

# CONFERENCE PROGRAM

## ICMAE 2018

The 9th International Conference on Mechanical and  
Aerospace Engineering

**With workshops of**

## ICPAM 2018

International Conference on Pure and Applied Mathematics

**July 10-13 | Eotvos Lorand University | Hungary**

---

### Conference Venue

**Faculty of Informatics, Eotvos Lorand University**



**Address:** ELTE Faculty of Informatics, Lagymányosi Campus, Eotvos Lorand University, 1/C. Pazmany  
Peter setany, Budapest-1117

# Welcome Address

It is our great pleasure to invite you to attend the The 9th International Conference on Mechanical and Aerospace Engineering(ICMAE), with workshops of 2018 the 7<sup>th</sup> International Conference on Pure and Applied Mathematics(ICPAM), to be held from July 10-13, 2018, in Faculty of Informatics, Eötvös Loránd University, Budapest, Hungary.

ICMAE has been one of the main events in Europe region with a focus on Aerospace Mechatronics and Avionics Systems, Aerospace Communications, Mechanical Engineering in Aerospace, Electronic Systems, Aerospace Engineering and Management, Pure and Applied Mathematics, etc. For near a decade, the conference has attracted world class researchers from both academic and engineering to share their state-of-the-art results in relative fields. The conference consists of Keynotes, plenary and invited speeches from experts, paper presentations, ELTE academic visit, tutorials and symposiums.

After several rounds of review procedure, the program committee accepted those abstracts to be presented on conference, and papers to be published in conference proceedings. We wish to express our sincere appreciation to all the individuals who have contributed to ICMAE 2018 conference in various ways, in the program committee for their thorough review of all the submissions, which is vital to the success of the conference, and also to the members in the organizing committee and the volunteers who had dedicated their time and efforts in planning, promoting, organizing and helping the conference. Special thanks are extended to our Local Chair-Prof. Kerek Ágnes, for his contribution, and great support from Faculty of Informatics, Eötvös Loránd University. Without their support, this conference cannot be prepared so smoothly and successfully.

This conference program is highlighted by 3 Keynote Speakers: Prof. Anh Dung NGO, Ecole de technologie supérieure (U. du Quebec), Canada; Prof. Ian McAndrew, Embry Riddle Aeronautical University, UK; Prof. Dashnor Hoxha, Orleans University, France; 4 Plenary Speakers: Prof. Simon Barrans, University of Huddersfield, United Kingdom; Prof. Hamid Bahai, Brunel University, UK; Prof. Necdet Bildik, Celal Bayar University, Turkey; Prof. Ruggero Maria Santilli, Institute for Basic Research, USA.

Budapest is paradise for explorers. Keep your senses primed and you'll discover something wonderful at every turn. Budapest's beauty is not all God given; humankind has played a role in shaping this pretty face too. Architecturally, the city is a treasure trove, with enough baroque, neoclassical, Eclectic and art nouveau buildings to satisfy everyone. Overall, though, Budapest has a *fin de siècle* feel to it, for it was then, during the capital's 'golden age' in the late 19th century, that most of what you see today was built.

We wish you a successful conference and enjoyable experience in Budapest!

Conference Organizing Committees  
Budapest, Hungary

# Conference Committees

<b>Conference Chairs</b>	<p>Prof. Dashnor Hoxha, Orleans University, France</p> <p>Prof. Ramesh K. Agarwal, Washington University in St. Louis, USA</p> <p>Prof. Ian McAndrew, Embry Riddle Aeronautical University, UK</p>
<b>Local Chair</b>	<p>Prof. Kerek Ágnes, Eötvös Lorand University, Hungary</p>
<b>Technical Program Co-chairs</b>	<p>Prof. ANH DUNG NGO, Ecole De Technologie Superieur (U. of Quebec), Canada</p> <p>Prof. Necdet Bildik, Celal Bayar University, Turkey</p> <p>Prof. Huafeng Ding, China University of Geosciences (Wuhan), China</p> <p>Prof. Musilova Michaela, the Slovak Organisation for Space Activities, Slovakia</p> <p>Prof. Huisheng Shi, Tongji University, China</p>
<b>Steering Co-chairs</b>	<p>Prof. Simon Barrans, University of Huddersfield, United Kingdom</p> <p>Prof. Eldad Avital, Queen Mary University of London, United Kingdom</p> <p>Prof. Hamid Bahai, Brunel University, UK</p> <p>Prof. Ibrahim Ozkol, Istanbul Technical University, Turkey</p> <p>Prof. Katarina MONKOVA, Technical University in Kosice, Slovakia</p>
<b>International Publicity Co-chairs</b>	<p>Prof. Kamel Mehdi, University of Tunis EL Manar, Tunisia</p> <p>Prof. Peter Monka, TU Kosice, Faculty of manufacturing technologies, Slovakia</p> <p>Prof. Yoshifumi Yokoi, National Defense Academy of Japan, Japan</p> <p>Prof. Myoung-Gyu Lee, Korea University, Korea</p> <p>Prof. ADRIANA FRANCA, Universidade Federal de Minas Gerais, Brazil</p>
<b>Technical Committees</b>	<p>Prof. Yuri N. Skiba, UNAM University, Mexico</p> <p>Prof. Maya Mitkova, Gulf University for Science and Technology, Kuwait</p> <p>Prof. Önder TURAN, Anadolu University, Turkey</p> <p>Prof. Anthony R. McAndrew, TWI Ltd., UK</p> <p>Prof. Kenji Uchiyama, Nihon University, Japan</p> <p>Prof. Linda Vee Weiland, ERAU-Worldwide College of Aeronautics, USA</p> <p>Prof. Mark Allen Friend, Embry-Riddle Aeronautical University, USA</p> <p>Prof. Tan Sui, University of Surrey, UK</p> <p>Prof. Najim A. Saad, Babylon University, Iraq</p> <p>Prof. Elena Scutelnicu, Dunărea de Jos, University of Galați, Romania</p> <p>Prof. Leandro Oliveira, Universidade Federal de Minas Gerais, Brazil</p> <p>Prof. Jose Antônio Da Silva, Federal University of São João del-Rei, Brazil</p> <p>Prof. Carlos F.Rodriguez, Universidad de los Andes, Colombia</p> <p>Prof. Andrew Carruthers, University of Bradford, UK</p> <p>Prof. Elena Vishnevskaya, Embry Riddle Aeronautical University, Germany</p> <p>Prof. Thananchai Leephakpreeda, Thammasat University, Thailand</p> <p>Prof. Nikolay Borgest, Samara State Aerospace University, Russian Federation</p> <p>Prof. Nadan K. Sinha, I.I.T. Madras, India</p> <p>Prof. Heow Pueh Lee, National University of Singapore, Singapore</p> <p>Prof. Hamid Dalir, Purdue University, US</p> <p>Prof. Şener Karabulut, Hacettepe University, Turkey</p> <p>Prof. Abdus Samad, Indian Institute of Technology, India</p> <p>Prof. Shariq Neshat Akhtar, University of Leeds, UK</p> <p>Prof. Emin Taner ELMAS, Energy Manager of Sistemas Technology and System Production, Turkey</p> <p>Prof. Orin L. Godsey, College of Aeronautics, USA</p>

Prof. Nam Seo Goo, Konkuk University, Korea  
Prof. Tomasz Kopecki, Politechnika Rzeszowska, Poland  
Prof. Antonin Pistek, Institute of Aerospace Engineering, Czech Republic  
Prof. Zheng Hong Zhu, York University, Canada  
Prof. TAHİR HİKMET KARAKOÇ, Anadolu University, Turkey  
Prof. Ferhan Kuyucak Şengur, Anadolu University, Turkey  
Prof. Mahmut Adil CYÜKSELEN, Istanbul Technical University, Turkey  
Prof. Josef Klement, Brno University of Technology, Czech Republic  
Prof. Jae Wook Kim, University of Southampton, UK  
Prof. Lucia Knapci kova, Technical University of Košice, Slovakia  
Prof. Jozef Černecký, Technical University of Zvolen, Slovakia  
Prof. Tomas Kliment, Slovak Legal Metrology, Slovakia  
Prof. Vsevolod V. Koryanov, Bauman Moscow State Technical University, Russia  
Prof. J. H. Chen, National Taiwan Ocean University, Taiwan  
Prof. Ramazan Çitak, Gazi University, Turkey  
Prof. Woradej Manosroi, Chiang Mai University, Thailand  
Prof. Rosario Pecora, Università degli Studi di Napoli "Federico II", Italy  
Prof. Jung-Chou Hung, Feng Chia University, Taiwan  
Prof. Mehmet Metin Yavuz, Middle East Technical University, Turkey  
Prof. Anshuman Srivastava, Mechanical Engineering Dept, SIET Allahabad, India.  
Prof. Mikio HORIE, Tokyo Institute of Technology, Japan  
Prof. Yuexi Xiong, Beijing University of Aeronautics and Astronautics, China  
Prof. Satuluri Srikanth, Lendi Institute of Engineering & Technology, India  
Prof. Maatouk Khoukhi, United Arab Emirates University, UAE  
Prof. Jose Alejandro POSADA-MONTOYA, Pascual Bravo University Institution, Colombia  
Prof. Qin Xuguo, Beijing Institute of Space Long March Vehicle, China  
Prof. Espen Oland, The Arctic University of Norway, Norway  
Prof. Mehmet Şerif Kavsaoğlu, Fatih Sultan Mehmet Vakıf University, Turkey  
Prof. Michael A. Saliba, University of Malta, Malta  
Prof. Yongdae Kim, Kyungil University, South Korea  
Prof. Cem Tahsin Yücer, National Defense University Air Force NCO Higher Vocational School, Turkey  
Prof. Zhang Jianrun, Southeast University, China  
Prof. Fedir Gagauz, National Aerospace University "KhAI", Ukraine  
Prof. Ruxandra Mihaela Botez, École de technologie supérieure, Canada  
Prof. Dimitris Drikakis, University of Strathclyde, UK  
Prof. Fatih Karpat, Uludağ University, Turkey  
Prof. Zhaoheng Liu, Université du Québec, Canada  
Prof. Kai Peng, Northwestern Polytechnical University, China  
Prof. Ming Zhu, Beihang University, China  
Prof. T. Rajasanthosh Kumar, Ace Engineering College, India  
Prof. Chen Yu-chun, Northwestern Polytechnical University, China  
Prof. Marc Thomas, Université du Québec, Canada  
Prof. Sun Yuwei, Beijing Institute of Spacecraft Environment Engineering, China  
Prof. LIU Pei-jin, Northwestern Polytechnical University, China  
Prof. Dumitrache Alexandru, "POLITEHNICA" University of Bucharest, Romania  
Prof. Mohamed DAMIR, Alexandria University, Egypt  
Prof. Haydar Al-Ethari, University of Babylon, Iraq

# Program at a Glance

July 10, 2018   Tuesday		
		<b>Room# 0-820</b>
10:00-17:00	Room#0-820	Registration & Conference Kits Collection
14:30-15:00		ELTE Campus Visit
		<b>Room</b>
15:25-15:30	Tutorial Introduction	<b>Dr. Jurij Sidor</b> , <i>Faculty of Informatics, ELTE, Hungary</i>
15:30-15:45	ELTE Tutorial	Materials and Mechanical Engineering

July 11, 2018   Wednesday		
		<b>Room#0-821</b>
09:00-09:05	Opening Remarks	<b>Prof. Ian McAndrew</b> , <i>Embry Riddle Aeronautical University, UK</i>
09:05-09:20	Welcome Address	<b>Prof. Zoltán HORVÁTH</b> , <i>Dean for Faculty of Informatics, ELTE, Hungary</i>
09:20-10:05	Keynote Speech-I	"Experimental Investigation of Operational Conditions Effects on Axial Fatigue behavior of Carbon/Epoxy Plain Weave Laminates Containing Artificial Flaw" <b>Prof. Anh Dung Ngo</b> , <i>École de technologie supérieure, Québec, Canada</i>
10:05-10:45	Group Photo& Coffee Break	
10:45-11:30	Keynote Speech-II	"Is the Sky above Us Safe and How has this Been Influenced by the Past and Present Policies?" <b>Prof. Ian McAndrew</b> , <i>Embry Riddle Aeronautical University, UK</i>
11:30-12:00	Plenary Speech-I	"The Neutron Synthesis from the Hydrogen and its Application for National Security" <b>Prof. Ruggero Maria Santilli</b> , <i>Institute for Basic Research, USA</i>
12:00-13:00	Lunch Break	
		<b>Room# 2-502</b>
13:00-15:30	Session <b>A-1</b>	Digital Manufacturing System and Weaponry Manufacturing
15:30-15:45	Coffee Break	
15:45-18:30	Session <b>A-2</b>	Power Machinery System and Analysis
		<b>Room # 2-712</b>
13:00-15:30	Session <b>B-1</b>	Control Science and Mechanical Engineering
15:30-15:45	Coffee Break	
15:45-18:30	Session <b>B-2</b>	Engine Design and Performance Assessment
		<b>Room # 0-820</b>
13:00-15:30	Session <b>C-1</b>	Electronic Systems and Communication Technology in Aerospace
15:30-15:45	Coffee Break	
15:45-18:30	Session <b>C-2</b>	Materials Science and Engineering
		<b>Room # 0-818</b>
13:00-14:15	Symposium-1	Approximation Theory
14:15-14:30	Free Talk	
14:30-15:30	Symposium-2	
15:30-15:45	Coffee Break	
15:45-18:30	Symposium-3/	Special Functions, Mathematical Modeling and Physical Mathematics

	Session <b>D-2</b>	Mathematical Modeling and Physical Mathematics
		<b>Room# 1-820</b>
13:00-15:30	Tutorial-1	Isomathematics
15:30-15:45	Coffee Break	
15:45-18:30	Tutorial-1	Isomathematics
18:30-20:00	Dinner	

### July 12, 2018 | Thursday

		<b>Room # 0-821</b>
09:00-09:05	Opening Remarks	<b>Prof. Dashnor Hoxha</b> , <i>Orleans University, France</i>
09:05-09:50	Keynote Speech-III	“Effective Thermal Properties of Heterogeneous Materials from far Field Contactless Temperatures Measurements” <b>Prof. Dashnor Hoxha</b> , <i>Orleans University, France</i>
09:50-10:20	Plenary Speech-II	“Understanding the Behaviour of V-band Clamps” <b>Prof. Simon Barrans</b> , <i>University of Huddersfield, UK</i>
10:20-10:50	Coffee Break & Group Photo	
10:50-11:20	Plenary Speech-III	“On the Solution of KdV-like Equations by the Optimal Perturbation Iteration Technique” <b>Prof. Necdet Bildik</b> , <i>Celal Bayar University, Turkey</i>
11:20-11:50	Plenary Speech-IV	“” <b>Prof. Hamid Bahai</b> , <i>Brunel University, UK</i>
12:00-13:00	Lunch	
		<b>Room # 2-502</b>
13:00-15:30	Session <b>A-3</b>	Power System Modeling and Analysis in Aerospace
15:30-15:45	Coffee Break	
15:45-18:30	Session <b>A-4</b>	Power Electronics Technology and Communication Engineering
		<b>Room # 2-712</b>
13:00-15:30	Session <b>B-3</b>	Fluid Mechanics and Applications
15:30-15:45	Coffee Break	
15:45-18:00	Session <b>B-4</b>	Aircraft Structure Design and Optimization
		<b>Room # 0-820</b>
13:00-15:30	Session <b>C-3</b>	Aircraft Design and Spacecraft
15:30-15:45	Coffee Break	
15:45-17:00	Session <b>C-4</b>	Image Processing and Application
		<b>Room # 1-820</b>
13:00-15:30	Session <b>D-1</b>	Mathematical Theory and Calculation
15:30-15:45	Coffee Break	
15:45-18:30	Tutorial-2	Isomechanics & Isochemistry
		<b>Room # 0-818</b>
13:00-15:30	Tutorial-3	Isomechanics
15:30-15:45	Coffee Break	
15:45-18:30	Tutorial-3	Isomechanics

18:30-20:00	Dinner
-------------	--------

**July 13, 2018 | Friday**

09:00-17:00	Optional One-day City Visit
-------------	-----------------------------

# Keynote Speakers



**Speech I: Jul. 11(Wed.) 9:20-10:05**

**Venue: Room 0-821**

**“Experimental Investigation of Operational Conditions Effects on Axial Fatigue Behaviour of Carbon/Epoxy Plain Weave Laminates Containing Artificial Flaw ”**

**Prof. Anh Dung NGO**

Ecole de technologie superieure (U. du Quebec), Canada

## ***Abstract of Speech***

Aeronautical composite structures having manufactured flaws usually operate in harsh conditions. This work aimed at characterizing the behavior of quasi-isotropic plain weave carbon/epoxy laminates containing artificial flaw under axial fatigue loading at various conditions such as hygrothermal, frequency and stress ratio. Dry and wet coupons were tested under load-controlled fluctuated cyclic loading with two stress ratios of  $R = 0.1$  and  $R = -0.1$  and two load frequencies of 7 Hz and 15Hz at room temperature and 82°C under different stress levels. Delamination threshold onset were determined based on the allowable stiffness change as failure criterion that was verified using ultrasonic imaging (C-Scan) technique, at each testing condition. At first, under tensile cyclic loading at 7Hz the experimental results showed that individually, moisture reduced the fatigue life of the studied material more than temperature did whereas their combination was much more damaging. On the frequency effect, the experimental results at 15Hz suggested that, in general, fatigue life increased with load frequency for most environmental conditions, except for two conditions: (1) room temperature and dry at high stress level, (2) 82°C and wet at low stress level. Finally, partially reversed tension-compression cyclic loading tests showed that this loading mode was more damaging than the tension-tension one due to the complex interaction and evolution of the compressive and tensile types of damage.

## ***Anh Dung NGO***

**BIO:** About Prof. Anh Dung NGO: B.Sc. A in Mechanical Engineering (É. Polytechnique, Canada), M.Sc. in Wood technology (U. Laval, Canada), Ph.D. in Mechanical Engineering (Concordia U., Canada). Professor NGO spent 18 years in industry as engineer and in governmental agency first as engineer and later as chief officer of the Occupation Safety Division at the Prevention Branch of the Quebec Occupational Health and Safety Commission before joining the university in 1991. He was the Chairman of the Mechanical Engineering Department from 1999 to 2004. He is the founder of two research groups, one in Occupational Safety and one in Composite Materials. He is also the editor of the Proceeding of the EIGHTH JOINT CANADA-JAPAN WORKSHOP ON COMPOSITES and author of sixty scientific papers and technical reports on Composites Materials and Occupational Safety.





**Speech II: Jul. 11(Wed.) 10:45-11:30**  
**Venue: Room 0-821**

**“Is the Sky above Us Safe and How has this been Influenced by the Past and Present Policies?”**

**Prof. Ian McAndrew**

Embry Riddle Aeronautical University, UK

***Abstract of Speech***

There have been many instances of aircraft collisions in the sky and these have been for a variety of reasons and causes. Technology has been used to address these concerns, yet these have not all been successful for other reasons. This presentation reviews the historical and technical reasons what and why has happened to produce this current situation and how the safety may not be as high as assumed. It also introduces the concerns that Unmanned Ariel Vehicles add and how these are being reviewed to minimize. Furthermore, the risk analysis of these implications due to Security and Cyber security.

***Ian McAndrew***

Ph.D. in Mechanical Engineering ; M.Sc. in Manufacturing MA in Education Management ; Pg.D. in Education Training; B.A. (Hons) in Mechanical Engineering; B.A. in Production Engineering Member of the Institute of Electrical Engineers. Dr McAndrew spent 12 years in industry as a designer before entering academia. He has over 20 years of teaching experience in the UK, Europe, Middle East and Far East. He has supervised many PhD students and published extensively for over 20 years. He is the author of a book and Editor of a new Journal being produced with a focus on Aviation. Currently he is the Department Chair of Graduate Studies in the College of Aeronautics Worldwide at Embry Riddle Aeronautical University. His research interests are in Aerodynamics and Effective Education, which he has published extensively. He has presented at many Conferences and believes these are critical research meetings for those that are new to research and the experienced to mentor the next generation.



**Speech III: Jul. 12(Thu.) 9:05-9:50**

**Venue: Room 0-821**

**“Effective thermal properties of heterogeneous materials from far field contactless temperatures measurements ”**

**Prof. Dashnor Hoxha**  
Orleans University, France

***Abstract of Speech***

Classical methods for determination of thermal properties of materials could be revealed inappropriate when used for macroscopic heterogeneous materials. This is because these parameters are typically obtained using measures on small volumes which could be smaller than VER of a heterogeneous material. To overcome this drawback a method, using far field temperature measurements induced by a laser spot on a heterogeneous material, is developed. Theoretical considerations and inverse approach used are explained in details before a validation of the method and its use in various heterogeneous materials as case studies.

***Dashnor Hoxha***

About Prof. Dashnor Hoxha: After obtained an engineer degree from Polytechnic University of Tirana and a Bachelor in Physics from Natural Science Faculty of Tirana, Albania in 1991, I was awarded M.Sc. and Ph.D. in Geomechanics Hydrosystems and Structures from National Polytechnic Institute of Lorraine (INPL) France in 1998. I worked for ten years in the research and developing industry before joining the University of Orleans as Head of Sustainable Constructions Division in 2007. I work actually in the Laboratory of Pluridisciplinary Research in Engineering Systems, Mechanics and Energy (PRISME) and I teach as Professor in Polytechnic School of Orleans. I published more than 34 papers in refereed international journals and 45 papers in conferences and 4 book chapters and I have been involved in many international conferences as Technical Chair and tutorial presenter.

# Plenary Speakers



**Speech I: Jul. 11(Wed.) 11:30-12:00**

**Venue: Room 0-821**

## **“The Neutron Synthesis from the Hydrogen and its Application for National Security”**

**Prof. Ruggero Maria Santilli**

**Institute for Basic Research, USA**

### ***Abstract of Speech***

The synthesis of the neutron from the hydrogen atom in the core of stars is the most fundamental nuclear synthesis in nature. Its theoretical understanding has requested decades of research in mathematics, physics and chemistry because the rest energy of the neutron is "bigger" than the sum of the rest energies of the proton and of the electron, under which condition 20th century mathematics and related theories are no longer effective due to their sole characterization of isolated point-particles in vacuum, while the compression of the electron within the hyperdense proton requires the representation of particles with their actual size. In the early 1980s, when at the Department of Mathematics of Harvard University under DOE support, the author constructed a covering of 20th century applied mathematics based on the isoassociative product  $A*B = AT*B$  of all possible quantities A, B, with ensuing isotopic lifting of numeric fields into isofields with isounit  $I^* = 1/T^* > 0$ , and necessary generalization of the Newton-Leibnitz differential calculus into a form defined over the volume represented by the isounit  $I^*$  based on the isodifferential  $d^*r^* = T^* d(rI^*) = dr + r T^* dI^*$  and related conventional and partial isodifferential calculus. The ensuing new mathematics, known as isomathematics, and related theories, known as isomechanics and as isochemistry, did indeed allow a quantitative representation of "all" characteristics of the neutron in its synthesis from the hydrogen. Such a representation then allowed in the late 1990s the achievement of the first known neutron synthesis in laboratory from a hydrogen gas. These studies were recently brought to industrial maturity by the U. S. publicly traded company Thunder Energies Corporation which is now manufacturing and selling a Directional Neutron Source (DNS, international patent pending) producing a flux of neutrons with controlled direction, CPS and energy. In this lecture, we briefly outline the novel isomathematics, isomechanics and isochemistry, their application to the neutron synthesis and point out its application such as: the use for national security because the DNS provides the most effective detection of nuclear weapons smuggled in containers; the detection of the presence and concentration of precious metals in mines; and other applications (see for more details [www.santilli-foundation.org/docs/new-sciences-new-era.pdf](http://www.santilli-foundation.org/docs/new-sciences-new-era.pdf))

## ***Ruggero Maria Santilli***

About Prof. Ruggero Maria Santilli: Academic and scientific notes: Dr. R. M. Santilli received the highest possible education in Italy, emigrated in the USA with his family in 1967 following an invitation from the University of Miami, Florida, to conduct research under NASA support, after which he was in the faculty of Boston University, MIT, and Harvard University under support from NASA, USAFOSR and DOE. From 1985 on, Dr. Santilli has been Professor of Physics and President of The Institute for Basic Research originally located within the compound of Harvard University and moved to Florida in 1989. Dr. Santilli became a U. S. Citizen in 1986. He is the author of 325 papers in mathematics, physics and chemistry published in refereed journals, has written 20 Ph. D. level monographs in various fields, the founder of three scientific journals and the editor of various journals. For more details, please visit the full-length curriculum <http://www.i-b-r.org/Ruggero-Maria-Santilli.htm>. Corporate notes: Dr. Santilli has been Scientific Advisor to various U. S. companies. From 2007 to 2013, Dr. Santilli has been Chief Scientist and Chairman of the Board of Magnegas Corporation, a U. S. company publicly traded at NASDAQ under the stock symbol MNGA, producing and selling the gaseous magnegas fuel synthesized from liquid wastes with complete combustion. For more details, please visit the website <http://www.magnegas.com>. Since 2014, Dr. Santilli is the founder, CEO and Chief Scientist of Thunder Energies Corporation, also a publicly traded company with stock symbol TNRG, for the development of three cutting edge new technologies: the synthesis of neutrons from a hydrogen gas and its application; a new combustion of fossil fuels with complete combustion, and new telescopes for the detection of antimatter galaxies and antimatter cosmic rays. For more details, please visit <http://www.thunder-energies.com>. Dr. Santilli's Honor: Dr. Santilli has been the recipient of: the 1982 gold medal for scientific merits from the Universite' d'Orleans, France; the 1990 nomination by the Estonia Academy of Sciences "among the most illustrious applied mathematicians of all times"; the 2009 Mediterranean Prize; the 2009 scientific prize from the U. S. Sons of Italy; the 2011 scientific prize from Kathmandu University, Nepal. In 2011 he was recognized as an invited member of the European Society of Computational Methods; in 2016 he received the ICNPAA award at the University of La Rochelle, France; and in 2016 he received the Fray International Sustainability Award, granted at the SIPS International Conference, Hainan Island, China. Dr. Santilli has been nominated since 1987 for the Nobel Prize in Physics and, separately Chemistry. In September 2011, Dr. Santilli was knighted by the Republic of San Marino as a member of the millenary Equestrian Order of Sant'Agata. For more details, please visit the website <http://santilli-foundation.org/santilli-nobel-nominations.html>

**Speech II: Jul. 12(Thu.) 9:50-10:20****Venue: Room 0-821****“Understanding the Behavior of V-band clamps”****Prof. Simon Barrans**

University of Huddersfield, UK

***Abstract of Speech***

V-band clamps are widely used in automotive, aeronautical and process industries as a means of connecting circular flanges. Applications include joining together the compressor, bearing and turbine housings in turbochargers, holding together the cans used to enclose diesel particulate filters and connecting pipes used in many processes. These clamps are popular because compared to the equivalent bolted flange joint, they require fewer parts, take up less space both when installed and during installation. For more than a decade, the behaviour and characteristics of these clamps has been researched at Huddersfield. A number of researchers have looked at aspects including stresses generated in the clamps during use, axial clamping load, forming of the clamps, the torsional load capacity and their performance at high temperature. This presentation will give an overview of this research highlighting both the most successful elements and those aspects that have proved most challenging.

***Simon Barrans***

About Dr Simon Barrans: BSc in Nuclear Engineering (Manchester University), PhD in Mechanical Engineering (Huddersfield University). Fellow of the Institution of Mechanical Engineers and serves on their Academic Assessment Committee and Academic Standards Panel. Fellow of the Higher Education Academy. Dr Barrans spent 5 years in the Nuclear Industry before entering academia. For 8 years he was the leader of the Mechanical Engineering Subject Area at Huddersfield. Over the past 20 years Dr Barrans has supervised a number of PhD students and has published extensively on topics including air bearings, V-band clamps and multi-criteria optimisation. He is an editor for the Central European Journal of Engineering and a reviewer for seven other international journals. In 2014 he moved to the Turbocharger Research Institute at Huddersfield and is currently investigating the optimisation of turbine and compressor housings, high temperature bolted joints, wheel burst prediction and containment modelling and the use of V-band retainers in turbochargers.



**Speech III: Jul. 12(Thu.) 10:50-11:20**

**Venue: Room 0-821**

**“ On the Solution of KdV-like Equations by the Optimal Perturbation Iteration Technique ”**

**Prof. Necdet Bildik**

Celal Bayar University, Turkey

***Abstract of Speech***

In this study, optimal perturbation iteration method is implemented to solve Korteweg de Vries (KdV)-like equation to obtain semi analytical solutions. We examine two illustrations to analyze the new optimal perturbation iteration method. This work displays that optimal perturbation iteration technique converges fast to the exact solutions of the differential equations at lower order of approximations.

***Necdet Bildik***

Necdet Bildik was born in Sivas/TURKEY in 1951. He graduated from Ankara University in 1974. He earned the M.Sc. degree in University of Louisville, Kentucky, USA in 1978. He awarded the Ph.D. degree in Oklahoma State University, USA in 1982. He was Assistant Professor in 1988 and also he was became Associate Professor in 1995. He was promoted to be Professor in 2003. He is interested in numerical analysis, ordinary, partial and non-linear differential equations, ergodic theory, stability theory.

He has over than a hundred published articles in the national and international journals and conferences. He also serves as a reviewer for many international journals.



**Speech IV: Jul. 12(Thu.) 11:20-11:50**  
**Venue: Room 0-821**

“”

**Prof. Hamid Bahai**  
Brunel University, UK

### ***Hamid Bahai***

Hamid Bahai received his PhD degree in 1993 in Computational Mechanics from Queen Mary College, University of London. Between 1993 and 1995 he worked as a Senior Research Engineer at T&N Technology where he was involved in research and development work on a number of projects for the automotive and aerospace industries. This was followed by a period at Halliburton Inc during which time he carried out design and analysis of a number of major offshore structures. In 1996 he moved to the aerospace industry by joining Astrium, an aerospace subsidiary of European Aeronautics Defence and Space company, where as a senior scientist, he played a leading role in conducting design, mathematical modelling and computational analysis of Euro3000 space craft structures and Arian launcher / spacecraft adapter. It was during this period that he was made a fellow of the Institute of Mechanical Engineers for his outstanding technical contributions and services to the scientific and engineering communities. In 1998 he returned to academia and joined Brunel University where he is currently a Professor in Computational Mechanics and Head of Department of Mechanical & Aerospace Engineering. He has led a number of research projects covering a wide range of topics in the area of Computational Mechanics and has published over 120 papers on various themes in the field.

Amongst Hamid Bahais many theoretical and applied contributions include the development of a new type of non-linear shallow shell strain based finite element and a novel inverse eigen value formulation for optimising the vibratory behaviour of structures. His current research interests include development of non-linear finite element formulations and fluid-solid interaction algorithms. He has conducted consulting work in the field of structural integrity for many UK and International companies and has given invited talks and courses the world over on various topics in structural computational mechanics. He is the Editor-in-Chief of the European Journal of Computational Mechanics.

# Special Events

## ELTE Tutorial

Teaching informatics at ELTE was initiated in 1969. The courses, offered to students of mathematics, were called computing techniques. In 1972 professor Imre Kátay recognized the growing significance of informatics and initiated a new curriculum called programmer-mathematician. In order to organize the introduction of the new courses the Department of Numerical and Computer Mathematics was established. The number of students was increasing rapidly, from 60 in 1972 to 400 in the eighties, and it reached 2000 by the end of the nineties. The huge department had to be divided into three specialized ones, which together created the Institute of Informatics later on. In 2003 the Institute of Informatics and the Department of Cartography of the Faculty of Science established the Faculty of Informatics.

Engineers from Eötvös Loránd University, Faculty of Informatics, Savaria Institute of Technology, Szombathely, Hungary, will join and deliver speeches about Materials and Mechanical Engineering.

---

## Tutorial

### **SPECIAL SESSIONS ON: ISOMATHEMATICS, ISOMECHANICS, AND ISOCHEMISTRY**

General Chair

Dr. Ruggero Maria Santilli

Thunder Energies Corporation

1444 Rainville Rd., Tarpon Springs, FL 34684, U.S.A.

---

## Symposium

This special session is the 5th edition of a series of mini-symposia which bring together researchers from all areas Approximation Theory and Special Functions. The first one was organized within the international conference ICNAAM 2013 Conference in Greece, the second one in MDS 2014 Conference in Bulgaria, the third one in ETAMM 2016 Conference in France, and the last one in ISAAC 2017 Conference in Sweden. The highlighted topics (but not limited to) Classical Approximation, Korovkin-Type Approximation, Statistical Approximation, Interpolation, Fuzzy Approximation, Summability, Time Scales, Constructive Approximation, Orthogonal Polynomials, Generating Functions, Matrix-Valued Polynomials, q-Analysis, Fractional Analysis, General Orthogonal Systems, Fourier Analysis.



# Guidelines for Presentations

## Oral presentations

Standard LCD projector (connected to a local PC) will be provided in each conference room.

Oral presentations have been allocated 15 minutes of effective presentation time, including Q/A time.

Authors must prepare their oral presentations to be sure to convey their message in clear and sharp manner, including giving outline of the key principles, facts and results. More detailed discussions can continue during the breaks.

In order to ensure a smooth performance during your session, we kindly ask you to consider the following instructions:

Be at the session room 15 minutes before session starts and introduce yourself to the session chairs.

A video projector and a PC will be available in all conference rooms. Speakers suggested not use their own laptop computer, avoiding useless time breaks in between papers.

Bring your presentation on a USB memory stick in MS-PowerPoint or Adobe PDF formats, and upload it in the Session Room computer no later than 10 minutes prior to your session start! You can also bring it earlier, during the coffee/lunch breaks before your presentation. Please upload your presentation in a right place in order to find it easily at the time of presentation.

Please wear formal clothes or national characteristics of clothing for participation.

In order to avoid any compatibility problems, read carefully the instructions below.

## PowerPoint Instructions

For MS-PowerPoint presentations, please use the following versions only: PP 97-2003 (\*.ppt) or 2007, 2010 to guarantee that it will be opened successfully on the on-site PC

We recommend to the PPT/PPTX format instead of PPS

All videos or animations in the presentation must run automatically!

## Pictures/Videos

We cannot provide support for embedded videos in your presentation; please test your presentation with the on-site PC several hours before your presentation.

In case your video is not inserted in MS-PowerPoint, it is possible to have it in other formats – MPEG 2,4, AVI (codecs: DivX, XviD, h264) or WMV. Suggested bitrate for all mpeg4 based codecs is about 1 Mbps with SD PAL resolution (1024x576pix with square pixels, AR: 16/9).

## Fonts

Only fonts that are included in the basic installation of MS-Windows will be available (English version of Windows). Use of other fonts not included in Windows can cause wrong layout/style of your presentation.

Suggested fonts: Arial, Times New Roman.

If you insist on using different fonts, these must be embedded into your presentation by choosing the right option when saving your presentation:

Click on “File”, then “Save As”

Check the “Tools” menu and select “Embed True Type Fonts”

## Poster presentations

Suggested Poster with size of 60cm\*80cm (width\*height).

Posters are required to be condensed and attractive. The characters should be large enough so that they are visible from 1 meter apart.

During this poster presentation time, the presenter must stand by the display board to answer questions and discuss about the contents of the poster informally. The poster display should include a statement the topic, objectives of the research project, the methodology used to solve the problem or implement the program, the major findings or outcomes and their significance and conclusions. There should be a logical sequence—introduction, development and conclusion—of your display. Each sheet should be numbered, a heading should be prepared for your presentation using lettering at least 3 cm high. The heading should include the title of the poster, all author names and institutional affiliations, and with ICMAE 2018+Paper ID at right-up corner.

Pins or tapes are provided by conference committee to mount your posters on the boards. All materials to be displayed should be prepared before your arrival. Supplies will not be available at the conference site.

# Technical Program

**Date: Jul. 10, 2018**

**Time: 14:30-16:45**

Campus Visit	
14:30-15:00	Campus Visit
ELTE Tutorial “Materials and Mechanical Engineering” Chairperson: Dr. Jurij SIDOR VENUE: Room #	
15:25-15:30	Tutorial Introduction
15:30-15:45	Inverse Design of Wind Turbine Blades for Extreme Weather Applications <b>Dr. Laszlo E. Kollar</b> Eötvös Loránd University, Faculty of Informatics, Savaria Institute of Technology, Szombathely, Hungary
15:45-15:00	Wear modelling in Total Knee Replacements <b>Dr. Gusztav Fekete</b> Eötvös Loránd University, Faculty of Informatics, Savaria Institute of Technology, Szombathely, Hungary
15:00-15:15	Tribology questions in case of light aircraft's silent block <b>Dr. Ando Matyas and Rajmund Lefanti</b> Eötvös Loránd University, Faculty of Informatics, Savaria Institute of Technology, Szombathely, Hungary
15:15-15:30	Development of microstructure and texture in Al alloys <b>Dr. Pal Gyula</b> Eötvös Loránd University, Faculty of Informatics, Savaria Institute of Technology, Szombathely, Hungary
15:30-15:45	Modelling the evolution of crystallographic texture and plastic strain ratio in Al alloys <b>Dr. Jurij Sidor</b> Eötvös Loránd University, Faculty of Informatics, Savaria Institute of Technology, Szombathely, Hungary

**Date: Jul. 11, 2018**

**Time: 9:00-18:30**

Time	Activity	Representative VENUE: Room # 0-821
09:00-09:05	Opening Remarks	<b>Prof. Ian McAndrew</b> , <i>Embry Riddle Aeronautical University, UK</i>
09:05-09:20	Welcome Address	<b>Prof. Zoltán HORVÁTH</b> , <i>Dean for Faculty of Informatics, ELTE</i>
09:20-10:05	Keynote Speech-I	"Experimental Investigation of Operational Conditions Effects on Axial Fatigue behavior of Carbon/Epoxy Plain Weave Laminates Containing Artificial Flaw" <b>Prof. Anh Dung Ngo</b> , <i>École de technologie supérieure, Québec, Canada</i>
10:05-10:50	Coffee Break & Group Photo	
10:45-11:30	Keynote Speech-II	"Is the Sky above Us Safe and How has this Been Influenced by the Past and Present Policies?" <b>Prof. Ian McAndrew</b> , <i>Embry Riddle Aeronautical University, UK</i>
11:30-12:00	Plenary Speech-I	"The Neutron Synthesis from the Hydrogen and its Application for National Security" <b>Prof. Ruggero Maria Santilli</b> , <i>Institute for Basic Research, USA</i>
12:00-13:00	Lunch	

<b>Session A-1</b> <b>"Digital Manufacturing System and Weaponry Manufacturing"</b> <b>Chairperson:</b> <b>VENUE: Room #2-502</b>		
13:00-13:15	(C3013) COMPARATIVE STUDY TO THE EFFECT OF SQUEEZE CASTING AND MOLD VIBRATION ON FATIGUE PERFORMANCE OF AL-17% Si ALLOY <b>Prof. Haydar Al-Ethari</b> , Alaa shaker obaida, Akhlas Khalid Zamel University of Babylon -IRAQ	
13:15-13:30	(C066) Elasto-Plastic Stress Analysis Methodology Establishment for Forging Dies <b>Mr. Dattaprasad Pandurang Lomate</b> , Mr. Govind Jagtap, Mr. Abhijit Patil, Mr. Sanket Inamdar, Mr. Manoj Ukhande & Dr. Rajkumar Singh Bharat Forge Ltd. India	
13:30-13:45	(C1017) Numerical Simulation and Experimental Research on Thermo-mechanical-wear Coupling <b>Dr. Peng Fei Chen</b> , Y. X. Xiong, J. W. He, and Y. X. Zhao Beihang University, China	
13:45-14:00	(C1039) Analysis, Simulation and Improvement of Tool Crib Operations in an Aircraft Maintenance Hangar Edward Gingell and <b>Assoc. Prof. Michael A. Saliba</b> University of Malta, Malta	
14:00-14:15	(C2001) Effect of manufacturing tolerance and assembly errors on the characterization of small scale slider-crank mechanism <b>Prof. Mohamed Damir</b> , Engy Rashed ,Ahmed Khatib Faculty of Engineering, Alexandria, Egypt	
14:15-14:30	(C061) Derivation and Analysis of a State-Space Model for Transient Control of Liquid-Propellant Rocket Engines	

	<b>Mr. Sergio Perez-Roca</b> , Julien Marzat, Helene Piet-Lahanier, Nicolas Langlois, Marco Galeotta, Francois Farago and Serge Le Gonidec CNES-ONERA France
14:30-14:45	(C062-A) Experimental Study of Forebody and Strake Configuration Effects on Lateral-Directional Static Stability of a Fighter Aircraft <b>Prof. Hyoung Seog Chung, Prof. Kybeom Kwon, Dr. Seung Pil Kim and Mr. Sang-Ho Kim</b> Korea Air Force Academy, Republic of Korea Republic of Korea Air Force Academy & South Korea Korea Air Force Academy, South Korea
14:45-15:00	(C140) A Study of Close-Formation Approach Attack Tactic of Multiple Anti-Ship Missiles <b>Ms. Yu-Young An</b> , Kuk-Kwon Park, Chang-Kyung Ryoo Inha University, South Korea
15:00-15:15	(C2008) Influence of Initial Conditions on Trajectory of a Submunition via Unsteady Simulation <b>Dr. Libin Ma</b> , Chao Yan School of Aeronautic Science and Engineering, Beihang University, Beijing, China
15:15-15:30	(C139) Trajectory Estimation for a Ballistic Missile in Ballistic Phase using IR Images <b>Mr. Kyujin Moon</b> , Hojun Kwon, Chang-Kyung Ryoo, Hongchul Sim Inha University, South Korea
15:30-15:45	Best Presentation Award & Session Group Photo & Coffee Break

**Session A-2**  
**“Power Machinery System and Analysis”**  
**Chairperson:**  
**VENUE: Room #2-502**

15:45-16:00	(C3014) Modal analysis as a tool of problem identification of gear mechanism <b>Prof. Katarina Monkova</b> , Peter Monka, Miorita Ungureanu, Nicolae Ungureanu FMT TU Kosice with the seat in Presov, Slovakia
16:00-16:15	(C005) A Family of Structure-Dependent Integration Methods Enhanced with Favorable Numerical Damping <b>Prof. Shuenn-Yih Chang</b> and Chiu-Li Huang National Taipei University of Technology, Taiwan, ROC
16:15-16:30	(C025) Comparative Analysis of a Floating mooring line-Driven Platform (FMDP) Having Different Mooring Lines Patterns <b>Dr. Mamoun M. Horoub</b> , Sikandar Khan and Sajid Ali Entrepreneurship Institute, King Fahd University of Petroleum and Minerals, Dhahran 31261, Saudi Arabia
16:30-16:45	(C033) Nonlinear dynamic responses of a cantilever beam under mixed mode of vibration loads <b>Dr. Yi Li</b> , Bing Sun, Jie Fang, Tong Liang and Guobiao Cai School of Astronautics, Beihang University, Beijing, China
16:45-17:00	(C2027) An Adaptive Feedback Turning SIR Particle Filter and Its Application on Fault Diagnosis of Auxiliary Power Unit <b>Assoc. Prof. Kai Peng</b> , Yingjie Hu, Ding Fan, Fan Yang, Zhaorong Zhang School of Power and Energy, Northwestern Polytechnical University, China
17:00-17:15	(C015) Modal Dynamic Analysis of a Synchronizer Mechanism: A Numerical Study <b>Mr. A. Farokhi Nejad</b> , G. Chiandussi, A. Moshrefzadeh, V. Solimine, A. Serra, E. Rulfi POLITECNICO DI TORINO, TURIN, Italy

17:15-17:30	(C085)Stress Analysis of Internal Gear Pairs with Unequal Tooth Thickness Tufan Gürkan Yılmaz, <b>Assoc. Prof. Fatih Karpaz</b> Uludag University, Turkey
17:30-17:45	(C3009) Experimental Investigation of the Impact Resistance of Involute Spur Gears <b>Mr. Oğuz Doğan</b> , Celalettin Yüce, Fatih Karpaz, Onur Can Kalay Uludag University, Turkey
17:45-18:00	(C068) Modeling thrust cutting force and torque in a vibratory drilling process of titanium alloy Ti6Al4V <b>Assoc. Prof. Kamel Mehdi</b> and Nawel Glau Preparatory Institute for Engineering Studies El Manar (IPEIEM),University of Tunis EL Manar (UTM), Tunisia
18:00-18:15	(C030-A) Single damage identification in metallic structure based on particular swarm optimization algorithm <b>Heller G. Sánchez A.</b> and Fabian R. Nova A. UNIVERSIDAD INDUSTRIAL DE SANTANDER - COLOMBIA
18:15-18:30	(C101) A Passive Flow Control Method Based on the Coandă Effect <b>Assoc. Prof. Florin Frunzulica</b> , Alexandru Dumitrache, Octavian Preotu "POLITEHNICA" University of Bucharest, Romania
18:30-20:00	Best Presentation Award & Session Group Photo &Dinner

**Session B-1**  
**“Control Science and Mechanical Engineering”**  
**Chairperson:**  
**VENUE: Room #2-712**

13:00-13:15	(C3024-A) Low Cycle Fatigue Life Prediction of Circumferentially Notch Round Bars <b>Assist. Prof. Richa Agrawal</b> , Rashmi Uddanwadiker, J. Veerababu, Sunil Goyal, R.Sandhya, Pramod Padole Pillai College of Engineering, Mumbai India
13:15-13:30	(C073) Study on the Mechanical Properties of Dissimilar Friction Stir Welding of AA 7075 T6 and AZ 31B Alloys <b>Dr. Musa BİLGİN</b> , Şener KARABULUT, Ahmet ÖZDEMİR Hacettepe University, Turkey
13:30-13:45	(C067) Cylindrical Grinding Performance Evaluation <b>Mr. Mohd Azher Mohd Mustafa Thanedar</b> , Suhas Joshi and Rajkumar Singh Bharat Forge Ltd. India
13:45-14:00	(C1023) Small postponed mechanism for delay-unfolding based on pressure device <b>Mr. Yang Jinpeng</b> , Chen Xiaoguang, Xu Hanzhong, Zou Xiaofeng, Jiao Shenghai, Sheng Xi Beijing Institute of Space Long March Vehicle, China
14:00-14:15	(C145) A numerical modeling study of the effects of various joint boundary conditions on stiffness behaviour of 6-DOF platform' s top plate <b>Mr. Umar Nawaz Bhatti</b> , Sajid Ali, Sikandar Khan, Mamon M. Horoub KFUPM, Saudi Arabia
14:15-14:30	(C012) Coupled Bending-Torsional Dynamic Behavior of a Cantilever Beam Carrying Multiple Point Masses <b>Ms. Alev Kacar Aksongur</b> , Seher Eken, Metin Orhan Kaya Istanbul Technical University, Turkey

14:30-14:45	(C059) Experimental investigation on the splitting of center-notched circular tube <b>Assoc. Prof. Jafar Rouzegar</b> , Mohammad Karimi Shiraz University of Technology, Iran
14:45-15:00	(C089) Structure Damage Detection Based on Ensemble Learning <b>Mr. Ding Huang</b> , Deying Hu, Jingwu He, Yuexi Xiong Beihang University, China
15:00-15:15	(C3006) A Tuning Method for PI Controller for an Integrating System with Time Delay <b>Mr. Haitao Sun</b> , Mohammad Jabbar Mnati, Mohamed Nabil Ibrahim, Alex Van den Bossche Gent University, Belgium
15:15-15:30	(C087) Discontinuities of Displacements at the Junction of Two Half-Strips with Different Boundary Conditions on their Sides <b>Assoc. Prof. Irina V. Menshova</b> , Mikhail D. Kovalenko, Alexander P. Kerzhaev and Tatiana D. Shulyakovskaya Institute of Earthquake Prediction Theory and Mathematical Geophysics RAS (IEPT RAS), Moscow, Russia
15:30-15:45	Best Presentation Award & Session Group Photo & Coffee Break

**Session B-2**  
**“Engine Design and Performance Assessment”**  
**Chairperson:**  
**VENUE: Room # 2-712**

15:45-16:00	(C081) Research on Reverse Design of Turboshift Engine Based on the Balance of Difficulty Factor <b>Dr. ZHANG Shaofeng</b> , CHEN Yuchun School of Power and Energy, Northwestern Polytechnical University, China
16:00-16:15	(1029-A) Performance Assessment of Jet Engines by Using Advanced Exergy Analysis <b>Dr. Cem Tahsin Yücer</b> National Defense Univ. Air Force NCO Higher Vocational School, Turkey
16:15-16:30	(C104) Parameters analysis of non-linear combustion instability base on the pulsed trigger T-burner technique <b>Assoc. Prof. JIN Bing-ning</b> , WEI Shao-juan and LIU Pei-jin Northwestern Polytechnical University, China
16:30-16:45	(C116) Research on Geometry Configuration/Fuel Distribution of Combustion Chamber of Scramjet <b>Mr. Hao-min Li</b> , Yu-chun Chen, Chun Guan, Yuan Gao, Zhi-hua Wang, Yu-sang Li Northwestern Polytechnical University, China
16:45-17:00	(C118) Performance analysis of mode transition of a triple combined cycle engine <b>Dr. Yuan Gao</b> , Yu-chun Chen, Shao-feng Zhang, Zhi-hua Wang Northwestern Polytechnical University, China
17:00-17:15	(C120) Variable compression component interpolation method for turbine engine <b>Mr. Ren Cheng</b> , Jia Linyuan, Chen Yuchun, Li Meijin, Ding Zhaoxia Northwestern Polytechnical University, China
17:15-17:30	(C121) Performance Calculation and Integrated Mission Assessment of High Speed Turbojet-Scramjet Combined Engine <b>Dr. GAO Yuan</b> , KANG Rui-yuan and CHEN Yu-chun
17:30-17:45	(C125) Turbo Engine Starting Control Law Design and Process Simulation <b>Dr. Tian Tan</b> , Yu-chun Chen, Xin-yue Ma, Chao Zhou Northwestern Polytechnical University, China

17:45-18:00	(C128) Steady State Calculation and Performance Analysis of Variable <b>Ms. Yu-sang Li</b> , Yu-chun Chen, Qiang Zhao Northwestern Polytechnical University, China
18:00-18:15	(C129) Steady State Control Schedule Optimization for A Variable Cycle Engine <b>Mr. Ren Cheng</b> , Jia Linyuan, Chen Yuchun, Li Meijin, Ding Zhaoxia Northwestern Polytechnical University, China
18:15-18:30	(C3010) Design of Control System for Pulse Detonation Engine <b>Dr. ZHANG Wen-long</b> , Li Jiang-hong, Pei Cheng-ming and Fan Wei School of Power and Energy, Northwestern Polytechnical University, China
18:30-20:00	Best Presentation Award & Session Group Photo & Dinner

<b>Session C-1</b> <b>“Electronic Systems and Communication Technology in Aerospace”</b> <b>Chairperson:</b> <b>VENUE: Room #0-820</b>	
13:00-13:15	(C096) On Fairness in the Network Air Traffic Flow Management with Rerouting <b>Mr. Sadeque Hamdan</b> , Ali Cheaitou, Oualid Jouini, Zied Jemai, Imad Alsyounf and Maamar Bettayeb University of Sharjah, United Arab Emirates
13:15-13:30	(C035) Fixed interval scheduling of multiple Earth observation satellites with multiple observations <b>Mr. Xinwei Wang</b> , Roel Leus, Chao Han Beihang University, China
13:30-13:45	(C3016) A Method of Carrier Landing Position Prediction Based on Sinusoidal Model <b>Mr. Jianzhi Wang</b> , Gang Liu and Guanxin Hong Beihang University, China
13:45-14:00	(C051) Reconfiguring NASA Generic Transport Model for Normal Flight Envelope Simulation and Analysis <b>Mr. Ramin Norouzi</b> University of Tehran, Iran
14:00-14:15	(2019-A) Test Platform for Small Satellite Attitude Determination and Control System <b>Ms. Demet Cilden-Guler</b> , Aykut Kutlu, Chingiz Hajiyeve Istanbul Technical University, Turkey
14:15-14:30	(C111) Differentiator-based output-feedback sliding mode control for angle constrained midcourse guidance <b>Dr. Shizheng Wan</b> , Xiaofei Chang, Jie Yan Northwestern Polytechnical University, China
14:30-14:45	(C007) A Game-Based Guidance Law against Higher-Speed Maneuvering Penetrator Using Model Predictive Method <b>Mr. Bo Sun</b> , Xiaofei Chang, Jie Yan, Wenxing Fu School of Astronautics, Northwestern Polytechnical University, P.R. China
14:45-15:00	(C143) Simulation and Evaluation of Civil Aircraft Auto-Landing with Various Guidance Systems <b>Mr. Li ChengXi</b> and Hong GuanXin Beihang University, China
15:00-15:15	(C018) Development of high - temperature position sensors for control of actuators in aerospace systems <b>Prof. Yongdae Kim</b> , Hyun Young Choi



	Kyungil University, Rep. of Korea
15:15-15:30	(C070) Design of a vibration isolator for the inertial navigation system of an autopilot dedicated to the operation of light drones <b>Prof. Zhaoheng Liu</b> , Mourad Kedadouché, Sun Yulan, Marc Thomas, Guillaume Charland-Arcand and Adrien Beck Ecole de technologie supérieure, Université du Québec, Canada
15:30-15:45	Best Presentation Award & Session Group Photo & Dinner

<b>Session C-2</b> <b>“Materials Science and Engineering”</b> <b>Chairperson:</b> <b>VENUE: Room #0-820</b>	
15:45-16:00	(C072) Study on the Wire Electrical Discharge Machining of AA 7075 Aluminum Alloy <b>Assist. Prof. Şener Karabulut</b> , Musa Bilgin, Recep Kökçan, Ahmet Özdemir Hacettepe University-Turkey
16:00-16:15	(C091) Optimization of Graded Metallic Foam Subjected to Impulsive Loading through DOE Approach <b>Mr. Ali Farokhi Nejad</b> , Amin Bassiri Nia, Mohd Yazid Yahya and Amran Ayob POLITECNICO DI TORINO, TURIN, ITALY
16:15-16:30	(C1008) Microstructure evolution and dynamic recrystallized model of 5083 aluminum alloy during hot deformation <b>Dr. Jiabin Zhang</b> ; Shihong Lu Nanjing University of Aeronautics and Astronautics & China
16:30-16:45	(C114) A Cell Equalization Method Based on Resonant Switched Capacitor Balancing for Lithium Ion Batteries <b>Mr. Ali Farzan Moghaddam</b> and Alex Van den Bossche Gent University, Belgium
16:45-17:00	(C1027) Thick-walled functionally graded material cylinder under thermo-mechanical loading <b>Assoc. Prof. Hamid Dalir</b> , Mohsen Damadam; Reza Moheimani, Ali Nayeibi Purdue University, USA
17:15-17:30	(C1028) Design of Intake Manifold and Selection of Suitable Material for Intake Manifold Gasket for Student Formula <b>Assist. Prof. Niti Kammuang-lue</b> , Jirawat Boonjun Department of Mechanical Engineering, Faculty of Engineering, Chiang Mai University, Thailand
17:30-17:45	(C3021-A) Effect of Ply Angle on the Stress analysis of composite pressure vessels by filament winding <b>Prof. Najim A.Saad</b> , Li A. Alzubaidi, Tamara Saif Babylon university, Iraq
17:45-18:00	(C110) Parametric Study of the Compressive Buckling Load of Composite Panels with I-shape Stiffeners <b>Dr. Yuequan WANG</b> , Shuhua ZHU Nanjing University of Aeronautics and Astronautics, China
18:00-18:15	(C034) An Active Cell Equalization Technique for Lithium Ion Batteries Based on Inductor Balancing <b>Mr. Ali Farzan Moghaddam</b> and Alex Van den Bossche Gent University, Belgium
18:15-18:30	(C1019-A) Investigation of Thermal Contact Resistance of Fibrous Material in Contact with

	Super-alloys Surface <b>Prof. Nam Seo Goo</b> , Vinh Tung Le and Jae Young Kim Konkuk University, Republic of Korea
18:30-20:00	Best Presentation Award & Session Group Photo & Dinner

### Symposium-1 “Approximation Theory” Chairperson: Prof. Oktay Duman VENUE: Room #0-818

13:00-13:15	(MS003-A) Harmonic functions in terms of two-variable orthogonal polynomials on the triangle <b>Assoc. Prof. Rabia Aktas</b> and Fatma Tasdelen Ankara University, Turkey
13:15-13:30	(MS009-A) Harmonic functions in terms of two-variable orthogonal polynomials on the triangle <b>Mr. Ismail Aslan</b> and Oktay Duman TOBB University of Economics and Technology/ Hacettepe University, Turkey
13:30-13:45	(MS002-A) On Generalized Picard integral <b>Prof. Ali Aral</b> , Tuncer Acar and Firat Ozsarac Kırıkkale University, Turkey
13:45-14:00	(MS006-A) Some Series Identities For a Class of Polynomials Suggested by Laguerre Polynomials Mehmet Ali Ozarslan and <b>Dr. Cemaliye Kurt</b> North Cyprus
14:00-14:15	(MS012-A) Recent convergence methods of functions defined on time scale <b>Dr. Ceylan Turan Yalçın</b> TOBB University of Economics and Technology, Turkey
14:15-14:30	Free Talk

### Symposium-2 “” Chairperson: Prof. Ali Aral VENUE: Room #0-818

14:30-14:45	(MS001-A) On Cheney and Sharma operators <b>Prof. Gulen Bascanbaz-Tunca</b> , Ayşegül Erençin Ankara University, Turkey
14:45-15:00	(MS004) The Meixner polynomials in several variables <b>Dr. Nejla Ozmen</b> and Esra Erkus-Duman Düzce University, Turkey
15:00-15:15	(MS014-A) Note on Baskakov Operators Preserving $e^{2ax}$ , $a > 0$ <b>Ms. Ovgu Gurel Yilmaz</b> , Vijay Gupta and Ali Aral Ankara University, Turkey
15:15-15:30	(MS008-A) A result for multivalued almost $F_{\delta}$ contraction <b>Dr. Özlem Acar</b> Mersin University, Turkey
15:30-15:45	Group Photo & Coffee Break

## “Special Functions, Mathematical Modeling and Physical Mathematics”

### Symposium-3+Session D-2

Chairperson: Prof. Esra Erkus-Duman

VENUE: Room #0-818

15:45-16:00	(MS010-A) Some Convergence Methods on Max-Min Operators <b>Ms. Turkan Yeliz Gokcer</b> and Oktay Duman TOBB University of Economics and Technology, Turkey
16:00-16:15	(MS005) Generating functions for k-hypergeometric functions <b>Dr. Duriye Korkmaz-Duzgun</b> and Esra Erkus-Duman Kafkas University, Turkey
16:15-16:30	(MS007-A) Simultaneous approximation by exponential type Bernstein operators with k-th order Kantorovich methods <b>Dr. Tuncer Acar</b> , Ali Aral and Firat Ozsarac Selçuk University, Turkey
16:30-16:45	(MS011-A) Reconstruction of Baskakov operators preserving some exponential functions <b>Mr. Firat Ozsarac</b> , Ali Aral and Tuncer Acar Kırıkkale University, Turkey
16:45-17:00	(MS013-A) The comparison of the dynamical systems on the Sierpinski Gasket obtained by different folding maps <b>Ms. Nisa Aslan</b> , Mustafa Saltan and Bünyamin Demir Anadolu University, Turkey
17:00-17:15	(M030-A) On the Performance of Robust Gm Estimator as a Remedy to Multicollinearity Which is Due to High Leverage Collinearity Enhancing Observations <b>Prof. HABSHAH MIDI</b> , SHELAN ISMAEEL Universiti Putra Malaysia, Malaysia
17:15-17:30	(M035-A) Leveraging PLS Predict Approach to Assess the Predictive Relevance of a Semantic KMS Model <b>Mr. Azmi Jaafar</b> , Abdulmajid Babangida Umar University Putra Malaysia, Malaysia
17:30-17:45	(M036-A) Artificial Neural Network Modeling for Chromium (VI) Adsorption Capabilities of Nanocomposite Materials <b>Dr. Törkan Altun and</b> Serpil Edebalı Selcuk University, Konya, TURKEY
17:45-18:00	(M008-A) Weak Gabor duals of Type I in Vector-valued Subspace <b>Dr. Jing Zhao</b> Beijing University of Technology, China
18:00-18:15	(M026-A) Accelerated Failure Time Model for Time-To-Event-Data <b>Prof. Noor Akma Ibrahim</b> and Mostafa Karimi Universiti Putra Malaysia, Malaysia
18:15-18:30	(M031) The stress state of a finite elastic cylinder under its proper weight <b>Ms. Anastasiia Filipchuk</b> , Protserov Yuriy, Vaysfeld Natalya Odesa Mechnikov University, str. Dvoryanskaya, 2, 65082, Odesa, Ukraine
18:30-20:00	Best Presentation Award & Session Group Photo & Dinner

## Tutorial-1

<b>"Isomathematics"</b> <b>Chairperson: Prof. Svetlin Georgiev</b> <i>Sorbonne University, Paris, France</i> <b>VENUE: Room # 1-820</b>	
13:00-14:00	(MT101) Fundamentals of Isomathematics <b>Arun S. Muktibodh</b> Hacettepe University-Turkey
14:00-15:00	(MT102) Introduction to Conformable Iso-Dierential Calculus <b>Svetlin G. Georgiev</b>
15:00-16:00	(MT103) On the Santilli's iso-hyper-mathematics. The Santilli's hyper-numbers <b>Thomas Vougiouklis</b>
16:00-17:00	(MT104) The Lie Santilli's weak-hyper-admisibility. The helix-hyperoperations on the low dimensional cases. <b>Thomas Vougiouklis</b>
17:00-18:00	(MT105) Generalized Lie Algebraic Geometry in $R^3 \times SO(3)$ Configuration Space for $SU(3)$ of Elementary Particles and for Wave-packing of Atomic Structure. <b>Animalu,2, Akpojotor, Edeagu S2,4Trell</b>
18:30-20:00	Best Presentation Award & Session Group Photo & Dinner

**Date: Jul. 12, 2018(Tuesday)**

**Time: 9:00-18:30**

Time	Activity	Representative VENUE: Room # 0-821
09:00-09:05	Opening Remarks	<b>Prof. Dashnor Hoxha</b> , <i>Orleans University, France</i>
09:05-09:50	Keynote Speech-III	“Effective Thermal Properties of Heterogeneous Materials from far Field Contactless Temperatures Measurements” <b>Prof. Dashnor Hoxha</b> , <i>Orleans University, France</i>
09:50-10:20	Plenary Speech-II	“Understanding the Behaviour of V-band Clamps” <b>Prof. Simon Barrans</b> , <i>University of Huddersfield, UK</i>
10:20-10:50	Coffee Break & Group Photo	
10:50-11:20	Plenary Speech-III	“On the Solution of KdV-like Equations by the Optimal Perturbation Iteration Technique” <b>Prof. Necdet Bildik</b> , <i>Celal Bayar University, Turkey</i>
11:20-11:50	Plenary Speech-IV	“” <b>Prof. Hamid Bahai</b> , <i>Brunel University, UK</i>
12:00-13:00	Lunch	
Session A-3 “Power System Modeling and Analysis in Aerospace” Chairperson: VENUE: Room # 2-502		
13:00-13:15	(C102) Applications of the Coanda Effect in Aeronautics <b>Prof. Alexandru Dumitrache</b> , Florin Frunzulica, Octavian Preotu Institute of Mathematical Statistics and Applied Mathematics Bucharest, Romania	
13:15-13:30	(C077) Study on Three-Dimensional Viscous Flow of An Aero Centrifugal Pump Impeller Based on Unstructured Hexahedron Grid <b>Dr. Liu Xianwei</b> , Li Huacong, Shi Xinxing and Fu Jiangfeng Northwestern Polytechnical University, China	
13:30-13:45	(C2025) Performance Analysis of Aviation Fuel Gear Pump Based on AMESim <b>Dr. Linxiong Hong</b> , Huacong Li, Hongliang Xiao and Siwei Ren School of Power and Energy, Northwestern Polytechnical University, China	
13:45-14:00	(C113) Rocket-Based Combined-Cycle Inlet Researches in Northwestern Polytechnical University <b>Prof. Lei Shi</b> , Guoqiang He, Fei Qin, Xianggeng Wei and Peijin Liu Northwestern Polytechnical University, P.R. China	
14:00-14:15	(C2017) The flow simulation of a fuel centrifugal pump with integrated inducer and impeller influenced by inlet flow ejector <b>Dr. LI Jia</b> Chang’an University, Xi’an, Shannxi , China	
14:15-14:30	(C1016) Dynamic Mechanical Properties of a Modified Double-base Propellant <b>Dr. Chaoxiang Sun</b> , Wen Pan, Hanzhong Xu, Shenghai Jiao, Mei Sheng Beijing Institute of Space Long March Vehicle, China	
14:30-14:45	(C1031) A Novel Methodology to Estimate Solid Propellant Temperature Before Ignition <b>Mr. Mustafa Ozcatalbas</b> , Volkan Coskun, Emre Kutukceken and Bulent Acar Roketsan Inc. Turkey	

14:45-15:00	(C1021) Linear friction welding for near net shape manufacturing of titanium alloy Ti-6Al-4V aerospace components <b>Dr. Anthony R. McAndrew</b> and Bertrand C. D. Flipo TWI Ltd., United Kingdom
15:00-15:15	(C078) Hydrodynamic Lubrication Performance Analysis of the Self-Cooled Bearing Structure in Aero-Gear Pump Considering the Cavitation Effect <b>Dr. Jiaxing Zhu</b> , Huacong Li, Jiangfeng Fu, Xianwei Liu Northwestern Polytechnical University, China
15:15-15:30	(C079) Layout Optimization of Solar Array for Stratospheric Airship with Thermal Effect <b>Mr. Yifei Wu</b> , Mingyun Lv, Erqiang Cui, Ming Zhu Beihang University, China
15:30-15:45	Best Presentation Award & Session Group Photo & Coffee Break

**Session A-4**  
**“Power Electronics Technology and Communication Engineering”**  
**Chairperson:**  
**VENUE: Room #2-502**

15:45-16:00	(C009-A) IMPROVING THE EFFICIENCY OF VAWT THROUGH AUTOMATIC SHIELDING <b>Dr. Jihad Rishmany</b> , Nicolas Saba, Issam Tawk, Macole Sabat and Michel Daaboul University of Balamand, Lebanon
16:00-16:15	(C127) Research on Rapid Response Flow Measurement Technology Based on Laminar Flow Meter <b>Dr. WANG Xiaolu</b> , CHEN Yuchun, ZHANG Shaofeng, ZHANG Wenlong School of Power and Energy, Northwestern Polytechnical University, China
16:15-16:30	(C3023) Single layer printed photodetector based on MEH:PPV-MoS <sub>2</sub> quantum dots composite <b>Dr. Memoon Sajid</b> , Soo Wan Kim, Hyun Bum Kim, Kyung Hyun Choi Jeju National University, Republic of Korea
16:30-16:45	(C053) Design of Repetitive Controller Using Optimization in Frequency Domain with Maximum Gain Constraints <b>Dr. Pitcha Prasitmeeboon</b> King Mongkut's Institute of Technology Ladkrabang, Thailand
16:45-17:00	(C054) A Multi-Band Frequency and Pattern Reconfigurable Antenna for Wi-Fi/WiMAX and WLAN applications <b>Assoc. Prof. Sulakshana Chilukuri</b> , Pandu Rangaiah Y, Keshav Dahal and Anjaneyulu Lokam Department of Electronics and Communication Engineering, Vardhaman College of Engineering, India
17:00-17:15	(C076) Design and Development of Ground Station for Advanced Weather Sensor Network for Rainmaking Process in Thailand <b>Dr. Peeramed Chodkaveekityada</b> and P. Wardkein King Mongkut's Institute of Technology Ladkrabang, Thailand
17:15-17:30	(C2011) Microwave Absorbing Heat Flow Simulation System for Vacuum Thermal Test of Large Microwave Antenna <b>Assoc. Prof. Yuwei Sun</b> , Xiaoning Liu, Boying Lin Beijing Institute of Satellite Environmental Engineering, China
17:30-17:45	(C032) A Tuning Method for the Derivative Filter in PID Controller with Delay Time <b>Mr. Haitao Sun</b> , Mohannad Jabbar Mnati, Mohamed Nabil Ibrahim, Alex Van den Bossche

	Gent University, Belgium
17:45-18:00	(C010-A) INVESTIGATION AND MODIFICATION OF THE TAILORING METHOD IN THE PRESS HARDENING PROCESSES USING COUPLED THERMO-MECHANICAL SIMULATION <b>Dr. Nicolas Saba</b> , Jihad Rishmany, Michel Daaboul and Issam Tawk University of Balamand, Lebanon
18:00-18:15	(C024) Design Method of Rough Terrain Detection and Avoidance in Unknown Environment for Space Rover <b>Mr. Sousuke Chiba, Prof. Kenji Uchiyama</b> and Kai Masuda Nihon University, Japan
18:15-18:30	(C060) Nonhomogeneous Boundary Value Problem for a Semi-strip Clamped at the End: Exact Solution <b>Assoc. Prof. Alexander P. Kerzhaev</b> Institute of Earthquake Prediction Theory and Mathematical Geophysics, Russian Academy of Sciences, Russia
18:30-20:00	Best Presentation Award & Session Group Photo & Dinner

**Session B-3**  
**“Fluid Mechanics and Applications”**  
**Chairperson:**  
**VENUE: Room #2-712**

13:00-13:15	(C3001) Numerical study of wind loads on a solar panel at different inclination angles <b>Dr. Onur Yemenici</b> , Muhammed Osman Aksoy Uludag University, Turkey
13:13-13:30	(C008-A) Experimental observation of electrohydrodynamic conduction and injection in a dielectric liquid <b>Assoc. Prof. Michel Daaboul</b> , Nicolas Saba, Jihad Rishmany, and Christophe Louste University of Balamand, Lebanon
13:30-13:45	(C050) Jet-Wing Interaction Flow Field Study for Missiles in Supersonic Free Streams <b>Dr. Longfei Li</b> , Jiangfeng Wang, Yuhua Wang, Faming Zhao Nanjing University of Aeronautics and Astronautics, China
13:45-14:00	(C2006-A) EFFECTIVENESS OF PASSIVE BLEEDING AS A FLOW CONTROL METHOD FOR THE FLOW STRUCTURE ON LOW TO MODERATE SWEPT DELTA WINGS <b>Mr. Kayacan Kestel</b> , Burcu Ramazanli, M. Metin Yavuz Middle East Technical University, Turkey
14:00-14:15	(C3011-A) Development of LBM for numerical simulation of axisymmetric compressible flow using finite volume method <b>Dr. Ramin Kamali Moghadam</b> , Nasrin Sahranavard Fard and Hamed Jalali Aerospace Research Institute, Ministry of Science and Technology, Iran
14:15-14:30	(C036) NUMERICAL SOLUTION OF THE FLOW FIELD AROUND A PROLATE SPHEROID <b>Mr. Emre Yüca</b> and Mehmet Şerif Kavsaoğlu Anadolu University, Faculty of Aeronautics and Astronautics, Turkey
14:30-14:45	(C1038) Uncertainty Quantification of $k-\omega$ Turbulence Model for Hypersonic Flow <b>Dr. Yatian Zhao</b> , Chao Yan, Hongkang Liu Beihang University, China
14:45-15:00	(C3008-A) Minihelicon plasma discharge simulation for potential electrodeless

	<b>Prof. Md Mahbubur Rahman</b> , Prof. Ighor Uzhinsky SKOLKOVO INSTITUTION OF SCIENCE AND TECH. ,Russia
15:00-15:15	(C044) CFD analysis for the performance of Gurney flap on the aerofoil and vertical axis turbine <b>Yan Yan</b> , Eldad Avital, Theodosios Korakianitis Queen Mary University of London, London
15:15-15:30	(C057) CFD based stochastic optimization of Pelton turbine bucket in Stationery condition <b>Mr. Suyesh Bhattarai</b> , Keshav Dahal, Parag Vichare, Bhupesh Mishra University of the West of Scotland, UK
15:30-15:45	Best Presentation Award & Session Group Photo & Coffee Break

<b>Session B-4</b> <b>“Aircraft Structure Design and Optimization”</b> <b>Chairperson:</b> <b>VENUE: Room #2-712</b>	
15:45-16:00	(C1040) Process Development for the In-house Manufacture of Aircraft Cabin and Cargo Composite Panels <b>Assoc. Prof. Michael A. Saliba</b> , Ian Attard University of Malta, Malta
16:00-16:15	(C115) Influence of the Landing Gear Casing on A High Lift Aircraft <b>Mr. Zhihua Wang</b> , Yuchun Chen, Yuan Gao and Haomin Li Northwestern Polytechnical University, School of Power and Energy, China
16:15-16:30	(C022) The flow characteristics in early stages of the close tandem symmetrical airfoils <b>Assoc. Prof. Yoshifumi Yokoi</b> National Defense Academy of Japan, Japan
16:30-16:45	(C071-A) Hybrid Optimization Approach Combining an Efficient and Global Evolutionary Algorithm with a Gradient-Based Method for Airfoil Design Problems <b>Assoc. Prof. Masahiro Kanazaki</b> and Attaphone Aryarit Tokyo Metropolitan University, Japan
16:45-17:00	(C069) Design Research of Fuselage Structure with Specified Stiffness Properties <b>Mr. Yang Yongze</b> , Xiong Yuexi, He Jingwu Beihang University , China
17:00-17:15	(C2024) Investigation of Aeroelastic Stability on AGARD 445.6 Wing at Transonic Regime <b>Mr. Mustafa Ozcatalbas</b> , Bulent Acar, Sitki Uslu Roketsan Inc. Turkey
17:15-17:30	(C105-A) Examining the Factors Affecting Flight Training and Planning: Identifying VFR Flight Hours for Hasan Polatkan Airport by Studying METAR Reports <b>Assoc. Prof. Savas S. ATES</b> , Batuhan BALLI Anadolu University , Turkey
17:30-17:45	(C1022) Survivability Analysis of Small Single Pawn Scout Unmanned Aerial Vehicle <b>Ms. Buxian Xiong</b> , Qing Han, Zirui Wang Aeronautical College, Northwestern Polytechnical University, Shanxi, Xi'an, China
17:45-18:00	(C3019) Dewetting Stress of Solid Propellant under Uniaxial Tensile Loading <b>Assoc. Prof. Jin Bing-ning</b> , Liu Xin-guo, Liu Pei-jin, Wang Zhe-jun and Han Yong-heng Northwestern Polytechnical University, China
18:30-20:00	Best Presentation Award & Session Group Photo & Dinner



**Session C-3**  
**“Aircraft Design and Spacecraft”**  
**Chairperson:**  
**VENUE: Room #0-820**

13:00-13:15	(C046) RF Source Localization using Unmanned Aerial Vehicle with Particle Filter <b>Mr. Mehmet Hasanzade</b> , Ömer Herekoğlu, Ramazan Yeniçeri, Emre Koyuncu, Gökhan İnalhan Istanbul Technical University / Istanbul, Turkey
13:15-13:30	(C1025) Research on Aeroheating of Complicated Hypersonic Reentry Vehicles <b>Dr. Qin Xuguo</b> , Shui Yongtao, Wang Yonghai, Wang Fei, Li Qiang Beijing Institute of Space Long March Vehicle, China
13:30-13:45	(C1026) Research on Optimal Guidance Law with Regulable Guidance Coefficient Satisfying Multiple Constraints <b>Dr. Li Qiang</b> , Shui Yongtao, Liu Tao, Wang Fei, Qin Xuguo Beijing Institute of Space Long March Vehicle, China
13:45-14:00	(C029) Comparison of Generated Flight Delays in Continuous Descent and Step-down Approaches <b>Mr. Ramin Norouzi</b> University of Tehran, Iran
14:00-14:15	(C080) Transition Flight Control and Test of a New Kind Tilt Prop Box-Wing VTOL UAV <b>Assoc. Prof. Deng Yangping</b> , Gao Honggang Northwestern Polytechnical University P.R. China
14:15-14:30	(C1034) Wall temperature effects on hypersonic aerodynamics of the Mars entry capsule <b>Dr. Kang Zhong</b> , Chao Yan, Xiaoyong Wang Beihang University, China
14:30-14:45	(C100) Removal of Organic Contaminants by Argon Plasma Jet: A Perspective Treatment of Urine on Spacecraft <b>Dr. Peerapong Pornwongthong</b> King Mongkut's University of Technology North Bangkok ,Thailand
14:45-15:00	(C2018-A) Attitude Estimation by SVD/EKF using Reformed Measurements and Decomposed Noise Covariance <b>Ms. Demet Cilden-Guler</b> , Chingiz Hajiyev Istanbul Technical University, Turkey
15:30-15:45	Best Presentation Award & Session Group Photo & Coffee Break

**Session C-4**  
**“Image Processing and Application”**  
**Chairperson:**  
**VENUE: Room # 0-820**

15:45-16:00	(M015-A)Data Mining in A Smart Traffic Light Control System Based on Image Processing and KNN Classification Algorithm <b>Assoc. Prof. Adem Alpaslan Altun</b> , Abdullah Yusefi Selcuk University, Konya, TURKEY
16:00-16:15	(M067)Implementing Virtual 3D Model and Augmented Reality Navigation for Library in University <b>Asst. Prof. Dr. Pijitra Jomsri</b> Suan Sunandha Rajabhat University, 1 U-Thong nok Road, Dusit, Bangkok 10300 Thailand
16:15-16:30	(M043-A)Detection of Damaged Area of Insects in Agricultural Areas by CNN

	<b>Prof. Cemil Sungur</b> , Akif Durdu Selcuk University, Konya, TURKEY
16:30-16:45	(M063)Characterizing the spatial distribution of geolocated categorical values <b>Prof. Pedro J. Zufiria</b> , and Miguel Á. Hernández-Medina Universidad Politécnica de Madrid, Spain
16:45-17:00	(M2001-A)Comparison Of Obesity Prevalence Using Body Mass Index, Waist Circumference And Waist To Hip Ratio <b>Prof. Asma Ahmad Shariff</b> , and Suhana Japar University of Malaya, Malaysia
18:30-20:00	Best Presentation Award & Session Group Photo & Dinner

**Session-D-1**  
**“Mathematical Theory and Calculation”**  
**Chairperson:**  
**VENUE: Room # 1-820**

13:00-13:15	(M007-A)The Green Rings of the $\Delta$ -associative algebras <b>Dr. Dong Su</b> Beijing University of Technology, China
13:13-13:30	(M009-A) Wavelet estimations for noncompacted density functions with $L^1$ risk <b>Dr. Kaikai Cao</b> Beijing University of Technology, China
13:30-13:45	(M017) A Unified Approach to Integration Theory <b>Assoc. Prof. Mangatiana A. ROBDERA</b> University of Botswana, Botswana
13:45-14:00	(M027-A)Extra Derivative Multistep Methods with Trigonometrically-Fitting for Oscillatory Problems <b>Prof. Fudziah Ismail</b> , Sufia Zulfa Ahmad and Norazak Senu DEPARTMENT OF MATHEMATICS, UPM, SERDANG, SELANGOR, 43400, MALAYSIA
14:00-14:15	(M041) On the Solution of KdV-like Equations by the Optimal Perturbation Iteration <b>Prof. Necdet Bildik</b> Manisa Celal Bayar University -TURKEY
14:15-14:30	(M051)On parallel curves obtained by a space curve in $E^3$ <b>Dr. Muhammed Talat SARIADYIN</b> , Talat Korpınar Selcuk university, mus alparslan university, Turkey
14:30-14:45	(M040-A)Mathematics, Topology, Algebraic Topology, Digital Topology, Category Theory, Functional Analysis <b>Assoc. Prof. Simge Öztunç</b> Manisa Celal Bayar University , TURKEY
14:45-15:00	(M062) Some Divisibility Traits On Valuated Binary Trees <b>Prof. Xingbo WANG</b> , Hongqiang GUO Foshan University, China
15:00-15:15	(M064) A fixed point theorem for quasi – contractive mappings on cone metric space with Banach algebras without assumption of normality <b>Dr. Eriola Sila</b> , Elida Hoxha, Silvana Lifta University of Tirana, Tirana, Albania
15:15-15:30	(M021-A) On Investigation of Static Two-Dimensional Models for Thermoelastic Piezoelectric Shells

	<b>Assoc. Prof. Gia Avalishvili</b> I. Javakhishvili Tbilisi State University, Georgia
15:30-15:45	Best Presentation Award & Session Group Photo & Coffee Break

<p><b>Tutorial-2</b>  <b>“Isomechanics &amp; Isochemistry”</b>  <b>Chairperson: Prof. Anil A. Bhalekar</b>  <i>R. T. M. Nagpur University, Amravati Road Campus, India</i>  <b>VENUE: Room # 1-820</b></p>
--

15:45-16:40	(MT203) The search for pseudoneutrons and pseudoprotons and their application <b>Ruggero Maria Santilli</b>
16:40-17:25	(MT301) Hadronic Chemistry and iso-Helium <b>Anil A. Bhalekar and Ruggero M. Santilli</b>
17:25-18:30	(MT302) Elements of hypercombustion <b>R. M. Santilli</b>
18:30-20:00	Best Presentation Award & Session Group Photo & Coffee Break

<p><b>Tutorial-3</b>  <b>“Isomechanics”</b>  <b>Chairperson: Prof. Jan Rak</b>  <i>Group Leader, CERN</i>  <b>VENUE: Room # 0-818</b></p>
---

13:00-14:00	(MT201) <b>Jan Rak</b>
14:00-15:00	(MT202) Experimental Evidence on the Synthesis of Neutrons and Neutroids from a Hydrogen Gas <b>Simone Beghella Bartoli</b>
15:00-16:00	(MT204) Hadronic Structures of Light Nuclides. Stable versus Unstable ones <b>Anil A. Bhalekar and Ruggero M. Santilli</b>
16:00-17:00	(MT205) The detection of antimatter galaxies via Santilli Isodual Telescope <b>Simone Beghella Bartoli</b>
17:00-18:00	(MT206) Holographic Viscous Dark Energy Described by Modified Equation of State and Scalar Field <b>G S Khadekar</b>
18:30-20:00	Best Presentation Award & Session Group Photo & Coffee Break

# Poster Presentation

**Date: Jul. 12 2018(Tuesday)**

**Time: 17:00-18:30**

**Chairperson:**

**VENUE: Lobby**

(C041)Dynamic Analysis of the Inflatable Net System for Space Capture

**Mr. Hao Liu**, Cheng Wei, Yang Zhao, Shunli Li, Chunlin Tan, Yongjian Liu

Harbin Institute of Technology, China

(C040)Research on the suppression effect law of different baffle positions on liquid sloshing in spherical tank

**Mr. Liang Ma**, Cheng Wei, Yang Zhao

Harbin Institute of Technology, China

(C011)An adaptive control approach for a flexible hypersonic glide vehicle

**Mr. Erkang Chen**, Wuxing Jing, Changsheng Gao, Zhao Zhang

Harbin Institute of Technology, China

(C1012)Rapidly Sampling-Based Trajectory Planning for Spacecraft Proximity

**Mr. Ding Zhou**, Zhenhua Yu, Yanquan Zhang, Shunli Li

Harbin Institute of Technology, China

(C037)Firing Data Design for the Midcourse Interceptor with Complex Flight Program

**Mr. Zhao Zhang**, Changsheng Gao, Wuxing Jing, Erkang Chen

Harbin Institute of Technology, China

(C043)Analysis for UAV Heuristic Tracking Path Planning Based on Target Matching

**Mr. Changwu Zhang**, Yuchen Tang and Hengzhu Liu

National University of Defense Technology, China

(C042)Resident Space Objects Streak Extraction and Angular Measurement Error Analysis Base on Space Image Synthesis System

**Ms. Wei E**, Cheng Wei, Yaoxiang Jing, Dianjun Wang, Yang Zhao

Harbin Institute of Technology, China

(C063)Development of an Adaptive Radial Basis Function Neural Network Tracking Control for the Yaw Motion of an Unmanned Helicopter

**Assoc. Prof. Ying-Chih Lai**, Tri-Quang Le, Chien-Hong Lin and Yi-Ren Ding

Feng Chia University, Taiwan

(C026)Quaternion-based Control of Fixed-Wing UAVs using Logarithmic Mapping

**Assoc. Prof. Espen Oland**

UiT - The Arctic University of Norway, Norway

(C1030)Analysis of tooth profile tolerance in high-precision end-toothed disc design

**Prof. Jianrun Zhang**, Beibei Sun, Xi Lu

School of Mechanical Engineering, Southeast University, Nanjing, Jiangsu, China

(C1036)One new method for identification of Distributed Dynamic Load Based on Modal Coordinate Transformation

**Assoc. Prof. Jinhui Jiang**, Huangfei Kong and Ke Wang

Nanjing University of Aeronautics and Astronautics, China

(C1033)Prediction of the Resonant Fatigue Residual Life of Stiffened Panel by Measuring Frequency

**Assoc. Prof. WANG Ke**, XIONG Feng, JIANG Jinhui

Nanjing university of Aeronautics and Astronautics, CHINA

(C2005)Minimum-fuel Powered Descent Guidance for Mars Landing

**Dr. Bai Chengchao**, Guo Jifeng, Zheng Hongxing

Harbin Institute of Technology, China

(C2016)Non-contact Guided Wave Excitation in Composite Plate by the Ultrasound Transmitter

**Dr. Michal Jurek**, Pawel Kudela, Maciej Radzienski, Wieslaw Ostachowicz

Polish Academy of Science, Poland

(C2021)A Hybrid Trajectory Planning Algorithm for UAVs in Cluttered Environments

**Dr. Hongxing Zheng**, Jifeng Guo, Peng Yan

Harbin Institute of Technology, China

(C090)A Fast PSO Algorithm Based on Alpha-stable Mutation and Its Application in Aerodynamic Optimization

**Dr. Fan Huayu**, Zhan Hao

School of Aeronautics, NWPU, Xi'an, P. R. China

(C093-A)Simulation of multi-cavity micro-injection system for reducing cavity filling deviation

**Mr. Beom Rae Kim, Mr. Yongchul Shin** and Seung Mo Kim

Seoul National University, South Korea

(C117)Research on Time-Varying Meshing Stiffness of Helical Gear considering Tribo-Dynamic Behavior

**Dr. Dong Huili** and Niu tao

Beijing Research Institute of Precise Mechatronic Beijing, China

(C131-A)Dynamic Behavior Analysis of Magnetorheological (MR) Damper and Experimental Validation of the Modified Bouc-Wen Numerical Model

**Dr. Said Boukerroum**, N. Kheznadji and N. Hamzaoui

Laboratoire de Mécanique Avancée (LMA), USTHB, Algiers, Algeria

(C123)A Novel Looseness Detection Method for Hydraulic Pipeline Clamp Based on statistical analysis

**Ms. Na Xiao**, Qin Wei, Ling Lu, Feng Yang

Wuhan University of Technology, China

(C122)Real-time Data Fusion Method Research Based on Different Measurement Element of Reconnaissance Radar

**Guanhui Liang**, Guizhou Lv, Yafeng Meng

Army Engineering University Shijiazhuang Campus, China

(C142-A)Comparison of the Performance Characteristics of Turbines with Local Sweep Blade for a Small Axial Supersonic Impulse Turbine

**Dr. Sooin Jeong**, Byoungik Choi, Kuisoon Kim, Hanggi Lee

Pusan National University, Republic of KOREA

(C134-A)Prediction of Progressive Failure for Curved Composite Laminates under Mode I and Mode II Loading

**Mr. Seunggu Kang**, Jaemoon Im, Sanghyup Lee, Kwangbok Shin

Hanbat National University, Rep. of Korea

(C099)A Test Method for Testing the Flow of Air Oxygen Supply Equipment

**Dr. Haichuan Jin**, Dongsheng Jiang, Guiping Lin, Jun Huang, Xueqin Bu and Yu Zeng

Beihang University, China

(M006) Modeling of the HFMD with the Carrier Population

**Mr. Ruzhang Zhao**

Tsinghua University, China

(M065) The parallel implementation of simultaneous methods for finding the polynomial zeros

**Assoc. Prof. Eglantina Kalluci**, Fatmir Hoxha, Brikena Preni

TIRANA, ALBANIA

(C058) The use of inflatable structures for the removal of spacecraft from orbit

**Dr. Vsevolod V. Koryanov**, Victor Kazakovtsev, Alexey G. Toporkov, Anton A. Nedogarak

Bauman Moscow State Technical University, Russia

(C1011) Digital Structure Matching Verification Method between large Spacecraft and On-Orbit Heat Flux Simulation Device

**Assoc. Prof. Jihui Xie**, Jing Wang, Xinming Su, Jiayong Qin

Beijing Institute of Satellite Environmental Engineering, China

18:30-20:00

Best Presentation Award & Session Group Photo & Dinner

# Listener

(L001) **Prof. Marc THOMAS**

ETS, Canada

(L002) **Mr. Ali Karami**

Persian, Iran

(L003) **Mr. Tianjiao Liang**

Chengdu Aircraft Design & Research Institute of Aviation Industry Corporation, China

(L005) **Ms. Huiqin Gao**

Chengdu Aircraft Design & Research Institute of Aviation Industry Corporation, China

(L006) **Mr. Yong Tang**

Chengdu Aircraft Design & Research Institute of Aviation Industry Corporation, China

(L007) **Dr. Yanxiong Wang**

Chengdu Aircraft Design & Research Institute of Aviation Industry Corporation, China

(L008) **Prof. Peter Monka**

FMT TU Kosice with the seat in Presov, Slovakia

(L009) **Assoc. Prof. Rashmi Uddanwadiker**

Visvesvaraya National Institute of Technology, Nagpur, India

(L010) **Prof. SUI QINGMEI**

Shandong University, China

(L011) **Ms. ZIRUI WANG**

Northwestern Polytechnical University, China

(L012) **Prof. Beibei Sun**

Southeast University, China

(L013) **Assoc. Prof. Xi Lu**

Southeast University, China

(L014) **Mr. Emmanuel kaku**

Statistics officer at GC health center, Ghana

(L016) **Ms. Suhana Japar**

University of Malaya, Malaysia

(L017) **Prof. Hilda María Colín Garcían**

Universidad Nacional Autonoma de Mexico, Mexico

# One Day Visit-Budapest

**Date: Jul. 13, 2018(Friday)**

**Time: 9:00-16:00**

**Attention:**

- This visit will charge **100USD** for each. (Pay to join before June 26, 2018);
- or you could choose to enjoy free time on July 13 to explore Budapest by yourself;
- **9:00 AM**, pick up at lobby of **Ibis Budapest Centrum**.
- Please be there on time, or you will miss the visit.

**Route:**

you will visit:

**Start from 9:00, Jul. 13:** Hősök tere-- City Park -- Széchenyi Thermal Bath -- Budapest Zoo--  
Vajdahunyad Vára-- Former Royal Palace--Old Town Hall--Matthias Church--Holy Trinity  
Column--Fishermen's Bastion—Citadel-- Great Synagogue-- Orthodox Synagogue

**End around 17:00.**

**Service includes:**

- Transportation, Fuel, Parking fees;
- English speaking tour guide;
- Lunch;
- Pick-up & drop-off at gathering spot.

**Service excludes:**

- Personal expenses (not mentioned above).

**Remarks**

- The itinerary / duration to visit may change without advance notice depending on group size or unexpected local situation.
- The participants should go to the assembly point by themselves, no pick-up service.