

Conference schedule

Tuesday, 6th of June, 2023	
Welcome Party, University House	19.30-22.00
Wednesday, 7th of June, 2023	
Registration, Hall “Mihai I of Romania”, University of Craiova	08.30 - 09.30
Opening ceremony	09.30 - 10.00
The ceremony of awarding the title of Doctor Honoris Causa to Giuseppe Carbone, Hall “Mihai I of Romania”, University of Craiova	10.00 - 11.00
Coffee break	11.00 – 11.30
<u>Keynote presentation:</u> <i>Recent Advances in Robotic Surgery for Cancer Treatment</i>	11.30 - 12.10
Doina Pisla, Technical University of Cluj-Napoca, Romania	
<u>Keynote presentation:</u> <i>Challenges in Mechanism Design for Robotic Systems as Medical Devices in Motion Assistance</i>	12.10 - 12.50
Marco Ceccarelli, University of Rome Tor Vergata, Italy	
<u>Keynote presentation:</u> <i>Enabling Technology for Safe Robot-assisted Retinal Surgery</i>	12.50 - 13.30
Iulian Iordachita, Johns Hopkins University, Baltimore, USA	
Lunch, University House	14.00 - 15.30

Technical sections		
The University House		
SECTION I. SURGICAL ROBOTICS		
	15.30-17.00	
1.	SOFT ROBOT ASSISTANCE FOR TUMOR BIOPSY AND ABLATION IN MAGNETIC RESONANCE IMAGING	15.30-15.45
	<i>Kira Schlockermann, Jan Peters, Bennet Hensen, J. Joaquin Löning C., Frank Wacker, Annika Raatz</i>	
2.	WORKSPACE-AWARE PLANNING OF A SURGICAL ROBOT MOUNTING IN VIRTUAL REALITY	15.45-16.00
	<i>Murali Karnam, Marek Zelechowski, Philippe Cattin, Georg Rauter, Nicolas Gerig</i>	
3.	STRUCTURAL STUDY OF A ROBOTIC SYSTEM FOR SILS SURGERY	16.00-16.15
	<i>Doina Pisla, Nicolae Crisan, Ionut Ulinici, Bogdan Gherman, Corina Radu, Paul Tucan, Calin Vaida</i>	
4.	DESIGN AND FUNCTIONAL ANALYSIS OF A NEW PARALLEL MODULAR ROBOTIC SYSTEM FOR SINGLE INCISION LAPAROSCOPIC SURGERY	16.15-16.30
	<i>Doina Pisla, Iulia Andras, Alexandru-Vasile PUSCA, Corina Radu, Bogdan Gherman, Nicolae Crisan, Calin Vaida, Paul Tucan, Nadim Al Hajjar</i>	
5.	DESIGN AND DEVELOPMENT OF A 6-DEGREE-OF-FREEDOM ROBOTIC DEVICE FOR COCHLEAR IMPLANTATION SURGERY	16.30-16.45
	<i>Xiangyu An, Mingfeng Wang</i>	
6.	FUZZY LOGIC SYSTEMS: FROM WISDOMOFAGE MENTORING PLATFORM TO MEDICAL ROBOTS	16.45-17.00
	<i>Gabriela Rus, Bogdan Gherman, Laurentiu Nae, Calin Vaida, Adrian Pisla, Eduard Oprea, Doina PISLA, Tiberiu Alexandru Antal</i>	
Cofee break		17.00-17.30

SECTION II. DESIGN OF MEDICAL DEVICES		
		17.30-19.15
1.	GRIP-TYPE PSEUDO FORCE DISPLAY WITH NORMAL AND TANGENTIAL SKIN STIMULATION	17.30-17.45
	<i>Mayuka Kojima, Shunsuke Yoshimoto, Akio Yamamoto</i>	
2.	DESIGN OF A SURGICAL STAPLER FOR LAPAROSCOPIC COLECTOMY	17.45-18.00
	<i>Dhruva Khanzode, Ranjan Jha, Alexandra Thomieres, Emilie Duchalais, Damien Chablat</i>	
3.	AN EXPERIMENTAL CHARACTERIZATION OF RIBOLUTION RIB FRACTURE FIXATOR	18.00-18.15
	<i>Marco Ceccarelli, Vincenzo Ambrogi, Matteo Russo, Elaisa Consalvo</i>	
4.	PRE-CLINICAL STUDY OF A CUSTOMIZED REHABILITATION DEVICE PROTOTYPE FOR PATIENTS WITH IMMOBILITY SYNDROME	18.15-18.30
	<i>Tomás Ribeiro, Luís Roseiro, Marco Silva, Frederico Santos, Rafael Bernardes, Remy Cardoso, Vítor Parola, Hugo Neves, Arménio Cruz, William Xavier, Ruben Durães, Cândida Malça</i>	
5.	A STEP TOWARDS OBTAINING AN INNOVATIVE SMARTBATH FOR SHOWER IN BED OF DISABLED AND ELDER'S PEOPLE	18.30-18.45
	<i>Karolína Bezerra, José Machado, Vítor Carvalho, Demétrio Matos, Filomena Soares</i>	
6.	LAB EXPERIENCES FOR A DRIVER MONITORING SYSTEM	18.45-19.00
	<i>María Garrosa, Marco Ceccarelli, Matteo Russo, Daniele Cafolla</i>	
7.	WIRE ACTUATION MECHANISM FOR WRIST EXOSKELETON	19.00-19.15
	<i>Narcis-Gratian Craciun, Erwin-Christian Lovasz</i>	
Dinner, University House		20.00

Thursday, 8th of June, 2023		
SECTION III. EXOSKELETONS AND PROSTHESES		09.00-11.15
III.1. Exoskeletons and prostheses		09.00-10.15
1.	DESIGN AND GAIT CONTROL OF AN ACTIVE LOWER LIMB EXOSKELETON FOR WALKING ASSISTANCE	09.00-09.15
	<i>Lingzhou Yu, Harun Leto, André d'Elbreil, Shaoping Bai</i>	
2.	PRELIMINARY DESIGN OF A NOVEL ULRD UPPER LIMB REHABILITATION DEVICE	09.15-09.30
	<i>Luis D. Filomeno Amador, Eduardo Castillo, Giuseppe Carbone</i>	
3.	DEVELOPMENT OF A PASSIVE ANKLE-FOOT EXOSKELETON FOR VARIABLE FORCE RESISTANCE TRAINING	09.30-9.45
	<i>Avinash S Pramod, Poongavanam Palani, Santhakumar Mohan, Asokan Thondiyath</i>	
4.	DESIGN AND PERFORMANCE ANALYSIS OF ANKLE JOINT EXOSKELETON	09.45-10.00
	<i>Nursultan Zhetenbayev, Marco Ceccarelli, Gani Balbayev</i>	
5.	A LEG EXOSKELETON MECHANISM FOR HUMAN WALKING ASSISTANCE	10.00-10.15
	<i>Cristian Copilusi, Marco Ceccarelli, Sorin Dumitru, Alexandru Margine, Ionut Geonea</i>	
III.2. Exoskeletons and prostheses		10.15-11.15
1.	DYNAMIC ANALYSIS AND STRUCTURAL OPTIMIZATION OF A NEW EXOSKELETON PROTOTYPE FOR LOWER LIMB REHABILITATION	10.15-10.30
	<i>Ionut Geonea, Cristian Copilusi, Alexandru Margine, Sorin Dumitru, Adrian Sorin Rosca, Daniela Tarnita</i>	

2.	DEVELOPMENTS IN THE DESIGN OF AN ANKLE REHABILITATION PLATFORM	10.30-10.45
	<i>Ioan DOROFTEI, Cristina-Magda CAZACU</i>	
3.	EFFECT OF A PASSIVE SHOULDER SUPPORT EXOSKELETON ON FATIGUE DURING WORKING WITH ARMS OVER SHOULDER LEVEL	10.45-11.00
	<i>Annina Brunner, Rachel van Sluijs, Volker Bartenbach, Dario Bee, Melanie Kos, Lijin Aryananda, Olivier Lambercy</i>	
4.	VIRTUAL PROTOTYPING OF A LEG EXOSKELETON FOR HUMAN PERSONS WITH NEUROMOTOR DEFICIENCIES	11.00-11.15
	<i>Sorin Dumitru, Cristian Copilusi, Ionut Geonea, Leonard Gherghe-Ciurezu, Nicolae Dumitru</i>	
Cofee break		11.15-11.45
SECTION IV. BIOMECHANICS		11.45-13.45
IV.1 Biomechanics		11.45-12.45
1.	EXPERIMENTAL TESTING PROCEDURE FOR VALIDATING A PASSIVE UPPER LIMB EXOSKELETON	11.45-12.00
	<i>Jhon Freddy Rodriguez Leon, Francesco Lago, Francesco Lamonaca, Juan Alejandro Flores Campos, Giuseppe Carbone</i>	
2.	A NEW BIO-INSPIRED JOINT WITH VARIABLE STIFFNESS	12.00-12.15
	<i>Philippe Wenger, Anick Abourachid, Christine Chevallereau</i>	
3.	PARAMETRIC IDENTIFICATION OF POSTURAL CONTROL MODELS IN HUMANS CHALLENGED BY IMPULSE-CONTROLLED PERTURBATIONS	12.15-12.30
	<i>Carlo De Benedictis, Maria Paterna, Andrea Berettoni, Carlo Ferraresi</i>	

4.	NONLINEAR DYNAMICS USED TO STUDY THE INFLUENCE OF TREADMILL SPEED AND INCLINE ON THE HUMAN HIP STABILITY	12.30-12.45
	<i>Daniela Tarnita, Ionut Geonea, Marius Georgescu, Dan Marghitu, Gabriela Marinache, Danut-Nicolae Tarnita</i>	
IV.2. Biomechanics		12.45-13.45
1.	NUMERICAL ANALYSIS OF A TESTBED USED FOR LIVER TISSUE OF BIOMECHANICAL BEHAVIOR	12.45-13.00
	<i>Arturo Yishai Prieto-Vázquez, Luis Ángel Guerrero-Hernández, Erick Gómez-Apo, Christopher René Torres-San Miguel</i>	
2.	EXPERIMENTAL EVALUATION OF RESPIRATION IN PATIENTS UNDERGOING THORACIC SURGERY	13.00-13.15
	<i>Marco Ceccarelli, Vincenzo Ambrogì, Matteo Russo, Manuel d'Onofrio, Cristiano Casciani</i>	
3.	DYNAMIC FUNCTIONAL STABILITY ANALYSIS OF GAIT AFTER ANTERIOR CRUCIATE LIGAMENT (ACL) RECONSTRUCTION	13.15-13.30
	<i>Mihnea Marin, Dorin Popescu, Alin Horia Burileanu, Ligia Rusu</i>	
4.	THE USE OF ACCELEROMETERS TO TRACK CHANGES IN COBB ANGLES DURING SCOLIOSIS REHABILITATION EXERCISES	13.30-13.45
	<i>Ana-Maria Vutan, Corina Gruescu, Carmen Sticlaru, Erwin-Christian Lovasz</i>	
Lunch		13.45-15.00
Meeting of the Steering Committee		
SECTION V. KINEMATICS AND DYNAMICS FOR MEDICAL ROBOTICS		15.00-17.00
V.1. Kinematics and dynamics for medical robotics		15.00-16.00
1.	FORWARD KINEMATIC MODEL RESOLUTION OF A HYBRID HAPTIC DEVICE USING AN INERTIAL MEASUREMENT UNIT	15.00-15.15

	<i>Majdi Meskini, Housseem Saafi, Abdelfattah Mlika, Marc Arsicault, Juan Sandoval, Amine Laribi</i>	
2.	INFLUENCE ON THE VISUAL FEEDBACK ON SEVERAL BALANCE ASSESSMENT INDICATORS MEASURED IN A BALANCE REHABILITATION MACHINE <i>Ruben Valenzuela Montes, Javier Corral, Mikel Diez, Fran Campa, Saioa Herrero Villalibre, Erik Macho, Charles Pinto</i>	15.15-15.30
3.	KINEMATIC AND DYNAMIC ANALYSIS OF A NEW MECHANISM FOR ASSISTING HUMAN LOCOMOTION <i>Ionut Geonea, Nicolae Dumitru, Marco Ceccarelli, Daniela Tarnita</i>	15.30-15.45
4.	THE FRAMEWORK FOR MOBILE ROBOT TASK PLANNING BASED ON THE OPTIMAL MANUFACTURING SCHEDULE <i>Aleksandar Jokic, Milica Petrović, Zoran Miljković</i>	15.45-16.00
V.2. Kinematics and dynamics for medical robotics		16.00-17.00
1.	PERIODIC ACTUATIONS OF TWO-LINK PLANAR ROBOT ARM WITH REVOLUTE AND PRISMATIC JOINTS <i>Jing Zhao, Daniela Tarnita, Dan B. Marghitu</i>	16.00-16.15
2.	MECHANISM DESIGN AND INVERSE KINEMATICS OF A 5-DOF MEDICAL ASSISTIVE MANIPULATOR <i>Anton Antonov, Alexey Fomin</i>	16.15-16.30
3.	DESIGN AND OPERATION OF A ROBOTIZED BED FOR BEDRIDDEN COVID PATIENTS <i>Marco Ceccarelli, Matteo Russo, Daniele Cafolla, Jorge Enrique Araque Isidro, Betsy D. M. Chaparro-Rico</i>	16.30-16.45
4.	DESIGN OF A MEDICAL ROBOT WITH FOLDING MECHANISM USED FOR DISINFECTION IN THE HARD-TO-REACH AREAS	16.45-17.00

	Elida-Gabriela Tulcan, Carmen Sticlaru, Erwin-Christian Lovasz	
Gala Dinner The Art Museum of Craiova		18.30-21.00
Friday, 9th of June, 2023		
SECTION VI. ANTROPOMORPHIC HANDS		
		09.30-10.30
1.	PATIENT TAILORED HAND EXOSKELETONS - A 3D-PRINTABLE CONCEPT FOR FORCE TRANSMISSION AND FEEDBACK	09.30-09.45
	<i>Mateus Enzenberg, Simon Winkler, Yeongmi Kim</i>	
2.	TREE-LIKE FRACTAL STRUCTURES MODELING AND THEIR APPLICATION IN 3D PRINTED BONES	09.45-10.00
	<i>Anca Stanciu Birlescu, Nicolae Balc</i>	
3.	BASICS OF HAND PROSTHESIS DESIGN	10.00-10.15
	<i>Isabela Todirite, Frent Radu Gabriela Corina, Mihaiela Iliescu</i>	
4.	RAPID PROTOTYPING TECHNIQUES FOR INNOVATIVE HAND PROSTHESIS	10.15-10.30
	<i>Lucian Matei, Emilia Furdu Lunguț, Corina Radu (Frent), Maria Magdalena Roșu, Luige Vlădăreanu, Mihaiela Iliescu</i>	
Award Ceremony and Closing Ceremony The University House		10.30-11.30
Lunch The University House		12.00-13.00
Social Programme Boat trip & Dinner on the Danube		13.00-22.00