

# The JSME International Conference on Motion and Power Transmissions, MPT 2017 - Kyoto

TIME	<b>Tuesday, February 28</b>
16:00 - 18:00	Registration
18:00 - 19:30	<b>Welcome Reception in Terrsa Hall</b>

TIME	<b>Wednesday, March 1</b>			
09:00 - 15:00	Registration			
TIME	<b>ROOM 1</b>	<b>ROOM 2</b>	<b>ROOM 3</b>	<b>ROOM 4</b>
	Manufacturing of gears (I)	Inspection of gears (I)	Mechanism design (I)	Belt, chain drives, and traction drives (I)
	Chair: Claude GOSSELIN, Hiroyuki SONOBE	Chair: Masaharu KOMORI, Myungsoo KIM	Chair: Yukio TAKEDA, Xiangyu WU	Chair: Tomoko HIRAYAMA, Ahmet KAHRAMAN
09:30 - 09:55	02-01 RESEARCH ON THE MANUFACTURING AND EVALUATION METHOD FOR A CURVE-FACE GEAR  Zhi Qin CAI, Chao LIN, Yu FAN, Xi Jun CAO	03-01 MONITORING OF HYPOID GEAR MESHING BASED ON A THERMAL NETWORK MODEL WITH HIGH-SPEED VIDEO THERMOGRAPHY  Susumu ARAO, Mitsuhiko SUZUKI, Toshiki HIROGAKI, Eiichi AOYAMA		11-01 INFLUENCE OF DEFORMATION OF PINS ON POWER LOSS OF CONTINUOUSLY VARIABLE TRANSMISSIONS DRIVEN THROUGH METAL CHAIN BELT  Hiroki ICHINOSE, Kazuya OKUBO, Toru FUJII, Kyohei WATANABE, Yuji OISHI, Atsushi IKEDA
09:55 - 10:20	02-02 MODERN SOLUTIONS FOR CHAMFERING OF GEARS  Oliver WINKEL	03-02 EFFECTS OF PINION GEAR PRESSURE ANGLE AND HELIX ANGLE ERRORS ON TRANSMISSION ERROR OF A FACE GEAR MODIFIED WITH A TRANSMISSION ERROR CONTROLLED CURVE  Tetsuo INOUE, Syuhei KUROKAWA	12-01 DEVELOPMENT OF SMALL TYPE OF A STANDING UP ASSISTANCE DEVICE FOR THE ELDERLY  Eiichiro TANAKA, Keiichi MURAMATSU, Keiichi WATANUKI	11-02 SLIP BEHAVIOR IN PULLEY GROOVE UP TO SLIDING SLIP AT STEADY STATE OF TORQUE AND POWER TRANSMITTING EFFICIENCY FOR METAL V-BELT CVT  Ryohei OKUDA, Kazuya OKUBO, Toru FUJII, Kyohei SAKAGAMI, Toru YAGASAKI
10:20 - 10:45	02-03 HARD FINISHING OF ASYMMETRIC TOOTH PROFILES - SOLUTIONS FOR SERIES PRODUCTION  Andreas MEHR, Kiyoshi IGUCHI	03-03 TESTING METHOD OF GEAR MEASURING INSTRUMENTS  Masaharu KOMORI, Yohan KONDO, Toshiyuki TAKATSUJI	12-02 DEVELOPMENT OF A WALKING ASSISTANCE APPARATUS INCLUDING A TORQUE LIMITER IN A GEAR  Eiichiro TANAKA, Hayato NAGAYOSHI, Hirotohi KONDO, Keiichi MURAMATSU, Keiichi WATANUKI	11-03 EFFICIENCY OF A TWO PULLEYS POLY-V BELT TRANSMISSION, INFLUENCE OF BELT CHARACTERISTICS: FRICTION COEFFICIENT, LONGITUDINAL STIFFNESS  Lionel MANIN, Cédric LORENZON, Houssem SAAD
10:45 - 11:10	02-04 COMPLETE MACHINING OF GEARS ON 5X MULTITASKING MACHINES  Thomas LOCHBIHLER	03-04 WHOLE OUTLINE SCANNING MEASUREMENT FOR HELICAL GEARS INCLUDING ROOT AND BOTTOM PROFILES  Syuhei KUROKAWA, Takashi TERAOKA, Yuki UTSUNOMIYA, Tetsuya TAGUCHI, Terutake HAYASHI, Yoji MATSUKAWA	12-03 KINEMATIC DESIGN OF A FOOTPLATE DRIVE MECHANISM USING A 3-DOF PARALLEL MECHANISM FOR WALKING REHABILITATION DEVICE  Chu ZHANG, Bluest LAN, Daisuke MATSUURA, Céline MOUGENOT, Yusuke SUGAHARA, Yukio TAKEDA	11-04 DEVELOPMENT OF A DRY TIMING BELT SYSTEM FOR A 3-CYLINDER ENGINE  Tomas JOHANNESSON
11:10 - 11:35	02-05 5AXIS CNC MANUFACTURING OF EDM BEVEL GEAR ELECTRODES  Claude GOSSELIN, Jianyu WANG	03-05 MEASUREMENT OF TOOTH FLANKS BY GEAR MEASURING INSTRUMENTS AND EVALUATION OF ITS SURFACE TEXTURE (EFFECT OF DIFFERENT PROFILES ON MEASUREMENT RESULTS)  Myungsoo KIM, Tomohiro TATSUMI, Daisuke IBA, Junichi HONGU, Morimasa NAKAMURA, Ichiro MORIWAKI	12-04 THE FRICTION CHARACTERISTICS TEST OF FRICTION ELEMENT WITH MULTI-CONE RING SURFACE CONFIGURATION  Yanzhong WANG, Xiangyu WU	11-05 SIMULATION OF ROLLING CONTACT FATIGUE STRENGTH FOR TRACTION DRIVE ELEMENTS (OBTAINING OF S-N CURVE BY FATIGUE TEST)  Yukihito NARITA, Ryouyusuke SATO, Tatsuya SASAGAWA, Masashi YAMANAKA, Toshiharu KAZAMA, Yasuhiro OSAFUNE, Tomoya MASUYAMA
11:35 - 12:00	02-06 GEAR GEOMETRY AS FUNCTION OF PRODUCTION METHOD – PROPOSAL OF INVO-PLANAR BEVEL GEAR FOR GOOD PRODUCTIVITY –  Aizoh KUBO, Akio UEDA	03-06 EXPLORES FOR THE ORIGIN OF GEARS IN TRADITIONAL JAPANESE CLOCK (WADOKEI)  Akio UEDA, Aizo KUBO, Hiroaki MATSUOKA, Jun WATANABE, Miyako MIYAZAKI	12-05 THREE-DOF TRANSLATIONAL PARALLEL MECHANISM PARTLY COMPOSED OF WIRES  Hiroaki KOZUKA, Daisaku UCHIJIMA, Takurou OKAMOTO, Yuusuke KITAYAMA, Hiroshi TACHIYA	11-06 STUDY ON HIGH-SPEED TRACTION DRIVE CVT FOR AIRCRAFT POWER GENERATION –GYROSCOPIC EFFECT OF THE THRUST BALL BEARING ON THE CVT-  Kippe MATSUDA, Tatsuhiko GOI, Kenichiro TANAKA, Hideyuki IMAI, Hirohisa TANAKA, Yasukazu SATO
12:00 - 13:30	LUNCH 1			
13:30 - 13:45	OPENING in Terrsa Hall			
13:45 - 14:45	<b>PLENARY LECTURE 1 in Terrsa Hall THE HYBRID TECHNOLOGY FOR HONDA SUPER SPORTS CAR by Mr. Yasuhide Sakamoto, Chief Engineer at Honda Motor Co., Ltd.</b>			
14:45 - 15:05	COFFEE BREAK 1			

TIME	ROOM 1		ROOM 2		ROOM 3		ROOM 4	
	Manufacturing of gears (I)		Design and synthesis of gears (I)		Dynamics and noise problems of gears (I)		Motion and power transmission systems (I)	
	Chair: Zhi Qin CAI, Syuhei KUROKAWA		Chair: Alexander KAPELEVICH, Tooru NISHIDA		Chair: Datong QIN, Shigeki MATSUMURA		Chair: Jean-Pierre DE VAUJANY, Geng LIU	
15:05 - 15:30	02-07	MODEL-BASED PROCESS ANALYSIS FOR GEAR CUTTING WITH INDEXABLE INSERTS	01-01	DESIGN OF HIGH-REDUCTION HYPOID GEARS MESHING IN PLANE OF ACTION	04-01	STUDY ON THE MODE CHARACTERISTICS AND PARAMETER SENSITIVITY FOR A TWO-STAGE SPUR PLANETARY GEAR SYSTEM BASED ON SHAFTING ELEMENT METHOD	10-00	HOW MANY TRANSMISSIONS FOR THE NEXT HYBRIDS?
		Fritz KLOCKE, Christoph LÖPENHAUS, Felix KÜHN, Markus KRÖMER		Atsushi SUZUKI, Ichiro TARUTANI, Takayuki AOYAMA		Aiqiang ZHANG, Jing WEI, Datong QIN		Bernd-Robert Höhn
15:30 - 15:55	02-08	DEVELOPMENT OF VIBRATION HOBBIING MACHINE	01-02	PLASTIC DEFORMATION MECHANISM OF HYPOID GEARS	04-02	INVESTIGATION ON TRANSIENT DYNAMIC CHARACTERISTICS OF A SINGLE-STAGE PLANETARY GEAR SYSTEM FOR WIND TURBINES	10-01	CHALLENGES AND OPPORTUNITIES OF FULL SIZE NACELLE TESTING OF WIND TURBINE GENERATORS
		Shu KARUBE		Takayuki AOYAMA, Tomohiro SUZUKI, Hiroki INOKURA, Yoshikatsu SHIBATA		Kuo Jao HUANG, Po Ching LU		Sebastian REISCH, Georg JACOBS, Dennis BOSSE, Daniel MATZKE
15:55 - 16:20	02-09	ANALYSIS OF THE EFFECT ON GEAR ACCURACY OF WORKPIECE/TOOL POSITIONING ACCURACY IN THE HOBBIING PROCESS	01-03	DESIGN METHOD FOR HYPOID GEARS CONSIDERING PLASTIC DEFORMATION UNDER HIGH LOAD	04-03	INVESTIGATION OF A NOVEL THREE-AXIS DRIVE DESIGN FOR A PLANETARY GEAR TRAIN THAT USES UNIVERSAL JOINTS	10-02	DESIGN AND DYNAMIC SIMULATION FOR A NEW HELICOPTER CONTINUOUSLY VARIABLE TRANSMISSION
		Kouji MATSUO, Yoshitomo SUZUKI, Kenichi FUJIKI		Hiroki INOKURA, Yoshikatsu SHIBATA, Takayuki AOYAMA, Takeshi MATSUMOTO		Dai NISHIDA, Masao NAKAGAWA, Deepak SAH, Toshiaki HIROGAKI, Eiichi AOYAMA		Ru Yuan, Xin Cai
16:20 - 16:45	02-10	AN EXPERIMENTAL STUDY ON CUTTING PERFORMANCE OF HSS HOB WITH TIN COATING FILM IN DRY HOBBIING	01-04	A REGRESSION METHOD FOR THE COMPUTATION OF LOCAL SPIRAL BEVEL AND HYPOID DEFLECTIONS FROM FINITE ELEMENT MODELS	04-04	EXPERIMENTAL RESEARCH OF HYPOID GEAR NOISE AND VIBRATION BY GEARBOX TEST	10-03	POWER FLOW AND EFFICIENCY ANALYSES OF DUAL PLANETARY COUPLING MECHANISM BASED ON BOND GRAPH THEORY – AUTHORS' INSTRUCTIONS –
		Akio KUBO, Hua QIU, Hironori MATSUOKA		Sandeep VIJAYAKAR, Karthikeyan MARAMBEDU		Takeshi WATANABE, Keiichiro TOBISAWA, Kohei SAIKI		Yi Han, Jianjun Hu, Zhihua Hu, Yong Zheng
16:45 - 17:10	02-11	METHOD FOR FINISHING THE TOOTH FLANK OF SURFACE-HARDENED SMALL GEARS USING A GEAR-SHAPED TOOL COMPOSED OF ALUMINA-FIBER-REINFORCED PLASTIC	01-05	GEOMETRY GENERATION PRINCIPLE AND MESHING CHARACTERISTICS OF A NEW GEAR DRIVE	04-05	TIME-VARYING TORQUE LOAD DEPENDENT HYPOID GEAR MESH AND DYNAMIC ANALYSIS	10-04	DESIGN AND ANALYSIS OF A NOVEL SERIES-PARALLEL HYBRID TRANSMISSION
		Yoshihiro FUJISAWA, Masaharu KOMORI		Zhenhua Han, Wankai Shi, Lang Xu, Chang Liu		Zhenghong SHI, Teik C. LIM		Huu-Tich NGO, Kuen-Bao SHEU, Yu-Chi CHEN, Yen-Chun HSUEH, Hong-Sen YAN
17:10 - 17:35	02-12	TOOTH CONTACT ANALYSIS AND MANUFACTURING OF DUAL LEAD WORM GEARS IN ISO TYPE I	01-06	A SIMPLIFIED METHOD FOR THE KINEMATIC ERROR ANALYSIS OF CYLOIDAL GEAR DRIVES	04-06	ANALYSIS OF THE DYNAMIC BEHAVIOUR OF MULTI-MESH SPUR AND HELICAL GEARS - APPLICATION TO THE DEFINITION OF OPTIMUM PROFILE RELIEFS IN AERONAUTICAL TRANSMISSIONS	10-05	STUDY ON DYNAMIC CHARACTERISTICS OF ELECTROMECHANICAL COUPLING IN MODE SWITCHING PROCESS OF MULTI-POWER TRANSMISSION SYSTEM CONSIDERING INTERNAL AND EXTERNAL EXCITATION
		Shigenori HAMADA, Kazumasa KAWASAKI, Isamu TSUJI		Keng-Hsun LIN, Chang-Chia HSIEH, Jyh-Jone LEE		Hassan FACKFACK, Philippe VELEX, Jérôme BRUYERE, Samuel BECQUERELLE		Yanzhao Su, Minghui Hu, Ling Su, Datong Qin, Yonggang Liu
17:35 - 18:00			01-07	PROFILE MODIFICATION AND SENSITIVITY TO SIZE DEVIATIONS	04-07	SOME ANALYTICAL GUIDELINES TO DEFINE OPTIMUM PROFILE RELIEF IN NARROW-FACED SPUR AND HELICAL GEARS	10-06	DESIGN AND PARAMETER MATCHING OF A NEW ELECTRO-HYDRAULIC HYBRID TRANSMISSION SYSTEM
				Vladislav DOROFEEV, Viktor GOLOVANOV, Suren GUKASIAN, Dmitry DOROFEEV, Liana SCHERBININA, Victoria ANANIEVA		Philippe VELEX, Jérôme BRUYÈRE		Chang LUO, Yang YANG, Pengxi LI

TIME	Thursday, March 2							
09:00 - 16:00	Registration							
09:30 - 10:30	PLENARY LECTURE 2 in Terrsa Hall SCIENCE OF TATARA AND JAPANESE SWORD – TRADITIONAL JAPANESE METHODS FOR STEEL AND SWORD MAKING – by Prof. Tatsuo INOUE, Professor Emeritus at Kyoto University							
10:30 - 10:50	COFFEE BREAK 2							
TIME	ROOM 1		ROOM 2		ROOM 3		ROOM 4	
	Lubrication, power loss, and efficiency (I)		Gear strength and durability (I)		Plastic gear technology (I)		Motion and power transmission systems (II)	
	Chair: Masahiro FUJII, Márk LELKES		Chair: Tobias SCHULZE, Tomoya MASUYAMA		Chair: Bingkui CHEN, Takao KOIDE		Chair: Minghui HU, Sebastian REISCH	
10:50 - 11:15	07-01	INFLUENCE OF LUBRICANT TEMPERATURE, TORQUE AND ROTATIONAL SPEED ON THE LOSS MECHANISMS IN A TWO-SPEED AUTOMATIC TRANSMISSION	05-01	SURFACE DURABILITY AND TOOTH FLANK PROPERTIES OF VACUUM-CARBONITRIDED GEARS FINISHED BY GRINDING, SHOT-PEENING AND POLISHING	09-01	POTENTIAL OF OIL-LUBRICATED CYLINDRICAL PLASTIC GEARS	10-07	NUMERICAL MODEL AND PARAMETRICAL STUDY OF SPLINE COUPLING
		Yonggang LIU, Bing WANG, Datong QIN, Zhenzhen LEI, Wenliang FU		Hiroshi MORIKAWA, Masahiko NAKAE, Toshio FUKUSHIMA		Christian HASL, Christopher ILLENBERGER, Peter OSTER, Thomas TOBIE, Karsten STAHL		Jean-Pierre DE VAUJANY, Michèle GUINGAND, Boris SCHMITT
11:15 - 11:40	07-02	A STUDY ON MESH FRICTION LOSS REDUCTION OF CYLINDRICAL GEARS UNDER MIXED LUBRICATION CONDITION	05-02	DEVELOPMENT OF TRANSMISSION GEARS WITH HIGHER TOOTH ROOT/TOOTH SURFACE FATIGUE STRENGTH OBTAINED WITH TWO-STAGE SHOT PEENING	09-02	LIFETIME AND MESHING TEETH TEMPERATURE OF A CROSSED HELICAL GEAR CONSISTING OF A PLASTIC GEAR AND A METAL GEAR: CASE OF NO LUBRICATION	10-08	AN EXPERIMENTAL INVESTIGATION OF THE LOAD DISTRIBUTION OF SPLINED JOINTS UNDER GEAR LOADING CONDITIONS
		Koji KUMAGAI, Kunihiko MORIKAWA, Kazuhiro TAKAKI		Ryohei SAITO, Yoshitomo SUZUKI, Atsushi IKEDA		Mikio TAKAHASHI, Takayoshi ITAGAKI, Hideo TAKAHASHI, Takao KOIDE, Yuki KOBARI		Michael BENATAR, David TALBOT, Ahmet KAHRAMAN

11:40 - 12:05	07-03	EXPERIMENTAL INVESTIGATIONS ON CHURNING LOSSES GENERATED IN A PLANETARY GEAR SET  Adrien NEUROUTH, Christophe CHANGENET, Charlotte FOSSIER, Fabrice VILLE	05-03	INFLUENCE OF DENSITY ON FATIGUE STRENGTH OF SINTERED AND POWDER-FORGED GEARS  Masanori SEKI, Masahiro FUJII	09-03	TOOTH SURFACE TEMPERATURE AND POWER TRANSMISSION EFFICIENCY OF PLASTIC SINE-CURVE GEAR  Takao KOIDE, Tatsuya YUKAWA, Suguru TAKAMI, Akio UEDA, Atsutaka TAMURA, Junichi HONGU	10-09	DEVELOPMENT OF HIGH-SPEED REDUCER MODIFIED THE ROLLING BEARING  Yosuke TOYOGUCHI, Yasuyoshi TOZAKI, Hirokazu Ooba
12:05 - 12:30	07-04	MODELLING OF STEADY-STATE MECHANICAL POWER LOSSES IN PLANETARY GEAR TRAINS OF AUTOMATIC TRANSMISSIONS  Venkatakrishna JANAKIRAMAN, Ahmet KAHRAMAN, David TALBOT	05-04	FRETTING LINES ON GEARS – SYSTEMATIC INVESTIGATIONS ON THE FORMATION CONDITIONS AND MECHANISMS  Daniel KADACH, Thomas TOBIE, Karsten STAHL	09-04	A STUDY ON NOISE REDUCTION OF POM HELICAL GEARS BASED ON SOUND QUALITY EVALUATION - NOISE PROPERTIES OF POM HELICAL GEAR PAIR OPERATING UNDER NO-LUBRICATION CONDITION - Yasuhiko OGIYA, Ryoichi INOUE, Kohei Kuroishi, Yohei FUKUDA	10-10	OPTIMUM DESIGNING OF SMALL-SIZED TOROIDAL CVT BASED ON FACTOR ANALYSIS FOR POWER LOSS  Makoto HIURA, Tomoko HIRAYAMA, Takashi MATSUOKA, Norio DEGUCHI, Kikuo OKAMURA

### LUNCH 2

TIME	ROOM 1		ROOM 2		ROOM 3		ROOM 4	
	Design and synthesis of gears (II) Chair: Takayuki AOYAMA, Sandeep VIJAYAKAR		Gear strength and durability (II) Chair: Bingkui CHEN, Masanori SEKI		Dynamics and noise problems of gears (II) Chair: Jože TAVČAR, Morimasa NAKAMURA		Motion and power transmission systems (III) Chair: Ahmet KAHRAMAN, Yasuyoshi Tozaki	
13:35 - 14:00	01-07	PROFILE MODIFICATION AND SENSITIVITY TO SIZE DEVIATIONS  Vladislav DOROFEEV, Viktor GOLOVANOV, Suren GUKASIAN, Dmitry DOROFEEV, Liana SHCHERBININA, Victoria ANANIEVA	05-05	EFFECT OF TOOTH PROFILE MODIFICATION ON TOOTH WEAR OF INVOLUTE SPUR GEAR  Jin NARAZAKI, Kiyotaka IKEJO, Kazuteru NAGAMURA, Eichiro TANAKA, Natsuhiko SEYAMA	04-08	STATIONARY RESPONSES OF GEAR SYSTEMS WITH COMBINED PERIODICALLY TIME-VARYING STIFFNESS AND STOCHASTIC EXTERNAL EXCITATIONS  Joël PERRET-LIAUDET, Pierre GARAMBOIS, Emmanuel RIGAUD	10-11	MODELLING OF POWER LOSSES IN POLY-V BELT TRANSMISSIONS: HYSTERESIS PHENOMENA  Carlos A.F. SILVA, Lionel MANIN, Renaud G. RINALDI, Didier REMOND, Etienne BESNIER, Marie-Ange ANDRIANOELY
14:00 - 14:25	01-08	MESHING ANALYSIS OF FACE GEARS WITH A LOW GEAR RATIO  Yoshihiko TSUNAWAKI, Kunihiko MORIKAWA, Kenichi SONOWA	05-06	PARAMETER STUDY ON THE CALCULATED RISK OF TOOTH FLANK FRACTURE OF CASE HARDENED GEARS  Michael HEIN, Thomas TOBIE, Karsten STAHL	04-09	DAMAGE DIAGNOSIS OF GEAR TOOTH SURFACE WITH NEAREST NEIGHBOR METHOD  Takahiro KAWAMOTO, Kiyotaka IKEJO, Kazuteru NAGAMURA, Kosuke OKADA	10-12	STUDY ON THE PLANETARY ROLLER SCREW MECHANISM – A REVIEW  Geng LIU, Shangjun MA
14:25 - 14:50	01-09	AXIAL TOOTH PROFILE OF CONICAL SURFACE ENVELOPING SPIROID  Yaping Zhao	05-07	CONTACT-BENDING-FATIGUE (CBF) TESTS ON HIGH STRENGTH STEELS FOR GEARS – EFFECTS OF BENDING STRESS ON PROPAGATION OF CRACKS INITIATED AT PITS DUE TO CONTACT –  Ichiro MORIWAKI, Shunsuke HASHIMOTO, Morimasa NAKAMURA	04-10	TIME SYNCHRONOUS AVERAGE FOR OF GEAR FAULT DIAGNOSIS USING NEURAL OSCILLATORS WITHOUT ROTARY-ENCODERS (EXPERIMENTAL EVALUATION OF NEURAL OSCILLATORS SYNCHRONIZED WITH MESHING VIBRATION)  Satoshi MIYAMOTO, Daisuke IBA, Junichi HONGU, Morimasa NAKAMURA, Nanako Miura, Takashi IZUKA, Arata MASUDA, Akira SONE, Ichiro MORIWAKI	10-13	RESEARCH ON LOAD BEARING CHARACTERISTICS OF PLANETARY ROLLER SCREW MECHANISM  Wenjie ZHANG, Geng LIU, Xiaojun FU
14:50 - 15:15	01-10	CONTACT RATIO OPTIMIZATION OF POWDER METAL GEARS: STRESS and TRANSMISSION ERROR REDUCTION  Alexander KAPELEVICH, Anders FLODIN	05-08	INFLUENCE OF ADDITIONAL SURFACE FINISHING TO THE MATERIAL PROPERTIES AND THE FLANK LOAD CARRYING CAPACITY OF CASE-HARDENED GEARS WITH GRINDING BURN  Johannes KOENIG, Peter KOLLER, Thomas TOBIE, Karsten STAHL	04-11	PROPOSAL OF ROTARY ENCODER LESS TIME SYNCHRONOUS AVERAGING METHOD USING NON-LINEAR OSCILLATION FILTER FOR GEARS IN OPERATION – COMPARISON OF FREQUENCY CHARACTERISTIC WITH LINEAR FILTER –  Junichi HONGU, Daisuke IBA, Ichiro MORIWAKI, Takao KOIDE	10-14	STUDY ON LOAD DISTRIBUTION OF PLANETARY ROLLER SCREW BASED ON THERMO-MECHANICAL COUPLING  Shangjun MA, Chenhui ZHANG
15:15 - 15:40	01-11	REDESIGNING AND PROTOTYPING A SIX SPEED MANUAL AUTOMOTIVE TRANSMISSION OF POWDER METAL GEARS  Michael ANDERSSON, Anders Flodin	05-09	FATIGUE STRENGTH SIMULATION OF GEARS WITH ASYMMETRIC TOOTH PROFILE  Tomoya MASUYAMA, Ryota KOBAYASHI, Naoki MIYAZAKI, Ryoosuke HORI, Yasunari MIMURA	04-12	INFLUENCE OF THE PARAMETRIC GEAR MESH EXCITATION ON THE DYNAMIC BEHAVIOR OF A KINEMATIC CHAIN SUBMITTED TO TORQUE FLUCTUATIONS  Pierre GARAMBOIS, Emmanuel RIGAUD, Guillaume DONNARD, Joël PERRET-LIAUDET	10-15	INFLUENCE OF CARRIER POSITION ERROR ON THE KINEMATIC CHARACTERISTICS OF PLANETARY ROLLER SCREW MECHANISM  Xiaojun FU, Geng LIU, Wenjie ZHANG

### COFFEE BREAK 3

TIME	ROOM 1		ROOM 2		ROOM 3		ROOM 4	
	Lubrication, power loss, and efficiency (II) Chair: Christophe CHANGENET, Yuya OMIYA		Gear materials and surface modification (I) Chair: Michael ANDERSSON, Teruie TAKEMASU		Plastic gear technology (II) Chair: Christian HASL, Yasuhiko OGIYA		Gear unit design and applications (I) Chair: Wenjie Zhang, Eiichirou TANAKA	
16:00 - 16:25	07-05	FRICITION COEFFICIENT OF SMALL-SIZED GEAR LUBRICATED WITH GREASE  Yoichi MATSUMOTO, Haruo HOUJOH	06-01	STRESS ANALYSIS IN DURABILITY TESTS OF SINTERED STEEL GEARS WITH DIFFERENT DENSITIES USING FEM MODEL CONSIDERING VOIDS  Takahiro NAGATA, Teruie TAKEMASU, Takao KOIDE	09-05	DIFFERENT TEETH PROFILE SHAPES OF POLYMER GEARS AND COMPARISON OF THEIR PERFORMANCE  Damijan ZORKO, Simon KULOVEC, Jože TAVČAR, Jože DUHOVNIK	08-01	FROM THE SINGLE COMPONENT SAFETY FACTOR TO THE SYSTEM RELIABILITY RATING – THE RELIABILITY CONCEPT: A NEW WAY TO ASSESS GEARS AND GEAR DRIVES –  Ulrich Kissling, Inho Bae, Michael Stangl
16:25 - 16:50	07-06	DEVELOPMENT OF A MICROGEAR ENDURANCE TEST SYSTEM AND A BASIC STUDY OF LUBRICATING CONDITIONS FOR MICRO SPUR GEAR  Tomoya SUZUKI, Mikio TAKAHASHI, Takayoshi ITAGAKI, Noritsugu MAEDA, Hideo TAKAHASHI	06-02	IMPROVED PM GEAR ROLLING SIMULATIONS USING ADVANCED MATERIAL MODELLING  Vasilis ANGELOPOULOS, Michael ANDERSSON	09-06	ACCELERATED LIFETIME TESTING OF REINFORCED POLYMER GEARS  Jože TAVČAR, Gašper GRKMAN, Jože DUHOVNIK	08-02	DEVELOPMENT OF DESIGN PROCEDURE FOR PLANETARY GEAR NOISE IMPROVEMENT  Yoshikazu MIYOSHI, Hiroko AOKI, Masato OGAWA
16:50 - 17:15	07-07	THE MEASUREMENT OF SURFACE TEMPERATURES ON GEAR TEETH DURING HIGH SURFACE PRESSURE WITH DISSIMILAR HARDENED GEARS  Yasuyoshi TOZAKI, Naoya MATSUSHITA, Takuya GOTO, Yuji SUMITANI	06-03	CYCLIC INDENTATION TEST FOR EVALUATING STRENGTH OF DLC FILMS  Morimasa NAKAMURA, Ryohei KURIHARA, Fumihiro NAKAYAMA, Ken-ichi MIURA, Junpei KOBATA	09-07	EXPECTATION REGARDING HIGHER LOAD CAPACITY OF LONG-FIBER-REINFORCED PLASTIC GEAR PAIRS  Ichiro MORIWAKI, Tomoya MURAKAMI, Morimasa NAKAMURA, Yoshihiro ASAMI, Masahiko ITAKURA	08-03	DESIGN AND ANALYSIS OF A THREE-STAGE CYCLOIDAL PLANETARY GEAR DRIVE FOR HIGH REDUCTION RATIO  Shyi-Jeng TSAI, Ling-Chiao CHANG, Chin-Hao HUANG

17:15 - 17:40	07-08	GEAR UNIT INTELLIGENT LUBE SYSTEM BENEFITS OVER WET SUMP SPLASH LUBRICATION  Márk LELKES, Csaba KOKREHEL	06-04	TRIBOLOGICAL CHARACTERISTICS OF PLASMA CARBURIZED TITANIUM ALLOY GEAR UNDER UNLUBRICATED CONDITION  Kosaku KITA, Yasuyoshi TOZAKI, Ken KAWAHIGASHI, Ryosuke NOGUCHI	09-08	FATIGUE LIFE OF INJECTION-MOLDED-PLASTIC-HELICAL-GEAR ADDED WITH CARBON POWDER MADE FROM RICE HULL  YenChu CHEN, Takayoshi ITAGAKI, Hideo TAKAHASHI, Mikio TAKAHASHI, Hiroshi IIZUKA	08-04	ANALYTICAL APPROACH FOR LOAD SHARING ANALYSIS OF A DIFFERENTIAL TYPE THREE-STAGE PLANETARY GEAR DRIVE  Shyi-Jeng TSAI, Qi-You ZHUANG
18:30 - 20:00	<b>Banquet in the Hall at RIHGA Royal Hotel Kyoto</b>							

TIME		Friday, March 3							
09:00 - 11:00		Registration							
		ROOM 1	ROOM 2	ROOM 3	ROOM 4				
TIME		Lubrication, power loss, and efficiency (III) & miscellanea Chair: Yasuyoshi TOZAKI, Yonggang LIU	Gear strength and durability (III) Chair: Thomas TOBIE, Kunihiko MORIKAWA	Dynamics and noise problems of gears (III) Chair: Philippe VELEX, Kiyotaka IKEJO	Manufacturing of gears (III) Chair: Andreas MEHR, Eiri NAGATA				
09:30 - 09:55				04-13 HYBRID DYNAMIC MODELING OF SHEARER'S DRUM DRIVING SYSTEM AND THE INFLUENCE OF HOUSING TOPOLOGY ON THE DYNAMIC CHARACTERISTICS OF GEAR  Hanjie JIA, Prof. Datong QIN					
09:55 - 10:20	07-09	THE INFLUENCE OF PHOSPHATE ADDITIVES ON THE MICROPITTING OF GEARS  Takuya OHNO	05-10 METHOD OF MEASURING THE LOAD DISTRIBUTION OF SPUR GEAR STAGES  Markus DAFFNER, Michael OTTO, Karsten STAHL	04-14 THEORETICAL RESEARCH ON THE VIBRATION MODE OF THE DOUBLEHELICAL STAR GEAR TRANSMISSION SYSTEM  Wang Sanmin, Hao Lifeng					
10:20 - 10:45	07-10	METAL-METAL FRICTION PROPERTY AND GEAR DURABILITY PERFORMANCE FROM LUBRICANT ADDITIVE IN CONTINUOUSLY VARIABLE TRANSMISSION FLUIDS  Keiichi NARITA	05-11 DETERMINATION OF LOAD DISTRIBUTIONS ON DOUBLE HELICAL GEARED PLANETARY GEAR BOXES  Tobias SCHULZE, Konrad RIEDEL	04-15 BOND GRAPH SIMULATION OF GEAR TRANSMISSION CONSIDERING TOOTH MESHING STIFFNESS AND DAMPING  Masao NAKAGAWA, Dai NISHIDA, Deepak SAH, Toshiki HIROGAKI, Eiichi AOYAMA	02-13	GEAR SKIVING FOR MASS PRODUCTION  Eiri NAGATA, Tomokazu TACHIKAWA, Yoshitomo NAKAHARA, Nobuaki KURITA, Morimasa NAKAMURA, Daisuke IBA, Ichiro MORIWAKI			
10:45 - 11:10	07-11	INFLUENCE OF SURFACE PROFILE MODIFIED WITH FINE SHOT PEENING ON SCUFFING IN ROLLING-SLIDING CONTACT ELEMENT  Masahiro FUJII, Yuya OMIYA, Ryo OCHIAI, Koshi ISHIMOTO, Akihiro UEDA	05-12 LOAD-DEPENDENT BEVEL GEAR DEFLECTIONS AND THEIR IMPACT ON THE PITTING LOAD CARRYING CAPACITY  Tobias REIMANN, Daniel KADACH, Tejiro YAMANAKA, Akira YAMAMOTO, Johann-Paul STEPLINGER, Karsten STAHL	04-16 INFLUENCE OF MOTOR FAULT ON SYNCHRONIZATION CHARACTERISTICS OF A MULTI-SOURCE DRIVING TRANSMISSION SYSTEM  Ruizhi Shu, Jing Wei, Datong Qin	02-14	MAPS REPRESENTING EXISTENCE REGIONS OF CONJUGATE PINIONS FOR CUTTER GEOMETRY DESIGN IN INTERNAL GEAR SKIVING  Ichiro MORIWAKI, Tsukasa OSAFUNE, Morimasa NAKAMURA, Daisuke IBA			
11:10 - 11:35	13-01	DEVELOPMENT OF PRINTED SENSOR FOR GEAR HEALTH MONITORING SYSTEM (DEVELOPMENT OF THREE-AXIS PRINTER FOR CONDUCTIVE INK LASER SINTERING PROCESS AND PROPERTIES EVALUATION OF SINTERED ELECTRIC CIRCUIT)  Takahiro KAMIMOTO, Daisuke IBA, Shintaro FUTAGAWA, Morimasa NAKAMURA, Nanako MIURA, Takashi IIZUKA, Arata MASUDA, Akira SONE, Ichiro MORIWAKI	05-13 TOOTH SURFACE STRENGTH TEST OF HYPER CONICAL GEARS  Tatsuya OHMACHI, Hidenori KOMATSUBARA, Ken-ichi MITOME	04-17 TRANSMISSION ERROR CONSTRUCTION OF A PAIR OF SPUR GEARS BASED ON GEAR ACCURACY DATA MEASURED  Shuting LI, Yuki KONO	02-15	NEW INTERNAL GEAR MACHINING SYSTEM, "SUPER SKIVING SYSTEM"  Yu CHIHARA, Yoza NAKAMURA, Junji USUDE, Toshimasa KIKUCHI, Tetsuji MONDEN, Keisuke YOSHIKAWA			
11:35 - 12:00	13-02	CHARACTERISTICS OF ULTRASONIC AND EDDY CURRENT METHODS FOR LUBRICATION EVALUATION IN ROLLING BEARING  Akitoshi TAKEUCHI	05-14 A STUDY ON LOADED TOOTH CONTACT ANALYSIS OF A CYCLOID PLANETARY GEAR REDUCER CONSIDERING BEARING ROLLER STIFFNESS  Shyi-Jeng TSAI, Ching-Hao HUANG	04-18 ESTIMATION OF LOADED STATIC TRANSMISSION ERROR OF HELICAL GEARS BY VIBRATION MEASUREMENT UNDER OPERATING CONDITIONS  Toshiya NAGUMO, Shigeki MATSUMURA, Haruo HOUJOH	02-16	PROCESS ANALYSIS FOR INTERNAL GEAR GRINDING  Krithika IYER, Masashi OCHI, Yoshikoto YANASE			
12:00 - 13:35	<b>LUNCH 3 &amp; CLOSING</b>								