



# Final event of the EC Tempus Project – MACH "Introduction of a New Master's program and Doctoral courses in Mechatronics in Uzbekistan" for November 1 – 4, 2016

**Participants:** Project representatives from KTH, JKU, KUL and Uzbek partners, EU Delegation in Uzbekistan, NCU, MHSSE and Uzbek industry partners

Day 0. October 30/31 – Arrival of European partners (from KTH, JKU and KUL) to Tashkent and departure to Bukhara

#### Day 1. November 1. Venue: Bukhara engineering technology institute

Time	Activity	Who
09:00 - 09:30	Registration	
09:30 - 09:45	Welcome speech	Mr. Ulugbek Mukhammedhanov -
		Rector of BTI – Uzbekistan
09:45 - 10:00	Greetings from MHSSE	Representative of MHSSE (t.b.c)
10:00 - 10:15	E+ programme news	Mrs. Aziza Abdurakhmanova – NEO
		coordinator
10:15 – 10:35	Lessons learned and recommendations for Uzbek partners	Mr. Martin Edin Grimheden – grant-
	for further capacity development in mechatronics	holder/project coordinator, KTH -
		Sweden
10:35 – 10:55	Achieved results and outcomes of MACH project	Mr. Sulaymon Eshkabilov – national
		coordinator, TARI - Uzbekistan
10:55 – 11:15	Coffee break	
11:15 – 11:35	Recommendations for development of Mechatronics	Mr. Rudolf Scheidl – JKU, Austria
	program in Uzbekistan	
11:35 – 11:55	How to develop doctoral programs in engineering in the	Mr. Farid Al-Bender – KUL, Belgium
	example of Mechatronics at KUL	
11:55 – 12:30	Discussions	
12:30 - 14:00	Lunch	





Industry funded projects at JKU in the example of Master	Mr. Andreas Muller – JKU, Austria
and Doctoral projects within Robotics domain	
Industry funded projects at KTH in the example of Master	Mr. Carl During – KTH, Sweden
and Doctoral projects within Mechatronics domain	
Overview of Industry funded projects around	Mr. Farid Al-Bender – KUL, Belgium
Mechatronics at KUL (in the example of Master and	
Doctoral projects)	
Achieved results and future plans for BTI	Mr. Karimjon Gafurov – project
	coordinator from BTI - Uzbekistan
Coffee break	
Achieved results and future plans for NMI	Mr. Tulkin Normurodov – project
	coordinator from NMI - Uzbekistan
Achieved results and future plans for TTPU	Mr. Farkhad Niyazov – project
	coordinator from TTPU - Uzbekistan
Achieved results and future plans for FPI	Mr. Eldor Mamurov – project
	coordinator from FPI - Uzbekistan
Developed course materials at TARI	Mr. Tohirjon Bobojonov
	Mr. Elyor Madirimov
	Mr. Dilmurad Saidov
	Mr. Davron Riskaliev
	Mr. Sulaymon Eshkabilov
Discussions	
Dinner	
	and Doctoral projects within Robotics domain  Industry funded projects at KTH in the example of Master and Doctoral projects within Mechatronics domain  Overview of Industry funded projects around Mechatronics at KUL (in the example of Master and Doctoral projects)  Achieved results and future plans for BTI  Coffee break  Achieved results and future plans for NMI  Achieved results and future plans for TTPU  Achieved results and future plans for FPI  Developed course materials at TARI  Discussions





### Day 2. November 2. Venue: Bukhara engineering technology institute – Mechatronics Lab

Project evaluation committee: KTH, JKU, KUL and MHSSE

Time	Activity	Who
09:00 - 09:30	Team projects of BTI team	BTI team members
09:30 - 10:00	Team projects of NMI team	NMI team members
10:00 - 10:30	Team projects of TPU team	TPU team members
10:30 - 11:00	Team projects of FPI team	FPI team members
11:00 – 11:15	Coffee break	
11:15 – 11:45	Team projects of TARI team	TARI team members
11:45 – 12:25	Evaluation and award ceremony of team projects*	KTH/JKU/KUL
12:30 – 14:00	Lunch	

<sup>\*</sup>Evaluation of each project with a score sheet

#### Parallel workshops and seminars

**Workshop** # 1. Curriculum development aspects of Mechatronics program in examples, and Student projects and research aspects of Mechatronics in examples

Time	Activity	Who
14:00 - 14:40	Presentation 1. Mechatronic Aspects in the Development of a	Mr. Florian Messner – JKU,
	Fast Switching Valve	Austria
14:40 - 15:20	Presentation 2. Mechatronics at the Department of Mechanical	Mr. Farid Al-Bender – KUL,
	Engineering, KU Leuven, and Master/doctoral programs/curricula	Belgium
15:10 – 15:40	Coffee Break	
15:40 - 16:00	Presentation 3. Development trends and challenges in	Mr. Martin Edin Grimheden /
	Mechatronics Master/doctoral programs/curricula at KTH	Mr. Carl During – KTH, Sweden
16:00 – 17:00	Discussions	





17:00 - 17:30	Summary of the day	
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## **Workshop # 2.** Seminars on modeling issues

Time	Activity	Who
14:00 – 15:10	Modeling of non-linear systems: in the example of friction	Mr. Farid Al-Bender – KUL,
		Belgium
15:10 – 16:20	Systematic approach in robotic system design	Mr. Andreas Muller – JKU, Austria
16:20 - 16:30	Coffee break	
16:30 – 17:30	Presentation 3 - Micro-motion control	Mr. Carl During – KTH, Sweden
17:30 - 18:00	Research cases in mechatronics: towards the Mechatronics	Mr. Farid Al-Bender – KUL,
	Compiler	Belgium
18:00 - 18:30	Discussions	

## **Workshop** # **3.** Cooperation opportunities in the framework of Erasmus+Call - 2017

Time	Activity	Who
14:00 - 15:20	CBHE- Capacity Building in Higher Education, Credit	Mrs. Aziza Abdurakhmanova –
	Mobility, Joint Master Degrees, Jean Monnet projects) and	NEO coordinator
	MSCA - Maria Sklodowska-Curie programme	
15:20 – 15:30	Coffee Break	
15:30 – 15:45	Best practice example of Curriculum development project	Mr. Sulaymon Eshkabilov
15:45 – 16:40	Application preparation aspects	Speaker (t.b.c)
16:40 - 17:00	Discussions	





## Day 3. November 3. Round table discussions on Development trends and future of Mechatronics from various aspects

Time	Activity	Who
09:00 - 09:10	Introduction to round-table discussions and presentation of	Facilitator – Mr. Martin Edin
	key points	Grimheden
09:10 - 09:30	Visions on mechatronics of today and tomorrow (JKU)	Mr. Rudolf Scheidl/Mr. Andreas
		Muller
09:30 - 09:50	Visions on mechatronics of today and tomorrow (KTH)	Mr. Martin Edin Grimheden/Mr.
		Carl During
09:50 - 10:10	Visions on mechatronics of today and tomorrow (KUL)	Mr. Farid Al-Bender
10:10 - 10:30	Visions on mechatronics development trends and applications	Mr. Sulaymon Eshkabilov
	of today and tomorrow in Uzbekistan	
10:30 - 10:45	Coffee break	
10:45 - 12:30	Discussions	