամանակակից մոտեցումները
պ.գ.թ., դոց. Ռ. Աղգաշյան, բ.գ.թ. Ա. Զապրոսյան

Գիտական հետազոտությունների թվայնացման մեթոդաբանական արդի մոտեցումները
պ.գ.թ., դոց. Ռ. Աղգաշյան, պ.գ.թ., պրոֆ. Գ. Մարգարով

Ասպիրանտական կրթության կատարելագործումը թվային տեխնո-

Dissemination Events

The project was presented and discussed at various levels in the NPUA, in particular at:

- **NPUA Board of Trustees meeting,**
- **NPUA Academic Council meeting,**
- **NPUA Rectorate meetings,**
- **IICTE Sponsors Board meeting,**
- **IICTE Academic Council meeting,**
- **ISSD department workshops and tranings.**

Thank you
for your patience
and attention !!!
QUESTIONS ?