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Peter Kiss Laszlo Mathe Csaba Farkas

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10:20am PLENARY: St. Christopher Lecture, Hungarian Defence Forces Logistics Center and Rába Axle Ltd **Presentation** Location: Ganges 1+2 (first floor) Chair: Prof. Peter Kiss 10:20am St. Christopher Lecture: NEW CHALLENGES AND OPPORTUNITIES FOR TERRAMECHANICS 1 Prof. György Sitkei University of Sopron, Hungary 10:50am THE MISSION AND TASK OF THE HUNGARIAN DEFENCE FORCES LOGISTICS CENTRE 25 Brigadier General István Baráth Commander, Hungarian Defence Forces Logistics Center, Hungary 11:15am DEVELOPMENT OF RABA AGRICULTURAL AXLES AND LATEST TECHNOLOGIES 26 Dr. Mark Lelkes Raba Axle Ltd, Hungary 11:45am Conference Photo Location: Terrace or staircase 12:00pm Lunch Location: Hotel Restaurant 1:30pm SES-01: Innovative system designs for terrain and SES-02: Mobile robotics for ground applications, road-vehicle applications planet exploration and other environments Location: Ganges 3+4 (first floor) Location: Ganges 1+2 (first floor) Chair: Prof. Kyeong Uk Kim Chair: Dr. Hiroshi Nakashima 1:30pm INFLUENCING FACTORS OF TORQUE DYNAMICAL MODELING AND SIMULATION OF TRANSMISSIBILITY IN DRY FRICTION THE FOUR-WHEEL MICRO ROVER IN SANDY **CLUTCHES 27 TERRAIN 82** Gábor Magdics¹, Prof. Peter Kiss² Takuto Oikawa¹, Nicolo Carletti², Prof. Kazuya Yoshida¹ 1: LuK Savaria Kft., Hungary; 2: Szent Istvan University, 1: Tohoku University, Japan; 2: Politecnico di Milano, Department of Automotive Technology 1:50pm SOIL PROPERTY CHARACTERISATION AND **EXPERIMENT STUDY ON DURABILITY OF THE EVALUATION BY VARIOUS IMAGE BIONIC WHEELS FOR MARS ROVERS 95 ACQUISITION TECHNIQUES 34** Prof. MENG ZOU1, Dr. YUNPENG YAN2, Dr. BAOFENG YUAN3, Dr. YUNCHENG LIN4, Prof. JIANQIAO LI5 Shwetha Shivanna, Dr. Takaaki Yokoyama, Dr. 1: Jilin University, China, People's Republic of China; 2: Kazuyoshi Tateyama Jilin University, China, People's Republic of China; 3: Department of Environmental Systems Engineering, China Academy of Space Technology, Beijing 100083; 4: Ritsumeikan University, Japan China Academy of Space Technology, Beijing 100083; 5: Jilin University, China, People's Republic of China 2:10pm APPLICATION OF TIRE RATING WITH AIM TO REACTION FORCE/TORQUE SENSING WHEEL **IMPLEMENT THE MATTER ON** SYSTEM FOR IN-SITU MONITORING ON **AGRICULTURAL TIRES 43 LOOSE SOIL 113** Dr. Shoya Higa, Dr. Kenji Nagaoka, Prof. Kazuya Dr. Patrik Prikner¹, Prof. Alexandr Grečenko², Dr. Radek Pražan³ Yoshida 1: Czech University of Life Sciences Prague, Prague, Tohoku University, Japan Czech Republic; 2: Fragnerova 2396/15, Prague, Czech Republic; 3: Research Institute of Agricultural

Engineering, p.r.i., Prague, Czech Republic



2:30pm	REAL-TIME VEHICLE MEASUREMENTS USING IMAGE CORRELATION 55 Devin K. Johnson, <u>Dr. Theunis R. Botha</u> , Prof. P. Schalk Els University of Pretoria, South Africa	UTILIZATION OF SHAPE MEMORY ALLOYS IN A NOVEL, NON-PNEUMATIC TIRE FOR HIGH LOAD APPLICATIONS 122 Dr. Santo Anthony Padula II ¹ , Colin Creager ¹ , Darrell Gaydosh ² , Kyle Johnson ¹ 1: NASA Glenn Research Center, United States of America; 2: Ohio Aerospace Insitute, United States of America
2:50pm	A FOUNDATION FOR REAL-TIME TIRE MOBILITY ESTIMATION AND CONTROL 63 Prof. Vladimir Vantsevich ¹ , Prof. Andriy Lozynskyy ² , Dr. Lyubomyr Demkiv ² , Sviatoslav Klos ² 1: The University of Alabama at Birmingham; 2: Lviv Polytechnic National University, Ukraine	COMPLIANT NITI SPRING TIRE WITH HIGH ENVELOPMENT CAPABILITY FOR MARS 123 Colin Creager¹, Dr. Santo Padula II¹, Dr. Scott Moreland², Kyle Johnson¹ 1: NASA Glenn Research Center, United States of America; 2: NASA Jet Propulsion Laboratory, United States of America
3:10pm	Coffee Break Location: Lobby of Ganges 1+2 (first floor)	
3:40pm	SES-03: Agricultural, forestry, construction, and mining equipment and vehicles Location: Ganges 1+2 (first floor) Chair: Dr. Patrik Prikner	SES-04: Advances in mobility, energy transfer, efficiency, ground vehicle dynamics, safety Location: Ganges 3+4 (first floor) Chair: Prof. Corina Sandu
3:40pm	DEVELOPING A METHOD OF THEORETICAL EVALUATION OF THE TRACKED TIMBER HARVESTING MACHINE UNDERCARRIAGE ELEMENT LOADING 124 Vladislav Klubnichkin, Evgeny Klubnichkin, Prof. George Kotiev Bauman Moscow State Technical University, Russian Federation	HIL-TESTBENCH FOR SIMULATION OF LIGHT COMMERCIAL VEHILES EQUIPPED BY ESC 184 Anton Tumasov, Anatoly Groshev, Evgeny Toropov, Viktor Kryaskov Nizhny Novgorod State Technical University n.a. R.E. Alekseev, Russian Federation
4:00pm	EFFECT OF RAMMER GROUND PRESSURE FOR COMPACTION PERFORMANCE 146 SOTA SHIMATANI, Dr. TADAOMI EGUCHI National Institute of Technology, AKASHI College, Japan	THE MOST EFFECTIVE PASSIVE CONTROL OF A SUSPENSION 194 Alexander Pieper, Prof. Khanh Chau Le Ruhr Universtität Bochum, Germany
4:20pm	MODELING OF SIDEWAYS OVERTURNING BEHAVIOR OF AN AGRICULTURAL CARRIER ON SLOPE USING A PHYSICS ENGINE 151 Dr. Chaoran Sun, Prof. Hiroshi Nakashima, Prof. Hiroshi Shimizu, Juro Miyasaka, Katsuaki Ohdoi Division of Environmental Science & Technology, Graduate School of Agriculture, Kyoto University, Kyoto, 606-8502, Japan	MODELLING AND VALIDATION OF ABS AND TYRE INTERACTION ON ROUGH TERRAIN 195 Nico A. van der Merwe¹, Dr. Vidas Žuraulis², Odette Scholtz¹, Prof. P. Schalk Els¹ 1: Vehicle Dynamics Group, Department of Mechanical and Aeronautical engineering, University of Pretoria; 2: Department of Automobile Transport, Vilnius Gediminas Technical University



4:40pm STUDY OF WORKING EFFICIENCY OF A

REMOTE CONTROL TYPE HYDRAULIC

EXCAVATOR 160

Dr. Takeshi Hashimoto¹, Kenichi Fujino¹, Dr. Shinichi Yuta²

1: Public Works Research Institute, Japan; 2: Shibaura Institute of Technology, Japan

INVESTIGATING DIFFERENT VEHICLE VELOCITY ESTIMATORS AND AN ADAPTIVE KALMAN FILTER FOR ANTI-LOCK BRAKING SYSTEMS FOR OFF-ROAD VEHICLES 204

Alexander Etienne Berndt, Wietsche Clement William

Penny, Prof. Pieter Schalk Els University of Pretoria, South Africa

5:00pm THEORETICAL FOUNDATIONS OF

> PRELIMINARY ASSESSMENT OF THE **IMPACT OF THE TIMBER-HARVESTING VEHICLES ON FOREST SOILS IN THE**

COURSE OF LOGGING 167

Vladislav Klubnichkin, Evgeny Klubnichkin

Bauman Moscow State Technical University, Russian CHENNAI, INDIA Federation

STUDY OF THE EFFECTS OF CASTER TRAIL AND KINGPIN OFFSET ON KINEMATICS AND LATERAL DYNAMICS OF LONG WHEELBASE **SOLID AXLE BUS 213**

SAGAR JAMBUKAR, Prof. SUJATHA C

INDIAN INSTITUTE OF TECHNOLOGY MADRAS,

Date: Tuesday, 26/Sep/2017

7:30am **Meeting for Technical Tour**

Location: Lobby of Hotel Aquaworld (ground floor)

7:40am BUS TRIP-01: Travelling to Győr (Rába Axle Ltd)

10:00am TECHNICAL TOUR-01: Visit of Rába Axle Ltd

Location: Rába Axle Ltd.

10:55am Sandwich Buffet, Soft Drink, Coffee

Location: Rába Axle Ltd.

11:30am BUS TRIP-02: Travelling to Écs (Rába Test Track)

12:20pm TECHNICAL TOUR-02: Vehicle Demonstration at Rába Test Track

Location: Rába Test Track

Lunch (Goulash Party) 3:00pm

Location: Rába Test Track

4:30pm BUS TRIP-03: Travelling to Budapest (Hotel Aquaworld)

7:00pm **Estimated arrival**



Date: Wednesday, 27/Sep/2017

7:50am Registration & Poster Collection

Location: Registration Desk (first floor)

Chair: Dr. Laszlo Mathe

8:00am SES-05: Terramechanics, terrain/soil-

wheel/tire/track interaction, modelling and

characterization

Location: Ganges 1 (first floor) Chair: Prof. Vladimir Vantsevich

SES-06: Terramechanics, terrain/soil-wheel/tire/track

interaction, modelling and characterization Location: Ganges 2 (first floor)

Chair: Prof. Schalk Els

8:00am PROCEDURE FOR THE CREATION OF TERRAIN FILES FOR MOBILITY ANALYSIS

UTILIZING SATELLITE IMAGERY 227

Prof. George Lamar Mason

Mississippi State University, United States of America

DYNAMIC 3D MEASUREMENT OF TIRE-**TERRAIN INTERACTION 304**

Alan Glenn Guthrie¹, Dr. Theunis Richard Botha¹, Emilio Jimenez², Prof. Schalk Els¹, Prof. Corina Sandu²

1: University of Pretoria, South Africa; 2: Virginia Polytechnic Institute and State University, USA

8:20am A COMPARATIVE ANALYSIS OF

DESTRUCTIVE FORCES RESULTING FROM **ROAD PROFILE ACTING ON OFF-ROAD TOWED VEHICLES 228**

Dr. László Gurmai¹, Prof. Péter Kiss²

1: CLAAS Hungaria Kft., Hungary; 2: Szent István University, Hungary

EFFECT OF FRONTAL PROFILE SHAPE OF RIGID WHEEL TREAD ON TRAVELING PERFORMANCE ON SANDY SOIL 314

Dr. Ryosuke Eto, Hiroki Yabe, Prof. Junya Yamakawa

National Defense Academy, Japan

8:40am A TECHNICAL SURVEY ON TERMINOLOGY,

TESTING METHODOLOGIES. AND EQUIPMENT USED IN MODELING AND PARAMETERIZATION OF SOFT SOIL FOR **VEHICULAR APPLICATIONS 243**

Rui He¹, Aamir Khan¹, A. Glenn Guthrie², Prof. Corina Sandu¹, Prof. P. Schalk Els²

1: Virginia Tech, Blacksburg, Virginia, United States of America; 2: University of Pretoria, Pretoria, South Africa

MEASUREMENT OF TIRE CHARACTERISTICS TRAVELING IN ACTUAL GROUND **ENVIRONMENT WITH AN INSTRUMENTED** VEHICLE 322

Prof. Junya Yamakawa

The National Defense Academy, Japan

9:00am A WHEEL ROTATIONAL VELOCITY CONTROL THE INFLUENCE OF SPATIAL DATABASE

STRATEGY FOR AN OPEN-LINK **LOCOMOTION MODULE 282**

Prof. Vladimir Vantsevich¹, Prof. Andriy Lozynskyy², Vaclav Talhofer, Marian Rybansky, Martin Bures, Dr. Lyubomyr Demkiv²

1: The University of Alabama at Birmingham; 2: Lviv Polytechnic National University, Ukraine

QUALITY ON MODELLING OF VEHICLE MOVEMENT IN TERRAIN 331

Katerina Simkova

University of Defence, Czech Republic

9:20am ROLLING RESISTANCE TESTS OF ATV TIRE 294 DYNAMIC SIMULATION OF WHEELED

Karol Kończalski, Dr. Marian Janusz Łopatka, Dr. Tomasz Muszvński

Military University of Technology, Poland

VEHICLES: MODELS AND ALGORITHMS 346

Albert Peiret¹, Laszlo Kovacs¹, Daniel Holz², Marek Teichmann², Jozsef Kovecses¹

1: McGill University, Canada; 2: CM Labs Simulations,



	and Coffee Break 5 1+2 (first floor)	
STUDY OF IMPACT FORCE CALCULATION METHOD FOR OBLIQUE LANDING ON LUNAR SURFACE 355	DEVELOPMENT OF A GROUND MOBILE ROBOT FOR MOTION IN CONDITIONS OF COASTAL ZONES 441	
Dr. Takaaki Yokoyama ¹ , Ryouta Matukura ² , Prof. Kazuyoshi Tateyama ¹ 1: Ritsumeikan University, Japan; 2: KINDEN Corporation, Japan	Dr. Denis Zeziulin, Dr. Vladimir Makarov, Dmitriy Porubov, Prof. Andrey Kurkin Nizhny Novgorod State Technical University n.a. R.E.Alekseev, Russian Federation	
DYNAMOMETER VEHICLE FOR FIELD TESTS IN AGRICULTURAL MACHINERY 356 Gábor Bércesi, Adrienn Bablena, László Kovács, Dr. Kornél Szalay NAIK Institute of Agricultural Engineering, Hungary	ESTIMATION OF LIGHT COMMERCIAL VEHILES DYNAMICS BY MEANS OF REAL TIME SIMULATION 448 Anton Tumasov, Alexey Vasiliev, Danila Butin, Andrey Vashurin, Yury Trusov, Pavel Moshkov Nizhny Novgorod State Technical University n.a. R.E. Alekseev, Russian Federation	
NEW CRITERION FOR DYNAMIC SHEARING RESISTANCE OF SOILS 363 Prof. Piotr Antoni DUDZIŃSKI Wrocław University of Science and Technology, Poland	NEW GENERATION TEST EQUIPMENT FOR EXPERIMENTAL IDENTIFICATION ON ROLL-OVER STABILITY IN WHEELED OFF-ROAD MACHINES AND VEHICLES 454 Prof. Piotr Dudziński, Gustaw Sierzputowski Wrocław University of Science and Technology, Poland	
NEW TEST DEVICE FOR DETERMINATION OF DYNAMICAL SHEARING RESISTANCE OF SOILS 373 Prof. Piotr Dudziński, <u>Dr. Damian Stefanow</u> Wrocław University of Science and Technology, Poland	NOVEL LABORATORY METHOD TO DETERMINE THE CONDITION OF SHOCK ABSORBERS USING ACCELEROMETER SENSORS 463 Niki Galbenisz, Csongor Horváth, Csaba Farkas Szent István University, Hungary	
ON INTERNAL RESISTANCE OF RUBBER TRACK Systems 382 Prof. Piotr Dudziński, Jakub Chołodowski Wrocław University of Science and Technology, Poland	PRESSURE-SINKAGE RELATIONSHIP OF AN ARTIFICIAL SOIL MODEL 473 Dr. Hiroshi Nakashima, Ryo Nakanishi, Prof. Hiroshi Shimizu, Dr. Juro Miyasaka, Dr. Katsuaki Ohdoi Graduate School of Agriculture, Kyoto University, Japan	
SIMULATION OF ROAD IMPACTS FOR FORECASTING OF DURABILITY OF VEHCLE'S SUSPENSION ELEMENTS AND SUPPORTING SYSTEM 396 Pavel Beresnev, Dr. Denis Zeziulin, Dr. Vladimir Makarov, Dr. Anton Tumasov Nizhny Novgorod State Technical University n.a. R.E.Alekseev, Russian Federation	STUDY OF EFFICIENCY OF USING ALL- TERRAIN VEHICLES DURING THE WINTER PERIOD 481 Dmitriy Porubov ¹ , Dr. Vladimir Makarov ¹ , <u>Dr. Denis</u> Zeziulin ¹ , Prof. Vladimir Belyakov ¹ , Dr. Alexey Anikin ² 1: Nizhny Novgorod State Technical University n.a. R.E.Alekseev, Russian Federation; 2: LLC Plant of All- terrain Vehicles (ZVM), Russian Federation	



STUDY OF TRAFFICABILITY CONDITIONS OF TYPICAL SOILS OF COASTAL ZONES OF SAKHALIN ISLAND (RUSSIAN FED.) 404

<u>Dr. Vladimir Makarov</u>, Valery Filatov, Dr. Umar Vahidov, Prof. Andrey Kurkin, Prof. Vladimir Belyakov

Nizhny Novgorod State Technical University n.a. R.E.Alekseev, Russian Federation

SURVEY OF THE EUROPEAN
MANUFACTURERS OF TOWED
AGRICULTURAL VEHICLES AND MACHINERY
AND THEIR MARKET 490

Prof. Péter Kiss¹, Dr. József Hajdú², Dr. László Máthé¹, <u>Dr. László Magó¹</u>

1: Szent István University, Hungary; 2: Hungarian Institute of Agricultural Engineering

PRESSURE REGULATION IN PNEUMATIC TRACTOR TYRES 412

<u>Dr. György Pillinger,</u> Dr. Laszlo Mathe, Prof. Peter Kiss

Szent István University, Department of Automotive Technology, Hungary

EFFECTS OF STEEL FLEXIBLE TRACKS ON FORWARDER PEAK LOAD DISTRIBUTION: RESULTS FROM A PROTOTYPE LOAD TEST PLATFORM 500

Prof. Eric R. Labelle¹, Prof. Dirk Jaeger²

1: Technische Universität München; 2: Albert-Ludwigs-Universität Freiburg

THE EFFECTS OF TERRAIN PROFILE ON OFF-ROAD VEHICLE MOBILITY 418

Prof. Lajos Laib, Dr. Laszlo Mathe, <u>Dr. György</u> Pillinger

Szent Istvan University, Faculty of Mechanical Engineering, Department of Automotive Technology WATER REGIME OF RIVERS AND ITS IMPACT ON CROSS-COUNTRY MOBILITY 501

Dr. Marian Rybansky

University of Defence, Czech Republic

Paper Submission Only

DEVELOPMENT AND VALIDATION OF A SYSTEM FOR MONITORING OF TIP OVER-STABILITY OF A SINGLE BUCKET EXCAVATOR 419

Andrzej Kosiara, Damian Stefanow

Wrocław University of Science and Technology, Poland

INVESTIGATING THE MOTION OF VEHICLES ON TERRAIN 502

<u>Dr. Laszlo Mathe</u>, Dr. Gyorgy Pillinger, Prof. Peter Kiss

Szent Istvan University, Faculty of Mechanical Engineering, Hungary

ONLINE NON-PARAMETRIC TERRAIN
EVALUATION FOR PLANETARY ROVERS 431

Dr. Han Huang¹, Prof. J<u>iiangiao Li</u>¹, Dr. Baichao Chen², Prof. Meng Zou¹

1: Key Laboratory of Bionic Engineering, Ministry of Education, Jilin University, Changchun 130022, China.; 2: China Academy of Space Technology, Beijing 100094, China.

A NEW ROLLOVER DETECTION SYSTEM FOR TRIPPED AND UNTRIPPED ROLLOVERS FOR

ANTIROLL SAFETY SYSTEMS 513
Hari Muraleedharan Nair, Prof. Sujatha C

Indian Institute of Technology Madras, Chennai, India



10:30am SES-07: Land locomotion, off-road and military

vehicles, operation snow and ice

Location: Ganges 1 (first floor)
Chair: Dr. Alex Phillip Keen

SES-08: Terramechanics, terrain/soil-wheel/tire/track interaction, modelling and characterization

Location: Ganges 2 (first floor) Chair: Prof. Junya Yamakawa

10:30am CALCULATION OF TRACTION

CAPABILITIES OF WHEELED VEHICLES ON LOW-PRESSURE TIRES ON SNOW 521

Dr. Alexey Anikin¹, Prof. Vladimir Belyakov², <u>Dr. Denis Zeziulin²</u>, Dr. Vladimir Makarov²

1: LLC Plant of All-terrain Vehicles (ZVM), Russian Federation; 2: Nizhny Novgorod State Technical University n.a. R.E.Alekseev, Russian Federation

THE EFFECTS OF AGE ON THE STIFFNESS PROPERTIES OF A SUV TYRE 566

Kraig Wright, <u>Prof. Schalk Els</u> University of Pretoria, South Africa

10:50am DISCRETE ELEMENT SNOW MODEL FOR IMPACT LOADING 534

<u>Thiemo Claas Theile</u>¹, Denes Szabo¹, Martin Schneebeli¹, Yoshio Kaji², Kazumasa Hagiwara², Shintaro Hatanaka²

1: WSL Institute for Snow and Avalanche Research SLF, Switzerland; 2: Bridgestone Corporation, Tokyo Japan

THREE-DIMENSIONAL DYNAMIC MODEL FOR OFF-ROAD VEHICLES USING DISCRETE ELEMENT METHOD 573

Michal Shani¹, <u>Yaron Franco</u>¹, Gilad Gat¹, Prof. Itzhak E Shmulevich¹, David Zaphir²

1: Faculty of Civil and Environmental Engineering. Technion, Israel; 2: Elbit systems LTD, Israel

11:10am THE IMPACT OF DRAINAGE ON TERRAIN VEHICLE MOVEMENT 538

Dr. Marian Rybansky

University of Defence, Czech Republic

TYRE LONGITUDINAL VELOCITY AND SLIP MEASUREMENTS FROM INSIDE A TYRE 586

Dr. Theunis Richard Botha¹, Glenn Guthrie¹, Emilio Jimenez², Prof. Schalk Els¹, Prof. Corina Sandu²
1: University of Pretoria, South Africa; 2: Virginia Polytechnic Institute and State University

11:30am DURABILITY ASSESSMENT: A VIRTUAL PROVING GROUND APPROACH 546

<u>László Takács</u>, Gergely Erdős eCon Engineering Kft., Hungary INVESTIGATING THE DIFFERENCE OF THE EFFECTIVE ROLLING RADIUS OF A TIRE ON A SOFT SOIL AND A RIGID SURFACE 596

Rui He¹, Prof. Corina Sandu¹, Javier E. Osorio²
1: Virginia Tech, Blacksburg, Virginia, United States of America; 2: Engineer Research and Development Center, Vicksburg, Mississippi, United States of America

11:50pm OFF-ROAD LOCOMOTION CAPABILITY IN THE HUNGARIAN DEFENCE FORCES 547

Szabolcs Vágner

Ministry of Defence, Hungary

DESIGN OF A MODULAR AMPHIBIOUS VEHICLE FOR CONDUCTING RESEARCH IN SURFZONE 612

<u>Pavel Beresnev</u>, Prof. Andrey Kurkin, Dr. Dmitry Tyugin, Dr. Denis Zeziulin

Nizhny Novgorod State Technical University n.a. R.E.Alekseev, Russian Federation

12:10pm ADVANCED TIRE-ICE MODEL FOR PNEUMATIC TIRE PERFORMANCE 548

<u>Emilio Jimenez</u>, Prof. Corina Sandu Virginia Tech, United States of America THE EFFECT OF TRACKED-VEHICLES MULTI-PASSES ON RUT DEPTH AND SOIL PROPERTIES 623

<u>Dr. Dror Rubinstein</u>, Yaron Franco, Prof. Itzhak Shmulevich

Technion - Israel Istitute of Technology, Israel



12:30pm Lunch

Location: Hotel Restaurant

2:00pm SES-09: Terramechanics, terrain/soil-

wheel/tire/track interaction, modelling and

characterization

Location: Ganges 1 (first floor) Chair: Prof. Kazuyoshi Tateyama SES-10: Terramechanics, terrain/soil-wheel/tire/track interaction, modelling and characterization

Location: Ganges 2 (first floor)

Chair: Dr. Jeremy P. Gray

2:00pm MODELING OF BUCKET-SOIL INTERACTION

MECHANICS BASED ON IMPROVED RESISTIVE FORCE THEORY 634

Ryota Yoneyama, Takuya Omura, <u>Dr. Genya</u> <u>Ishigami</u>

Department of Mechanical Engineering, Keio University, Japan

SLIP COMPENSATED ODOMETRY FOR TRACKED VEHICLE WHEN ROTATING ON A LOOSE WEAK SLOPE 673

<u>Genki Yamauchi</u>¹, Prof. Keiji Nagatani¹, Dr. Takeshi Hashimoto², Kenichi Fujino²

1: Tohoku University, Japan; 2: Public Works Research Institute, Japan

2:20pm SLIP ESTIMATION AND CLASSIFICATION

USING IN-WHEEL SENSOR FOR MOBILE ROBOT IN SANDY TERRAIN 646 Takuya Omura, Dr. Genya Ishigami

Keio University, Japan

FAST ENERGY-EFFICIENT TORQUE DISTRIBUTION AMONGST MULTIPLE DRIVETRAINS 680

<u>Dr. Arash M. Dizqah</u>¹, Prof. Mike Blundell¹, Prof. Vladimir Vantsevich², Brandon Ballard¹

1: Coventry University, UK; 2: The University of Alabama at Birmingham, US

2:40pm TERRAMECHANICS ANALYSIS OF WHEEL

WITH GROUSERS BASED ON RESISTIVE FORCE THEORY 656

TORGE THEORY 050

<u>Hirotaka Suzuki</u>, Prof. Shingo Ozaki Yokohama National University, Japan MODELLING OF AN UNMANNED GROUND VEHICLE WITH NEW SKID-STEERING INPUTS 689

Siyuan Zhang, Prof. Vladimir Vantsevich

The University of Alabama at Birmingham, United States of America

3:00pm APPLICATION OF THE HOHENHEIM TYRE

MODEL FOR THE DRIVING COMFORT INVESTIGATIONS OF AGRICULTURAL TRACTORS 661

Alexander Bürger, Prof. Stefan Böttinger, Prof. Heinz Dieter Kutzbach

Institute of Agricultural Engineering, University of Hohenheim, Germany

STUDY ON TRAVELING PERFORMANCE FOR ROVERS EQIPPED WITH WHEEL-BASE LENGTH VARIABLE MECHANISM TO TRAVELING LOOSE SOIL WITH SLOPE 703

<u>Daisuke Fujiwara</u>, Kojiro lizuka Shibaura Institute of Technology, Japan

3:20pm Coffee Break

Location: Lobby of Ganges 1+2 (first floor)

3:50pm Closing Ceremony

Location: Ganges 1+2 (first floor)

4:50pm Chair: Prof. Peter Kiss

Best Paper Award, Prof. Peter Kiss
Outgoing President address, Prof. Peter Kiss
Incoming President address, Dr. Hiroshi Nakashima
Nomination of 2nd Vice President, Dr. Hiroshi Nakashima
Next ISTVS Conference, Dr. Hiroshi Nakashima

Closing Remarks, Prof. Peter Kiss

5:40pm Meeting for Banquet

Location: Lobby of Hotel Aquaworld (ground floor)

7:00pm Banquet on River Danube

Location: Boat Trip on River Danube