

Wed 18 Nov 19:00 Get together Plenary

Time	Paper	Participants	Title
19:00	get	REM2015 chairs, committees, organisers and delegees registered for this event	Get together (with snacks and drinks) at Café Konkret Kortumstraße 19 (crossing Kerkwege), 44787 Bochum
20:00	reg	REM2015 organisers	Registration I at Café Konkret
22:30	end		End of Café Konkret session
23:00	none		Bochum night life in the Bermuda3eck

Thu 19 Nov 09:00 Session 1 Plenary

Time	Paper	Authors / Speakers	Title
08:00	reg	REM2015 organizers	Registration II at Rewirpower Lounge, Castroper Str. 145, 44791 Bochum
09:00	opn	Prof. Dr.-Ing. Rolf Biesenbach Deutsche Gesellschaft für Mechatronik	General chair's opening
09:15	uni	Prof. Dr. Martin Sternberg Hochschule Bochum, President	Greetings from Bochum University of Applied Sciences
09:35	key	Prof. Dr.-Ing. Gerhard Hirzinger Deutsches Zentrum für Luft- und Raumfahrt (DLR)	Keynote: Robotics and Mechatronics – from outer space to factory, surgery and autonomous mobility
10:45	92	coffee break	and photo session in the rewirpowerSTADION

Check http://rem2015.de/documents/REM2015_programme.pdf for actual version, please.

Thu 19 Nov 11:20 Session 2A Robotics I [Kluszczyński]

Time	Paper	Authors / Speakers	Title
11:20	14	Mohammad Mehdi Moniri, Mahdi Bamdad, Mohammad Z. Sayyadan	A Novel Mechatronic Design of Wall Climbing Robot for Steel Storage Tank Inspection pp. 1-6
11:45	36	H. Elshatarat, R. Biesenbach, M. Bani Younus, T. Tutunji	MATLAB Toolbox Implementation and Interface MATLAB Toolbox for motion control of KUKA KR6- R900-SIXX robotic manipulator pp. 12-15
12:10	16	Jan Weber, Christof Kaufmann, Christof Hache, Marco Schmidt	Solving the Box-Pushing Problem Using a Spherical Robot pp. 7-11
12:35	91	cafeteria (Moritz)	lunch

Thu 19 Nov 11:20 Session 2B Industrial application [Ivakhiv]

Time	Paper	Authors / Speakers	Title
11:20	50	Jörg Wollert	Wireless Systems for Machinery Safety pp. 88-91
11:45	58	Paweł Kielan, Damian Krawczyk	Using The Embedded Ethernet Communication Capability of PLC controller for tailor-made Manufacturing Execution System pp. 92-96
12:10	24	Wolfgang Weber, Alexander König, Dany Xavier Nodem	“Corner Movement” with Industrial Robots with defined speed and position tolerances pp. 34-40
12:35	91	cafeteria (Moritz)	lunch

pp. pages in printed proceedings

Thu 19 Nov 11:20 Session 2C

Modern curricula [Löffler-Mang]

Time	Paper	Authors / Speakers	Title
11:20	07	Tarek A. Tutunji	Research Methodology Course for Mechatronics Masters Program pp.111-115
11:40	12	Jinkab Lee	College Education Curriculum of Automation, Mechatronics in the Republic of Korea pp. 116-121
12:00	41	Ralph Kroll, Dierk Schoen	A Holistic Evaluation Approach for Degree Courses in Engineering Sciences for Distance Learning Universities pp. 122-126
12:20	51	Patrick Bouillon, Jörg Frochte	Simulation- and Web-Based E-Learning in Engineering - Open Source Architecture and Didactic Issues - pp 127-134
12:40	62	Søren Hansen and Ole Ravn	Experiences From Developing a New Course in Mechatronics pp. 135-138
13:00	91	cafeteria (Moritz)	lunch

Thu 19 Nov 13:30 Session 3A

Vehicles [Eichinger]

Time	Paper	Authors / Speakers	Title
13:30	46	Friedbert Pautzke, Fabian Raschke, Matthias Drossel, Matthias Wiemers, Robert Siebrecht	Around the globe with 80 liters of fuel pp. 139-143
13:50	32	Patrick Bouillon, Jörg Frochte, Markus Lemmen	Influence of Plant Model Variants for the Automatic Optimisation of Control Parameters pp. 80-87
14:10	61	Chanin Joochim, Rattanakorn Phadungthin, Sawangtit Srikituwan	Design and Development of a Remotely Operated Underwater Vehicle pp. 148-153
14:30	92	coffee	break

Thu 19 Nov 13:30 Session 3B

Communication [Wollert]

Time	Paper	Authors / Speakers	Title
13:30	63	Kielan Pawel, Krzysztof Kluszczynski	Investigation on controlling mechatronic systems via the Internet with use of Network Emulator pp. 154-158
13:50	23	Sven Seiler, Raivo Sell, Carsten Köhn, Vanessa Böhrk, Monica Pedro, Filipe Cruz, Tarquinio Mota, Maria Braga, Diogo Pires, Rodrigo Ventura	USORA: Unified Solution of Remote Access in Practical Vocational Engineering Education pp. 159-164
14:10	60	M.W. Abdullah, H. Roth, J. Wahrburg, M. Weyrich	Telematic Control and Communication with Industrial Robot over Ethernet Network pp. 165-169
14:30	03	A. Balouki, M. Sbihi, Y. Balouki	RM-ODP: A Framework for Mechatronics Systems pp. 73-79
14:50	92	coffee	break

Thu 19 Nov 13:30 Session 3C

Energy [Rawashdeh]

Time	Paper	Authors / Speakers	Title
13:30	18	Gernot Schullerus	Increasing the Energy Efficiency of a Hogger in a Woodworking Machine pp. 170-177
13:50	52	Josef Vollmer, Jan Schaefer	Miniaturization of Vibration Energy Generators for Energy Harvesting Systems pp. 185-190
14:10	92	coffee	break

Thu 19 Nov 15:20 Session 4A

International projects I [Weinert]

Time	Paper	Authors / Speakers	Title
15:20	35	H. Schillo, R. Biesenbach	JIM2L –Development and Implementation of a MSc Double Degree Programme in Mechatronics for Egypt, Jordan and European Union pp. 197-202
15:45	31	K.R.G. Rotter	Training of Engineers on board ship Logos Hope pp. 191-196
16:10	39	Reiner Dudziak, Carsten Köhn	Mechatronics Engineering Study Course at the Sino-German University of Applied Sciences CDHAW at Tongji-University Shanghai, China pp. 203-206
16:35	09	Fidelis Theinert	International Mechatronics Educational Project IMEP 2015 pp. 207-211
17:00	93		end of session

Thu 19 Nov 15:20 Session 4B

Sensors and actuators [Schugt]

Time	Paper	Authors / Speakers	Title
15:20	34	Mychaylo Gerayimchuk, Orest Ivakhiv	Current state and prospects of microtransducers for position and motion characteristics of the object consideration pp. 227-231
15:45	48	Grzegorz Kłapyta, Marek Kciuk, Kamil Świątek	Design and prototype of fuse activated by SMA wire pp. 232-237
16:10	33	D. Gerhardt, S. Hacia, J. Aubke, L. Jakob, M. Metze, S. Prengel	Three-dimensional measurement system performing sensor development pp. 238-244
16:35	47	A.T. Al-Halhouli, L. Düring, L. Alahmad, S. Demming, A. Llobera, A. Dietzel, S. Büttgenbach	Fabrication and Testing of a photonic Ethanol Biosensor pp. 245-249
17:00	93		end of session

Thu 19 Nov 15:20 Session 4C Robotics II [Zwiers]

Time	Paper	Authors / Speakers	Title
15:20	05	Sudev Nair, Vivek Velivela	1-D Simulation and Control of Servo Slide based Pick And Place Device pp. 16-20
15:45	56	Ashraf Saleem, Ahmed Al Maashri, Lazhar Khriji, Medhat Hussein	An Integration Framework for UGV Outdoor Navigation System Based on LiDAR and Vision Data pp. 16-20
16:10	57	Wojciech Kołton, Tomasz Trawiński	Analysis of mutual interaction between joints of robots with branched kinematic chains pp. 22-26
16:35	93		end of session

Thu 19 Nov 17:00 Session 5 Plenary

Time	Paper	Authors / Speakers	Title
17:15	duz	Prof. Dr.-Ing. Rolf Biesenbach Prof. Dr. Jürgen Bock	Honouring ceremony Prof. Dr.-Ing. Reiner Dudziak REM honorary president

Thu 19 Nov 19:00 Conference dinner Plenary in Hattingen

Time	Paper	Authors / Speakers	Title
18:30	dep	Two transfer busses	from Bochum to Hattingen leave at the venue rewirpowerLOUNGE
19:00	din	REM2015 chairs, committees, organisers, delegees and accompanying persons	Conference dinner (and culture) Henrichshütte (Heinrichs) Hattingen Nomination of Prof. Dr. Sc. Krzysztof Kluszczyński as REM Honorary President Great Live Music Show by Pamela Falcon and band
22:30	ret	transfer buses	back from Hattingen to Bochum main station (Hbf) and rewirpowerSTADION

Fri 20 Nov 08:40 Session 6A Control [Tutunji]

Time	Paper	Authors / Speakers	Title
08:40	38	Hanny M. Rosalinda, Muneeb U. Khan, Laurent Petit, Christine Prella	Development of a control circuit for an electromagnetic smart surface pp. 268-272
09:00	37	U. Zwiers	Modeling of Wheeled Inverted Pendulum Systems pp. 273-277
09:20	13	Michael Pohl, Simon von Eichstedt	The Cybernetic Motion Trainer - a practical laboratory training in control theory courses pp. 278-282
09:40	54	Zbigniew Pilch, Paweł Kielan	Infrared camera as part of a feedback loop in the MR fluid coupling research pp. 283-287
10:00	92	coffee	break

Fri 20 Nov 08:40 Session 6B International projects II, PBL [Löffler-Mang]

Time	Paper	Authors / Speakers	Title
08:40	06	Martin Löffler-Mang, Claus Riehle	Intensive Program 'Engineering Visions' pp. 212-215
09:00	44	Andrea Dederichs-Koch, Ulrike Zwiers	Project-based Learning Unit: Kinematics and Object Grasping in Humanoid Robotics pp. 216-220
09:20	59	Raivo Sell, Sven Seiler	SimLab: Towards ten years of successful Estonian-German co-operation pp. 221-224
09:40	92	coffee	break

Fri 20 Nov 08:40 Session 6C Robotics III [Eichinger]

Time	Paper	Authors / Speakers	Title
08:40	19	Enrico Fiore, Hermes Giberti, Luca Sbaglia	Dimensional Synthesis of a 5-DOF Parallel kinematic Manipulator for a 3d printer pp. 41-48
09:00	08	Harald Loose	Gait Patterns in Standard Scenarios Using Xsens MTw Inertial Measurement Units pp. 296-301
09:20	17	Jens Golz, Rolf Biesenbach	Implementation of a chess playing industrial robot pp. 53- 56
09:40	92	coffee	break

Fri 20 Nov 10:10 Session 7A Actuators [Köhn]

Time	Paper	Authors / Speakers	Title
10:10	43	Ala'aldeen T. Al-Halhouli, Nathir A. Rawashdeh, Mousaa Sanna, Stephanus Büttgenbach, Andreas Dietzel	Development of a Novel Electromagnetic Double Action Meso-scale Pump pp. 250-254
10:30	40	Markus Raab, Arif KaziDavid L. Trumper	Magnetically levitated BLDC motor as a modular teaching tool pp. 255-262
10:50	42	Rüdiger G. Ballas, Dierk Schoen	Modeling of Piezoelectric n-layered Beam Bending Actuators for Energy Harvesting Purposes pp. 263-267
11:10	92	coffee	break

Fri 20 Nov 10:10 Session 7B Mobile robots [Marinelli]

Time	Paper	Authors / Speakers	Title
10:10	22	Gilmar H. Tuta Navajas, Jaime A. Parra Raad, Sebastián Roa Prada	Concurrent Design Optimization and Control of a Custom Designed Quadcopter pp. 63-72
10:30	30	Cristiano Marinelli, Hermes Giberti, Ferruccio Resta	Conceptual design of a gait simulator for testing lower-limb active prostheses pp. 314-321
10:50	101		spare slot (break, discussion, late paper)
11:10	92	coffee	break

Fri 20 Nov 10:00 Session 7C Sitzung der Vorstände der DGM und des Fachbereichstags Mechatronik

Time	Paper	Participants	Title
10:00		members of the boards	Working group meeting I
11:10	92	coffee	break

Fri 20 Nov 11:40 Session 8C Sitzung der Vorstände der DGM und des Fachbereichstags Mechatronik

Time	Paper	Participants	Title
11:40		members of the boards	Working group meeting II
12:50	93		end of session

Fri 20 Nov 11:40 Session 8A (plenary) Mechatronics applications [Schmidt]

Time	Paper	Authors / Speakers	Title
11:40	04	Theodor D. Popescu, Bogdan Dumitrascu	An Application of Renyi Entropy Segmentation in Fault Detection of Rotating Machinery pp. 288-297
12:05	02	A.A. Nikolaev, P.G. Tulupov, A.V. Anufriev	Assessing the Feasibility of Electrical Mode Control of Ultra-High Power Arc Steelmaking Furnace Based on Data about Harmonic Composition of Arc Currents and Voltages pp. 301-308
12:30	53	Jarosław Domin, Krzysztof Kluszczyński	Hybrid electromagnetic launcher with pneumatic assist – influence of input supply data upon final velocity missile pp. 309-314
12:50	93		end of session

Fri 20 Nov 12:50 Session 9 Plenary (room B)

Time	Paper	Authors / Speakers	Title
12:50	bye	Rolf Biesenbach, Hochschule Bochum Christine Prella, Université de technologie de Compiègne	Closing Ceremony REM2015 in Bochum, Germany and Announcement of REM2016, in Compiègne, France
13:40		cafeteria (rewirpowerLOUNGE)	lunch
15:00	end		End of conference ... and a pleasant trip home