

# 2013 IFToMM NEWSLETTER



International Federation for the Promotion of  
Mechanism and Machine Science

[www.iftomm.org](http://www.iftomm.org)

## CONTENTS:

Message of the IFToMM President  
News from Executive Council  
News from Member Organizations  
News from Permanent Commissions  
News from Technical Committees  
Other articles  
Book survey  
Call for 2015 IFToMM World Congress  
Forthcoming IFToMM Sponsored Conferences  
IFToMM publication frames  
IFToMM bodies and contacts

## SCOPE OF THE NEWSLETTER

This Newsletter reports the most important facts and events of IFToMM activity during the year but with an eye to the future plans. Information is collected mainly from IFToMM bodies and its leadership. A special attention list is devoted to forthcoming conference as forum for meetings among the community and promotion of MMS.

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## EDITORIAL BOARD FOR 2013 ISSUE

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Jean Pierre Merlet, EC member  
Teresa Zielinska, Secretary General

## MESSAGE OF THE IFToMM PRESIDENT

Prof. Yoshihiko Nakamura, University of Tokyo, Japan  
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It is my great pleasure to write a new-year message as President of IFToMM in the Newsletter of IFToMM. I sincerely hope you had a fertile year of 2013 both in personal and professional lives and wish you an enjoyable endeavor in

2014. We have seen great changes of environments, society, economy, science and technology all over the world. The wisdom of the IFToMM founders at the cold-war era, that tied and networked the colleagues in the east and the west, still remain as the polestar in our age in even more complex and critical reasons for the global society and civilization.

I would like to bring you two good news from IFToMM, both of which had been recommended by the Executive Council and the Secretary General recently informed me of their approval through the e-mail ballots by the chairs of Member Organizations.

First of all, Kazakhstan returns to IFToMM as the 47<sup>th</sup> Member Organization! The colleagues of Kazakhstan have succeeded restructuring and strengthening her council of IFToMM and the new application to join IFToMM was formally approved. Please join welcoming and wishing great success of our colleagues in Kazakhstan. I would also share with you that the EC have been contacted for possible participation as new members from the colleagues of a few other countries. In 2014, we are looking forward to expanding our network to share the spirits of IFToMM founders for the promotion of mechanism and machine science.

The second news is about the one that needs the final approval by the constitution council chaired by Professor Ken Waldron. I would like to share the news as a preliminary announcement. The Executive council had recommended an amendment of the IFToMM constitution and the by-laws (more specifically of No. 3.9 of the by-laws), which has been approved through e-mail ballot by the chairs of Member Organizations. IFToMM currently has 13 Technical Committees which are the main fields of the scientific works of the colleagues of IFToMM. The amendment is about the rules on the membership of Technical Committees. No.3.9 of the by-laws sets the maximum number of Technical Committee members to two from a Member Organization. The rule was consequential to the importance of activities in Technical Committees. However, it unfortunately made a difficulty to invite motivated young colleagues to the activities of Technical Committee. The amendment is to remove the limitation and to allow every qualified individual if he or she wishes and is approved by the Technical Committee chair and the Executive Council. At the same

time, the limitation of number of Technical Committees by an individual is also removed.

One may concern about the voting method. The IFToMM community shares, for the diversity of opinions, the spirits of equal voting right among Member Organizations. The spirits are maintained by setting the simple majority of votes by the individuals from a Member Organization as the vote by the Member Organization. Please keep your eyes at the IFToMM Web page and INVITE YOUR YOUNG QUALIFIED COLLEAGUES to apply for the members of Technical Committees as soon as it is formally announced.

In 2013 I took as many opportunities as possible and participated conferences and events sponsored by IFToMM. Each of them filled me with scientific curiosity and unforgettable memories with IFToMM colleagues and friends. If I am asked to choose one, I would not hesitate to take “The Second Student International Olympiad on Mechanism and Machine Science” (October 12-13, 2013, Shanghai, China) co-organized by Professor Fen Gao and Professor Weizhong Guo as the most memorable one. The Olympiad were supported by faculty members of Shanghai Jiao Tong University and very well organized with Chinese hospitalities. However, the scientific curiosity, passion of study, sense of international exchange as well as charm of smiles of those students who participated, were the best memories of the year. It was clearly showing the value of stages that IFToMM can offer to young motivated scientists in addition to the scientific excellence.



The 2<sup>nd</sup> SIOMMS, October 12-13, 2013, Shanghai, China.

#### NEWS FROM EXECUTIVE COUNCIL

Prof. Teresa Zielinska, Warsaw University of Technology, Poland

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The 46th EC IFToMM Annual Meeting, October 30th - November 2nd, 2013, held in Hsinchu, Taiwan was combined with the site visit of upcoming IFToMM World Congress.



Group photos taken during EC meeting

Current year of our activities has been marked by further improvements of the IFToMM web page, however still it must be improved. This year we started the electronic submission of the TC/PC reports, what significantly improved information handling. The year 2013 reports showed that our Technical Committees and Permanent Commissions are in general very active, however there still are a few which are encouraged to be more vigorous. We expect each PC/TC to have a clear activity statement (vision and mission/program). Thus we were very glad to see very good descriptions in many reports confirming good quality of those PC/TCs chairmanships. We expect a proper activity statement in all reports in the year 2014. All TC/PCs are encouraged to build their web pages. The EC suggests also the creation of the position of a TC/PC secretary as the person handing the web page and information flow. The proposals of the PC/TC new members were very well prepared using new templates. The data pertaining to the candidates, including their CVs, was a very good material, enabling the EC to make the well based decisions regarding membership approval. Speaking about membership, some TC/PCs are very active, presenting a fast growth, but the others needed encouragement.

In the recent 2 years we have recorded a significant increase in the amount of IFToMM patroned/sponsored conferences, what complies with the IFToMM promoting mission.

This year Prof. Ken Waldon, a former IFToMM President (2000-2007), celebrated his 70th birthday. This was an occasion for his friends and pupils to organize on May 17th and 18th, 2013, a “Waldron Fest” combined with a workshop “Advances in Mechanisms, Robotics and Design. Education and Research”. The event was held at the Scott Laboratory, The Ohio State University, Columbus, Ohio. It was attended by more than 100 participants.



*During the Workshop (from the right: Prof. Y.Nakamura – IFToMM President, Prof. O.Khatib, Prof.K.Waldron – IFToMM Past President, Prof. T.Zielinska - IFToMM Secretary General, Prof. B.Roth, Prof. V.Kumar – IFToMM EC member)*

The workshop speakers emphasized Prof.K.Waldron's contribution to the field of engineering - a wonderful and touching talk with a private flavour was given by Ken Waldron's wife Dr. Manjula Waldron. The book with the workshop contributions was published. The event was attended by IFToMM President and Secretary General. Prof Ken Wadron was granted by IFToMM the Dedicated Service Award. The award was presented by President and Secretary to the recipient during the Workshop. The EC members expressed their sincere congratulations to Prof. Ken Waldron and are wished him happy long years full of successes and satisfaction.



*Near to the Congress Venue: left – famous Taipei 101 tower, right – the nearest metro station and a view from the venue entrance doors*

The site visit to the forthcoming IFToMM World Congress and the talks with the local Organizers showed that the event will be a great success and will be attended by many participants. Taipei is safe, not very expensive and has a very good public transportation systems, with clear information in English. The conference place is very well localised, with easy access. The offered resources are at a very good level, and the proposed event schedule is adequate. The IFToMM EC encourages all researchers related to IFToMM, as well as all other scientists to participate in the 2015 IFToMM World Congress. The Young Delegates (YD) grants are available for young researchers (based on competition, the rules will be decided by the Congress Organizers).

## NEWS FROM MEMBER ORGANIZATIONS

[A total of 17 reports]

### MO BELARUS

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VI Belarusian Congress of Theoretical and Applied Mechanics "Mechanics-2013" (23th-25th October 2013, Minsk, Belarus) is the main event in the field of TMM in Belarus (<http://oim.by/ru/belcongress>). The Joint Institute of Mechanical Engineering of National Academy of Science of Belarus (NASB), which patronizes the Belarusian Committee of IFToMM, is a host of the Conference.

The Congress is organized under the support of the NASB, State Science and Technology Committee, Ministry of Industry, and Ministry of Education of Belarus. Congress topics are: Mechanics of machines, certification and tests; Dynamics, strength, and durability of machines and constructions; Technological mechanics.

The Congress is attended by scientists from Belarus, Russia, Ukraine, Georgia, Bulgaria, Poland, Canada, and Singapore. This event became a promising platform for the international exchange of experiences and results of academic research and realizations in the field of mechanics and engineering currently carried out by Belarusian experts and their foreign colleagues.

Proceedings "Actual issues of Mechanical Engineering" was published by The Joint Institute of Mechanical Engineering of the NAS of the NASB at the end of 2012 (<http://oim.by/ru/sbornik>). More than 100 reports of the participants of the International scientific conference "Innovations in Engineering-2012" from Belarus, Russia, Ukraine, Poland, Canada, and Singapore are represented in the first issue of the Proceedings.

The Joint Institute of Mechanical Engineering of the NASB released four issues of the International scientific and technical journal "Mechanics of Machines, Mechanisms and Materials" in 2013 (<http://oim.by/ru/zhurnal/>). Their tables of contents are:

No 1 (22)\_2013

([http://oim.by/ru/zhurnal/new\\_url\\_671515787/new\\_url\\_636693663/](http://oim.by/ru/zhurnal/new_url_671515787/new_url_636693663/));

No 2 (23)\_2013

([http://oim.by/ru/zhurnal/new\\_url\\_671515787/soder\\_2\\_2013/](http://oim.by/ru/zhurnal/new_url_671515787/soder_2_2013/));

No 3 (24)\_2013

([http://oim.by/ru/zhurnal/new\\_url\\_671515787/soder\\_3\\_2013/](http://oim.by/ru/zhurnal/new_url_671515787/soder_3_2013/));

No 4 (25)\_2013 is dedicated to the First International

Conference "Theories of membranes' shells in mechanics and



biology: from macro- to the nanoscale structures". It will be issued at the end of 2013.

V.A. Belyi Metal Polymer Research Institute of the NASB published six issues of the International Scientific Journal "Friction and wear"

(<<http://elibrary.ru/contents.asp?issueid=1108647>>;  
<<http://elibrary.ru/contents.asp?issueid=1120020>>;  
<<http://elibrary.ru/contents.asp?titleid=9621>>).

A monograph "Dynamics and vibromonitoring of gears" written by Dr Ishin N.N. (Ishin, N.N., Minsk: Belaruskaja Navyka, 2013, 432 pages) have been published in 2013 under the aegis of the Joint Institute of Mechanical Engineering of the NASB. The monograph is dedicated to monitoring systems for the technical condition of gear units of mobile machines. The examples of their effective use are represented.

### MO BRAZIL

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Activities on the field of MMS and IFToMM in Brazil have been done under patronage of the Brazilian Society of Mechanical Sciences and Engineering – ABCM. The Brazil IFToMM TC and PC representatives are ABCM members.

1. International Congress of Mechanical Engineering – COBEM2013, November 2-7.
2. National Congress of Mechanical Engineering Students – CREEM 2013, October 21-25.
3. International Symposium on Dynamic Problems of Mechanics - DINAME 2013, February 17-22.
4. Brazilian Congress on Dynamics, Control and Applications – DINCON 2013, October 13-17.

Brazilian members of IFToMM TCs and PCs have taken part in several events and meetings during the period with IFToMM MO, and have collaborations in the educational area (undergraduate and postgraduate programs) and research activities with IFToMM and non IFToMM members.

*Future planned activities:* Promote co-sponsored events by IFToMM and ABCM, increase the participation of Brazilian members on activities promoted by IFToMM, and to implement actions to encourage students in mechanical sciences.

### MO CHINA-BEIJING

Prof. Tian Huang, Tianjin University, China

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1. The 2nd Students International Olympiad on Mechanism and Machine Science (SIOMMS 2013) was successfully held in Shanghai Jiaotong University, China on October 12, 2013. This event is sponsored by IFToMM and hosted by Shanghai Jiaotong University. Prof. Gaofeng with

Shanghai Jiaotong University chaired the organizing committee. 14 teams from Russia, Spain, Japan, South Korea, China-Beijing and China-Taipei participated this event. The IFToMM President, Prof. Nakamura; the Chair of IFToMM Education Commission, Prof. Garcia-Prada; the TC member of Linkage and Mechatronics, Prof. Takeda and Prof. Krylov attended this event as well. Prof. Tu with East China University of Science chaired the Judge Panel.



2. Organized by the IFToMM MO Being-China and financially supported by IFToMM and NSFC, etc., three events will be held during the period of July 6-10, 2014 in Tianjin, China, including 2014 IFToMM Workshop on the History of Machines and Mechanism on July 06 (<http://www.parallel2014.com>); The 3<sup>rd</sup> Workshop on Fundamental Issues and Future Research Directions for Parallel Mechanisms and Manipulators (Parallel 2014) on July 07-08 (<http://www.parallel2014.com>); and the 3<sup>rd</sup> IFToMM Asian Conference on Mechanism and Machine Science (IFToMM Asian 2014) on July 09-10 (<http://www.asianmms2014.com>).

### MO CHINA-TAIPEI

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The IFToMM 2013 Executive Council meeting is held in the Industrial Technology Research Institute (ITRI) Hsin Chu campus from Oct. 30 to Nov. 2. It is hosted by the executive council member Prof. Shuo Hung Chang who is the distinguished professor at the Department of Mechanical Engineering, National Taiwan University, and the Vice President and General Director of the Mechanical and System Lab., ITRI. A total of 16 participants include IFToMM President Prof. Yoshihiko Nakamura, University of Tokyo; Vice President Veniamin Goldfarb, Izhevsk State Technical University; Former President Prof. Marco Ceccarelli, University of Cassino; Secretary General Prof. Teresa Zielinska, Warsaw University of Technology; Treasure Prof. Just Herder, Delft University of Technology; EC member Dr. Jean-Pierre Merlet, Directeur de Recherche INRIA; EC member Prof. Dr-Ing. Burkhard Corves, RWTH Aachen University Aachen; and EC Member, Prof. Datong Qin, Chongqing University. However, two EC members, Prof. Juan Antonio Carretero, University of New Brunswick, Canada and Prof. Vijay Kumar, University of Pennsylvania, USA are absent.

Another participant includes, Chair of TC Vibration Professor Marian Wiercigroch, University of Aberdeen; Editor in chief of IFToMM Journal Mechanism and Machine Theory, Prof. Dr.-Ing. Andrés Kecskeméthy, University of Duisburg Essen; Chair of PC Education Prof. Juan Carlos García Prada, University Carlos III of Madrid; Professor Qiaode Jeffrey Ge, Stony Brook University; Dr. Iuliia Sheveleva, Izhevsk State Technical University; Dr. Assylbek Jomartov, Institute of Mechanics and Mechanical Engineering, Kazakhstan; and Dr. Skanderbek Joldasbekov, Institute of Mechanics and Mechanical Engineering, Kazakhstan.

The Chinese Society of Mechanism and Machine Theory (CSMMT) in Taiwan had been established since 1990. CSMMT has been maintaining approximately 160 members from both the academy and industry. Every year, CSMMP organizes annual domestic academic conference and General Assembly in November. The number of papers presented in the annual conference is approximately 100 that are mostly from universities. Several domestic research institutes, especially the Industrial Technology Research Institute (ITRI) constantly has contributions. The 2013 annual conference and general assembly was held in the National Tsing Hua University in Hsin Chu on Nov. 1-2, 2013. Prof. Cheng-Kuo Sung, National Tsing Hua University is the conference chair. The keynote speech was given by the IFToMM President Prof. Yoshihiko Nakamura. The speech title is “Robotics and Community for Decommissioning of Nuclear Facilities.”

The new President of Taiwan MMS Society, Prof. Der-Min Tsay, National *Sun Yat-sen University*, has been elected and will be the Chair of IFToMM China-Taipei starting 2014.

In addition to academic paper presentation during the annual conference, a ceremony was also held for presenting awards to the winners of student competition on Mechanism design.

The CSMMT members are often actively involved in the international professional societies. For example, they actively participated the IFToMM events, such as the IFToMM 2013 ISRM in Singapore.

The CSMMT has been actively preparing to host the 2015 World Congress in Taipei in Oct. 25-30, 2015. The venue at the Taipei International Convention Center, Taipei has been secured. The committees include Honorary Advisor board, International Scientific Committee, Technical Program chair and Committee members, Best Paper Award chair, and Secretary General are identified. The web page [www.iftomm2015.tw](http://www.iftomm2015.tw) is available to browse and the call for papers is ready for dissemination. Tentative program with the 2015 EC meeting, tutorial, exhibition, technical tour, young delegate, accompany program and post tour is defined.



*The group photo taken at the EC meeting site, ITRI, Hsin Chu, Taiwan*

*From left to right (a total of 16 participants):*

*1<sup>st</sup> row: Yoshihiko NAKAMURA, Teresa ZIELINSKA, Jean-Pierre MERLET, Veniamin GOLDFARB, Iuliia SHEVELEVA, Shuo Hung CHANG (host)*

*2<sup>nd</sup> row: Marian WIERCIGROCH, Datong QIN, Marco CECCARELLI, Juan Carlos Garcia PRADA, Assylbek JOMARTOV*

*3<sup>rd</sup> row: Burkhard CORVES, Qiaode Jeffrey GE, Andrés KESCSKEMETHY, Just HERDER, Skanderbek JOLDASBEKOV*

## **MO CZECH REPUBLIC**

Ing. Jaromír HORÁČEK DrSc., Academy of Sciences of the Czech Republic, Czech Republic

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1. REGULAR CONFERENCE EVENTS organized under the auspices by the Czech National Committee IFToMM:

- “Dynamics of Machines 2013” held in Prague from 5-6 February 2013 was organized by the Institute of Thermomechanics, Academy of Sciences of the Czech Republic, 40 participants/8 from abroad (the conference is organized every year)
- “Engineering Mechanics 2013” was held in Svratka from 13-16 May and organized by Institute of



Thermomechanics, Academy of Sciences of the Czech Republic, 200 participants/20 from abroad (the conference is organized every year)

- “Computational Mechanics 2013” organized by the University of West Bohemia in Pilsen held in Spicak from 4-5 November 2013, 80 participants/10 from abroad (the conference is organized every year)

2. In the year 2013, the Czech National Committee IFToMM had one regular session during the conference held in Svratka in May. Main topics were some personal changes in the members of this MO body and some new members nominations of the Czech researchers to the Technical Committees (TC), mainly for TC „Linkages and Mechanical Control“.

### MO Hungary

Prof. Elisabeth Filemon, Budapest University of Technology and Economics, Hungary  
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In Zacopane (1969) the Chief Delegate of Hungary was Prof. Dr. Z. Terplan, who signed the Foundation Document of IFToMM on the name of the Hungarian Academy of Sciences (HAS). From 1970 HAS regularly paid for the IFToMM Subscription Fee.

Following the regular routine, the activity of the IFToMM MO Hungary in 2013 had been carried out in the frame of the Scientific Committee for Machine Design (SCMD) (and its Mechanisms Subcommittee) of the Hungarian Academy of Sciences (HAS). The main activities throughout the year 2013 where the six Scientific Meetings (2013 February 07, April 18, June 13, June 27, in November (planned), and the last one in December (planned). Each meeting was accompanied with lectures related to MMS problems, and speakers were scientists from universities or experts from the industry.

In addition to this regular activities, MO Hungary continuously try to recruit new/young researchers to the IFToMM Family. One effective way would be to support them by the IFToMM Young Delegates Grant. “The purpose of the Young Delegates Program (YDP) is to provide assistance to young scientists and engineers so that they may participate in IFToMM Technical Conferences”.

It is hard to explain that in the homepage of IFToMM the list of the “RECIPIENTS OF YOUNG DELEGATES ASSISTANCE” finished in 2009. The number of the recipients in 2004 (4), in 2005 (2), in 2006 (10), in 2007 (24), in 2008 (1), in 2009 (1). The MO Hungary supported two applicants in 2012, and one in 2013. All the three were unsuccessful.

### MO JAPAN

Prof. Haruo Houjoh, Tokyo Institute of Technology, Japan

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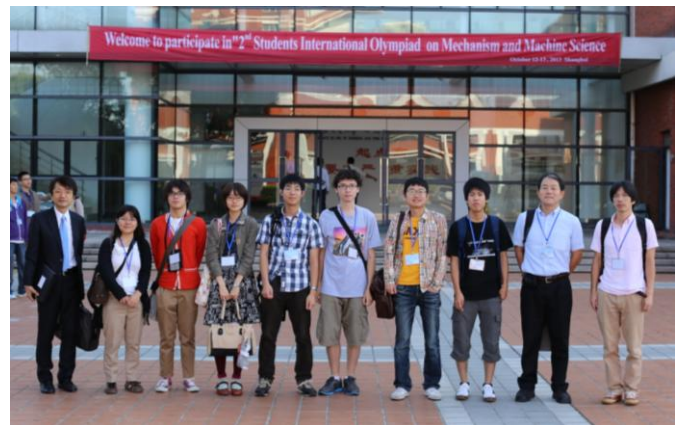
Japan IFToMM (Jc-IFToMM) had an annual Symposium on June 15<sup>th</sup>, where twelve presentations were arranged covering Robotics, Mechanisms, etc. To encourage young investigators, we selected and awarded three young authors as the finalists based on the paper review. Among the three finalists, the best presentation award was presented to Mr. Donghyun HWANG who presented “A Cycloidal Motor Using Shape Memory Alloy Wires”. After the annual symposium, we had the general assembly where activities, budget and executive members were discussed and the award ceremony was held.

We sent two teams of undergraduates to the Student International Olympiad on Mechanism and Machine Science (SIOMMS 2013) that was held in November at Shanghai, China. It was really a good opportunity to establish friendship among students from various countries as well as to educate students in mechanical engineering department the knowledge of the theory of machines and mechanisms.

Next year in 2014, our annual symposium will be held in Tokyo on Saturday May 24<sup>th</sup> where young investigators from foreign countries are welcome.



Young Investigator Award Finalists with Jc-IFToMM Chair



Participants of the SIOMMS2013

## MO LITHUANIA

Prof. Vytautas Ostasevicius,

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Prof. Kazimieras Ragulskis,

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### 50 Years to “Vibrotechnika“ Investigations in the Theory of Mechanisms and Machines in Lithuania

Investigations in the field of the Theory of Mechanisms and Machines were performed in the Lithuanian Academy of Sciences. From 1963 they took place in Kaunas Polytechnical Institute (KPI), which was later renamed into Kaunas University of Technology. There the Scientific Center „Vibrotechnika“ of KPI was established. The scientific domain of precise vibromechanics and vibroengineering was created with the following scientific directions.

#### 1. In the direction of stabilization created

- (1) the effect of dynamical self organization of combined type of systems, determined boundaries of transition to regions of motions of other types;
- (2) the effect of dynamical stabilization and direction of orientation. For example when the body performs transition from liquid to rigid status orientation of dipoles located in it, or structuring of liquids, or in the process of hardening of liquid metal the change of crystallization into a desired one and of course possible direction by using mechanical and electrical vibrations;
- (3) stabilization of moving bodies by microvibrations of high frequency;
- (4) creation of restoring forces by using dynamic capillary phenomena.

#### 2. In the direction of robotisation created

- (1) methods of transformation of motions and energies by using vibrations and waves to other forms by using nonlinear phenomena and systems. For example vibromotors, or the change of mechanical energy of fluxes into electrical energy by using waves;
- (2) mechanisms for performance of microdisplacements based on capillary qualities and vibrations;
- (3) methods of synthesis of some mechanical systems based on the distance from self stopping conditions, according to maximum characteristics of dynamicity and others;
- (4) systems of generation of mechanical vibrations and waves based on transformation of motions by using constant magnets;
- (5) thermal motors, which because of differences of temperatures perform mechanical motions;
- (6) methods for the change of some of the feeling elements of a human being by technical devices the signals from which are transferred to the brain by vibrations through the external part of the skin.

#### 3. In the direction of control of vibrations and vibrodiagnostics created

- (1) methods for measurement of vibrations by eliminating disturbances;

- (2) methods based on optics for the measurement of velocities of motions and of trajectories of motions of bodies;
- (3) methods based on surface waves for the measurement of displacements and their derivatives;
- (4) powerful (of the power of hundreds of kW) acoustical generators for vibrodiagnostics of huge objects, for conduction of experimental investigations and destruction;
- (5) method for measurement and diagnostics of vibrations of mechanical bodies based on controlled dipoles.

About 1990 because of lack of financing there was reduction in the amount of investigations and scientific research transferred to various departments of universities and to private innovative enterprises in Lithuania and abroad. In a time period of about ten years scientific research began to revive and the investigations in the scientific directions of precise vibromechanics and precise mechanical vibration technologies were created.

In this direction more than 400 dissertations were defended, more than 60 research monographs and books, more than 2000 research papers have been published and more than 4000 inventions have been made.

Now the international journals „Journal of Vibroengineering“, „Mechanika“, „Journal of Measurements in Engineering“, „Vibroengineering Procedia“ are published.

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2. A. Liekis (editor) Academician Kazimieras Ragulskis and his Scientific School. Science and Arts of Lithuania, Book 60, Vilnius, Lithuanian Academy of Sciences, 2006, 728 p., (in Lithuanian).
3. A. Liekis (editor) Vibroengineering. Science and Arts of Lithuania, Book 19, Vilnius, Lithuanian Academy of Sciences, 1998, 572 p.
4. From Higher Courses in Kaunas to Kaunas University of Technology 1920 – 1997. Technologija, Kaunas, 1997, 454 p., (in Lithuanian).

## MO MEXICO

Prof. Ricardo Chicurel Uziel, Instituto de Ingenieria, Mexico

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SOMIM, the sponsor of the Mexican IFToMM Organization, held its annual congress in the Technological Institute of Pachuca, located in the city of Pachuca, Hidalgo on September 25-27, 2013. The attendance included 286 professionals and 535 students, representing 45 institutions. A total of 174 technical papers were presented. The program included five keynote lectures. Also, 9 student workshops

were offered. A photo of the opening ceremony is shown below:



### Hand Orthoprosthesis

A novel orthoprothetic device (shown below) has been developed at the Center for Mechanical Design of the Engineering School of UNAM (National Autonomous University of Mexico). It is strapped to the dorsal side of a hand with paralysis. The device is an actuator that opens and closes the hand at will by the person wearing it. A load of up to 1 kg may be lifted. The orthoprosthesis may also be locked temporarily avoiding over exertion of the person while holding an object.

The members of the research team are: David Torres-Martínez, Rosa Itzel Flores-Luna, Mariano García-de-Gállego, Jesus Manuel Dorador-González .



### **MO NETHERLANDS**

Prof. Just Herder, Delft University of Technology, Netherlands

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The first European version of the Design of Medical Devices Conference was held in Delft, The Netherlands, chaired by Prof. Just Herder. This conference is linked to its Minneapolis counterpart in which he was active for several years. IFToMM patronage was applied for but its processing in the TC was delayed. This will be remedied in the next issue of the conference.

Significant effort by Prof. Just Herder, Dr Nima Tolou, and Dr Amin Barari was put in developing the open-access journal Mechanical Sciences (<http://www.mech-sci.net>) that is affiliated with IFToMM. The journal entered its fourth year. By July 2013, a total of 67 articles were published with 114 and 49 citations in Google Scholar and Thomson Reuters, respectively. Rejection rate is around 70%. Scopus indexing was applied for.

Prof. Just Herder attended the EC meeting in Hsingchu, Taiwan, to present his Treasurers report, and gave a seminar at Taiwan Tech in the Mechanisms and Robotics for Healthcare lab of Dr Chin-Hsing Kuo.

### **MO POLAND**

The expanded report from MO Poland had been received, it is available at IFToMM Webpage.

### **MO ROMANIA**

Prof. Ion Visa, Transilvania University of Brasov, Romania

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ARoTMM represents the Romanian branch of IFToMM, founded in 1970, and gathers members from universities all over the country: Brasov, Bucharest, Bacau, Baia Mare, Cluj Napoca, Craiova, Galati, Iasi, Oradea, Pitesti, Resita, Timisoara, Targu Jiu, Targu Mures. Developing joint research, harmonizing the education content in the specific topics and networking were the main targets followed by the members and represent the core activities in the past year.

The 8<sup>th</sup> edition of the National Seminary for Mechanisms (Galati, 23-25 May, 2013), focused on mechanisms integrated in high-tech products; a collaborative frame allowed experience exchange among the centres, outlining the approach on high-tech products in R&D, and the steps followed in the curricula development for training the students to design and develop novel products.

Other R&D events were further opportunities for presenting the R&D results and for networking: 3E conference (Energy, Environment and Education, Galati, September 2013), ICOME (Craiova, May 2013) and the 8<sup>th</sup> Conference of the Romanian Academy of Technical Sciences (Brasov, October, 2013).



One major event jointly organized by ARoTMM and IFToMM is the 11<sup>th</sup> edition of the International Conference SYROM that will be hosted in the Transilvania University of Brasov, in 11-12 November 2013. After a peer review process, 57 papers were selected for the Proceedings Volume, (Springer Publishing House). The event will also support the increased international visibility of ARoTMM and will allow identifying further collaboration paths at international level, for R&D and education.

In November 11, 2013 the ARoTMM General Assembly will gather for electing the new leading structures and the representatives in the IFToMM committees, PCs and TCs. This is the moment when the eight year long and fruitful activity of the current national board will be presented and when the new board will outline the further goals and objectives for the coming four years.



*Prof. dr. eng. Ion Visa, ARoTMM President*

#### **MO SINGAPORE**

Dr. Wei Lin, Singapore Institute of Manufacturing Technology, Singapore  
Email: [wlin@SIMTech.a-star.edu.sg](mailto:wlin@SIMTech.a-star.edu.sg)

Singapore successfully hosted the IFToMM International Symposium on Robotics and Mechatronics (ISRM 2013) from 2nd – 4th October 2013. Organised jointly by the IFToMM TC on Robotics and Mechatronics and Nanyang Technological University, 78 articles by authors from 15 countries were presented in the symposium. One of the highlights of the event was the technical tour to the Robotics Research Centre at NTU and the labs of the Singapore Institute of Manufacturing Technology (SIMTech).



*Delegates of ISRM toured the robotics lab in SIMTech*

Besides the above big event, MO Singapore members have organised a number of events. Some of them were as follows: Workshop on Advanced robotics for intelligent manufacturing, 23 July 2013.

Research lecture on Advances in distributed-parameter modeling, design and control for robotics, automation and mechatronics, 5 July 2013

Seminar on Compliant mechanisms and integrated sensors and actuators: An ideal opportunity for soft robots, 14 May 2013.

#### **MO SLOVENIA**

Prof. dr. Karl Gotlih, University of Maribor, Slovenia  
Email: [karl.gotlih@um.si](mailto:karl.gotlih@um.si)

In the year 2013 in NC SI IFToMM we started the preparations for the next IFToMM World conference in Taipei in the year 2015. We start with pronouncing of the conference and motivating the researchers and students to prepare papers. In the meantime an annual conference of the Slovenian mechanics association (SDM) was organized. This year the conference was in September in Rogaska Slatina with 32 papers and presentations. The proceeding of the conference (ISBN 978-961-91659-8-0) is available on internet on the home page of the SDM <http://www.drustvozamehaniko.si/index.htm>.

Prof. dr. Lenarčič and Prof. dr. Khatib are in the preparation of the next ARK conference which will be held in Ljubljana, Slovenia. This conference will be in June 2014 organized by the J. Stefan Institute and is under the patronage of IFToMM. As in the year 2012 we organize also this year seminars for school children to motivate them for mechanical engineering, machines and mechanism. These events are organized locally in Maribor and are focused on school children in the last three years of the ground school (7-9 class). The main subjects in these events are robotics and mechanisms.

#### **MO SPAIN**

Prof. Fernando Viadero-Rueda, Universidad de Cantabria, Spain  
Email: [viaderof@unican.es](mailto:viaderof@unican.es)

The members of the AEIM (Spanish Association of Mechanical Engineering), the Spanish MO of IFToMM, took part in a great number of events sponsored by IFToMM and are strongly involved in IFToMM activities by their participation as members and chairs in several TC's and PC's. As organization, the AEIM has been also involved on several IFToMM activities co-sponsoring with IFToMM two conferences organized by AEIM members in Spain. The First International Symposium on Education in Mechanism and Machine Science (ISEMMS 2013) was held in Leganés (Madrid) from 13 to 14 June 2013. It was chaired by Professor J. C. García Prada. This conference tries to create a stable frame for the development of activities of the PC for Education, chaired by Prof. García Prada, allowing the exchange of experiences and research in this subject.

Moreover, the Second Workshop on Mechanisms, Transmissions and Applications – (MeTrApp 2013) was held at Bilbao on October 2-4. This conference was chaired by Professor A. Hernández which is member of the AEIM executive committee and co-chaired by Professor F. Viadero, the actual president of the AEIM.

In addition to the technical meetings and conferences the AEIM develops every even year a meeting of Professors in Mechanical Engineering and Vehicles which during 2013 arrives to the XIV edition and was held in September 11 to 13 in the Faculty of Engineering of Jaen.



*Open ceremony of the Mechanical Engineering Professors Meeting in Jaen*

Previously to this meeting a technical journey about the History of Mechanical Engineering was celebrated with the participation of the AEIM Honor President, Professor E. Bautista, Prof. M. Artés, FelbIM president, Prof. Juan I. Cuadrado, member of the Executive Committee of AEIM and Prof. M. Ceccarelli, IFToMM pass president.



*Speakers in the technical meeting on History of Machine*

The web page of the AEIM has been changed and the digitized journal *Anales de Ingeniería Mecánica* thanks to the project “thinkMOTION” are now available in the AEIM web site.

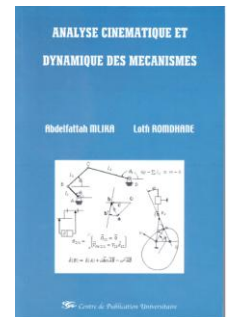
### MO TUNISIA

Prof. PhD Lotfi Romdhane, Ecole Nationale D'Ingenieurs de Sousse, Tunisia

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2013 was marked by the organization of the 5th International Congress : Design and Modeling of Mechanical Systems : CMSM'2013, which took place on 25 - 27 March 2013 and it took place in the Island of Djerba, Tunisia. This event is sponsored by IFToMM and, as usual, one of the main guest speakers was a prominent member of the IFToMM community. This year, the guest speaker was Dr Philippe Bideau with a plenary session entitled “la locomotion dynamique en robotique”. IFToMM Tunisia was also present in the IFToMM sponsored event CK 2013 that took place in Barcelona on May 12-15, and in the ISRM2011 that took place in Singapore on October 2-4.

This year was also marked by the publication of a new textbook entitled “Analyse cinématique et dynamique des mécanismes” by A. Mlika and L. Romdhane. Edition CPU, ISBN: 978-9973-37-727-2



### MO TURKEY

Prof. Eres Söylemez, Middle East Technical University, Turkey

Email: [eres@metu.edu.tr](mailto:eres@metu.edu.tr)

The main activity of IFToMM Turkey group was the organization of the National Machine Theory Symposium on September 12-13, 2013, where 82 papers were presented in 4 sessions. Prof. Chintien Huang (National Cheng Kung University, Taiwan) and Dr. Géza Husi (University of



Debrecen, Hungary) also attended to the symposium as guest speakers.

One week summer school on mechanism synthesis was given at İzmir Institute of Technology during September 2-7, 2013. Another week long workshop is planned during February 2014 at Erciyes University, Kayseri.



Registered members of IFToMM Turkey has reached to 57. Among our members Dr. Can Dede was appointed to the Technical Committee of Linkages and Mechanical Controls and Dr. Gökhan Kiper was appointed to the Technical Committee of Computational Kinematics.

#### MO VIETNAM

Prof. Nguyen Van Khang, Hanoi University of Science and Technology, Vietnam

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Hanoi University of Science and Technology

- Members of IFToMM MO Vietnam took part in the 3<sup>rd</sup> IFToMM International Symposium on Robotics and Mechatronics (Singapore 1-4.10.2013) with 6 scientific reports.
- Last year MO Vietnam has organized monthly seminars on Dynamics and Control at Hanoi University of Science and Technology to inform and exchange the new research results in these fields.
- MO Vietnam actively collaborated with local universities to organize annual Olympiad exams on the subjects of Machine Theory, Machine Element and Engineering Mechanics for students.

Members of IFToMM MO Vietnam are taking part as principal investigators in a number of research project

financed by the Vietnam National Foundation for Science and Technology Development (NAFOSTED).

#### NEWS FROM PERMANENT COMMISSIONS

[A total of 2 report]

##### PC FOR EDUCATION

Pres. Prof. J.C. Garcia-Prada, University Carlos III of Madrid, Spain

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The main activity developed in this period has been the First International Symposium on the Education in Mechanism and Machine Science (ISEMMS), held in Madrid-Spain, 13-14th June 2013.

([http://www.uc3m.es/portal/page/portal/congresos\\_jornadas/isemms](http://www.uc3m.es/portal/page/portal/congresos_jornadas/isemms)).



ISEMMS 2013 Opening ceremony: Chair ISEMMS Prof. Garcia-Prada, Prof. Sánchez Vice-Chancellor UC3M for Undergraduate Studies, Prof. Castejon Vice-Chair ISEMMS and Prof. Ceccarelli Former IFToMM President)

The works have been published in the book: New Trends in Educational Activity in the Field of Mechanism & Machine Theory (isbn 978-3-319-01835-5), Ed. Springer. This first International Symposium on Education (ISEMMS2013) published 33 articles from 40 received from different countries: Russia, Romania, Spain, Italy, German, Norway, kazakhstan.

The PC for Education has collaborated with the local committee in the 2<sup>o</sup> SIOMMS-2013 (Second Students International Olympiad On Mechanism & Machine Science)



in Shanghai Jiao Tong University (SJTU), China, 12-13 October, 2013. The topics proposed to solve by the students at the Olympiad : Structural analysis and synthesis of mechanisms, Kinematics of flat mechanisms, Force analysis of mechanisms, Kinematic analysis of cam mechanisms, Gearings (kinematics, geometry, efficiency), Adjustment of dynamic characteristics, mechanical governors and Balancing of rotating masses.

The President of PC of Education has assisted to the Feibim 2013 at La Plata-Argentina, 11-14 November, 2013 to disseminate the actions of IFToMM. In this event, we've contacted with the Iberoamerican members of IFToMM-America (Perú, Mexico and Brazil) and we've had a meeting with researchers related with education in Mechanism & Machine Science (Colombia, Costa Rica, Panamá, Argentina, ...). PC of Education continues with the aim of obtaining information about the Mechanism & Machine Science MMS subjects and studies (Degree, Master & Doctorate studies). To generate a complete DB and edit an Education MMS White Paper.

The PC of Education will prepare the education technical sessions of the next IFToMM Congress at Taipei Taiwan. We must do an effort to obtain more quality contributions for this next congress.

#### **PC FOR HISTORY**

Assist. Prof. Thomas G. Chondros, University of Patras, Greece

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Prof. Marco Ceccarelli, University of Cassino and South Latium, Italy

Email: [ceccarelli@unicas.it](mailto:ceccarelli@unicas.it)

The PC for History of MMS is composed of 56 members from 29 IFToMM Member Organizations, and prof. Olga Egorova from Russia has been appointed as the chair for term 2014-2017 as successor of prof. Thomas Chondros from Greece.

According to IFToMM By-Laws, the activities of the PC are planned and executed in order to promote the republishing of classical works of reference, to promote the collection and circulation of material and information in the field of Mechanism and Machine Science (MMS), to maintain the Archive of the Federation, and to promote activities and works in the field of the History of MMS.

A one day meeting was held on January 29, 2013 at the National Archaeological Museum, Athens with a special exhibition of the archaeological remains and models of the Antikythera Mechanism. The 2013 Workshop on History of MMS was held on 21-22 November 2013 at the School of Engineering of Palermo, Italy. This Workshop on History of MMS follows a successful yearly series of 12 previous ones,

for the presentation of unpublished material, discussion and promotion of interest on historical subjects. In 2014 Workshop on History of MMS will be held in Tianjin, China-Beijing on 5 - 6 July 2014 and in 2015 the Workshop on History of MMS 2015 will be held in St Petersburg, Russia on May 27 and 29.

The 2016 HMM Symposium as the fifth one of the series started in 2000 is planned in Querétaro, Mexico on 7-10 June 2016 and the aim of the Symposium is to establish an international forum for presenting and discussing historical developments in the field of MMS with published proceedings in Springer book series on History of MMS <http://www.springer.com/series/7481>.

In the frame of the Springer series, started during 2007, the last volume edited by Marco Ceccarelli entitled Distinguished Figures in Mechanism and Machine Science: Their Contributions and Legacies, Part 3 is under production now. The titles of this series and more information can be found on above webpage.

## **NEWS FROM TECHNICAL COMMITTEES**

[A total of 11 reports]

### **TC FOR BIOMECHANICAL ENGINEERING**

Dr-Ing. Juana MAYO, University of Seville ETSI, Spain

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The technical Committee for Biomechanical Engineering was created in Guanajato, Mexico in June 2011, during the 13th IFToMM World Congress. TC for Biomechanical Engineering was approved with 15 members belonging to 11 different countries. Today it has 20 members from 16 countries. The list of the 15 initial members in alphabetical order for the countries they represent is:

One member from Australia, Prof. Marcus Pandy from the University of Melbourne; two members from Brazil, Prof. Luciano Luporini Menegaldo from the Military Institute of Engineering (IME) and Marko Ackermann from the Centro Universitário da FEI (FEI); two members from Germany, Prof. Dr.-Ing. Andres Kecskemethy from University Duisburg-Essen and Prof. Dr.-Ing. Prof. E.h. Peter Eberhard from Universität Stuttgart; one member from Israel, Prof. Moshe Shoham from Technion - Israel Institute of Technology, one member from Poland, Prof Dr-Ing. Wojciech Blajer from the Technical University of Radom; two members from Portugal, Prof. Miguel Pedro Tavares da Silva from the Instituto Superior Técnico (IST) of Lisbon that acts as Deputy Chair of the Committee and Prof. Paulo Flores from the University of Minho; one member from Serbia, Prof. Dejan Popovic from the University of Belgrade; two members from Spain, prof. Javier Alonso from the University of Extremadura that acts as TC Secretary and the Chair of the Committee Prof. Juana Mayo from the University of Sevilla; one member from The Netherlands, Prof. Dr. Ir. Just Herder

from Delft University of Technology who is the really promoter of this TC (originally it was going to be called TC for Biomedical Devices); one member from Taiwan, Prof. Ming-Yih Lee from Chang Gung University, and one member from U.K., Prof. Venketesh N. Dubey from Bournemouth University.

Members included in 2012 are: one member from USA, Prof. Bahram Ravani from the University of California-Davis, one member from France, Prof. Fethi Ben Oueddou from the University de Versaille St - Quentin-en-Yvelines; one member from Hungary, Prof. Lajos Borbas from Budapest University Technology and Economics (BME); one member from Italy, Prof. Vincenzo Parenti-Castelli from the University of Bologna; one member from Romania, Prof. Dr.-Ing. Doina Pisla from Technical University of Cluj-Napoca. Future planned activities are the creation of the TC webpage and support the International Workshops on Medical and Service Robots (MESROB 2014) to be held in July Lausanne, Switzerland. Prof. Hannes Bleuler will be the chair.

#### TC FOR COMPUTATIONAL KINEMATICS

Prof. Dr. Ing. Doina Pisla, Technical University of Cluj-Napoca, Romania,  
Email: [doina.pisla@mep.utcluj.ro](mailto:doina.pisla@mep.utcluj.ro)

The recent activities are: **Publishing Special Issue 1-2/2013** “New Trends in Advanced Robotics”, ROMANIAN JOURNAL OF TECHNICAL SCIENCES–APPLIED MECHANICS, Guest editors: D. Pisla, M. Husty; **Publishing the Springer book:** New Trends in Medical and Service Robots–Theory and Integrated Applications, Vol. 16, 2014 (Eds. D. Pisla et al); Manfred Husty received the title **Doctor Honoris Causa** of the Technical University of Cluj-Napoca on 4.04.2013.



Many meetings and visits were organized: The TC meeting took place on 13.05.2013 in Barcelona where Doina Pisla was voted as Chair for 2nd term (2014-2017), Philippe Wenger was voted as Deputy Chair and Erika Ottaviano as Secretary; D. Pisla visited University of Innsbruck between 7-14.01.2013 within research project Austria-Romania; M. Husty visited TU Cluj-Napoca between 3-6 April 2013; A student of Ph. Wenger visited University of Innsbruck in June 2013

within research project Austria-France; M. Husty visited IRCCyN-Ecole Centrale de Nantes between 7-25 October 2013; E. Ottaviano visited TU Cluj-Napoca between 12-15 June 2013; D. Pisla visited Nanyang Technological University of Singapore during ISRM 2013 in October 2013.

The 6th International Workshop on Computational Kinematics was organized in Barcelona in May 2013, <http://www.iri.upc.edu/ck2013>.



The Second Conference on Interdisciplinary Application of Kinematics was organized in Lima in Sept. 2013, [http://www.uni-due.de/mechanikb/iak2013\\_objectives](http://www.uni-due.de/mechanikb/iak2013_objectives). Some TC CK members have participated at the Second Workshop on Medical and Service Robots, Belgrade in July 2013, [http://www.pupin.rs/RnDProfile/Call\\_for\\_MESROB\\_2013.docx](http://www.pupin.rs/RnDProfile/Call_for_MESROB_2013.docx).

M. Husty was invited speaker in “Algebraic Geometry in Robot Kinematics” in Cluj-Napoca between 3-6.04.2013. The future planned activities are: ARK 2014–Advances in Robot Kinematics, 14<sup>th</sup> International Symposium, Ljubljana, June 29- July 3, 2014; “Second International Conference on Cable-Driven Parallel Robots”, Duisburg, 24-27 August, 2014.

Dr. Gökhan KİPER (Izmir Institute of Technology, Turkey) was nominated as member, and Dr. Marco CARRICATO (University of Bologna, ITALY) was nominated as observer. The Executive Council approved these activities in Taiwan in November 2013.

#### TC FOR GEARING AND TRANSMISSIONS

Professor Daizhong Su, Nottingham Trent University, United Kingdom  
Email: [Daizhong.su@ntu.ac.uk](mailto:Daizhong.su@ntu.ac.uk)

In this period, the TC has conducted the following major activities:

1. TC Meeting was held on 27<sup>th</sup> September 15:00-16:00 in Valencia. 11 TC members and observers attended the meeting.
2. Research collaborations  
The Advanced Design and Manufacturing Engineering Centre (ADMEC) of Nottingham Trent University, UK and the State

Key Laboratory of Mechanical Transmission (SLMT) of Chongqing University, China, jointly conducted the project ‘Condition based maintenance of agitators using advanced condition monitoring and Internet/wireless technologies’, supported by European Commission’s FP7 Marie Curie programme. This project was led by Professor Daizhong Su of ADMEC, and Professor Yimin Shao of SLMT was the International Incoming Fellow. The project team conducted the following post project activities in 2013:

- Special session ‘Machine Condition Monitoring’ on 27<sup>th</sup> September 2013 chaired by Professor Shao, during the ADM2013 conference held in Valencia 2013.
- Session ‘VII. Machine Condition Monitoring’ in Mechanisms’ in journal ‘Key Engineering Materials’(14 papers in total), Volume 572 (2014), Trans Tech Publications, Switzerland
- Published a research paper: Zaigang Chen, Yimin Shao and Daizhong Su, ‘Dynamic simulation of planetary gear set with flexible spur ring gear’, Journal of Sound and Vibration 332 (2013), pp.7191–7204

### 3. ADM2013 Conference and Gearing & Transmission Special Session

The 5<sup>th</sup> International Conference on Advanced Design and Manufacture (ADM2013), was held in Valencia, Spain, 25-28 September 2013. Gearing and mechanical transmission was a major theme of the conference. As a high quality conference, 164 conference papers were published in a refereed journal ‘Key Engineering Materials’ indexed by EI and major indexing media. This TC was a co-organiser of the conference. The TC Chairman, Professor D Su, chaired the conference, the conference International Committee includes several members of this TC, such as Professor Goldfarb, Professor Frank H Schaefer and Professor Vilmos V Simon, and the TC organised two special Sessions ‘Gearing and Transmission’.



Some participants of the 5<sup>th</sup> International Conference on Advanced Design and Manufacture (ADM2013)

### TC FOR LINKAGES AND MECHANICAL CONTROLS

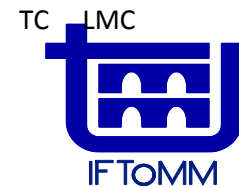
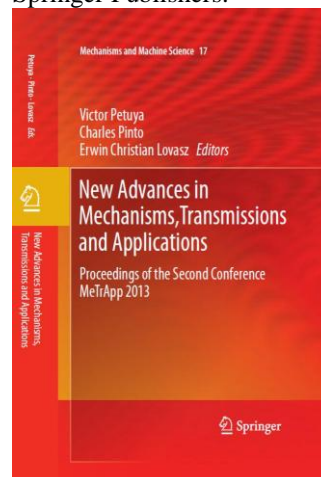
Assoc. Prof. Dr-Ing. Erwin-Christian Lovasz, Politechnica University of Timisoara, Romania  
Email: [erwin.lovasz@mec.upt.ro](mailto:erwin.lovasz@mec.upt.ro)

During 2013 new members and observers were nominated by IFToMM Member Organizations. The process of updating the

membership was supervised by the chair, Assoc. Prof. Dr. Ing. Erwin-Christian Lovasz. Currently, the number of individual members sums 23 persons from 14 different IFToMM Member Organizations from all over the world; 20 of the individual members are full members. The remaining 3 individual members are observers or honorary members.

TC Linkages and Mechanical Controls supported in 2013 two conferences: The Second Conference on Mechanisms and Mechanical Transmissions MeTrApp-2013 in Bilbao, Spain (October 2013) and The 11<sup>th</sup> International Symposium on Mechanisms and Machine Science, SYROM-2013, in Brasov, Romania.

The papers presented at MeTrApp-2013 and SYROM-2013 were published in the IFToMM book series issued by Springer Publishers.



Cover of the volume MeTrApp-2013, Logo of TC LMC, TC LMC Meeting in Bilbao

Several selected papers of TC members were published in the Springer book “Distinguished Figures in Mechanism and Machine Science. Their Contributions and Legacies”. Volume 3.

The updated webpage of the TC displays actual information regarding members, meetings and technical events. The website is available on <http://www.mec.upt.ro/tc/>.



After the decision made by the TC meeting in Tokyo 2012, the organizing of a TC Summer School in 2014 in Timisoara started. For this event, a webpage was created and five partial young delegate grants were required and approved by the IFToMM EC in July 2013. A number of 7 lecturers (all IFToMM members) accepted to prepare and present the lectures.

In 2013 the meeting of the TC LMC took place on the occasion of the Second MeTrApp-2013, held in Bilbao, Spain. The TC Linkages and Mechanical Controls required the approval of IFToMM EC for a personalized logo. According to IFToMM recommendation, the TC Linkages and Mechanical Controls developed an own TC Diploma for the TC members with valuable scientific contributions and outstanding activity within the TC.

### TC FOR MICROMACHINES

Prof. G. K. Ananthasuresh, Indian Institute of Science, India  
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The Technical Committee on Micromachines aims to promote mechanical aspects of microsystems activities and distinguishes itself from many other microelectromechanical systems (MEMS) forums that emphasize fabrication, materials, electronics, and integration. The main activities of this TC have been organizing biennial workshops entitled "Microactuators and Micromechanisms (MAMM)".

MAMM 2010 and 2012 were held in Aachen (Germany) and Durgapur (India). An edited research monograph was published by Springer based on the contributed papers of MAMM 2010. The book is entitled "Micromechanics and Microactuators". A special issue of a journal based on selected and further-reviewed papers from MAMM 2012 is nearing completion." MAMM 2014 is planned to be held in Timisoara (Romania). The first call for papers will be released shortly.

### TC FOR MULTIBODY DYNAMICS

Prof. Javier CUADRADO, Universidad de La Coruña, Spain  
Email: [javicuad@cdf.udc.es](mailto:javicuad@cdf.udc.es)

The TC for Multibody Dynamics has got 41 members from 24 Member Organizations. The following activities took place in this year.

The ECCOMAS Thematic Conference Multibody Dynamics 2013, Zagreb, Croatia, July 2013, the European event on multibody dynamics, which received IFToMM patronage, was held with great success, attracting more than 200 participants from Europe and other continents. During the days of the conference, Croatia became member of the European Union, which was enthusiastically celebrated in Zagreb.



*Celebration in Zagreb of Croatia as new EU member during the ECCOMAS Thematic Conference Multibody Dynamics 2013.*

Several publications appeared in journals, based on contributions presented at conferences: a special issue in the Int. Journal of Non-Linear Mechanics (vol. 53) and a special issue in Multibody System Dynamics (vol. 30, no. 2) from the 2<sup>nd</sup> Joint Int. Conference on Multibody System Dynamics (IMSD 2012), Stuttgart, Germany, May-June 2012; a special issue in Mechanics Based Design of Structures and Machines (vol. 40, no. 4) from the Int. Symposium on Multibody Systems and Mechatronics (MuSme 2011), Valencia, Spain, October 2011.

The announced section on benchmark problems in the TC web was created; in order to give visibility to the initiative, a special session on benchmark problems with four invited papers was held during the ECCOMAS Thematic Conference Multibody Dynamics 2013, Zagreb, Croatia, July 2013; the benchmark section was opened for submissions at the beginning of September 2013.



*New section on benchmark problems in the TC web*

A one-day workshop entitled "Introduction to Multibody Dynamics" was delivered by the TC Chair in Castellon, Spain, November 2012, with occasion of the National Conference on Mechanical Engineering organized by the Spanish Association of Mechanical Engineering, IFToMM Member Organization.

The TC plans to continue with the effort to attract conferences under IFToMM patronage, to promote publication of conference contributions in journals, and to maintain and improve the TC web site. A special effort is to be devoted to the dissemination of the recently created TC web benchmark section, to provide visibility to it, and to encourage the multibody dynamics community to contribute to its success.

#### **TC FOR RELIABILITY**

Prof. Dr. Zbigniew KESY, Kazimierz Pulaski University of Technology and Humanities in Radom, Poland  
Email: [zkesy@interia.pl](mailto:zkesy@interia.pl)

Activity areas of Technical Committee for Reliability encompass all aspects of reliability, durability, safety, faulty design, wear, etc - mainly in fields of machines and mechanisms science.

Member's activity in fields of: meetings, visits, research joint collaborations, exchanges and teaching is on good level. This year a web site of Technical Committee for Reliability: [www.iftomm-reliability.strefa.pl](http://www.iftomm-reliability.strefa.pl) was created. Dr. Marcin Migus, Secretary of the TC, is the page administrator. The main problem of recent activity is connected with "silent" members. This year one person is proposed as an observer and two members were removed from list of members due to no contact.

The main tasks for next year are: an organization of a world conference in reliability, increase in number of the TC for Reliability members and increase in number of information pieces on www site of the TC of Reliability. Sankt Petersburg in Russia was chosen as a possible place of such a conference.

Our success is that Vice-chair of Technical Committee for Reliability - Prof. Irina Demiyanshko was appointed the Member of Bureau of National Committee of the Russian Federation on TMM.

#### **TC FOR ROBOTICS AND MECHATRONICS**

Prof. I-Ming Chen, Nanyang Technological University, Singapore  
Email: [michen@ntu.edu.sg](mailto:michen@ntu.edu.sg)

Currently the TC has 79 members from 31 MOs. There are two new members from joining the TC: Prof. Nikos Aspragathos from Greece and Dr Laszlo Kovacs from Hungary. Prof. Elizabeth Filemon from Hungary is retired from the TC. The TC thanks for her contribution to the IFToMM robotics community over the years. ISRM 2013 has been successfully held in Nanyang Technological University (NTU), Singapore from 2 to 4 Oct 2013 with about 106 delegates from all over the world.

A TC meeting was convened in NTU on 2 October 2013 with 14 TC members and 6 observers. The meeting discussed about collaboration with the newly founded TC under the IEEE Robotics & Automation Society - Technical Committee on Robotics and Automation in Nuclear Facilities (TC-RANUF) on various topics using robotics for nuclear power plant decommissioning applications. Prof. Nakamura mentioned that while the nuclear thematic might be distant from the one's main research focus, it would be beneficial to create a network of experts as nuclear issues generally require a very broad range of expertise. IFToMM might, for example, generate new interest groups (SIG). The next major TC event will be Romansy 2014 in 23 to 26 June 2014.



*Cultural Tour for ISRM 2013 in Singapore (3 Oct 2013)*



*TC Robotics & Mechatronics Meeting in NTU (2 Oct. 2013)*

#### **TC FOR ROTORDYNAMICS**

Prof. Paolo Pennacchi, Politécnico di Milano, Italy  
Email: [paolo.pennacchi@polimi.it](mailto:paolo.pennacchi@polimi.it)

The TC Rotordynamics is composed of 49 members from 37 IFToMM member organizations. There are 4 more members from 3 observer countries. The Chair is Prof. Paolo Pennacchi.

The mission of the Technical Committee is to promote the rotor dynamics both in academia and in industry. To achieve this end, the TC encourages worldwide the study of rotor dynamics in universities and maintains close contact with the industry by organizing meetings, workshops and conferences especially, among them, that sponsored by IFToMM every



four years, which is the main point of encounter and engagement for all those involved in rotor dynamics.

For more than 30 years, this event has brought together specialists from university and industry all over the world to promote the exchange of knowledge, ideas and information on the latest developments and applied technologies in the dynamics of rotating machinery.

The objective of the conference is to provide high quality research and professional interactions for the advancement of science, technology and international cooperation.

The 9th IFToMM International Conference on Rotor Dynamics will be held at Politecnico di Milano from 22 to 25 September, 2014: a return to the country where it originally made its debut (please see [www.iftomm2014.it](http://www.iftomm2014.it) for more details).

The first conference was held in Rome in 1982 and since then much has changed in the rotor dynamics field.

Great progress has been made in modeling rotor machines: the results we can achieve today from calculation models are very close to those obtained through experimental practice.

In the vision of the Technical Committee, the rotor dynamics is a constantly evolving science, which, starting from a rich tradition, must broaden its expertise to a wide set of topics particularly in respect to all components of rotating machinery. This implies significant synergies with other disciplines, such as design, tribology, fluid dynamics, thermodynamics, electromechanical effects and signal analysis.

#### **TC FOR SUSTAINABLE ENERGY SYSTEMS**

Prof. Ion Visa, Transilvania University of Brasov, Romania

Email: [visaion@unitbv.ro](mailto:visaion@unitbv.ro)

The TC SES aims at implementing the complex concept of “sustainability” for mechanisms and mechanical systems, by defining energy efficiency, and renewable and clean energy in industry, business and society.

During the last year, the TC was joined by seven new member (total: 16) and four observers (total: 8), involved in specific R&D, education and dissemination activities.

Networking at international level was promoted through a joint meeting with the European Sustainable Energy Innovation Alliance (ESEIA) organized in Brasov, attended by the eight TC members and the ESEIA General Manager, Brigitte Hassewend, when joined project topics were identified.

The TC was represented (Prof. Visa) at the major energy event in Europe launching the revised EU Strategic Technology Plan up to 2020, (Dublin May, 2013) and the TC activity was presented to the Romanian IFToMM branch (ARoTMM), in Galati during the Romanian National Seminary for Mechanisms.

The TC members attended international R&D conferences (Solar Heating and Cooling, Freiburg September 2013; Computer Aided Process Engineering, Graz April, 2013;

Energy, Environment and Education, Galati, September 2013; ICOME Craiova, May 2013; The Conference of the Romanian Academy of Technical Sciences, Brasov, October, 2013) and published 10 papers in main stream journals.

Education and training represents a permanent focus; the Summer School “Sustainable Smart Metropolitan Regions” was jointly organised by the Transilvania University of Brasov, ESEIA and the TC (Brasov, 15-26 July, 2013). The 17 attendees coming from Austria, Brazil, Indonesia, Lithuania, Netherlands and Romania, had interactive activities with the invited TC lecturers (Ion Visa, Tereza Ponce de Leao, Gintaras Stauskis, Lothar Fickert, Ina Korner, Yoram Kroezer, Anca Duta and Mircea Neagoe), and the invited guests (Nicolae Olariu, Maria Gavrilescu).

Future activities are scheduled: International conference SYROM 2013 (November, 11-12, 2013) and the International Conference for Sustainable Energy, CSE 2014 (Brasov, November 2014).



*Participants at the TC a joint meeting with the European Sustainable Energy Innovation Alliance (ESEIA) organized in Brasov*

#### **TC FOR TRANSPORTATION MACHINERY**

Dr. Madhu Raghavan, GM R&D Center, USA

Email: [madhu.raghavan@gm.com](mailto:madhu.raghavan@gm.com)

Our TC’s mission has been to solve research problems from the transportation industry with emphasis on propulsion hybridization and driveline electrification of passenger vehicles. We have worked hard to share research results via quarterly teleconferences, workshops, and visits. In 2013, we were able to conduct a quarterly teleconference (April 2013) and a face-to-face visit Aug 2013. Visits included trips to Beijing University (Beijing) and Hunan University (Changsha) in 2013.

Examples of collaborative research by TC members include Prof. Nong Zhang’s (Australia) joint research program with researchers at Hunan University (China) to set up an automotive dynamometer for propulsion system experiments. He and his co-workers have also created a novel low-cost



hybrid system to accomplish torque-hole fills during 1-2 shifts on Automated Manual Transmissions. This problem was suggested to Prof. Zhang's team by an IFToMM colleague during a prior TC meeting.

The highlight of 2013 was the 3rd IFToMM International Workshop on Hybrids (HEV/PHEV/BEV), Hunan University, August 2013. The workshop was attended by approximately 30 graduate students (free of charge). Presentation topics included "Challenges and Opportunities in Propulsion Electrification," "Development of Dual Clutch Transmissions," "Improvement of Gear Shift Quality in Manual Transmissions," and "High Speed Foil Bearings for Turbochargers." Additionally, the visiting speakers conducted several short courses for the students there. Future planned activities include an International Workshop on Electrified Propulsion in Nairobi, Kenya, 2014 (tentative)



*Prof. Nong Zhang (Australia) - 3<sup>rd</sup> IFToMM International Workshop on Hybrids*

#### **Call for 2015 IFToMM World Congress**

Prof. Shuo Hung Chang, Conference Chair, National Taiwan University; and Vice President and General Director, Industrial Technology Research Institute, Taiwan

Email: [shuohung@gmail.com](mailto:shuohung@gmail.com); [shuohung@itri.org.tw](mailto:shuohung@itri.org.tw)

Prof. Marco Ceccarelli, University of Cassino and South Latium, Italy

Email: [ceccarelli@unicas.it](mailto:ceccarelli@unicas.it)

The 14th IFToMM World Congress will be held in Taipei, Taiwan, on Oct. 25-30, 2015. IFToMM World Congress is held every 4 years and is the largest congress on mechanism and machine science. It will provide opportunity for researchers, scholars and students with interests in the theory and practice of mechanisms and machines for new ideas, sharing experiences, and discussing future developments.

#### **TOPICS OF THE CONGRESS**

Papers are welcome on the general areas of the theory and practice of machines and mechanisms, but not limited, to the topics of the IFToMM Technical Committees and Permanent Commissions, namely:

- ♦ Biomechanical engineering

- ♦ Computational kinematic
- ♦ Design methodology
- ♦ Dynamics of machinery
- ♦ Education
- ♦ Gearing and transmissions
- ♦ History of MMS
- ♦ Linkage and mechanical controls
- ♦ Mechatronics
- ♦ Micromechanisms
- ♦ Multibody dynamics
- ♦ Reliability of machines and mechanisms
- ♦ Robotics
- ♦ Rotor dynamics
- ♦ Standardization of terminology
- ♦ Sustainable energy systems
- ♦ Transportation machinery
- ♦ Tribology
- ♦ Vibration

#### **ORGANIZING COMMITTEE**

General Chair: Shuo Hung Chang (National Taiwan University, Industrial Technology Research Institute)

General Co-Chair: Marco Ceccarelli (University of Cassino)

Technical Program Chair: Cheng-Kuo Sung (National Tsing Hua University)

Best Paper Award Chair: Hong Sen Yan (National Cheng Kung University)

Secretary General: Tyng Liu (National Taiwan University)

#### **PRESENTATION AND PROCEEDINGS**

The official language is English. Registered participants will receive one Digital Proceedings which will be Engineering Index (EI), DOI and ISBN numbered.

#### **PAPER SUBMISSION**

All papers must be submitted electronically and they will be reviewed. Authors are requested to submit a full length paper, 4 pages (minimum) to 10 pages (maximum). The abstracts are NOT acceptable. The format will follow the IFToMM template that is available in the congress webpage. Best Paper awards will be given.

#### **IMPORTANT DATES**

Full version of the paper should be submitted through the Conference Web site.

On-line Submission System Open: 01 Sep. 2014

Full Paper submission: 15 Jan. 2015 Provisional decision: 15

Apr. 2015 Final version submission: 31 May 2015

Final decision: 15 Jul. 2015

#### **REGISTRATION FEES**

Early registration will be before 25 August 2015. IFToMM Young Delegate Program will provide support to young researchers as ruled in IFToMM webpage.

#### **CONGRESS LOCATION**

The island of Taiwan lies about 180 Km off the southeastern China. Taipei City, the capital of Taiwan is a city of

fascinating contrasts – a mix of modern and traditional with a generous dash of energy and friendly smile. It will be held in Taipei International Convention Center which situated in central Taipei, Xinyi District, near Taipei 101, with convenient transportation.

For more information, please visit the Tourism Bureau site at: <http://www.taipeitravel.net/en/scene/>

**ACCOMMODATION**

A variety of hotels with special rate in different standards with the room rate ranging from US\$133 to US\$387 will be listed on the IFToMM 2015 website.

**TRAVEL INFORMATION**

Taipei can be reached by flight from all around the world to Taiwan Taoyuan International Airport (TPE) and Taipei Song Shan Airport (TSA). TICC is located on Xinyi line of MRT.

Taiwan Taoyuan International Airport: <http://www.taoyuan-airport.com/english/index.jsp>

Taipei Song Shan Airport:

<http://www.tsa.gov.tw/tsa/en/home.aspx>

**ORGANIZED BY**

Chinese Society of Mechanism and Machine Theory, Taiwan  
National Taiwan University Industrial Technology Research Institute (ITRI), Taiwan

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International Federation for the Promotion of Mechanism and Machine Science (IFToMM)  
National Science Council, Taiwan Ministry of Economic Affairs, Taiwan  
Industrial Technology Research Institute (ITRI), Taiwan  
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Ministry of Foreign Affairs, Taiwan City Government of Taipei, Taiwan

**Contact:** [iftomm2015@elitepco.com.tw](mailto:iftomm2015@elitepco.com.tw)

IFToMM Web: [www.iftomm.org](http://www.iftomm.org)

Congress Web: <http://www.iftomm2015.tw>

**Forthcoming IFToMM Sponsored Conferences**

NAME AND PLACE OF THE CONFERENCE	CONTACT INFORMATION	DATE S	PC/TC/MO
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XXIV-th International Conference on Theory of Machines and Mechatronic Systems 2014	Stanisław Zawislak, Prof. Secretary of the Committee IFToMM-Poland <a href="mailto:szawislak@ath.biel-sko.pl">szawislak@ath.biel-sko.pl</a> <a href="mailto:antoni.gronowicz@pwr.wroc.pl">antoni.gronowicz@pwr.wroc.pl</a> <a href="http://tmm.pwr.wroc.pl/tmium2014">tmm.pwr.wroc.pl/tmium2014</a>	Szklarska Poreba, Lower Silesia, Poland Hotel „Las”, 21-24 September, 2014	MO chair Poland
SUMMER SCHOOL "Screw-Theory Based Methods in Robotics 2014"	Marco Carricato and Vincenzo Parenti Castelli Department. of Industrial Engineering, University of Bologna Viale Risorgimento 2, 40136 Bologna, Italy <a href="mailto:marco.carricato@unibo.it">marco.carricato@unibo.it</a> <a href="http://www.summerscrews.org/">http://www.summerscrews.org/</a>	University of Bologna, Italy 1– 11 September 2014	Technical Committee for Computational Kinematics Technical Committee for Robotics and Mechatronics Permanent Commission for Education Member Organization: Italy
The 3 <sup>rd</sup> Conference on Microactuators and Micromechanisms MAMM-2014	Assoc.Prof. Eng. Erwin-Christian LOVASZ Politehnica University of Timisoara Mechatronics Department B-dul Mihai Viteazul Nr.1, RO-3000222 Timisoara, Romania <a href="mailto:erwin.lovasz@mec.upt.ro">erwin.lovasz@mec.upt.ro</a> <a href="http://mamm-2014.mec.upt.ro/">http://mamm-2014.mec.upt.ro/</a>	Politehnica University of Timisoara, Timisoara, Romania, July 06-13, 2014	TC Linkages and Mechanical Controls TC Micromachines

3rd IFToMM Symposium on Mechanism Design for Robotics MEDER 2015	Shaoping Bai, PhD, Associate Professor Dept. of Mechanical and Manufacturing Engineering, Aalborg University Fibigerstraede 16, Rm 4.205, Aalborg 9220, Denmark E-mail: shb@m-tech.aau.dk; Phone: +45 9940 9291 (office); 2135 9697 (mobile)	02-04 June 2015  Aalborg University, Aalborg, Denmark	TC for Robotics and Mechatronics MO Denmark
23 <sup>rd</sup> International Conference on Robotics in Alpe-Adria-Danube Region (RAAD 2014)	Štefan Havlík Slovak Academy of Sciences, Inst. of Informatics, Dumbierska 1 974 11 Banská Bystrica Slovakia  <a href="mailto:raad2014@savba.sk">raad2014@savba.sk</a>  <a href="http://www.raad2014.org">www.raad2014.org</a>	<b>Smolenice Castle – Slovakia</b>  September 3-5, 2014	TC Robotics and Mechatronics MO Slovakia
Second International Conference on Cable-Driven Parallel Robots (CableCon2014)	Dr.-Ing. Tobias Bruckmann University Duisburg-Essen Chair for Mechatronics Lotharstrasse 1, Duisburg, Germany <a href="mailto:tobias.bruckmann@uni-due.de">tobias.bruckmann@uni-due.de</a>  Dr.-Ing. Andreas Pott Fraunhofer IPA Nobelstrasse 12, 70569 Stuttgart, Germany  <a href="http://www.CableCon2014.org">http://www.CableCon2014.org</a>	University Duisburg-Essen, Duisburg, Germany, 24.-27. August, 2014	TC Computational Kinematics

HMM 2016 International Symposium on History of Machines and Mechanisms	Prof. Carlos S. López-Cajún Universidad Autónoma de Querétaro Facultad de Ingeniería, Cerro las campanas s/n, Col. Las campanas 76010 Querétaro, QRO. México <a href="mailto:cajun@uaq.mx">cajun@uaq.mx</a>  <a href="http://www.uaq.mx/ingenieria/HMM2016">http://www.uaq.mx/ingenieria/HMM2016</a>	June 7-10, 2016	PC on HMM and IFToMM Mexico
Second International Brazilian Conference on Tribology - TriboBR-2014 – Foz do Iguaçu, Pr - Brazil	Prof. José Daniel Biasoli de Mello Laboratório de Tribologia e Materiais Faculdade de Engenharia Mecânica Universidade Federal de Uberlândia Bloco 1R - Campus Santa Mônica 38400-902 Uberlândia MG - Brazil <a href="mailto:itm-demello@ufu.br">itm-demello@ufu.br</a>  web. NOT YET available	3-5 November 2014	Technical Committee for Tribology
2015 IFToMM PC Workshop on History of MMS	Olga Egorova, Bauman Moscow State Technical University, Russia <a href="mailto:olgaegor@bmstu.ru">olgaegor@bmstu.ru</a>  Alexander Evgrafov, St. Petersburg State Polytechnical University, Russia <a href="mailto:a.evgrafov@spbstu.ru">a.evgrafov@spbstu.ru</a>  <a href="http://www.hmms2015.ru">http://www.hmms2015.ru</a>	26-28 May 2015	PC History of MMS



<p>CCToMM Mechanisms, Machines, and Mechatronics (M<sup>3</sup>) Symposium, 2014. Toronto, Ontario, Canada</p> <p>University of Toronto, Toronto, ON, Canada</p>	<p>Professor M. John D. Hayes 1592 Apeldoorn Ave. Ottawa, ON, K2C 1V5, Canada <a href="mailto:jhayes@mae.carleton.ca">jhayes@mae.carleton.ca</a> <a href="http://www.cctomm.ca">www.cctomm.ca</a> and <a href="http://www.mie.utoronto.ca/csme2014">www.mie.utoronto.ca/csme2014</a></p>	<p>June 1-4, 2014</p>	<p>Canadian Committee for the Theory of Machines and Mechanisms (CCToMM)</p>
<p>17<sup>th</sup> International Conference on Climbing and Walking Robots and the Support Technologies for Mobile Machines CLAWAR 2014 Poznan, Poland</p>	<p>Piotr Mieszala, MS, Poznan University of Technology, Poland <a href="mailto:piotr.mieszala@put.poznan.pl">piotr.mieszala@put.poznan.pl</a> phone: +48 61 665 2117, fax: +48 61 665 2849 <a href="http://www.clawar2014.put.poznan.pl">http://www.clawar2014.put.poznan.pl</a></p>	<p>July 21-23, 2014</p>	<p>TC Robotics</p>
<p>The 20th Jc-IFTToMM Symposium</p>	<p>Prof. Haruo Houjoh Precision and Intelligence Laboratory Tokyo Institute of Technology 4259 Nagatsuta-cho, Midori-ku, Yokohama, Kanagawa 226-8503, Japan <a href="mailto:takeda@mech.titech.ac.jp">takeda@mech.titech.ac.jp</a>  <a href="http://www.jc-iftomm.org/english/index.html">http://www.jc-iftomm.org/english/index.html</a></p>	<p>May 24th, 2014.</p>	<p>MO Japan</p>
<p>Summer School 2014 on “Micro- and Macro Mechanisms Design in Mechatronics and Robotics,</p>	<p>Assoc.Prof. Eng. Erwin-Christian LOVASZ Politehnica University of Timisoara Mechatronics Department B-dul Mihai Viteazul Nr.1, RO-3000222 Timisoara, Romania <a href="mailto:erwin.lovasz@mec.upt.ro">erwin.lovasz@mec.upt.ro</a>  <a href="http://summerschool-2014.mec.upt.ro/">http://summerschool-2014.mec.upt.ro/</a></p>	<p>July 06-13, 2014</p>	<p>TC Linkages and Mechanical Controls</p>

<p>2014 IFToMM Asian Conference on Mechanism and Machine Science Tianjin, China</p>	<p>Prof. Tian Huang <a href="mailto:tianhuang@tju.edu.cn">tianhuang@tju.edu.cn</a> Prof. Jian S. Dai <a href="mailto:jian.dai@kcl.ac.uk">jian.dai@kcl.ac.uk</a> Prof. Zhongxia Xiang <a href="mailto:xiangzhx@tju.edu.cn">xiangzhx@tju.edu.cn</a>  <a href="http://www.asian-mms2014.com">www.asian-mms2014.com</a></p>	<p>09-10 July 2014</p>	<p><b>TC Robotics and Mechatronics</b></p>
<p>XX CISM-IFTToMM SYMPOSIUM on Theory and Practice of Robots and Manipulators, Moscow</p>	<p>Victor Glazunov Email: <a href="mailto:vaglznv@mail.ru">vaglznv@mail.ru</a> <a href="http://romansy2014.bmstu.ru">http://romansy2014.bmstu.ru</a></p>	<p>23/06/2014-26/06/2014</p>	<p>TC Robotics and Mechatronics</p>
<p>"Theory and practice of Gearing" International Symposium dedicated to 100-year anniversary of Prof. F.L.Litvin; Izhevsk State Technical University, Russia</p>	<p>PhD, Eng. Natalie Barmina e-mail: barminan@yandex.ru 7, Studencheskaya str, Izhevsk, 426069, Russia Institute of Mechanics of ISTU  Prof V.Goldfarb, Director of Institute of Mechanics, izhevsk State technical University 7 Studencheskaya str. Izhevsk, 426069, Russia e-mail: veniamingoldfarb@yahoo.com</p>	<p>January 21- 23, 2014</p>	<p>TC for Gearing and Transmissions</p>
<p>1st International and 16th National Conference on Machines and Mechanisms (iNaCoMM 2013) Indian Institute of Technology, Roorkee, 247667, India</p>	<p>Pushparaj Mani Pathak, Assistant Professor <a href="mailto:pushpfme@iitr.ernet.in">pushpfme@iitr.ernet.in</a> <a href="http://www.nacom2013.org">http://www.nacom2013.org</a></p>	<p>December 18-20, 2013</p>	<p>IFTToMM India</p>
<p>The Third Joint International Conference on Multibody System Dynamics (IMSD2014) and The 7th Asian Conference on Multibody Dynamics</p>	<p>Professor Sung-Soo Kim <a href="mailto:sookim@cnu.ac.kr">sookim@cnu.ac.kr</a>  Not yet web page</p>	<p>Busan, Korea June 29 – July 3, 2014</p>	<p>TC Multibody</p>

(ACMD2014)			
5th IFToMM-FeIbIM International Symposium on Multibody Systems and Mechatronics MUSME 201, Huatulco, Mexico	<p><i>Prof. Marco Ceccarelli</i></p> <p>ceccarelli@unicas.it</p> <p>Prof. Eusebio Eduardo Hernández Martínez</p> <p><a href="mailto:euherandezm@ipn.mx">euherandezm@ipn.mx</a></p> <p><a href="http://www.musme2014.org">www.musme2014.org</a></p>	21-24.10.2014	<p>Technical Committee for Robotics and Mechatronics Chair Prof. I-Ming CHEN</p> <p>Technical Committee for Multi-body Dynamics Chair Prof. Javier Cuadrado</p>

Chairperson shall not serve for more than two terms consecutively. The general goals for the work of the Commissions and Committees are aimed at promoting their fields of interest by attracting researchers and practitioners, including young individuals, in order to:

- define new directions in research and development within their technical areas;
- establish contacts between researchers and engineers;
- initiate and develop bases and procedures for modern problems;
- promote the exchange of information;
- organize national and international symposia, conferences, summer schools, and meetings.

**Mission:**

To promote research and development in the field of Machines and Mechanisms by theoretical and experimental methods, along with their practical applications

**Vision:**

To provide leadership for cooperation and development of modern results in the Mechanism and Machine Sciences by assisting and enhancing international collaboration

- 46 IFToMM Members Organizations

**IFToMM publication frames**

- affiliated Journals:
  - Mechanism and Machine Theory <http://www.elsevier.com>
  - Problems of Mechanics <http://pam.edu.ge>
  - Open-access Mechanical Sciences <http://www.mech-sci.net>
  - Chinese Journal of Mechanical Engineering <http://www.cjmenet.com>
  - Advances in Vibration Engineering <http://www.tvi-in.com/index.asp>
- Book series on MMS <http://www.springer.com/series/8779>
- Book series on History of MMS <http://www.springer.com/series/7481>

- |               |                |
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| GEORGIA       | GERMANY        |
| GREECE        | HUNGARY        |
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| SLOVAKIA      | SLOVENIA       |
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| TUNISIA       | TURKEY         |
| UKRAINE       | UNITED KINGDOM |
| USA           | VIETNAM        |

**IFToMM bodies and contacts**

**General Assembly**

The General Assembly is the supreme body of the Federation and determines its policy. It is composed of the Chief Delegates of IFToMM Organization Members and members of the Executive Council.

**Executive Council**

The Executive Council manages the affairs of the Federation between the sessions of the General Assembly. It is elected every four years, meets annually, and is composed of the President, Vice-President, Secretary-General, Treasurer, and six ordinary members.

**Commissions and Committees**

Each Permanent Commission and Technical Committee is composed of a Chairperson, appointed by the Executive Council, a Secretary and members, nominated by the Chairperson and appointed by the Executive Council. A

**13 Technical Committees:**

- Biomechanical Engineering
- Computational Kinematics
- Gearing and Transmissions
- Linkages and Mechanical Controls
- Micromachines
- Multibody Dynamics
- Reliability

Robotics and Mechatronics  
 Rotordynamics  
 Sustainable Energy Systems  
 Transportation Machinery  
 Tribology  
 Vibrations

- **4 Permanent Commissions:**  
 Communications, Publications and Archiving  
 Education  
 History of MMS  
 Standardization of Terminology

For chairs and their contact address, please look at the IFToMM web page

- Executive Council (2008-2011):

Marco Ceccarelli (Italy) – President  
 Yoshihiko Nakamura (Japan) – Vice President  
 Carlos S. Lopez Cajun (Mexico) – Secretary General  
 Joseph Rooney (UK) – Treasurer  
 Datong Qin (China-Beijing)  
 Veniamin I. Goldfarb (Russia)  
 Theodor G. Ionescu (Romania)  
 Bahram Ravani (USA)  
 James Trevelyan (Australia)  
 Miroslav Václavík (Czech Republic)

Past-President: Kenneth J. Waldron (USA)

- Executive Council (2012-2015):

Yoshihiko Nakamura (Japan) – President  
 Veniamin I. Goldfarb (Russia) – Vice President  
 Teresa Zielinska (Poland) – Secretary General  
 Just Herder (Netherlands) – Treasurer  
 Shuo Hung Chang (China-Taipei)  
 Burkhard Corves (Germany)  
 Vijay Kumar (USA)  
 Jean Pierre Merlet (France)  
 Datong Qin (China-Beijing)  
 Juan Antonio Carretero (Canada)

Past-President: Marco Ceccarelli (Italy)

Address for IFToMM correspondence (2008-2011)

<b>PRESIDENT</b>	Prof. Marco Ceccarelli, LARM: Laboratory of Robotics and Mechatronics, DIMSAT, University of Cassino, Via Di Biasio 43, 03043 Cassino (Fr), Italy, Tel +39-0776-2993663, Fax +39-0776-2993989, Email: ceccarelli@unicas.it
<b>VICE-PRESIDENT</b>	Prof. Yoshihiko Nakamura, Department of Mechano-Informatics, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan, Tel +81-3-5841-6379, Fax +81-3-5841-7916 Email: nakamura@ynl.t.u-tokyo.ac.jp
<b>SECRETARY-GENERAL</b>	Prof. Carlos S. Lopez Cajun, Facultad de Ingenieria, Universidad Autonoma de Queretaro, Cerro de las Campanasnc, 76010 Santiago de Queretaro, Qro, Mexico, Tel + 52-42-1921264-117, Fax + 52-442-1921264 -103 Email: cajun@uaq.mx
<b>TREASURER</b>	Dr Joe Rooney, Faculty of Technology, The Open University, Milton Keynes, MK7 6AA United Kingdom, Tel: +44 (0)1908 652979 Fax: +44 (0)1908 654052 Email: j.rooney@open.ac.uk

Address for IFToMM correspondence (2012-2015)

<b>PRESIDENT</b>	Prof. Yoshihiko Nakamura, Department of Mechano-Informatics, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan, Tel +81-3-5841-6379, Fax +81-3-5841-7916 Email: nakamura@ynl.t.u-tokyo.ac.jp
<b>VICE-PRESIDENT</b>	Prof. Veniamin S. Goldfarb, Director of Institute of Mechanics, Izhevsk State Technical University, Studencheskaya str. 7, Izhevsk, Russia, 426069 Tel/Fax: +73412-592503 E-mail: gold@udmlink.ru; veniamingoldfarb@yahoo.com
<b>SECRETARY-GENERAL</b>	Prof. Teresa Zielinska, Inst. of Aircraft Engineering and Applied Mechanics Warsaw University of Technology ul. Nowowiejska 24, 00-665 Warsaw POLAND, Tel: 22 2347790 Fax: 22 6282587 E-mail: teresaz@meil.pw.edu.pl
<b>TREASURER</b>	Prof L. Just Herder, TU Delft, faculty 3ME, Mekelweg 2, 2628 CD Delft, The Netherlands Tel: +31 15 2784713 Fax: +31 15 278 1397 E-mail: j.l.herder@tudelft.nl