eucass 2017

7th European Conference for Aeronautics and Space Sciences

3 > 6 JULY 2017 - Milan, ITALY

Programme

POLITECNICO
MILANO 1863

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Greetings from President

Please take the time to read these greetings from the Conference Chairs, for they convey information that may be potentially important for you.

On behalf of the EUCASS society and of the organisation committee, we are most delighted to welcome you to join us at the conference EUCASS 2017. EUCASS is the premier European conference in the fields of aeronautics and space. It is therefore the most comprehensive forum at the service of all aerospace, covering from cutting edge research to long-term finalized programmes. Its goal is to assemble specialists from the world over, and to create among them a community spirit that stimulates circulation of novel ideas and cross-fertilisation of disciplines.

After Moscow (2005), Brussels (2007), Versailles (2009), St. Petersburg (2011), Munich (2013), Kraków (2015), the seventh EUCASS conference is hosted by Politecnico di Milano. EUCASS 2017 is extremely grateful to the administration of this Institute, and particularly to Rector Ferruccio Resta, for welcoming our conference this time.

Dear European participants, we are really pleased to welcome you here. Your presence honours and rewards the people that devoted much of their time to prepare the event, the Technical Committees in charge of drafting the programme and Carte Blanche as professional conference organizer. Dear residents from the rest of the world, we take special pride in the fact that you came to Milan to join us for this exciting aerospace sciences event. We are grateful to you for sharing your expertise with us. We hope that your contacts will be greatly beneficial to you and, foremost, that you'll feel the need to join forces with us on our future scientific research projects.

About one hundred technical sessions are at your disposal in addition to eight plenaries. Also pay attention to the special workshops, particularly those on icing which feature the very best specialists worldwide. Last but not least, for the first time we shall graft a new activity onto the conference programme, with the aim of stimulating your interest in development of trans-disciplinary projects. We encourage all of you to visit sessions other than your usual ones, in the hope that some ideas will emerge where two or more promising scientific breakthroughs are mated together at an early stage to launch very innovative demonstrator concepts.

This may add tremendous value to your own work and help you to mature it faster. So look at the programme early on to see what others will be presenting; and, when the conference starts, venture out of your ivory tower and go meet these other people. You may want to follow the session titled "Issues for Future of Aerospace" which touches on the subject and then the plenary on "Funding Opportunities" that follows immediately afterwards. You'll have three months following the conference to prepare projects and submit them to us for review. The best ones will be recommended by us to the EC and/or agencies like ESA for funding. The charter for this action will be available online in due time.

Please also note that ArianeGroup will remit a prize for the best young professional paper during the gala dinner on Wednesday evening.

We have all done our very best to offer you a comprehensive set of activities, and a warm and stimulating atmosphere to facilitate your contacts. We expect you to contribute through your discussions to the development of the international aerospace culture and traditions and to the general enlightenment of the colleagues that came here to meet you.

Thanks to you all, therefore, for your patronage. We are also keenly aware that the conference would not be possible without the dedicated support of the Agencies, research establishments and aerospace companies. Several are exhibiting their products here. Please do pay them a visit.

Jean-Pierre Taran

Luciano Galfetti

Committees

Local Organizing Committee

The Local Committee is chaired by **Prof Luciano Galfetti** (Politecnico di Milano)

- **Dr. Paolo Bellomi** (Vice President Engineering & Product Development, AVIO s.p.a., Colleferro, Rome)
- **Dr. Salvatore Borrelli** (Space Technology Integration and Demonstrators, Division Manager, C.I.R.A., Centro Italiano Ricerche Aerospaziali, Capua)
- **Prof. Francesco Nasuti** (Professor, University «Sapienza», Rome)
- **Prof. Giuseppe Sala** (Director of the Aerospace and Science Technology Department, Politecnico di Milano, Milan)
- **Prof. Franco Bernelli Zazzera** (former Director of the Aerospace and Science Technology Department, Politecnico di Milano, Milan)

Technical Committee

System Integration

- Christophe Bonnal, CNES, FRANCE
- Luciano Anselmo, CNR, ITALY
- Vladimir Aslanov, Samara Univ., RUSSIA
- Jacques Gigou, ESA, FRANCE
- Martin Sippel, DLR, GERMANY
- Philippe Tatry, Airbus, FRANCE
- Walter Zinner, Airbus, GERMANY
- Kevin.E. Post, Boeing, USA
- Peter Schmollgruber, ONERA, FRANCE
- Bagdat Suimenbayev, Kazakh T. U, KAZAKHSTAN

Flight Physics

- Doyle D. Knight, Rutgers University, USA
- Yevgeniy Bondar, ITAM NOVOSIBIRSK, RUSSIA
- Igor Lipatov, TsAgi ZHUKOVSKY, RUSSIA
- Philippe Reijasse, ONERA, FRANCE
- Matt Casiano, NASA, USA
- Laurent Cambier, ONERA, FRANCE
- Valery Chernoray, Chalmers Univ. of Techn., SWEEDEN
- Amer Chpoun, IUP – Evry, FRANCE
- Paola Cinnella, Dynfluid-ENSAM Paris Tech, FRANCE
- Franck Clero, ONERA, FRANCE
- Jean-Paul Dussauge, IUSTI, FRANCE
- Sebastien Esquieu, CEA, FRANCE
- Abdellah Hadjadj, CORIA, FRANCE
- Ardeshir Hanifi, FOI, SWEEDEN
- Patrick Huerre, LADHYX, FRANCE
- Alexander Kosinov, ITAM, RUSSIA
- Sergey Leonov, JIHT, RUSSIA
- Francesco Nasuti, Univ. La Sapienza, ITALY
- Jean-Christophe Robinet, Dynfluid-ENSAM Paris Tech, FRANCE
- Eric Schall, Pau Univ., FRANCE
- Ferry Schrijer, TU Delft, THE NETHERLANDS
- Andrey Sidorenko, ITAM, RUSSIA

Committees

- Denis Sipp, ONERA, FRANCE
- Vitaly Soudakov, TsAGI, RUSSIA
- Louis Souverein, ASL, GERMANY
- Philippe Tran, ASL, FRANCE
- Maxime Ustinov, TsAGI, RUSSIA
- Shashi Verna, NAL, INDIA
- Valery Zapryagaev, ITAM, RUSSIA
- Alexander Zheltovodov, ITAM, RUSSIA
- Ali Guelhan, DLR, GERMANY
- Jason M. Reese, University of Strathclyde, UNITED KINGDOM
- Ralf Stark, DLR, GERMANY
- Hong Yan, NPU, CHINA

Structures and Materials

- Blanka Lenczowski, Airbus Defence and Space, GERMANY
- Michel Berdoyes, ASL, FRANCE
- Stefen Beyer, ASL, GERMANY
- Jesus Gomez Garcia, ASL, GERMANY
- J.P. Grisval, ONERA, FRANCE
- Wolfgang Luber, TUM, GERMANY
- Kevin Mathis, CNES, FRANCE
- Tasadduq Khan, ONERA, FRANCE
- Yuri Nozhnitsky, CIAM, RUSSIA
- Jorg Riccius, DLR, GERMANY
- Bernard Troclet, ASL, GERMANY

Flight Dynamics/GNC

- Martine, Ganet, Airbus Defence and Space, FRANCE
- Daniel Choukroun, Ben Gurion Univ., ISRAEL
- Alexander Nebylov, St. Petersburg Univ., RUSSIA
- Christian Philippe, ESA / ESTEC, THE NETHERLANDS
- Badr Rmili, CNES, FRANCE
- Vladimir Kutahov, Rostechnology, RUSSIA
- Rodrigo Martinez-Val, Univ. Politec. Madrid, SPAIN
- Tugrul Oktay, Erciyes. Univ., TURKEY
- Charles Vallet, FRANCE

Propulsion Physics

- Luciano Galfetti, Politecnico di Milano, ITALY
- Max Calabro, TIA, FRANCE
- Helmut Ciezki, DLR, GERMANY
- Gerald Hagemann, ASL MUNICH, GERMANY
- Sergei Frolov, RAS, RUSSIA
- Oskar Haidn, TUM MUNICH, GERMANY
- Nathalie Girard, CNES, FRANCE
- Keiichi Hori, JAXA, JAPAN
- Alexander Lukin, WCRC, RUSSIA
- Luca Maddalena, Texas Univ., USA
- Francesco Nasuti, Univ. La Sapienza, ITALY
- Benveniste Natan, TECHNION, ISRAEL
- Michael Oswchald, DLR, GERMANY
- Sergey Rashkovskiy, RAS, RUSSIA
- Toru Shimada, JAXA, JAPAN
- Niklas Wingborg, FOI, SWEEDEN
- Valery A. Babuk, Baltic State Technical University, St. Petersburg, RUSSIA

General information

The event will be held at the Politecnico di Milano – Campus Bovisa, Italy.

The congress place is easily reachable from the city center and located next to the Bovisa station.

For more information please consult: http://www.eucass2017.eu/venue/

Registration desks and information

Registration desks and conference information are located at the entrance of the building BL27.

The opening hours are:

Sunday 2 July 17:00 – 20:00

Monday 3 July 08:30 – 20:00

Tuesday 4 July 08:00 – 19:00

Wednesday 5 July 08:00 – 19:00

Thursday 6 July 08:00 – 19:00

Messages and information

Messages and programme updates will be posted on a board near the registration desks.
Email of the conference: contact@eucass2017.eu

Information on tram, taxi… will be available at the registration desk or on level 1 at the Milano Turismo stand.

Coffee breaks

Coffee, Tea and soft drinks will be served all day at the time scheduled in the programme near the exhibition or the conference rooms.

Lunches

Buffet lunches will be served in the ground floor and dessert will be served upstairs within the exhibition.

Oral sessions

Duration of oral presentations depends on the session and type of talk, please refer to the detailed programme to find the time slot allocated to your oral presentation. Time slots include presentation and questions.

You must arrive 15 minutes before your session to « checkin » with the chairman of the session.

Please provide before your presentation a brief text (2 or 3 lines) for the chair to introduce you to the audience.

Preview Room

Oral presenters should go to the Preview Room (registration desk) located on the ground floor to test and upload their presentations.

Delegates giving a presentation in the morning must have uploaded their file in the Preview room by 05:00 pm the previous day.

Delegates giving a presentation in the afternoon must have uploaded their file in the Preview room by 10:00 am the same day.

Poster session

Before setting up your poster you must first register.

Assistance will be given to guide you to the correct poster board location. A number will be allocated to each poster and corresponding board. Affixing material will be supplied.

Social programme

Welcome Reception

A cocktail will be served on Sunday 2 July 2017 from 18:30 to 20:00 upstairs in Building BL27.

Welcome Party

A cocktail will be served on Monday 3 July 2017 from 18:30 to 20:00 within the exhibition area.

This cocktail is sponsored by **Thales Alenia Space**.

Gala Evening

Museo della Scienza

Wednesday 5 July 2017
(off-site event)

We will have a nice evening at the "Museo della Scienza, Via Olona 8" with a music band and the best student paper award ceremony.

The place is easily reachable by public transport, so please organize your transport by your own. From Cadorna main station take the line n°2 (green) to San Ambrogio (1st stop), the Museum is 150m from the metro station. EUCASS banners will be set up at the entrance and organizers will be there to welcome you.

Complementary information and direction are provided on the website.

Please note that it is not included in the registration fees and it is open to accompanying person.

You will be asked to show your invitation at your arrival. We reserved the right to refuse entrance if payment is pending.

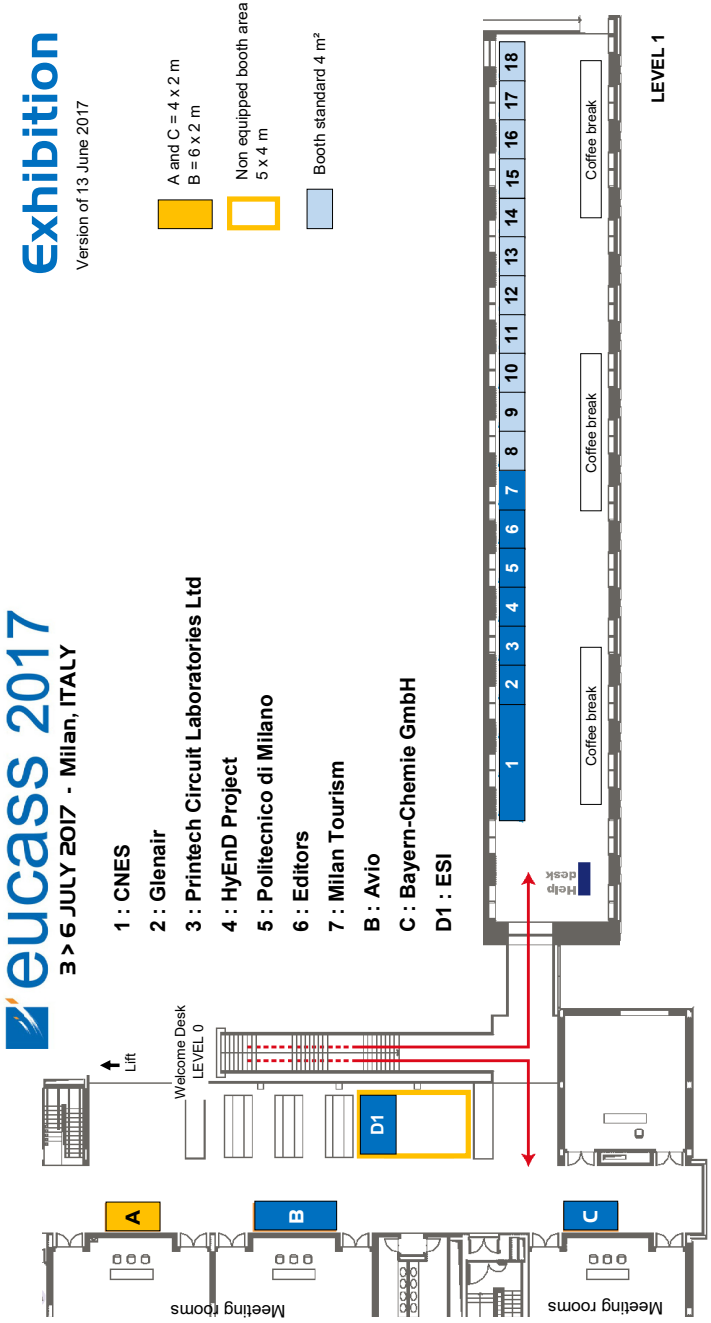
Exhibition

Exhibition is located in the first floor of Politecnico di Milano within the coffee break area.

Exhibition opening hours

Monday 3 July	09:00 - 20:00
Tuesday 4 July	08:30 - 18:00
Wednesday 5 July	08:30 - 18:00
Thursday 6 July	08:30 - 15:00

Exhibition


Exhibition
Version of 13 June 2017
A and C = 4 x 2 m
B = 6 x 2 m
Non equipped booth area
5 x 4 m
Booth standard 4 m²
eucass 2017
3 > 6 JULY 2017 - Milan, ITALY
1 : CNES
2 : Glenair
3 : Printech Circuit Laboratories Ltd
4 : HyEnD Project
5 : Politecnico di Milano
6 : Editors
7 : Milan Tourism
B : Avio
C : Bayern-Chemie GmbH
D1 : ESI
LEVEL 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Coffee break
Coffee break
Coffee break
Help desk
Lift
Welcome Desk
LEVEL 0
D1
A
B
C
Meeting rooms
Meeting rooms

Exhibitors

AVIO

Booth number B

Rossella CONTE

rossella.conte@avio.com

www.avio.com

Avio is a leading company in space rocket and space propulsion. The company is based in Colleferro, Rome, Italy. The expertise and know-how acquired in over 100 years in explosives and more than 50 in space activities allow Avio to compete with the top players in the Space Launch Systems definition, manufacturing and integration as well as in the segment of solid, liquid and cryogenic space propulsion.

Today, Avio plays a strategic role in the global space industry through Vega, a launcher of satellites in the range 1.500kg – 2,000kg in LEO produced by ELV (70% Avio, 30% ASI), Ariane 5, the biggest European launcher and is working on the new launchers Vega C and Ariane 6.

Avio has operations companies at the European Space Centre in French Guiana since 1984: Regulus (60 % Avio, 40% ASL) for solid propellant manufacturing for Ariane and Vega's first-stage engines, Europropulsion (50 % Avio, 50% ASL), in charge of booster assembly and ELV for integration of the entire Vega launcher.

CNES

Booth number 01

Laruence AMEN

contact@cnes.fr

www.cnes.fr

Founded in 1961, the Centre National d'Etudes Spatiales (CNES) is the government agency responsible for shaping and implementing France's space policy in Europe.

Its task is to invent the space systems of the future, bring space technologies to maturity and guarantee France's independent access to space. CNES is a pivotal player in Europe's space programme, and a major source of initiatives and proposals that aim to maintain France and Europe's competitive edge. It conceives and executes space programmes with its partners in the scientific community and industry, and is closely involved in many international cooperation programs—the key to any far-reaching space policy.

The agency's more-than 2,400-strong workforce constitutes an exceptional pool of talent, with some 1,800 engineers and executives, 35% of whom are women. Through its ability to innovate and its forward-looking vision, CNES is helping to foster new technologies that will benefit society as a whole, focusing on: Ariane, Sciences, Observation, Telecommunications & Defence.

Bayern-Chemie GmbH - MDBA

Booth number C

Axel RINGEISEN

axel.ringeisen@mbda-systems.de

www.bayern-chemie.com

Bayern-Chemie has over 60 years of experience in developing, producing, qualifying and upgrading rocket motors, gas generators and pyrotechnic actuators. Bayern-Chemie is a 100% subsidiary of MBDA. Products and services offered :

Defence :
- Variable flow ducted ramjet rocket motor
- High-performance bi-pulse rocket propulsion systems for highly agile homing
- Variable-speed and insensitive gel-fuelled rocket propulsion
- Solid-fuel gas generators for a variety of applications

Space :
- Components for single stage to orbit propulsion systems
- Highly controllable gelled propellant rocket motors for various applications
- Pyrotechnic separation devices
- Propulsion systems for de-orbiting of space vehicles

Aviation :
- Gas generators for provisioning emergency and rescue systems
- Pyrotechnic actuators for safety devices

Services :
- Engineering
- Laboratory and testing facilities and expertise

Exhibitors

DLR – HyEnD (Hybrid Engine Development Project)

Booth number 04

Dr. Mario KOBALD

kobald@irs.uni-stuttgart.de

http://www.hybrid-engine-development.de/
https://www.facebook.com/Hybridtriebwerk/

HyEnD (Hybrid Engine Development) is a student project located the Institute of Space Systems, Stuttgart University in Germany.

In November 2016, they launched their Hybrid sounding rocket "HEROS 3" from ESRANGE Space Center to an altitude of 32.3 km, a new record for student projects. The project was funded by the DLR Space Administration and a cooperation exists with the DLR Institute of Space Propulsion, Lampoldshausen.

ESI Italia

Booth number D

Christina THEUERKAUF

christina.theuerkauf@esi-group.com

www.esi-group.com

ESI Group is a leading innovator in Virtual Prototyping software and services. Specialist in material physics, ESI has developed a unique proficiency in helping industrial manufacturers replace physical prototypes by virtually replicating the fabrication, assembly and testing of products in different environments. Today, coupled with Virtual Reality, animated by systems models, and benefiting from data analytics, Virtual Prototyping becomes immersive and interactive: ESI's clients can bring their products to life, ensuring reliable performance, serviceability and maintainability. Benefiting world-leading OEM's and innovative companies alike, ESI empowers engineers and decision-makers with the guarantee that their products will pass certification tests, before any physical prototype is built, and that they will deliver competitive products to their markets. ESI's Virtual Prototyping solutions address the emerging need for products to be smart and autonomous and support industrial manufacturers in their digital transformation. Today, ESI's customer base spans nearly every industry sector. The company employs about 1100 high-level specialists worldwide to address the needs of customers in more than 40 countries.

Glenair

Booth number 02

Ron LOGAN

rlogan@glenair.com

www.glenair.com

Glenair has been providing Space-Grade Interconnect Solutions since the earliest manned space flights. We understand the highly specialized mechanical, electrical and optical performance requirements for data, video, and high-speed communications in exo-atmospheric vehicles. Space-rated interconnect systems require specialized materials and processing and precise and reliable mating interfaces. Size and weight reduction are additional key requirements. All are Glenair strengths.

Glenair interconnect technology has seen broad acceptance and application on both NASA and ESA space missions. Glenair Micro-D and nano-miniature connectors, as well as numerous circular connector series, opto-electronic technologies, HDRMs, and backshell designs have been specified on ESA missions ranging from launch vehicles to satellites. The Glenair Space product portfolio is supported by our own independently accredited test laboratory. Certified to ISO/IEC 17025:2005, Glenair's test laboratory is capable of running all industry standard qualification programs for its space flight customers—from outgassing to full ESA and NASA qualification programs.

Dr Ron Logan from Glenair will present an oral paper "MULTI-GIGABIT PHOTONIC TRANSCEIVERS FOR SPACEFIBRE DATA NETWORKS" on Tuesday 4th July

Exhibitors

Politecnico Di Milano

Booth number 05

Prof. Galfetti LUCIANO
luciano.galfetti@polimi.it
www.polimi.it

Politecnico di Milano is one of the most outstanding universities in the world, ranked 24th on a global scale, 7th in Europe, and 1st in Italy among technical universities, according to QS World University Ranking – Engineering & Technology 2017.
Founded in 1863, Polimi is the largest school of Architecture, Design and Engineering in Italy, with 3 main campuses located in Milan, and 5 campuses based around the Lombardy region, one of the most industrialized areas of Europe.

Department of Aerospace Science and Technology

The Department of Aerospace Science and Technology of Politecnico di Milano (DAER) is the only University Department in Italy entirely dedicated to the aerospace studies.
It was officially established in its present status in January 2013, as a result of the latest University reform in Italy. It inherits the long and successful tradition in aeronautics and aerospace that Politecnico di Milano has nurtured since the early days of aviation.
Three elements lie behind the foundation of the Department of Aerospace Science and Technology (DAER): the worldwide importance of the aerospace engineering field, a keen awareness of the role of a technical University in this field and a solid background in aerospace engineering at Politecnico di Milano.
The mission of the Department aims at achieving highly ambitious scientific, educational and societal goals:

- to preserve and advance knowledge in aerospace engineering through cutting edge research in order to find solutions to present and future demands of society;
- to intensively pursue fundamental research to provide solutions for tomorrow's problems;
- to create and develop forefront technologies to play a proactive role in our partnership with the aerospace industry;
- to provide students with a solid background in aerospace engineering and train qualified engineers for leadership positions in several technical fields in society;
- to make the Department a leader in the national and international aerospace community.

Printech

Booth number 03

Nick POTTS
nick.potts@rfpcbs.com
www.pcbs.space

Printech Circuit Laboratories is a manufacturer of bespoke circuitry, including the design and manufacture of PCB based antenna.

Milano Tourism

Booth number 07

www.turismo.milano.it

Descriptif Milano tourism :

The Tourism area within the Metropolitan Marketing Department of the Municipality of Milan is in charge of the development and implementation of initiatives for the promotion, information and tourist enjoyment of the city of Milan.

The timetable of their attendance in the booth will be:

- Monday 3rd: from 8:30 to 18h30
- Tuesday 4th: from 10:00 to 19:00
- Wednesday 5th: from 10:00 to 17:00


Inventing the future of space
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DÉFENSE
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cnes
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D'ÉTUDES SPATIALES
cnes.fr

Opening ceremony

The conference opening ceremony will be held
at the BL28 Building on Monday 3 July 2017 from 09:30 to 12:30 in the Amphitheatre.

Prominent VIP speakers will give an opening address.

Please bring your conference badge to the event.

Opening

Monday 3 July, 09:30 - Amphitheatre

Moderator:
Doyle Knight
Eucass

Jean-Pierre Taran
President
Eucass

Ferruccio Resta
Rector
Politecnico di Milano

Giuseppe Sala
(To be confirmed)
Mayor Milano

Clara de la Torre
Director
Transport General Directorate of Research and Innovation
European Commission

Johann-Dietrich Woerner
General Director
ESA

Roberto Battiston
President
ASI

Jean-Yves le Gall
President
CNES

Stefan Schlechtriem
Director Institute of Space Propulsion
DLR

Giulio Ranzo
Chief Executive Officer
AVIO

Hervé Gilibert
CTO
ArianeGroup

Axel Flaig
Senior Vice-President for Research & Technology
Airbus

Plenaries

Research Networks

Monday 3 July, 14:00 - Amphitheatre

Bruno Sainjon
President
EREA & ONERA

Spiros Pantelakis
President
EASN

Crosscutting Technologies for Satellites

Tuesday 4 July, 11:50 - Amphitheatre

Franco Ongaro
Director of Technology,
Engineering and Quality
Head of ESTEC
ESA

Ralf Hartmann
Vice President
Airbus DS

Jan-Christian Meyer
Project Manager
OHB Space Debris Centre

EU Programmes

Tuesday 4 July, 18:00 - Amphitheatre

Giuseppe Pagnano
Coordinating Project Officer
Clean Sky Joint Undertaking
European Commission

Peter Hotham
Executive Director
SESAR Joint Undertaking

Michael Kyriakopoulos
General Director, Research & Innovation/H3/Research Programme
Officer
European Commission

Plenaries

R&T Launch vehicles

Wednesday 5 July, 11:50 - Amphitheatre

Stefano Bianchi
Head of ESA Launchers
Development Department
ESA

Jérôme Vila
Associate Director – Head of Future
& Innovation for Launch Systems
Department
CNES

Future European Launchers Challenges: Ariane 6 and Vega C & E

Wednesday 5 July, 18:00 - Amphitheatre

Yann Letourneur
Ariane 6 Launcher System Test
Chief Engineer
Airbus Safran Launchers

Paolo Bellomi
Vice President Engineering &
Product Development
AVIO

Funding Opportunities

Thursday 6 July, 11:50 - Amphitheatre

Russel Cummings
Technical Advisor and International
Program Officer
AFOSR

Maija Kukla
University of Maryland and NSF

Caroline Videlier-Gutmann
Head of Launcher Procurement
service
ESA

Plenaries

Helicopter Propulsion

Thursday 6 July, 18:00 - Amphitheatre

Frédéric Ripolles
Senior Expert
SAFRAN

Closing Remarks

Thursday 6 July, 18:40 - Amphitheatre

Monday 3 July >> Afternoon

15:00 >> FD - Optimization

Location: BL27.07

Chairs:

BOURGEOIS Eric - CNES, Direction des Lanceurs - FRANCE

ESPINOSA RAMOS Amaya - CNES - FRANCE

71 - NEW IMPROVEMENTS IN THE OPTIMIZATION OF THE LAUNCHER ASCENT TRAJECTORY THROUGH THE HJB APPROACH
BOURGEOIS Eric - CNES, Direction des Lanceurs - FRANCE

254 - OPTIMAL AIRCRAFT PATH PLANNING CONSIDERING WIND UNCERTAINTY
FRANCO Antonio - University of Seville - SPAIN

338 - OPTIMIZATION OF WIG-CRAFT 3D-TRAJECTORY NEAR THE ROUGH SEA SURFACE
NEBYLOV Alexander - State University of Aerospace Instrumentation - RUSSIAN FEDERATION

463 - ON THE MINIMUM TIME AND FUEL CONTROL OF AN AIRCRAFT IN ITS CLIMBING PHASE
GOUBINAT Damien - University of Toulouse - FRANCE

137 - OPTIMAL SCHEDULING ALGORITHM IN POINT MERGE SYSTEM INCLUDING HOLDING PATTERN BASED ON MILP
LEE Somang - Seoul National University - REPUBLIC OF KOREA

498 - THE CONTROL OPTIMIZATION OF LOW-ORBIT SPACECRAFT WITH ELECTRIC RAMJET
YANOVA Olga - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

545 - TRAJECTORY OPTMIZATION OF COMMOM AERO VEHICLE THROUGH GENETIC ALGORITHM AIDED WITH RATIONAL BEZIER CURVE
FAREED Usman - Northwestern Polytechnical University - CHINA

15:00 >> FP - CFD I

Location: BL28.1.1

Chair:

KOZLOV Victor - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

181 - COMPUTATIONALLY EXPENSIVE AERODYNAMIC DESIGN OPTIMIZATION FRAMEWORK WITH ADAPTIVE SEARCH STRATEGIES AND DATA FUSION
LONG Bingxiang - China Aerodynamics Research and Development Center - CHINA

188 - HYPERSONIC VEHICLE DESIGN AND ANALYSIS BASED ON SHOCK-FITTING WAVERIDER
CHEN Bingyan - China Academy of Aerospace Aerodynamics - CHINA

193 - TURBULENT-LAMINAR FLOWS OF VISCOUS GAS IN NARROW CHANNELS WITH RIGID WALLS
LIPANOV Aleksei - Institute of Applied Mathematics Russian Academy of Sciences - RUSSIAN FEDERATION

215 - MICRO-AEROTHERMODYNAMICS ANALYSIS OF THE SPACELINER CABIN ESCAPE SYSTEM ALONG ATMOSPHERIC RE-ENTRY
VERANT Jean-Luc - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

226 - AERODYNAMIC DATABASE IMPROVEMENT OF AIRCRAFTS BASED ON NEURAL NETWORKS AND GENETIC ALGORITHMS
GOMEC Fazil Selcuk - TUSAS Aerospace Industries, Inc. - TURKEY

353 - AHYBRID LST-RANS METHOD FOR MODELING OF LAMINAR-TURBULENT TRANSITION
OBRAZ Anton - TsAGI Central Aerohydrodynamic Institute - RUSSIAN FEDERATION

689 - DSMC COMPUTATIONS OF LAMINAR FLOW SEPARATION IN MODERATE ENTHALPY AND DENSITY HYPERSONIC FLOWS
PRAKASH Ram - University of New South Wales - AUSTRALIA

Monday 3 July >> Afternoon

15:00 >> FP - Computational and Experimental Aerodynamics of Air Vehicules II

Location: BL27.13

Chairs:

PALCHEKOVSKAYA Natalia - Moscow Institute of Physics and Technology - RUSSIAN FEDERATION

FIRSOV Alexander - JIHT - RUSSIAN FEDERATION

416 - AEROSHAPE TRADE-OFF AND AERODYNAMIC ANALYSIS OF THE SPACE-RIDER VEHICLE
MARINI Marco - CIRA - Italian Aerospace Research Center - ITALY

424 - EXPERIMENTAL RESEARCH OF THE INWARD-TURNING INTAKE STARTING AT TSAGI T-116 WIND TUNNEL WITHIN THE INTERNATIONAL HEXAFLY-INT PROJECT
GUBANOV Anatoly - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

445 - CONCEPTUAL DESIGN OF DISTRIBUTED PROPELLERS AIRCRAFT: AERODYNAMIC MODEL VERIFICATION OF PROPELLER-WING INTERACTION
BOHARI Baizura - National Aviation University - FRANCE

447 - WING GEOMETRIC PARAMETER STUDIES OF A BOX WING AIRCRAFT CONFIGURATION FOR SUBSONIC FLIGHT
AGRICO DE PAULA Adson - Instituto Tecnologico de Aeronautica - BRAZIL

450 - AN OPTIMIZATION STUDY FOR FUSELAGE LAYOUT OF A REGIONAL JET
AGRICO DE PAULA Adson - Instituto Tecnologico de Aeronautica - BRAZIL

651 - NUMERICAL AND EXPERIMENTAL INVESTIGATION OF DUCTED FANS INTERFERENCE FOR MULTIROTOR COPTER-TYPE AERIAL VEHICLE
ARKHIPOV Maksim - Moscow Institute of Physics and Technology - RUSSIAN FEDERATION

657 - EXPERIMENTAL STUDY TO THE EFFECTS OF EXHAUST PLUME AND NOZZLE LENGTH ON TRANSONIC AND SUPERSONIC AXISYMMETRIC BASE FLOWS
VAN GENT Paul - Delft University of Technology - NETHERLANDS

108 - AERODYNAMIC DATA FUSION WITH A MULTI-FIDELITY SURROGATE MODELING METHOD
HE Lei - CARDC - CHINA

15:00 >> FP - Rarefield and Real Gas Flows I

Location: BL27.12

Chair:

SHOEV Georgy - ITAM Institute of Theoretical and Applied Mechanics - RUSSIAN FEDERATION

23 - DSMC SIMULATIONS OF LEADING EDGE FLAT-PLATE BOUNDARY LAYER FLOWS AT HIGH MACH NUMBER
Speaker TBC

26 - BINARY GAS MIXTURE IN A HIGH SPEED CHANNEL
Speaker TBC

66 - ON ORBIT CONTAMINANT DEPOSITION MEASUREMENTS ON RUSSIAN ORBITAL STATIONS AND ON THE RUSSIAN SEGMENT OF THE INTERNATIONAL SPACE STATION
KRYLOV Andrey - Rocket and Space Corporation Energia - RUSSIAN FEDERATION

111 - STATE-RESOLVED MODELS OF CHEMICAL REACTIONS FOR NON-EQUILIBRIUM FLOW SIMULATIONS
SAVELEV Aleksei - Saint Petersburg State University - RUSSIAN FEDERATION

199 - STATE-TO-STATE MODELS OF PHYSICO-CHEMICAL PROCESSES IN DIRECT SIMULATION MONTE CARLO (DSMC) COMPUTATIONS OF 2-DIMENSIONAL FLOWS
OBLAPENKO Georgii - Saint Petersburg State University - RUSSIAN FEDERATION

Monday 3 July >> Afternoon

15:00 >> FP - Wind Tunnel and Measurement Techniques I

Location: BL27.11

Chairs:

ZAPRYAGAEV Valeriy - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

SCHRIJER Ferry - Delft University of Technology - NETHERLANDS

155 - EXPERIMENTAL INVESTIGATION OF THE VKI LONGSHOT GUN TUNNEL COMPRESSION PROCESS
ILICH Zdenek - VKI -von Karman Institute for Fluid Dynamics - BELGIUM

168 - MACH 3 TURBULENT BOUNDARY LAYER MEASUREMENT OVER A FLAT PLATE USING THE PARTICLE IMAGE VELOCIMETRY
Speaker TBC

186 - SUB-SCALE HYPERSONIC FREE FLIGHT DYNAMICS OF HEXAFLY-INT EFTV + ESM (MULTIBODY SEPARATION)
KENNELL Chris - University of New South Wales - AUSTRALIA

187 - WIND TUNNEL TEST COMPARISON BETWEEN JAXA-HIEST AND ONERA-S4MA WITH HYFLEX LIFTING-BODY
TANNO Hideyuki - Japan Aerospace Exploration Agency - JAPAN

15:00 >> PP - Green liquid propellants I

Location: BL27.15

Chairs:

BATONNEAU Yann - University of Poitiers - FRANCE

NEGRI Michele - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

319 - TECHNOLOGY DEVELOPMENT FOR ADN-BASED GREEN MONOPROPELLANT THRUSTERS – AN OVERVIEW OF THE RHEFORM PROJECT
NEGRI Michele - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

639 - CHALLENGES AND ECONOMIC BENEFITS OF GREEN PROPELLANTS FOR SATELLITE PROPULSION
GOTZIG Ulrich - Airbus Safran Launchers - GERMANY

479 - DEVELOPMENT OF CATALYTIC MATERIALS FOR DECOMPOSITION OF ADN-BASED MONOPROPELLANTS
MALEIX Corentin - University of Poitiers - FRANCE

143 - PRELIMINARY TESTS ON THERMAL IGNITION OF ADN-BASED LIQUID MONOPROPELLANTS
WILHELM Marius - DLR Lampoldshausen - GERMANY

481 - A REVIEW ON THERMAL AND CATALYTIC DECOMPOSITION OF AQUEOUS ADN FOR LIQUID PROPULSION – H2020 PROJECT RHEFORM
BATONNEAU Yann - University of Poitiers - FRANCE

618 - A NUMERICAL STUDY OF THE TIME DEPENDENT COMBUSTION OF A GEL FUEL DROPLET
HADAD Arza - Technion - Israel Institute of Technology - ISRAEL

Monday 3 July >> Afternoon

15:00 >> PP - LRE I

Location: BL27.14

Chairs:

HAGEMANN Gerald - ASL - GERMANY

GIRARD Nathalie - CNES, Direction des Lanceurs - FRANCE

248 - OVERVIEW OF FLPP PROPULSION PROJECTS FINAL
UNDERHILL Kate - ESA HQ - FRANCE

418 - DEVELOPMENT HISTORY AND VERIFICATION OF THE FLIGHT MODEL OF A 500 N ETHANOL/LOX ROCKET ENGINE
SIEDER Jan - TU Dresden - GERMANY

474 - NITROUS OXIDE APPLICATION FOR LOW-THRUST AND LOW-COST LIQUID ROCKET ENGINE
PALACZ Tomasz - AGH University of Science and Technology - POLAND

627 - PERSEUS PROJECT 5KN LOX/ETHANOL ROCKET ENGINE FIRE TESTS
DELPY Rémi - GAREF Aerospatial - FRANCE

282 - DESIGN, MANUFACTURE, ASSEMBLY AND TESTING OF A LIQUID (LOX AND GASOLINE) ROCKET MOTOR FOR A VEHICLE WITH STRATOSPHERIC APOGEE IN COLOMBIA: THE SUAII ENGINE
FLORIAN Andres - UNIVERSIDAD DE LOS ANDES – COLOMBIA

503 - BOREAS DEMONSTRATOR FOR FUTURE LIQUID PROPULSION ENGINES
DREYER Stéphanie - Airbus Safran Launchers - FRANCE

227 - FLOW VISUALIZATION OF THE PRIMING PROCESS IN SPACECRAFT FEEDLINES
BOMBARDIERI Cristiano - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

15:00 >> PP - LRE chamber cooling

Location: BL27.17

Chairs:

OSCHWALD Michael - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

SOUVEREIN Louis - ASL - GERMANY

649 - PRELIMINARY STUDY ON WALL-MODELED LARGE EDDY SIMULATION OF TURBULENT HEAT TRANSFER FOR LIQUID ROCKET ENGINES
MUTO Daiki - Japan Aerospace Exploration Agency - JAPAN

589 - NUMERICAL SIMULATION OF TURBULENT BOUNDARY LAYERS WITH FOREIGN GAS TRANSPIRATION USING OPENFOAM
PROKEIN Daniel - University of Stuttgart - GERMANY

476 - NUMERICAL INVESTIGATION OF TRANSPIRATION COOLING WITH UNIFORMLY AND NON-UNIFORMLY SIMULATED INJECTION
KÖNIG Valentina - RWTHAachen University - GERMANY

422 - HYBRID LES/RANS SIMULATIONS FOR THE PREDICTION OF WALL HEAT FLUXES IN ROCKET COMBUSTION ENGINES
Speaker TBC

453 - 2D THERMO-STRUCTURAL CODE DEVELOPMENT FOR REGENERATIVE COMBUSTION CHAMBER ANALYSIS
TERRACCIANO Andrea - AVIO - ITALY

260 - EXPERIMENTAL ANALYSIS OF HEAT TRANSFER IN CRYOGENIC COMBUSTION CHAMBERS ON MASCOTTE TEST BENCH
PICHILLOU Julien - CNES, Direction des Lanceurs - FRANCE

331 - SIMULATION OF NONEQUILIBRIUM HYDROCARBON GAS FLOW IN THE HIGH ASPECT RATIO CHANNELS WITH PHASE TRANSITION AND HIGH HEAT INTENSITY
FEDOTOVA Ksenya - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

Monday 3 July >> Afternoon

15:00 >> PP - Liquid combustion

Location: BL27.16

Chairs:

WEISER Volker - Fraunhofer-Institut Chemische Technologie (ICT) - GERMANY

ZHUKOV Victor - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

369 - RESPONSE OF A TRANSCRITICAL COAXIAL FLAME TO PROPELLANT INJECTION RATE MODULATIONS: ANALYSIS AND LOW ORDER MODELING OF THE GENERATION OF UNSTEADY HEAT RELEASE RATE
NEZ Robin - CNRS Laboratoire EM2C, - FRANCE

247 - LARGE-EDDY SIMULATION OF MULTI-ELEMENT LOX/H2 COMBUSTION AT TRANSCRITICAL CONDITIONS
ZIPS Julian - Thermodynamics Institute, Bundeswehr University Munich - GERMANY

588 - SOLUTION OF A DROPLET COMBUSTION PROCESS USING MODIFIED THERMAL RESISTORS MODEL
MOR Yoash - Technion - Israel Institute of Technology - ISRAEL

609 - ANALYSIS OF COAXIAL-FLAME RESPONSE DURING TRANSVERSE COMBUSTION INSTABILITY
SELLE Laurent - Institut de Mécanique des Fluides de Toulouse - FRANCE

395 - EVALUATION OF THE GRID CONVERGENCE FOR A ROCKET COMBUSTION CHAMBER WITH A POROUS INJECTOR
ZHUKOV Victor - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

608 - MODELING SCALAR MIXING AND TRANSPORT IN LRE-LIKE CONDITIONS
LAPENNA Pasquale Eduardo - University of Rome «La Sapienza» - ITALY

15:00 >> PP - Nozzles and plumes I

Location: BL27.18

Chairs:

STARK Ralf - DLR - GERMANY

NASUTI Francesco - University of Rome «La Sapienza»- ITALY

359 - THE TICTOP NOZZLE – FIRST EXPERIMENTAL RESULTS
FREY Manuel - Airbus Safran Launchers - GERMANY

666 - EFFECT OF NON-CIRCULAR NOZZLE SHAPE ON IMPINGEMENT COOLING CHARACTERISTICS
KARAKUS Yavuzer - Istanbul Technical University - TURKEY

178 - DESIGN OF A FILM COOLED DUAL BELL NOZZLE
STARK Ralf - DLR (German Aerospace Center) - GERMANY

507 - NUMERICAL MODELLING OF UNSTEADY START PROCESSES OF ALTITUDE TESTS FACILITY GAS-DYNAMIC TUBES
Speaker TBC

523 - DEVELOPMENT OF A PROBE FOR PARTICLE COLLECTION IN HIGH-TEMPERATURE, SUPERSONIC FLOW: APPLICATION OF QUASI-1D ENGINEERING MODELS AND 2D AXISYMMETRIC CFD
CARLOTTI Stefania - Politecnico di Milano - ITALY

Monday 3 July >> Afternoon

15:00 >> PP - Test benches and diagnostics

Location: BL27.06

Chairs:

WERLING Lukas - DLR - GERMANY

KNAB Oliver - Airbus Safran Launchers - GERMANY

234 - 50 YEARS OF TEST COMPLEX M11 IN LAMPOLDSHAUSEN – RESEARCH ON SPACE PROPULSION SYSTEMS FOR TOMORROW
CIEZKI Helmut - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

198 - TEST BENCH FOR KEY COMPONENTS OF MEGAWATT CLASS INTERNATIONAL POWER AND PROPULSION SYSTEM GROUND DEMONSTRATION
SOLODUKHIN Alexander - Keldysh Research Center - RUSSIAN FEDERATION

225 - PERGOLA: AN EXPERIMENTAL FACILITY TO INVESTIGATE STORABLE PROPELLANTS' COMBUSTION
BOUST Bastien - PPRIME - FRANCE

388 - DESIGN OF A CANDY PROPELLANT ROCKET MOTOR BY A COMPUTER AIDED SYSTEM AND ITS PERFORMANCE IN STATIC TESTING
GALARZA Camilo - Los Andes University - COLOMBIA

437 - THE PRESSURE DEPENDENCE OF OPTICAL FLAME EMISSION FROM SPACE PROPULSION-RELEVANT HYDROGEN COMBUSTION
STÜTZER Robert - DLR (German Aerospace Center) - GERMANY

375 - ACTIVE FLOW CONTROL BY MEANS OF PLASMA ACTUATOR IN THE CURVILINEAR CHANNEL
MORALEV Ivan - Joint Institute for High Temperatures Russian Academy of Sciences (JIHT) - RUSSIAN FEDERATION

15:00 >> SI - Aircraft System Concept and MDO

Location: BL27.05

Chairs:

TATRY Philippe - AIRBUS D&S - FRANCE

MARTINEZ-VAL Rodrigo - TU Madrid (UPM) - SPAIN

501 - THE IMPACT OF FUSELAGE CONFIGURATION ON THE DESIGN OF A REGIONAL JET AIRCRAFT
Speaker TBC

20 - A SYSTEMS ENGINEERING APPROACH TO VARIABLE INTAKES FOR CIVIL AVIATION
KAZULA Stefan - Brandenburg University of Technology Cottbus-Senftenberg - GERMANY

246 - INTEGRATED EQUIPMENT INSTALLATION AND OPTIMISATION FOR NEW ENGINE ARCHITECTURE NACELLES
VANKAN Wilhelmus - (NLR) National Aerospace Laboratory - NETHERLANDS

373 - CONFIGURATION DESIGN AND OPTIMIZATION OF DUCTED FAN USING PARAMETER BASED DESIGN
JUNG Yunki - Konkuk University - REPUBLIC OF KOREA

209 - CONCEPTUAL DESIGN OF SELF-EXPANDING FOLDING EXTREMELY LARGE ASPECT RATIO WING AIRPLANE
XIAOPENG Zhou - Tsinghua University - CHINA

271 - A MODELLING AND SIMULATION FRAMEWORK FOR THE INTEGRATED DESIGN OF AIRCRAFT SYSTEMS
CIMMINO Nicola - University of Naples «Federico II» - ITALY

280 - MOTOR MASS OPTIMIZATION FOR THE MAXIMIZATION OF SOLAR-POWERED AIRCRAFT PERFORMANCE
SEROKHVOSTOV Sergey - MIPT Moscow Institute of Physics and Technology - RUSSIAN FEDERATION

676 - ADVANCES, CHALLENGES AND FUTURE OF ALL ELECTRIC AIRCRAFT
POSADA Jose - Pascual Bravo University Institution - COLOMBIA

Monday 3 July >> Afternoon

15:00 >> SI/FD - Rendez-vous and Debris

Location: BL27.08

Chairs:

GANET Martine - AIRBUS D&S - FRANCE

BONNAL Christophe - (CNES) Centre National d'Etudes Spatiales - FRANCE

317 - GNC ARCHITECTURE FOR THE E.DEORBIT MISSION
SOMMER Josef - AIRBUS D&S - GERMANY

632 - ON GROUND VALIDATION OF DEBRIS REMOVAL TECHNOLOGIES
TOMASSINI Angelo - GMV Aerospace and Defence S.A.U. - SPAIN

612 - CONTACT DYNAMIC MODELS OF SPACE DEBRIS CAPTURING USING ANET
HAN Minghe - Delft University of Technology - NETHERLANDS

631 - SBSS-DMAND ANDROID: TWO SMALL MISSIONS FOR SPACE-BASED SPACE SURVEILLANCE AND ACTIVE DEBRIS REMOVAL DEMONSTRATIONS
TOMASSINI Angelo - GMV Aerospace and Defence S.A.U. – SPAIN

47 - SERVICE SPACECRAFT CONTROL DURING THE SPACE DEBRIS REMOVAL FROM THE GEO PROTECTION REGION BY THE ION SHEPHERD METHOD
OBUKHOV Vladimir - (RIAME) Research Institute of Applied Mechanics and Electrodynamics - RUSSIAN FEDERATION

15:00 >> SM - Advanced Materials/Technologies I

Location: BL28.1.2

Chair:

LENCZOWSKI Blanka - AIRBUS GROUP - GERMANY

298 - ENHANCEMENT OF NON-FLAMMABILITY AND MECHANICAL PROPERTIES OF AZXW8000 ALLOY THROUGH LOW TEMPERATURE EXTRUSION PROCESS
GO Yohan - Korea University of Science and Technology - REPUBLIC OF KOREA

252 - INVESTIGATIONS ON MICROSTRUCTURE AND MECHANICAL PROPERTIES OF NON-FLAMMABLE MG-AL-ZN-CA-Y EXTRUDED ALLOYS
GNEIGER Stefan - Austrian Insitute of Technology, Light Metals Technologies Ranshofen - AUSTRIA

300 - EFFECT OF ALLOYING ELEMENTS ON HIGH TEMPERATURE OXIDATION AND IGNITION BEHAVIOUR OF MAGNESIUM ALLOYS
KIM Young Min - Korea Institute of Materials Science - REPUBLIC OF KOREA

541 - SELF-PROPAGATED HIGH-TEMPERATURE SYNTHESIS OF MASTER-ALLOY FOR ALUMINUM ALLOYS
PROMAKHOV Vladimir - Tomsk State University - RUSSIAN FEDERATION

633 - ALMGSC ALLOY 5028 STATUS OF MATURATION
VOREL Michal - Airbus Safran Launchers - GERMANY

131 - FLPP ETID: ENABLING TECHNOLOGIES FOR FUTURE EUROPEAN UPPER STAGE ENGINES
SOLLER Sebastian - Airbus Safran Launchers - GERMANY

24 - THIN FILM DEPOSITION USING RAREFIED GAS JET
Speaker TBC

Tuesday 4 July >> Morning

08:30 >> FD - Aerodynamic modelling and identification

Location: BL27.08

Chair:

MARTINEZ-VAL Rodrigo - TU Madrid (UPM) - SPAIN

100 - A COMPARATIVE STUDY OF MATHEMATICAL MODELING METHODS FOR ROCKET AERODYNAMIC DATA
QIAN Weiqi - CARDC - CHINA

91 - COMPARISON OF A CLOSED-LOOP CONTROL BY MEANS OF HIGH-FIDELITY AND LOW-FIDELITY COUPLED CFD/RBD COMPUTATIONS
FRANZE Marius - DLR (German Aerospace Center) - GERMANY

550 - PITCHING AERODYNAMIC DAMPING IN A FREE FALL PHASE: BACKGROUND THEORIES AND NUMERICAL ANALYSES
SCHIARITI Daniele - AVIO – ITALY

376 - COMPUTATIONAL GROUND EFFECT AERODYNAMICS AND AIRPLANE STABILITY ANALYSIS DURING TAKE-OFF AND LANDING
SEREEZ Mohamed - De Montffort University - UNITED KINGDOM

179 - AIRCRAFT DYNAMICS IDENTIFICATION FOR OPTIMAL CONTROL
ROMMEL Cédric - Safety-Line, INRIA, Centre de Mathématiques Appliquées de l'École Polytechnique - FRANCE

08:30 >> FD - Navigation I

Location: BL27.07

Chair:

VALLET Charles - Retired from Airbus - FRANCE

695 - HYBRIDATION AND FUSION OF SATELLITE AND TELECOMMUNICATION NETWORK BASED POSITIONING METHODS
Francis CASTANIE - CNRS - FRANCE

264 - GUIDANCE, NAVIGATION, AND CONTROL FOR FORMATION FLYING USING DIFFERENTIAL DRAG
CHOCRON Shaked - Ben Gurion University of the Negev - ISRAEL

452 - SYNTHESIS OF A CONTROL SYSTEM FOR RELATIVE MOVEMENT OF CLOSELY SPACED SATELLITES
PANFEROV Aleksandr - State University of Aerospace Instrumentation - RUSSIAN FEDERATION

Tuesday 4 July >> Morning

08:30 >> FP - Buffet and Boundary Layer Transition Delay Control I

Location: BL27.13

Chairs:

HANIFI Ardeshir - KTH Royal Institute of Technology - SWEDEN

BRION Vincent - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

325 - BUFFET DELAY ON TRANSONIC AIRFOIL BY TANGENTIAL JET BLOWING
SOUDAKOV Vitaly - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

266 - LOCALIZED MICRO-DISCHARGES GROUP DBD VORTEX GENERATORS- DISTURBANCES SOURCE FOR ACTIVE TRANSITION CONTROL
MORALEV Ivan - Joint Institute for High Temperatures Russian Academy of Sciences (JIHT) - RUSSIAN FEDERATION

291 - BUFFET SUPPRESSION BY SUBMICROSECOND SPARK DISCHARGE
FIRSOV Aleksandr - Joint Institute for High Temperatures Russian Academy of Sciences (JIHT) - RUSSIAN FEDERATION

345 - TRANSONIC BUFFET CONTROL BY PLASMA ACTUATOR WITH SPARK DISCHARGE
GROMYKO Yury - ITAM Institute of Theoretical and Applied Mechanics - RUSSIAN FEDERATION

122 - SIMPLE BODY FORCE MODEL FOR DIELECTRIC BARRIER DISCHARGE PLASMA ACTUATOR
BABOU Yacine - Universidad Carlos III de Madrid - SPAIN

08:30 >> FP - CFD II

Location: BL28.1.1

Chairs:

LIPANOV Aleksej - Institute of Applied Mathematics Russian Academy of Sciences - RUSSIAN FEDERATION

WEISS Pierre-Elie - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

549 - PRELIMINARY NUMERICAL AERODATABASE OF VEGAC LAUNCHER
RONCIONI Pietro - CIRA - Italian Aerospace Research Center - ITALY

582 - DELAYED DETACHED EDDY SIMULATION OF SEPARATED FLOWS IN A PLANAR NOZZLE
MARTELLI Emanuele - Università della Campania Luigi Vanvitelli - ITALY

604 - STUDY ON K-? SHEAR STRESS TRANSPORT MODEL CORRECTIONS APPLIED TO ROUGH WALL TURBULENT HYPERSONIC BOUNDARY LAYERS
OLAZABAL-LOUME Marina - French Alternative Energies and Atomic Energy Commission (CEA) - FRANCE

610 - DNS OF SPARK-IGNITION IN AN ANODE-CATHODE CONFIGURATION: IMPACT OF PLASMA CHEMICAL KINETICS
MISDARIIS Antony - CERFACS - FRANCE

389 - DEVELOPMENT OF A SUPERSONIC FLOW CHEMICAL CO LASER DRIVEN BY A CHEMICAL REACTION BETWEEN CARBON VAPOR AND OXYGEN
FREDERICKSON Kraig - The Ohio State University - UNITED STATES OF AMERICA

Tuesday 4 July >> Morning

08:30 >> FP - Rarefield and Real Gas Flows II

Location: BL27.12

Chair:

MARINI Marco - CIRA - ITALY

222 - MULTI-TEMPERATURE MODELS FOR SHOCK HEATED FLOWS OF CO2/CO/O MIXTURE
KOSAREVA Alena - Saint Petersburg State University - RUSSIAN FEDERATION

230 - NAVIER–STOKES COMPUTATION OF HIGH-ENTHALPY NON-EQUILIBRIUM FLOWS WITH DISSOCIATION, VIBRATIONAL RELAXATION AND IONIZATION
SHOEV Georgy - ITAM Institute of Theoretical and Applied Mechanics - RUSSIAN FEDERATION

281 - NUMERICAL SIMULATION OF FLOW OVER THE SPACE VEHICLE IN MARTIAN ATMOSPHERE
EGOROV Ivan - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

601 - MODELING, NUMERICAL METHOD AND VALIDATION FOR THE SIMULATION OF HYPERSONIC RAREFIED GAS FLOWS
BARANGER Céline - French Alternative Energies and Atomic Energy Commission (CEA) - FRANCE

08:30 >> FP - Wind Tunnel and Measurement Techniques II

Location: BL27.11

Chair:

SOUVEREIN Louis - Airbus Safran Launchers - GERMANY

213 - SUPERSONIC WIND TUNNEL TESTS OF A STANDARD MODEL AT HIGH ANGLES OF ATTACK
VUKOVIC Djordje - Vojnotehnicki institut Beograd - SERBIA

368 - EFFECT OF MICRO RAMP GEOMETRY ON THE DOWNSTREAM FLOW TOPOLOGY IN A SUPERSONIC TURBULENT BOUNDARY LAYER: AN EXPERIMENTAL STUDY
SCHRIJER Ferry - Delft University of Technology - NETHERLANDS

623 - DESIGN OF A SUPPORT APPARATUS FOR WIND TUNNEL TEST OF MULTI-BODIES SEPARATION
Speaker TBC

Tuesday 4 July >> Morning

08:30 >> PP - Gel propellants

Location: BL27.18

Chairs:

CIEZKI Helmut - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

NATAN Benveniste - Technion - Israel Institute of Technology - ISRAEL

253 - OVERVIEW ON THE GERMAN GEL PROPULSION TECHNOLOGY ACTIVITIES: STATUS 2017 AND OUTLOOK
KIRCHBERGER Christoph - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

250 - REALIZATION AND RUN-IN OF A GEL COMBUSTION CHAMBER WITH OPTICAL ACCESS
KIRCHBERGER Christoph - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

268 - NUMERICAL SIMULATION OF A BORON LOADED GEL FUEL RAMJET COMBUSTOR
NATAN Benveniste - Technion - Israel Institute of Technology - ISRAEL

154 - GREEN GELLED PROPELLANT THROTTEABLE ROCKET MOTORS FOR AFFORDABLE AND SAFE MICRO-LAUNCHERS
NAUMANN Karl - Bayern-Chemie - GERMANY

158 - SCALABILITY OF GELLED PROPELLANT ROCKET MOTORS
CALDAS PINTO Pedro - Bayern-Chemie - GERMANY

216 - DESIGN AND REALIZATION OF A TEST STAND FOR OPTICAL FLUID DYNAMIC RESEARCH OF GELS
STIEFEL Alexander - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

08:30 >> PP - Hybrid propulsion prototypes

Location: BL27.17

Chairs:

KOBALD Mario - DLR Lampoldshausen - GERMANY

PARAVAN Christian - Politecnico di Milano SPLab - ITALY

645 - ZEPHYR - ZARM EXPERIMENTAL HYBRID ROCKET: RESULTS OF THE PROPULSION SYSTEM TESTS AND FLIGHT OF A SMALL LOX/PARAFFIN POWERED SOUNDING ROCKET
RICKMERS Peter - DLR (German Aerospace Center) - GERMANY

334 - DEVELOPMENT OF A 10 KN LOX/HTPB HYBRID ROCKET ENGINE THROUGH SUCCESSIVE DEVELOPMENT AND TESTING OF SCALED PROTOTYPES
BAMBAUER Maximilian - TUM - GERMANY

410 - GETTING READY FOR SPACE: NAMMO'S DEVELOPMENT OF A 30 KN HYBRID ROCKET BASED TECHNOLOGY DEMONSTRATOR
FAENZA Martina - Nammo Raufoss AS - NORWAY

468 - QUASI-STEADY AND FORCED TRANSIENT BURNING IN AVORTEX FLOW HYBRID MOTOR
PARAVAN Christian - Politecnico di Milano SPLab - ITALY

613 - THERMAL ANALYSIS OF A HYBRID ROCKET PROPULSION SYSTEM FOR INTERPLANETARY CUBESATS
CONTADIN Stefania - Politecnico di Torino - ITALY

659 - LIQUID BOOSTER ENGINE RELATED TMF PANEL TESTS
RICCIUS Joerg - DLR Lampoldshausen - GERMANY

Tuesday 4 July >> Morning

08:30 >> PP - LRE ignition

Location: BL27.14

Chairs:

GIRARD Nathalie - CNES, Direction des Lanceurs - FRANCE

NEGRI Michele - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

49 - LASER IGNITION OF A MULTI-INJECTOR RESEARCH COMBUSTION CHAMBER UNDER HIGH ALTITUDE CONDITIONS
BOERNER Michael - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

336 - EXPERIMENTAL INVESTIGATION OF THE IGNITION, FLAME PROPAGATION AND FLASHBACK BEHAVIOR OF A PREMIXED GREEN PROPELLANT CONSISTING OF N2O AND C2H4
WERLING Lukas - DLR (German Aerospace Center) - GERMANY

654 - EXTERNAL IGNITION DEVICE OR GROUND IGNITION FOR A CRYOGENIC H2/O2 PROPELLANT FED ROCKET ENGINE
MERLIN Cindy - Airbus Safran Launchers - FRANCE

08:30 >> PP - Solid propulsion

Location: BL27.15

Chairs:

ZARKO Vladimir - Institute of Chemical Kinetics and Combustion - RUSSIAN FEDERATION

RASHKOVSKIY Sergey - Institute for Problems in Mechanics RAS - RUSSIAN FEDERATION

617 - EFFECTS OF ZRH2 ON THE COMBUSTION BEHAVIORS OF SOLID DOUBLE-BASE PROPELLANTS
YANJING Yang - Xi'an Modern Chemistry Research Institute - CHINA

674 - DETAILED PROPERTIES OF IRON OXIDE SOLID-PROPELLANT CATALYST
Speaker TBC

598 - IGNITION OF HYDROXYL-TERMINATED POLYBUTADIENE(HTPB) FUEL UNDER CO2 LASER IRRADIATION
QIN Zhao - Science and Technology on Combustion and Explosion Laboratory, Xi'an Modern Chemistry Research Insti. - CHINA

105 - FORMATION OF SOLID RESIDUES IN COMBUSTION OF BORON-CONTAINING SOLID PROPELLANTS
RASHKOVSKIY Sergey - Institute for Problems in Mechanics RAS - RUSSIAN FEDERATION

324 - EXPERIMENTAL STUDY ON COMBUSTION PROCESS OF NEPE PROPELLANT
YAN Xiaoting - National University of Defence Technology - CHINA

98 - MICROWAVE RESONATOR METHOD FOR MEASURING TRANSIENT MASS GASIFICATION RATE OF CONDENSED SYSTEMS
ZARKO Vladimir - Institute of Chemical Kinetics and Combustion - RUSSIAN FEDERATION

544 - EFFECTS OF TKX-50 ON THE PROPERTIES OF HTPB-BASED COMPOSITE SOLID PROPELLANT
PANG Weiqiang - Politecnico di Milano - CHINA

Tuesday 4 July >> Morning

08:30 >> PP - Supersonic combustion and scramjets I

Location: BL27.16

Chairs:

DAVIDENKO Dmitry - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

SABELNIKOV Vladimir - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

31 - THERMODYNAMIC PERFORMANCE ANALYSIS OF SCRAMJET AT WIDE WORKING CONDITION
HUANG Wei - National Univ. of Defense Technology - CHINA

76 - PRELIMINARY DESIGN OF A 2D SCRAMJET INLET
Speaker TBC

218 - STUDIES ON THREE-DIMENSIONAL INTAKE WITH BLEED AT M= 3.5
CHIDAMBARANATHAN Mansiankar - CSIR-NATIONAL AEROSAPCE LABORATORIES - INDIA

235 - EXPERIMENTS ON FLOW INTERACTION IN A TRANSPIRATION COOLED MODEL SCRAMJET
STRAUSS Friedolin - DLR Lampoldshausen - GERMANY

459 - EXPERIMENTAL RESEARCH OF PROPULSION EFFICIENCY FOR HEXAFLY-INT FACILITY MODULE
RUDINSKY Aleksandr - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

08:30 >> SI - Space Debris Modeling & Mitigation

Location: BL27.06

Chairs:

MAGGI Filippo - Politecnico di Milano - ITALY

BONNAL Christophe - (CNES) Centre National d'Etudes Spatiales - FRANCE

540 - EXAMINATION OF SPACECRAFT ANOMALIES PROVIDES INSIGHT INTO COMPLEX SPACE ENVIRONMENT
MCKNIGHT Darren - Integrity Applications, Inc. - UNITED STATES OF AMERICA

519 - DYNAMICAL EVOLUTION OF SPACE DEBRIS IN VICINITY OF GNSS REGIONS
KUZNETSOV Eduard - Ural Federal University - RUSSIAN FEDERATION

443 - SENSITIVITY ANALYSIS FOR A SPACE DEBRIS ENVIRONMENT MODEL
SOMMA Gian Luigi - University of Southampton - UNITED KINGDOM

48 - DIMENSIONAL AND SCALE ANALYSIS APPLIED TO THE PRELIMINARY ASSESSMENT OF THE ENVIRONMENT CRITICALITY OF LARGE CONSTELLATIONS IN LEO
ANSELMO Luciano - CNR - Consiglio Nazionale delle Ricerche - ITALY

335 - SATELLITE DESIGN FOR DEMISE: DISMANTLEMENT MECHANISMS AND THERMAL CHARACTERISATION IN EARLY RE-ENTRY
HEINRICH Stephane - ALTRAN - FRANCE

510 - SRM PLUME: A CANDIDATE AS SPACE DEBRIS BRAKING SYSTEM FOR JUST-IN TIME COLLISION AVOIDANCE MANEUVER
JARRY Amauric - CNES, Direction des Lanceurs - FRANCE

Tuesday 4 July >> Morning

08:30 >> SI - Unmanned Aerial Vehicules Systems

Location: BL27.05

Chairs:

TARAN Jean-Pierre - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

LOVERA Marco - Politecnico di Milano - ITALY

184 - MULTI-OBJECTIVE MORPHING WING OPTIMIZATION FOR AN UNMANNED AIR VEHICLE
OZGEN Serkan - Middle East Technical University - TURKEY

89 - LOW LEVEL RPAS TRAFFIC IDENTIFICATION AND MANAGEMENT
LE TALLEC Claude - ONERA - FRANCE

200 - CONCEPTUAL DESIGN OF AHYBRID (TURBOFAN/SOLAR) POWERED HALE UAV
OZGEN Serkan - Middle East Technical University - TURKEY

307 - ENGINEERING DESIGN SYSTEM DEVELOPMENT USING INTEGRATED DATABASE FOR VTOL-STOL COMPOUND DRONE
Speaker TBC

382 - FLYWIN, AH2-LIFTING GAS AIRSHIP DEMONSTRATOR
MILOVA Praskovia - ULB,University of Brussels - BELGIUM

08:30 >> SM - Advanced Materials/Technologies II

Location: BL28.1.2

Chair:

BERDOYES Michel - Airbus Safran Launchers - FRANCE

306 - DESIGN AND TESTING OF LIQUID PROPELLANT INJECTORS FOR ADDITIVE MANUFACTURING
SOLLER Sebastian - Airbus Safran Launchers - GERMANY

123 - EXPERIMENTAL STUDY OF ION OPTICS WITH IMPROVED STRUCTURAL STRENGTH
Speaker TBC

244 - STATIC AND FATIGUE PROPERTIES OF TI-6AL-4V DEPOSITED BY THE WAAM PROCESS IN BOTH THE UNROLLED AND ROLLED CONDITIONS
MARTINA Filomeno - Cranfield University - UNITED KINGDOM

455 - ADDITIVE LAYER MANUFACTURING TECHNOLOGY IN AVIO INJECTOR HEAD DESIGN
TERRACCIANO Andrea - AVIO - ITALY

Tuesday 4 July >> Afternoon

14:00 >> FD - Avionics and Software

Location: BL27.08

Chairs:

RMILI Badr - CNES, Direction des Lanceurs - FRANCE

PHILIPPE Christian - ESA ESTEC - NETHERLANDS

70 - RELIABLE HIGH DATA RATE WIRELESS SENSOR NETWORK FOR HEAVY LIFT LAUNCH VEHICLES
CHALHOUB Gerard - University Clermont Auvergne - FRANCE

489 - FEES: A1/3U CUBESAT MISSION FOR IN ORBIT TECHNOLOGY VALIDATION
COLAGROSSI Andrea - Politecnico di Milano - ITALY

232 - BEACON ADVERTISING IN AN IEEE 802.15.4E TSCH NETWORK FOR SPACE LAUNCH VEHICLES
MINET Pascale - Inria - FRANCE

677 - MULTI-GIGABIT PHOTONIC TRANSCEIVERS FOR SPACEFIBRE DATA NETWORKS
LOGAN Ronald - Glenair Inc. - UNITED STATES OF AMERICA

316 - ROUTES GENERATION IN ON-BOARD SPACE DATA SYSTEMS WITH SPACEWIRE NETWORKS
PAKHAREV Sergey - State University of Aerospace Instrumentation - RUSSIAN FEDERATION

150 - MPBUS: MODULAR POWER BUS FOR SPACE VEHICLES
Speaker TBC

177 - RF ENERGY HARVESTER OPTIMIZED FOR WIRELESS SENSOR NETWORK IN LAUNCHER APPLICATION
Speaker TBC

399 - PROGRAMMING TECHNOLOGY FOR AUTONOMOUS ADAPTIVE CONTROL USING ON-BOARD MANY-CORE PLATFORMS
PAKHAREV Sergey - State University of Aerospace Instrumentation - RUSSIAN FEDERATION

14:00 >> FD - Control of Aircrafts

Location: BL27.07

Chairs:

KOLB Sebastien - CReA (French Air Force Research Centre) - FRANCE

CHOUKROUN Daniel - Ben-Gurion University of the Negev - ISRAEL

33 - HOW DOES THE RATE OF DECREASE OF THE AIRCRAFT'S TOTAL WEIGHT AFFECT THE TRIMMED CONDITIONS AND LONGITUDINAL PERFORMANCE?
Speaker TBC

204 - FLIGHT CONTROL LAWS CAREFREE HANDLING CLEARANCE OF A HIGHLY MANOEUVRABLE AIRCRAFT USING MULTI-STRATEGY ADAPTIVE GLOBAL OPTIMIZATION
RODRÍGUEZ ROBLES Rodney - AIRBUS D&S - SPAIN

402 - BIFUCATION ANALYSIS OF THE FLIGHT DYNAMICS OF A FIGHTER AIRCRAFT
KOLB Sebastien - CReA (French Air Force Research Centre) - FRANCE

202 - WIG-CRAFT FLIGHT CONTROL CONCEPT FOR THE WAVED SEA
NEBYLOV Alexander - State University of Aerospace Instrumentation - RUSSIAN FEDERATION

312 - ESTIMATION OF SPIN MODES REGIONS OF ATTRACTION
IGNATYEV Dmitry - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

192 - ROBUST CONTROL AUGMENTATION SYSTEM FOR FLIGHT ENVELOPE PROTECTION USING BACKSTEPPING CONTROL SCHEME
SEO Yongjun - Seoul National University - REPUBLIC OF KOREA

228 - HIGH ANGLE OF ATTACK MANEUVERING CONTROL OF F-16 AIRCRAFT BASED ON NONLINEAR DYNAMIC INVERSION
ALBOSTAN Onur - TUSAS Aerospace Industries, Inc. - TURKEY

→ THE EUROPEAN SPACE AGENCY

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European Space Agency

Tuesday 4 July >> Afternoon

14:00 >> FP - Buffet and Boundary Layer Transition Delay Control II and Round Table

Location: BL27.13

Chairs:

SOUDAKOV Vitaly - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

ASHWORTH Richard - AIRBUS GROUP - UNITED KINGDOM

61 - LAMINAR BUFFET AND FLOW CONTROL
BRION Vincent - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

350 - EFFECTIVE PLASMA BUFFET AND DRAG CONTROL FOR LAMINAR TRANSONIC AIRFOIL
POLIVANOV Pavel - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

341 - STABILIZATION OF CROSSFLOW INSTABILITY WITH PLASMA ACTUATORS: LINEARIZED NAVIER STOKES SIMULATIONS
ASHWORTH Richard - AIRBUS GROUP - UNITED KINGDOM

406 - EXPERIMENTAL STUDY OF CROSS-FLOW DOMINATED TRANSITION CONTROL BY DIELECTRIC BARRIER DISCHARGE
Speaker TBC

465 - DIRECT NUMERICAL SIMULATIONS OF TRANSITION CONTROL IN A SWEPT-WING BOUNDARY LAYER USING RING-TYPE PLASMA ACTUATORS
HANIFI Ardeshir - KTH Royal Institute of Technology - SWEDEN

14:00 >> FP - Flow Control I

Location: BL28.1.1

Chairs:

KNIGHT Doyle - Rutgers, The State University of New Jersey - UNITED STATES OF AMERICA

LEONOV Sergey - University of Notre Dame - UNITED STATES OF AMERICA

13 - ON VOLUMETRIC FORCE DISTRIBUTION GENERATED BY DIELECTRIC BARRIER DISCHARGE ACTUATOR
KURYACHII Aleksandr - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

85 - CONTROL OF PLASMA AND JOULE HEATING EFFECTS ON SUPERSONIC FLOW PAST A CYLINDRICALLY BLUNTED PLATE
AZAROVA Olga - Dorodnicyn Computing Center of the Russian Academy of Sciences - RUSSIAN FEDERATION

114 - CONTROL OF INCIDENT SHOCK INDUCED SEPARATION AT MACH 3.5 USING AN ARRAY OF STEADY MICRO-JET ACTUATORS
CHIDAMBARANATHAN Mansiankar - CSIR-NATIONAL AEROSAPCE LABORATORIES - INDIA

270 - ACTIVE CANCELATION OF A LOW-VELOCITY STREAK IN THE BOUNDARY LAYER BY ADJUSTABLE DBD PLASMA ACTUATOR
MORALEV Ivan - Joint Institute for High Temperatures Russian Academy of Sciences (JIHT) - RUSSIAN FEDERATION

285 - MITIGATION OF REFLECTED SHOCK WAVE BY STREAMWISE PLASMA ARRAY
LEONOV Sergey - University of Notre Dame - UNITED STATES OF AMERICA

308 - USING OF WAVY MORPHING WING FOR FLOW AND FLIGHT CONTROL
KRYUKOV Alexey - Khristianovich Institute of Theoretical and Applied Mechnics - RUSSIAN FEDERATION

Tuesday 4 July >> Afternoon

14:00 >> FP - Rarefield and Real Gas Flows III

Location: BL27.12

Chairs:

EGOROV Ivan - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

SHOEV Georgy - ITAM Institute of Theoretical and Applied Mechanics - RUSSIAN FEDERATION

449 - REDUCING THE EFFECTS OF AERODYNAMIC FORCES ON SMALL SATELLITES OPERATING IN VERY LOW EARTH ORBIT THROUGH SHAPE OPTIMISATION
WALSH Jonathan - University of Bristol - UNITED KINGDOM

470 - SIMULATION OF UNSTABLE RAREFIED GAS FLOWS IN CHANNELS AND NOZZLES FOR LARGE KNUDSEN NUMBERS
KHALIDOV Iskander - St-Petersburg State Polytechnical University - RUSSIAN FEDERATION

475 - SCATTERING OF RAREFIED GAS ATOMS FROM POLY-GAUSSIAN ROUGH SURFACE
KHALIDOV Iskander - St-Petersburg State Polytechnical University - RUSSIAN FEDERATION

636 - ON DEVELOPMENT OF ADSMC CODE FOR MODELLING OF IONIZED RADIATIVE REENTRY FLOWS
Speaker TBC

2 - SEPARATION ANALYSIS IN A HIGH-SPEED ROTATING CYLINDER FOR A BINARY GAS MIXTURE
Speaker TBC

14:00 >> FP - Wing Aerodynamics

Location: BL27.11

Chair:

MARTELLI Emanuele - Politecnico di Milano - ITALY

103 - V-SHAPED WINGS IN SUPERSONIC FLOW
MAKSIMOV Fedor - Institute of Mechanics Moscow Lomonosov State University - RUSSIAN FEDERATION

135 - WING FORM AND WING STRUCTURE OPTIMIZATION FOR HUMAN POWERED ORNITHOPTER
ZVERKOV Ilya - Khristianovich Institute of Theoretical and Applied Mechnics - RUSSIAN FEDERATION

480 - EFFECTS OF WING FLEXIBILITY ON THE DRAG OF REGIONAL AVIATION AIRCRAFT
GARCIA Luis Eduardo - Instituto Tecnologico de Aeronautica - BRAZIL

67 - 2D NUMERICAL INVESTIGATION OF BOUNDARY LAYER INGESTION PROPULSOR ON AIRFOIL
EL-SALAMONY Mostafa - Moscow Institute of Physics and Technology - RUSSIAN FEDERATION

653 - COMPARISON OF TURBULENCE MODELS EFFECTIVENESS FOR A DELTAWING AT LOW REYNOLDS NUMBERS
MONK David - University of Salford - UNITED KINGDOM

SYMPOSIUM	SI	SI	FD/GNC	FD/GNC	FP	FP	Worksh
Room	BL27.05	BL27.06	BL27.07	BL27.08	BL27.11	BL27.12	BL27.1
Monday 3 July							
08:30							
09:30-12:30							Op
12:30-14:00							
14:00-14:40	**Plenary: Research Networks:** Bruno						
15:00-18:20	1.1 Aircraft System Concept and MDO	5.34 Test benches and diagnostics	4.1 Optimization	1.11/4.2 Rendez-vous and Debris	2.13 Wind Tunnel and Measurement Techniques 1	2.21 Rarefied and Real Gas Flows I	2.09 Computationa Experimen Aerodynamics Vehicles
18:30-20:00							
Tuesday 4 July							
08:00							
08:30-11:25	1.3 Unmanned Aerial Vehicles Systems	1.8 Space Debris Modelling & Mitigation	4.3 Navigation 1	4.4 Aerodynamic modelling and identification	2.12 Wind Tunnel and Measurement Techniques 2	2.22 Rarefied and Real Gas Flows II	2.01 Buffet and Bo Layer Trans Delay Contr
11:50-12:40	**Plenary: Crosscutting Technologies for Satellites:** Franco Ongaro, ESTEC ESA - Francesc						
12:30-14:00							
14:00-17:20	1.2 Aircraft System Safety	1.9 Space Situational Awareness and Active Debris Removal	4.5 Control of Aircrafts	4.6 Avionics and Software	2.10 Wing Aerodynamics	2.23 Rarefied and Real Gas Flows III	2.02 Buffet and Transition D Control II Round Tal
18:00-18:50	**Plenary: EU Programmes:** Giuseppe Pagnano, European Commission -						
Wednesday 5 July							
08:00							
08:30-11:25	1.4 Space Systems MDO		4.7 Navigation II	4.8 Simulation and Validation	2.19 Shock Interactions	2.16 CFD III	2.24 Aeroaco
11:50-12:40	**Plenary: R&T Launch vehicle**						
12:30-14:00							
14:00-17:20	1.5 Space Systems Concepts	5.31 Propulsion systems	4.9 Orbit control	4.10 FDIR and Control	2.11 Separated Flows and Shear Layers	2.04 Boundary Layer Transition I	2.25 Internatio Workshop on
18:00-18:50	**Plenary: Future European Launchers Challenges: Ariane 6 an**						
20:00-23:00	Gala						
Thursday 6 July							
08:00							
08:30-11:25	1.7 Hypersonics Systems	5.28 Turbomachines	4.11 Control/Guidance of Launchers and Spacecrafts		2.03 Launcher Aerodynamics	2.07 Computational and Experimental Aerodynamics of Air Vehicles I	2.26 Internatio Workshop on II
11:50-12:40	**Plenary: Funding Opportunities:** Russel Cummings, AFOSR						
12:30-14:00							
14:00-17:20	1.6 Launch of Small Payloads	5.29 GOX/GCH4 combustion	4.12 Flight Control of UAVs	1.10 Reentry Survivability & Space Surveillance	2.20 Heat Transfer	2.06 Boundary Layer Transition III	2.27 Internatio Workshop on III
18:00-19:00	**Plenary: Helicopter Propulsion:**						
	C						

>> Programme

op	FP	PP	PP	PP	PP	PP	S&M
3	BL28.1.1	BL27.14	BL27.15	BL27.16	BL27.17	BL27.18	BL28.1.2
Registration							
ening Ceremony							
Lunch							
Sainjon, EREA & ONERA - Spiros Pantelakis, EASN							
l and tal of Air II	2.14 CFD I	5.1 LRE I	5.2 Green liquid propellants I	5.3 Liquid combustion	5.4 LRE chamber cooling	5.5 Nozzles and plumes (I)	3.1 Advanced Materials/ Technologies I
Welcome Party							
Registration							
undary ition rol I	2.15 CFD II	5.6 LRE ignition	5.7 Solid propulsion	5.8 Supersonic combustion and scramjets (I)	5.9 Hybrid propulsion prototypes	5.10 Gel propellants	3.2 Advanced Materials/ Technologies II
co Lumaca, Thales Aliena Space, Ralf Hartmann, Airbus DS - Jan-Christian Meyer, OHB Space Debris Centre							
Lunch							
B.L. elay and ble	2.17 Flow Control I	5.11 LRE modeling	5.12 Solid propulsion modeling	5.13 Supersonic combustion and scramjets (II)	5.14 Hybrid propulsion fuels (I)	5.15 Nozzles and plumes (II)	3.3 Advanced Materials/ Technologies III
Peter Hotham, SESAR Joint Undertaking - Michael Kyriakopoulos, European Commission							
Registration							
ustics	2.18 Flow Control II	5.17 Methane rocket engines (I)	5.16 Injection and sprays	5.18 Solid propulsion aluminized propellants	5.19 Supersonic combustion and scramjets III	5.20 Hybrid propulsion fuels (II)	3.4 Structural Dynamics I
es: Stefano Bianchi, ESA - Jérôme Vila, CNES							
Lunch							
nal ICING I		5.23 Methane rocket engines II	5.24 Green solid propellants GRAIL Workhop	5.25 Propellant management and tanks	5.26 Hybrid propulsion numerical modeling I	5.27 Air breathing I	3.5 Structural Dynamics II
d Vega C & E: Yann Letourneur, Airbus Safran Launchers - Paolo Bellomi, AVIO							
Dinner: Science Museum							
Registration							
nal ICING	2.05 Boundary Layer Transition II	5.30 LRE II	Issues for Future of aerospace	3.8 Temperature Resistant Materials/ Protections I	5.32 Hybrid propulsion numerical modeling II	5.33 Air breathing II	3.6 Structural Modelling. Testing. Validation and Optimization I
R - Maija Kukla, Univ. of Maryland and NSF - Caroline Videlier-Gutmann, ESA							
Lunch							
nal ICING	2.08 Computational and Experimental Aerodynamics of Air Vehicles III	5.35 Green liquid propellants (II)	5.36 Thermo-acoustic instabilities	3.9 Temperature Resistant Materials/ Protections II	5.37 Hybrid propulsion experimental investigations	5.38 Electrical propulsion	3.7 Structural Modelling. Testing. Validation and Optimization II
Frédéric Ripolles, SAFRAN Helicopter Engines							
Closing remarks							

Tuesday 4 July >> Afternoon

14:00 >> PP - Hybrid propulsion fuels I

Location: BL27.17

Chairs:

WINGBORG Niklas - Swedish Defence Research Agency, FOI - SWEDEN

KOBALD Mario - DLR Lampoldshausen - GERMANY

107 - EXPERIMENTAL INVESTIGATION OF THE HYDROGEN PEROXIDE – SOLID HYDROCARBON HYPERGOLIC IGNITION
CASTANEDA David A. - Technion - Israel Institute of Technology - ISRAEL

473 - NOVEL, HIGH-REGRESSION RATE FUELS FOR HYBRID ROCKET MOTORS
GUZIK Aleksander - AGH University of Science and Technology - POLAND

245 - CHARACTERIZATION OF HTPB-BASED FUELS CONTAINING MULTIWALL CARBON NANOTURBES (MWCNTS) FOR HYBRID PROPELLANT
CHEN Suhang - Nanjing University of Science and Technology - CHINA

14:00 >> PP - LRE modeling

Location: BL27.14

Chairs:

ZHUKOV Victor - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

FREY Manuel - Airbus Safran Launchers - GERMANY

18 - SKELETAL KINETIC MECHANISM OF METHANE OXIDATION FOR HIGH PRESSURES AND TEMPERATURES
ZHUKOV Victor - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

397 - NUMERICAL STUDY ON COMBUSTION DYNAMICS OF KEROSENE/GOX IN A SWIRL INJECTOR UNDER SUPERCRITICAL CONDITION
KANG Jeongseok - Korea Aerospace University - REPUBLIC OF KOREA

Tuesday 4 July >> Afternoon

14:00 >> PP - Nozzles and plumes II

Location: BL27.18

Chairs:

STARK Ralf - DLR - GERMANY

NASUTI Francesco - University of Rome «La Sapienza»- ITALY

434 - IONIZED SOLID PROPELLANT ROCKET EXHAUST PLUME: MILES SIMULATION AND COMPARISON TO EXPERIMENT
GUY Aurélien - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

21 - RADIO FREQUENCY ATTENUATION BY A ROCKET PLUME USING DIFFRACTION THEORY AND FINITE ELEMENT MODELING
DIEUDONNÉ Eva - CNES, Direction des Lanceurs - FRANCE

441 - NUMERICAL SIMULATION OF RADIATION IN HIGH ALTITUDE SOLID PROPELLANT ROCKET PLUMES
BINAULD Quentin - ONERA - FRANCE

526 - DEVELOPMENT OF A PROBE FOR PARTICLE COLLECTION IN HIGH-TEMPERATURE, SUPERSONIC FLOW: CONCEPTUAL AND DETAILED DESIGN.
CARLOTTI Stefania - Politecnico di Milano - ITALY

579 - EXPERIMENTAL STUDY OF THE INFRARED SIGNATURE CHARACTERISTIC OF A SMALL TURBOJET ENGINE
GU Bonchan - Korea Advanced Institute of Science and Technology - REPUBLIC OF KOREA

16 - MODELLING OF LUNAR LANDER'S THRUSTER'S EXHAUST PLUME IMPINGEMENT IN VACUUM
Speaker TBC

14:00 >> PP - Solid propulsion modeling

Location: BL27.15

Chairs:

GALLIER Stany - Airbus Safran Launchers - FRANCE

CAVALLINI Enrico - University of Rome «La Sapienza»- ITALY

144 - A MODEL FOR SOLID PROPELLANT BURNING FLUCTUATIONS USING MESOSCALE SIMULATIONS
GALLIER Stany - Airbus Safran Launchers - FRANCE

148 - A NUMERICAL MESOSCALE MODEL FOR ALUMINUMAGGLOMERATION IN SOLID PROPELLANTS
PLAUD Mathieu - Airbus Safran Launchers - FRANCE

394 - PREDICTION OF COMBUSTION INSTABILITY ON INTERNAL BALLISTIC OF SOLID ROCKET MOTOR
Speaker TBC

430 - CFD STUDY OF VORTICITY PATTERNS AND SOUND GENERATION IN SIMPLIFIED AFT-FINOCYL GEOMETRIES
LAURETI Mariasole - University of Rome «La Sapienza» - ITALY

432 - VORTEX-SOUND MODELLING IN AFT-FINOCYL SOLID ROCKET MOTORS
CAVALLINI Enrico - Agenzia Spaziale Italiana - ASI - ITALY

646 - PREDICTION OF THE RESIDUAL THRUST OF 2ND AND 3RD VEGA LAUNCHER SOLID ROCKET MOTOR STAGES AFTER THE BURN-OUT, DUE TO INTERNAL THERMAL PROTECTION PYROLYSIS
SCHIARITI Daniele - AVIO - ITALY

174 - COMPUTATIONAL STUDY OF ALUMINUM DROPLET COMBUSTION IN DIFFERENT ATMOSPHERES
MULLER Mathieu - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

Tuesday 4 July >> Afternoon

14:00 >> PP - Supersonic combustion and scramjets II

Location: BL27.16

Chairs:

DAVIDENKO Dmitry - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

SABELNIKOV Vladimir - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

458 - PLASMA ASSISTED COMBUSTION OF ETHYLENE AND KEROSENE IN SUPERSONIC AIRFLOW
YARANTSEV Dmitry - Joint Institute for High Temperatures Russian Academy of Sciences (JIHT) - RUSSIAN FEDERATION

630 - DESIGN OF INLET DISTORTION GENERATORS FOR DIRECT-CONNECT SCRAMJET COMBUSTORS
DEGREGORI Enrico - Politecnico di Torino - ITALY

124 - EXPERIMENTAL INVESTIGATION OF PLASMA-ASSISTED SUPERSONIC COMBUSTION
SABELNIKOV Vladimir - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

12 - SHOCK WAVE FOCUS VIA WAVE AND JET IMPLODING FOR TWO-STAGE-PDE
Speaker TBC

171 - SIMULATION OF A ROTATING DETONATION UNDER CONDITIONS OF PREMIXED AND SEPARATE INJECTION OF GASEOUS PROPELLANTS
DAVIDENKO Dmitry - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

457 - DISTRIBUTED PLASMA SYSTEM FOR IGNITION AND FLAMEHOLDING IN SUPERSONIC FLOW
FIRSOV Aleksandr - Joint Institute for High Temperatures Russian Academy of Sciences (JIHT) - RUSSIAN FEDERATION

509 - VISUALIZATION OF CONVENTIONAL AND COMBUSTING SUBSONIC JET INSTABILITIES
KOZLOV Victor - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

14:00 >> SI - Aircraft System Safety

Location: BL27.05

Chairs:

CRESPO Javier - PoliTech Madrid - SPAIN

SUIMENBAYEV Bagdat - Kazakh National Research Technical University after K.Satpayev - KAZAKHSTAN

275 - CARRIER DECK LAUNCHING OF ADAPTED LAND-BASED AIRPLANES
MARTINEZ-VAL Rodrigo - TU Madrid (UPM) - SPAIN

558 - RESEARCH ON THE AVIATION ACCIDENT IMPORTANCE ANALYSIS BASED ON THE BOW-TIE MODEL
CUI Lijie - Air Force Engineering University - CHINA

276 - STRENGTHS AND WEAKNESSES OF THE EMERGENCY EVACUATION TRIAL FOR TRANSPORT AIRPLANE CERTIFICATION
MARTINEZ-VAL Rodrigo - TU Madrid (UPM) - SPAIN

303 - COMPUTATION OF AIRCRAFT COMBAT VULNERABILITY ASSESSMENT BASED ON LIGHT-OF-SIGHT ANGLE OF MISSILE FOR END-GAME SIMULATION
JO Euigyu - Konkuk University - REPUBLIC OF KOREA

562 - PERSONAL OVERHEAD STOWAGE BINS TO EASE FLIGHT BOARDING AND DISEMBARKING AND ENHANCE PASSENGER EXPERIENCE
GARG Pulkit - University of Petroleum and Energy Studies - INDIA

14 - NEW SCENARIOS AND ECOSYSTEMS WITH POTENTIAL TO REVOLUTIONIZE AVIATION IN THE 21ST CENTURY
Speaker TBC

Tuesday 4 July >> Afternoon

14:00 >> SI - Space Situational Awarness and Active Debris Removal

Location: BL27.06

Chairs:

TRUSHLYAKOV Valeriy - Omsk State Technical University - RUSSIAN FEDERATION

PHIPPS Claude - Photonic Associates, LLC - UNITED STATES OF AMERICA

553 - SPOOK - A COMPREHENSIVE SPACE SURVEILLANCE AND TRACKING ANALYSIS TOOL
RODRIGUEZ FERNANDEZ Oscar - AIRBUS - GERMANY

591 - A VALID JOINT DETECTION AND TRACKING METHOD FOR WEAK SPACE DEBRIS
ZHANG Lefeng - National Univ. of Defense Technology - CHINA

678 - SYSTEMATIC SPACE DEBRIS COLLECTION USING CUBESAT CONSTELLATION
LUCKEN Romain - Share My Space - FRANCE

102 - XXIST CENTURY TOWER: SPACE DEBRIS TRACKING AND REMOVAL
CALABRO Max - The Inner Arch - FRANCE

543 - SPACE DEBRIS REMOVAL USING AN AUTOMATED CAPTURING AND SELF STABILISING SYSTEM, C.L.E.O.
Speaker TBC

14:00 >> SM - Advanced Materials/Technologies III

Location: BL.28.1.2

Chair:

MATHIS Kevin - (CNES) Centre National d'Etudes Spatiales - FRANCE

LILLO Francesca - AVIO - ITALY

4 - COMPOSITE REINFORCED METALLIC CYLINDER FOR HIGH-SPEED ROTATION
Speaker TBC

28 - DEVELOPMENT OF ULTRA-LIGHT WEIGHT CARBON FIBRE SPACE REFLECTOR ANTENNA'S MANUFACTURING PROCESS
MAUNG Pyi Phyo - Bauman Moscow State Technical University - RUSSIAN FEDERATION

310 - CURING KINETICS ANALYSIS OF CARBON/EPOXY PREPREG FOR SOLID ROCKET MOTOR CASINGS APPLICATION
MIRANTE Nicola - AVIO - ITALY

311 - OPTIMIZATION OF CURING PROCESS OF CARBON/EPOXY PREPREG FOR LARGE SOLID ROCKET MOTOR CASING
MIRANTE Nicola - AVIO - ITALY

Wednesday 5 July >> Morning

08:30 >> FD - Navigation II

Location: BL27.07

Chair:

NEBYLOV Alexander - State University of Aerospace Instrumentation - RUSSIAN FEDERATION

660 - ADVANCES IN THE DEVELOPMENT OF THE ATTITUDE DETERMINATION AND CONTROL SYSTEM OF THE CUBESAT MOVE-II
MESSMANN David - TUM - GERMANY

655 - A NEW OBSERVER FOR AEROSPACE NAVIGATION
Speaker TBC

607 - ON-BOARD DA-BASED STATE ESTIMATION ALGORITHM FOR SPACECRAFT RELATIVE NAVIGATION
CAVENAGO Francesco - Politecnico di Milano - ITALY

15 - INTEGRATED SVD/EKF FOR NANO-SATELLITE ATTITUDE DETERMINATION IN THE CASE OF MAGNETOMETER FAULTS
CILDEN GULER Demet - Aerospace Engineering Faculty - TURKEY

08:30 >> FD - Simulation and Validation

Location: BL27.08

Chairs:

CHOUKROUN Daniel - Ben-Gurion University of the Negev - ISRAEL

CRESPO Javier - PoliTech Madrid - SPAIN

259 - ANALYSIS OF AIRCRAFT TRAJECTORY UNCERTAINTY USING ENSEMBLE WEATHER FORECASTS
RIVAS Damián - University of Seville - SPAIN

539 - THE IXV PROGRAM FES: MIL AND SIL SIMULATION ENVIRONMENT FOR GNC DESIGN, DEVELOPMENT AND VERIFICATION
HAGENFELDT Miguel - DEIMOS - SPAIN

162 - A FLEXIBLE REAL-TIME SIMULATION PLATFORM DEDICATED TO EMBEDDED ROCKET ENGINE CONTROL SYSTEMS DEVELOPMENT AND TESTING
ESPINOSA Amaya - CNES - FRANCE

263 - SECTOR DEMAND ANALYSIS UNDER METEOROLOGICAL UNCERTAINTY
VALENZUELA Alfonso - University of Seville - SPAIN

205 - FEATURES OF THE NANOSATELLITE DYNAMICS IN THE GRAVITATIONAL AND MAGNETIC FIELD OF THE EARTH
GUSSEINOV Samir - Kazakh National Research Technical University after K.I. Satpayev - KAZAKHSTAN

Wednesday 5 July >> Morning

08:30 >> Workshop: FP - Aeroacoustics

Location: BL27.13

Chairs:

GELY Denis - ONERA - FRANCE

164 - NUMERICAL SIMULATION OF THE COMBINED POROUS-SERRATION TRAILING EDGE FOR NOISE REDUCTION
Speaker TBC

212 - NUMERICAL ANALYSIS OF ACOUSTIC LOADS GENERATED BY SUPERSONIC JETS
KOH Seong Ryong - RWTHAachen University - GERMANY

385 - INVESTIGATION OF SUBSONIC JET ACOUSTIC FIELD BASED ON LARGE EDDY SIMULATION METHOD
BENDERSKIY Leonid - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

568 - COMPARISON OF TWO DIFFERENT CAA METHODS FOR THE PREDICTION OF FAR-FIELD NOISE FROM HEATED AND UNHEATED JETS
TRÜMNER Jens - Universität der Bundeswehr München - GERMANY

439 - HELICOPTER NOISE SIMULATION AND EXPERIMENTAL TECHNIQUE FOR ITS VALIDATION
ZAYTSEV Mikhail - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

638 - CREATING A DATABASE OF HELICOPTER MAIN ROTOR ACOUSTIC EXPERIMENTS FOR VALIDATION OF CFD METHODS
PAKHOV Vladimir - Kazan National Research TU - RUSSIAN FEDERATION

08:30 >> FP - CFD III

Location: BL27.12

Chair:

MARTELLI Emanuele - «Università della Campania Luigi Vanvitelli» - ITALY

5 - DSMC SIMULATION OF HIGH MACH NUMBER TAYLOR-COUETTE FLOW
Speaker TBC

6 - THE GENERALIZED ONSAGER MODEL FOR A BINARY GAS MIXTURE WITH SWIRLING FEED
Speaker TBC

22 - ANALYSIS OF HIGH-SPEED ROTATING FLOW IN POLAR (R - THETA) COORDINATE
Speaker TBC

652 - FLUID-KINETIC COUPLING OF THE BGK AND LATTICE BOLTZMANN EQUATIONS
ILYIN Oleg - Dorodnicyn Computing Center of the Russian Academy of Sciences - RUSSIAN FEDERATION

Wednesday 5 July >> Morning

08:30 >> FP - Flow Control II

Location: BL28.1.1

Chairs:

KNIGHT Doyle - Rutgers, The State University of New Jersey - UNITED STATES OF AMERICA

MORALEV Ivan - Joint Institute for High Temperatures Russian Academy of Sciences (JIHT) - RUSSIAN FEDERATION

351 - EFFECT OF BLOWING/SUCTION THROUGH POROUS SURFACE AT SUPERSONIC MACH NUMBER
POLIVANOV Pavel - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

670 - HIGH SPEED FLOW CONTROL WITH NANOSECOND DISCHARGE
ZNAMENSKAYA Irina - Lomonosov Moscow State University - RUSSIAN FEDERATION

117 - INVESTIGATION OF FLOW SEPARATION CONTROL WITH DIELECTRIC BARRIER DISCHARGE PLASMA ACTUATOR
KHOO B.C. - National University of Singapore - SINGAPORE

405 - FLOW CONTROL MECHANISMS OF THE KARMEN-VORTEX GENERATOR IN CONICAL DIFFUSER SEPARATION
YANG Jinwen - Tsinghua University - CHINA

08:30 >> FP - Shock Interaction

Location: BL27.11

Chair:

REIJASSE Philippe - ONERA - FRANCE

63 - THE SHOCK-WAVES INTERFERENCE IN THE FLOW AROUND A CYLINDER MOUNTED ON A BLUNTED PLATE
RADCHENKO Vladimir - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

84 - CONTROL OF TRIPLE-SHOCK CONFIGURATIONS IN HIGH SPEED FLOWS PAST AD BODIES IN DIFFERENT GASES
AZAROVA Olga - Dorodnicyn Computing Center of the Russian Academy of Sciences - RUSSIAN FEDERATION

65 - NUMERICAL SIMULATION OF SHOCK WAVE/ LAMINAR BOUNDARY LAYER INTERACTION OVER A BLUNT GEOMETRY
KNIGHT Doyle - Rutgers, The State University of New Jersey - USA

97 - EFFECT OF VIBRATIONAL TEMPERATURE BOUNDARY CONDITION OF ISOTHERMAL WALL ON HYPERSONIC SHOCK WAVE LAMINAR BOUNDARY LAYER INTERACTION OF A HOLLOW CYLINDER FLARE
KNIGHT Doyle - Rutgers, The State University of New Jersey - USA

Wednesday 5 July >> Morning

08:30 >> PP - Hybrid propulsion fuels II

Location: BL27.18

Chairs:

SHIMADA Toru - Japan Aerospace Exploration Agency - JAPAN

PARAVAN Christian - Politecnico di Milano SPLab - ITALY

251 - HYBRID ROCKET STUDIES USING HTPB/ PARAFFIN FUEL BLENDS IN GASEOUS OXYGEN FLOW
THOMAS James - Texas A&M University - UNITED STATES OF AMERICA

214 - THE EFFECTS OF MECHANICAL MODIFICATION ADDITIVES ON THE REGRESSION RATE OF PARAFFIN-BASED FUELS FOR HYBRID ROCKET
TANG Yue - Nanjing University of Science and Technology - CHINA

596 - SELF-DISINTEGRATION EFFECTS ON THE REGRESSION RATE OF COMPOSITE POLYMER PARTICLE PARAFFIN FUEL (CM3PF)
SHEN Ruiqi - Nanjing University of Science and Technology - CHINA

491 - IMAGING ANALYSIS OF BOUNDARY-LAYER COMBUSTION WITH TANGENTIAL AND RADIAL OXIDIZER INJECTION IN A CYLINDER
SHIMADA Toru - Japan Aerospace Exploration Agency - JAPAN

08:30 >> PP - Injection and Sprays

Location: BL27.15

Chairs:

PISCAGLIA Federico - Politecnico di Milano - ITALY

SOLLER Sebastian - Airbus Safran Launchers - GERMANY

78 - EXPERIMENTAL STUDY OF ATOMIZATION IN GAS-CENTERED COAXIAL INJECTORS WITH LIQUID JETS INJECTED IN AIR CROSS-FLOW
Speaker TBC

466 - ANALYSE OF THE ATOMIZATION PROCESS USING COMPUTATIONAL FLUID DYNAMICS
DE MORAIS BERTOLDI Artur Elias - ULB,University of Brussels - BELGIUM

574 - INCLUDING REAL FUEL CHEMISTRY IN LARGE-EDDY SIMULATIONS
MISDARIIS Antony - CERFACS - FRANCE

79 - VISUALIZATION COUPLED WITH PHASE DOPPLER INTERFEROMETRY FOR INVESTIGATION OF CRYOGENIC LOX/NITROGEN AND LOX/HELIUM SPRAYS
FDIDA Nicolas - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

536 - A STUDY OF PRIMARY ATOMIZATION IN HIGH-PRESSURE FUEL INJECTORS BY A DYNAMIC VOF SOLVER IN OPENFOAM
MONTORFANO Andrea - Politecnico di Milano - ITALY

147 - DIFFUSE INTERFACE MODELLING FOR THE PRIMARY ATOMIZATION IN CRYOGENIC ROCKET ENGINES
MURRONE Angelo - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

691 - NUMERICAL STUDY OF ACOUSTIC RADIATION EFFECTS ON AIR-ASSISTED JETS
RUTARD Nicolas - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

Wednesday 5 July >> Morning

08:30 >> PP - Methane rocket engines I

Location: BL27.14

Chairs:

HAGEMANN Gerald - ASL - GERMANY

OSCHWALD Michael - DLR (German Aerospace Center) - GERMANY

88 - EFFECT OF PINTLE INJECTOR ELEMENT GEOMETRY ON COMBUSTION IN A LIQUID OXYGEN/ LIQUID METHANE ROCKET ENGINE
Speaker TBC

332 - SYSTEM ANALYSIS OF ALOX/METHANE EXPANDER BLEED ENGINE
NASUTI Francesco - University of Rome «La Sapienza» - ITALY

484 - ARCHITECTURE TRADE-OFF FOR THE VEGA-E UPPER STAGE LOX/CH4 ENGINE
LIUZZI Daniele - AVIO - ITALY

483 - FIRING TEST AND PROGRAM PROGRESS OF THE SMSP REGENERATIVE COMBUSTION CHAMBER
LIUZZI Daniele - AVIO - ITALY

381 - SUBSCALE FIRING TEST FOR REGENERATIVE COOLING LOX/METHANE ROCKET ENGINE
KATO Toshiki - Japan Aerospace Exploration Agency - JAPAN

490 - RESEARCH AND DEVELOPMENT RESULT OF CRYOGENIC PROPELLANT VALVE FOR SMALL THRUST LOX/METHANE ROCKET ENGINE
ASAKAWA Hiroya - IHI Corporation – JAPAN

08:30 >> PP - Solid propulsion aluminized propellants

Location: BL27.16

Chairs:

BABUK Valery - Baltic State Technical University - RUSSIAN FEDERATION

JARRY Amauric - CNES, Direction des Lanceurs - FRANCE

43 - SMOKE OXIDE PARTICLES FORMATION AT THE BURNING SURFACE OF CONDENSED SYSTEMS
BABUK Valery - Baltic State Technical University - RUSSIAN FEDERATION

532 - ALUMINIUM DROPLETS COMBUSTION AND SRM INSTABILITIES
ORLANDI Olivier - Airbus Safran Launchers - FRANCE

469 - AGEING EFFECTS ON NANO-SIZED ALUMINUM REACTIVITY
PARAVAN Christian - Politecnico di Milano SPLab - ITALY

327 - EXPERIMENTAL ANALYSIS OF SOLID-PROPELLANT SURFACE DURING COMBUSTION WITH SHADOWGRAPHY IMAGES: NEW TOOLS TO ASSIST ALUMINUM-AGGLOMERATION MODELLING
DEVILLERS Robin - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

585 - BURNING RATES OF VITON-COATED ALUMINUM AND WATER MIXTURES
WOLLMARK Shahar - Technion - Israel Institute of Technology - ISRAEL

Wednesday 5 July >> Morning

08:30 >> PP - Supersonic combustion and scramjets III

Location: BL27.17

Chairs:

RASHKOVSKIY Sergey - Institute for Problems in Mechanics RAS - RUSSIAN FEDERATION

DAVIDENKO Dmitry - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

278 - COMPLEX NUMERICAL-EXPERIMENTAL INVESTIGATIONS OF HYDROGEN COMBUSTION IN MODEL HIGH-SPEED COMBUSTOR DUCTS
VLASENKO Vladimir - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

106 - NUMERICAL SIMULATION OF SOLID-FUEL RAMJET COMBUSTOR WITH A FLAME HOLDER
RASHKOVSKIY Sergey - Institute for Problems in Mechanics RAS - RUSSIAN FEDERATION

454 - COMPUTATIONAL RESEARCH OF OPERATION PROCESS IN THE COMBUSTION CHAMBER OF HEXAFLY-INT MODEL IN WIDE RANGE OF FREE STREAM CONDITIONS AND EQUIVALENCE RATIOS
KUKSHINOV Nikolay - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

92 - VALIDATION AND FURTHER DEVELOPMENT OF 2.5D APPROACH TO DESCRIPTION OF FLOWS IN ENGINE DUCTS
VLASENKO Vladimir - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

08:30 >> SI - Space System MDO

Location: BL27.05

Chairs:

KNOCHE Ralf - Airbus Safran Launchers - GERMANY

DUPONT Cédric - BERTIN TECHNOLOGIES - FRANCE

575 - ALTAIR AIR LAUNCH SYSTEM: MID-TERM SYSTEM DESIGN OF THE SPACE LAUNCH VEHICLE
DUPONT Cédric - BERTIN TECHNOLOGIES - FRANCE

413 - MULTI-DISCIPLINARY OPTIMISATION OF RE-ENTRY VEHICLES FROM TAEM TO LANDING
BONETTI Davide - DEIMOS - SPAIN

650 - ANALYTICAL CONSTELLATION DESIGN AND LINK BUDGET COMPUTATION TOOL FOR EO MISSIONS
MARCUCCIO Salvo - University of Pisa - ITALY

391 - PERFORMANCE EVALUATION OF ALTERING-INTENSITY SWIRLING-OXIDIZER-FLOW-TYPE HYBRID ROCKET USING MULTI-DISCIPLINARY OPTIMIZATION
KANAZAKI Masahiro - Tokyo Metropolitan University – JAPAN

75 - OVERVIEW ON THE NATIONAL PROGRAMME TO ENHANCE CRYOGENIC UPPER STAGE TECHNOLOGIES TO EXTEND EUROPEAN AND GERMAN COMPETENCES IN FUTURE LAUNCHER DEVELOPMENTS - PROCEED
KNOCHE Ralf - Airbus Safran Launchers - GERMANY

223 - NEW STRATEGY TO PRELIMINARY DESIGN SPACE LAUNCH VEHICLE BASED ON A DEDICATED MDO PLATFORM
DUPONT Cédric - BERTIN TECHNOLOGIES - FRANCE

Wednesday 5 July >> Morning

08:30 >> SM - Structural Dynamics I

Location: BL28.1.2

Chair:

LUBER Wolfgang - TUM - GERMANY

206 - SIMULATION OF FLUID STRUCTURE INTERACTION IN OVEREXPANDED COLD GAS ROCKET NOZZLES USING THE DLR TAU CODE
JACK Sebastian - DLR (German Aerospace Center) - GERMANY

299 - HYPERSONIC FLUID-STRUCTURE INTERACTION ON A CANTILIVERED PLATE
CURRAO Gaetano - University of New South Wales - AUSTRALIA

38 - EXPERIMENTAL CHARACTERIZATION OF THE ACOUSTICS OF THE FUTURE ARIANE 6 LAUNCH PAD
MALBEQUI Patrice - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

80 - DESIGN OPTIMIZATION AND TEST CAMPAIGN OF A1/50TH ARIANE 5 REPRESENTATIVE DYNAMIC MODEL SUBJECTED TO BLAST WAVES
THEMIOT Cedric - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

634 - DYNAMIC AEROELASTIC SIMULATION OF COMPOSITE WING FOR HALE UAV APPLICATION
KIRSCH Bertrand - CReA (French Air Force Research Centre) - FRANCE

90 - NONLINEAR FLUTTER ANALYSIS WITH UNCERTAINTIES BASED ON DESCRIBING FUNCTION AND STRUCTURED SINGULAR VALUE WITH AN IQC VALIDATION
IANNELLI Andrea - University of Bristol - UNITED KINGDOM

683 - INTEGRATED DESIGN OF COMPOSITE GENERIC WINGS
Speaker TBC

Wednesday 5 July >> Afternoon

14:00 >> FD - FDIR and Control

Location: BL27.08

Chairs:

ZOLGHADRI Ali - University of Bordeaux - FRANCE

GANET Martine - Airbus Safran Launchers - FRANCE

692 - TURNING MODEL-BASED FDIR THEORY INTO PRACTICE FOR AEROSPACE AND FLIGHT-CRITICAL SYSTEMS
ZOLGHADRI Ali - University of Bordeaux - FRANCE

51 - A MULTI-OBJECTIVE HINFINITY DESIGN FRAMEWOK FOR HELICOPTER PID CONTROL TUNING WITH HANDLING QUALITIES REQUIREMENTS
PEROZZI Gabriele - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

556 - FDI DESIGN AND VERIFICATION USING A HIGH-FIDELITY INDUSTRIAL AIRBUS NONLINEAR SIMULATOR
HAGENFELDT Miguel - DEIMOS - SPAIN

195 - NEURAL NETWORK-BASED NONLINEAR DYNAMIC INVERSION CONTROL OF VARIABLE-SPAN MORPHING AIRCRAFT
LEE Jihoon - Seoul National University - KOREA (REPUBLIC OF)

321 - RECONFIGURATION CONTROL METHOD FOR NON-REDUNDANT ACTUATOR FAULTS ON UAV
BOCHE Adèle - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

62 - FAULT TOLERANT INTEGRATED BAROMETRIC-INERTIAL-GPS ALTIMETER
MAÑERO CONTRERAS Alberto - Politecnico di Milano - ITALY

14:00 >> FD - Orbit control

Location: BL27.07

Chairs:

PHILIPPE Christian - ESA ESTEC - NETHERLANDS

SOMMER Josef - AIRBUS D&S - GERMANY

50 - SOLVING THE MINIMUM-FUEL LOW-THRUST GEOSTATIONARY STATION KEEPING PROBLEM VIASWITCHING SYSTEMS THEORY
GAZZINO Clément - LAAS-CNRS - FRANCE

151 - OPTIMAL BI-IMPULSE ORBITAL TRANSFER BETWEEN COPLANAR ORBITS
SANATIFAR Mohammad - University of Rome «La Sapienza» - ITALY

289 - FAST AERODYNAMIC ESTABLISHMENT OF A CONSTELLATION OF CUBESATS
SMITH Brenton - University of New South Wales - AUSTRALIA

39 - FORMATION FLYING ALONG HALO ORBIT USING SWITCHING HAMILTONIAN STRUCTURE PRESERVING CONTROL
JUNG Seungyun - Seoul National University - KOREA (REPUBLIC OF)

Wednesday 5 July >> Afternoon

14:00 >> FP - Boundary Layer Transition I

Location: BL27.12

Chairs:

LIPATOV Igor - TsAGI - RUSSIAN FEDERATION

KOSINOV Alexander - ITAM Institute of Theoretical and Applied Mechanics - RUSSIAN FEDERATION

3 - TRANSITION AND TURBULENCE IN A WALL-BOUNDED CHANNEL FLOW AT HIGH MACH NUMBER
Speaker TBC

60 - BIGLOBAL STABILITY ANALYSIS OF THE WAKE BEHIND AN ISOLATED ROUGHNESS ELEMENT IN HYPERSONIC FLOW
PADILLA MONTERO Iván - VKI -von Karman Institute for Fluid Dynamics - BELGIUM

120 - TRANSITION REVERSAL ON BLUNT OGIVE BODY OF REVOLUTION AT HYPERSONIC SPEEDS
VAGANOV Alexander - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

128 - PROBLEMS WITH DISCONTINUOUS BOUNDARY CONDITIONS DESCRIBING LAMINAR FLOWS AT HIGH REYNOLDS NUMBERS
LIPATOV Igor - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

161 - THE INVESTIGATION OF LAMINAR-TURBULENT TRANSITION BEHIND THE LOCALIZED ROUGHNESS ON THE SWEPT WING IN THE FAVORABLE PRESSURE GRADIENT REGION
KOZLOV Victor - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

163 - THE INFLUENCE OF TWO-DIMENSIONAL ROUGHNESS ELEMENT ON BOUNDARY FLOW STRUCTURE IN THE FAVORABLE PRESSURE GRADIENT REGION OF THE SWEPT WING
KOZLOV Victor - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

682 - FORWARD-FACING STEPS INDUCED TRANSITION IN A SUBSONIC BOUNDARY LAYER
FU Song - Tsinghua University - CHINA

14:00 >> FP - International Workshop on ICING I

Location: BL27.13

Chairs:

VILLEDIEU Philippe - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

LAURENDEAU Eric - POLYTECHNIQUE MONTREAL - CANADA

570 - SCIENTIFIC AND TECHNOLOGICAL CHALLENGES WITH DURABLE ICEPHOBIC COATINGS
BONACCURSO Elmar - AIRBUS - GERMANY

668 - ICEPHOBIC PERFORMANCE OF SUPERHYDROPHOBIC COATINGS: A NUMERICAL ANALYSIS
DOLATABADI Ali - Concordia University - CANADA

625 - COMPARISON OF EXTENSIONAL AND FLEXURAL MODES FOR THE DESIGN OF PIEZOELECTRIC ICE PROTECTION SYSTEMS
ROUSET Pierrick - Institut supérieur de l'aéronautique et de l'espace - FRANCE

482 - PREDICTION OF RIVULET TRANSITION IN ANTI-ICING APPLICATIONS
GOSSET Anne - University of A Coruña - SPAIN

153 - EXPERIMENTAL STUDY OF UNSTEADY AERODYNAMIC CHARACTERISTICS OF TRANSPORT AIRCRAFT IN ICING CONDITIONS
IGNATYEV Dmitry - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

687 - AN INTEGRATED APPROACH TO SWEPT WING ICING SIMULATION
Speaker TBC

Wednesday 5 July >> Afternoon

14:00 >> FP - Separated Flows and Shear Layers

Location: BL27.11

Chair:

WEISS Pierre-Elie - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

82 - NEW TYPE OF SINGULARITY IN THE NEAR-WALL REGION OF 3D BOUNDARY LAYER OVER THE RUNOFF PLANE AND THE FLOW STRUCTURE IN ITS VICINITY
SHALAEV Vladimir - Moscow Institute of Physics and Technology - RUSSIAN FEDERATION

86 - DYNAMIC LAYER FORMATION IN THE REATTACHMENT ZONE FOR A SUPERSONIC LAMINAR SEPARATION FLOW
ZAPRYAGAEV Valeriy - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

183 - MECHANISM OF IDEAL GAS SEPARATION FOR BODIES IN A SUPERSONIC FLOW
TUGAZAKOV Renat - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

619 - ON THE STRUCTURE OF LARGE SCALE SEPARATIONS IN HYPERSONIC FLOWS
BONDAR Yevgeniy - Khristianovich Institute of Theoretical and Applied Mechnics - RUSSIAN FEDERATION

672 - MATHEMATICAL MODEL FOR LES OF EVOLUTION OF FAR VORTEX WAKE BEHIND AIRPLANE
BOSNYAKOV Igor - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

286 - COST ESTIMATING OF COMMERCIAL SMALLSAT LAUNCH VEHICLES
DRENTHE Nigel - Delft University of Technology - NETHERLANDS

14:00 >> PP - Air Breathing I

Location: BL27.18

Chairs:

IVANOV Mikhail - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

BONDARENKO Dmitry - AIRBUS GROUP - RUSSIAN FEDERATION

518 - A METHOD FOR PROCESSING EXPERIMENTAL DATA AND CALCULATING THE AVIATION FUEL O2 SATURATION PROCESS PARAMETERS
BONDARENKO Dmitry - AIRBUS GROUP - RUSSIAN FEDERATION

371 - HYBRID LES-RANS SIMULATIONS OF ENTHALPY REDUCTION IN T-SHAPE CHAMBER BY MEANS OF TRANSVERSE COLD AIR INJECTION
IAKOVCHUK Andrey - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

572 - DEVELOPMENT OF A PLASMA ACTUATOR FOR AVIATION ENGINE DUCT FLOW CONTROL
SEMENEV Pavel - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

17 - AIR BREATHING ENGINE THEORY AT THE SPACE THERMOSTAT PRESENCE
IVANOV Mikhail - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

55 - PRELIMINARY INVESTIGATION ON THE STARTING CHARACTERISTICS AND FLOW CONTROL OF AN INWARD-TURNING INLET
YUAnyuan - China Aerodynamics Research and Development Center (CARDC) - CHINA

142 - REGENARATIVE SYSTEM FOR TURBOPROPENGINES
Speaker TBC

Wednesday 5 July >> Afternoon

14:00 >> PP - Green solid propellants GRAIL Workshop

Location: BL27.15

Chairs:

CALABRO Max - The Inner Arch - FRANCE

WINGBORG Niklas - Swedish Defence Research Agency, FOI - SWEDEN

560 - GRAIL: GREEN SOLID PROPELLANTS FOR LAUNCHERS
WINGBORG Niklas - Swedish Defence Research Agency, FOI - SWEDEN

502 - CALCULATED AND EXPERIMENTAL BINARY PHASE DIAGRAMS FOR ADN AND AN BASED SOLID PROPELLANTS – H2020 GRAIL PROJECT
BEAUCHET Romain - University of Poitiers - FRANCE

429 - BURNING BEHAVIOR OF ADN-BASED PROPELLANTS LOADED WITH A L-MG MECHANICALLY ACTIVATED POWDERS
WEISER Volker - Fraunhofer-Institut Chemische Technologie (ICT) - GERMANY

525 - AL-MG MECHANICALLY ACTIVATED POWDERS FOR CHLORINE-FREE SOLID ROCKET PROPELLANTS
DOSSI Stefano - Politecnico di Milano - ITALY

478 - SYNTHESIS, CHARACTERIZATION AND STABILIZATION OF ALANE (ALUMINIUM HYDRIDE, ALH3)
BATONNEAU Yann - University of Poitiers - FRANCE

520 - CATALYST SCREENING FOR AMMONIUM NITRATE OXIDIZER
MAGGI Filippo - Politecnico di Milano - ITALY

681 - RECENT VIEW ABOUT THE DECOMPOSITION OF AMMONIUM NITRATE: KINETIC VS THERMODYNAMIC CONTROL? – H2020 GRAIL PROJECT
KAPPENSTEIN Charles - University of Poitiers - FRANCE

72 - BURNING BEHAVIOR OF ALUMINIZED ADN/PSAN PROPELLANTS
GETTWERT Volker - Fraunhofer-Institut Chemische Technologie (ICT) - GERMANY

14:00 >> PP - Hybrid propulsion numerical modeling I

Location: BL27.17

Chairs:

SHIMADA Toru - Japan Aerospace Exploration Agency - JAPAN

CIEZKI Helmut - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

506 - NUMERICAL ANALYSIS OF TURBULENT COMBUSTION IN HYBRID ROCKET MOTOR WITH SWIRLING AND AXIAL OXIDIZER INJECTION
SHIMADA Toru - Japan Aerospace Exploration Agency - JAPAN

157 - DEVELOPMENT OF AN EDDY DISSIPATION MODEL FOR THE USE IN NUMERICAL HYBRID ROCKET ENGINE COMBUSTION SIMULATION
MAY Stefan - DLR (German Aerospace Center) - GERMANY

611 - IMPROVED FLUID-DYNAMIC MODELING OF HYBRID ROCKET ENGINES WITH DIFFERENT FUELS
DI MARTINO Giuseppe - University of Naples «Federico II» - ITALY

477 - NUMERICAL MODELING OF PANCAKE HYBRID ROCKET MOTOR
GLOWACKI Jakub - Politecnico di Milano SPLab - POLAND

Wednesday 5 July >> Afternoon

14:00 >> PP - Methane rocket engines II

Location: BL27.14

Chairs:

NASUTI Francesco - University of Rome «La Sapienza»- ITALY

IANNETTI Alessandra - CNES, Direction des Lanceurs - FRANCE

552 - HIGHLY REUSABLE LOX/LCH4 ACE ROCKET ENGINE DESIGNED FOR SPACEPLANE: TECHNICAL MATURATION PROGRESS VIA KEY SYSTEM DEMONSTRATORS RESULTS
DUTHEIL Jean-Philippe - Airbus Safran Launchers - FRANCE

537 - PROMETHEUS, ALOX/LCH4 REUSABLE ROCKET ENGINE
IANNETTI Alessandra - CNES, Direction des Lanceurs - FRANCE

370 - UTILIZATION OF LOX/LCH4 EXPANDER-BLEED CYCLES FOR UPPER STAGE ENGINE APPLICATIONS
DOS SANTOS HAHN Robson Henrique - DLR Lampoldshausen - GERMANY

360 - THE HYPROB LOX-LCH4 DEMONSTRATOR: STATUS OF THE MANUFACTURING AND EXPERIMENTAL ACTIVITIES
RICCI Daniele - CIRA - Italian Aerospace Research Center - ITALY

577 - MULTI PURPOSES REUSABLE LOX/CH4 BLEED ROCKET ENGINE
Speaker TBC

583 - TEST OF FLOW DEFLECTOR DEMONSTRATORS IN LOX/METHANE COMBUSTION GASES
BOUE Yoan - Airbus Safran Launchers - FRANCE

14:00 >> PP - Propellant management and tanks

Location: BL27.16

Chairs:

TRUSHLYAKOV Valeriy - Omsk State Technical University - RUSSIAN FEDERATION

WEBSTER Samuel - Airbus Safran Launchers - GERMANY

146 - LIQUID HYDROGEN LOW BOND NUMBER REORIENTATION: EXPERIMENT AND NUMERIC COMPARISON
BEHRUZI Philipp - Airbus Safran Launchers - GERMANY

471 - MULTI-BODY MODELING FOR FLUID SLOSHING DYNAMICS INVESTIGATION IN FAST SPINNING ROCKETS
BUCCI Lorenzo - Politecnico di Milano - ITALY

511 - ACTIVE SLOSH CONTROL AND DAMPING - SIMULATION AND EXPERIMENT
KONOPKA Martin - Airbus Safran Launchers - GERMANY

115 - INFLUENCE OF ULTRASOUND ON AN INTENSIFICATION OF PROCESS OF EVAPORATION LIQUIDS UNDER THE BOUNDARY CONDITIONS MODELING SMALL GRAVITATION
TRUSHLYAKOV Valeriy - Omsk State Technical University - RUSSIAN FEDERATION

220 - PRESSURIZATION SYSTEM FOR A CRYOGENIC PROPELLANT TANK IN A PRESSURE-FED HIGH-ALTITUDE ROCKET
Speaker TBC

59 - TRL 5 TESTS OF A SUB-SCALE LH2 FEED LINE EVAPORATION COOLER
ISSELHORST Armin - Airbus Safran Launchers - GERMANY

367 - DEVELOPMENT AND VERIFICATION OF AN OXYGEN MASS-FLOW REGULATOR UNDER HIGH TEMPERATURE AND PRESSURE CONDITIONS
WEBSTER Samuel - Airbus Safran Launchers - GERMANY

Wednesday 5 July >> Afternoon

14:00 >> PP - Propulsion Systems

Location: BL27.06

Chairs:

MARTIN Fabrice - Airbus Safran Launchers - FRANCE

ORLANDI Olivier - Airbus Safran Launchers - FRANCE

626 - POSSIBILITY OF USING THERMAL DECOMPOSITION OF HYDROGEN PEROXIDE FOR LOW PROPULSION SYSTEM APPLICATION
MEZYK Lukasz - Warsaw Univerwity of Technology, Faculty of Power and Aeronautical Engineering, IHE - POLAND

196 - COMBUSTION CHARACTERISTIC OF 5-AMINOTETRAZOLE IN NITROGEN FOR LASER-CHEMICAL PROPULSION
SHEN Ruiqi - Nanjing University of Science and Technology - CHINA

573 - ANTIGRAVITY BASED PROPULSION SYSTEMS - A NEW ERA IN ASTRONAUTICS AND AERONAUTICS
GROMOV Alexander - TU Nuremberg - GERMANY

701 - MODELING AND VALIDATION OF PROPULSION SYSTEM FOR SMALL BATTERY POWERED ELECTRIC AIRCRAFT
ZHANG Maoquan - Aerospace Engineering Faculty - CHINA

14:00 >> SI - Space Systems Concepts

Location: BL27.05

Chairs:

TATRY Philippe - AIRBUS D&S - FRANCE

ESPINOSA RAMOS Amaya - (CNES) Centre National d'Etudes Spatiales - FRANCE

592 - CHEOPS FIRST ESA SMALL SCIENTIFIC MISSION
RATTI Francesco - ESA ESTEC - NETHERLANDS

680 - REUSABLE FIRST STAGE ROCKET DEMONSTRATOR
TATIOSSIAN Pascal - CNES, Direction des Lanceurs - FRANCE

57 - ARIANE 6 LAUNCHER REQUIREMENTS FOR SOLID ROCKET MOTOR
MARTIN Fabrice - Airbus Safran Launchers - FRANCE

624 - CONCEPTUAL DESIGN OF THE DESCENT SUBSYSTEM FOR THE SAFE ATMOSPHERIC RE-ENTRY FLIGHT OF SPACE RIDER
BALOSSINO Alessandro - Aero Sekur SpA - ITALY

563 - RECOVERY OF SOUNDING ROCKETS USING RETRACTABLE WINGS FOR CONTROLLED DESCEND
GUPTA Prerna - University of Petroleum and Energy Studies - INDIA

497 - ON THE USE OF THE CONCEPT OF EQUIVALENT SINGLE STAGE LAUNCHER
KOPPEL Christophe - KopooS Consulting - FRANCE

273 - PHOTONIC SWARM FOR LOW FREQUENCY RADIO ASTRONOMY IN SPACE
VAN DER MAREL Hans - ASTRON - NETHERLANDS

Wednesday 5 July >> Afternoon

14:00 >> SM - Structural Dynamics II

Location: BL28.1.2

Chair:

MATHIS Kevin - (CNES) Centre National d'Etudes Spatiales - FRANCE

29 - AUTOMATIC ESTIMATION OF MODAL PARAMETERS USING A HYBRID METHOD OF MOPSO AND K-MEANS CLUSTERING IN THE TIME-FREQUENCY DOMAIN
YANG Kai - China Aerodynamics Research and Development Center - CHINA

337 - DYNAMIC SIMILARITY OF LARGE 3D FRAME STRUCTURES
HERNANDO José-Luis - PoliTech Madrid - SPAIN

121 - MEASURE OF THE ANGULAR DYNAMIC STIFFNESS OF A BALL JOINT
LEGUET Guillaume-David - University of Technology of Compiègne - FRANCE

176 - A HYBRID FE-SEA MODEL REDUCTION METHOD TO OBTAIN DETAILED RESPONSES AT CHOSEN LOCATIONS FROM A LARGE LAUNCH VEHICLE MODEL
CALLONI Massimiliano - ESI Group - ITALY

34 - BENCHMARK AND APPLICATION OF OPERATIONAL MODAL ANALYSIS TECHNIQUES ON ARIANE 5 FLIGHT RECORDS
MULLER Stephane - Airbus Safran Launchers - FRANCE

358 - VIBRATION REDUCTION IN A HELICOPTER USING ACTIVE TWIST ROTOR BLADE METHOD
SICIM Mürüvvet Sinem - University of Turkish Aeronautical Association - TURKEY

Thursday 6 July >> Morning

08:30 >> FD - Control/Guidance of Launchers and Spacecrafts

Location: BL27.07

Chair:

VERNIS Philippe - Airbus Safran Launchers - FRANCE

257 - STRUCTURED H-INFINITY AND LINEAR PARAMETER VARYING CONTROL DESIGN FOR THE VEGA LAUNCH VEHICLE
NAVARRO-TAPIA Diego - University of Bristol - UNITED KINGDOM

597 - DESIGN OF MICROSCOPE'S ATTITUDE-GUIDANCE STRATEGY FOR STAR-TACKER'S MOON-GLARE MANAGEMENT
WALKER-DEEMIN Aymeric - (CNES) Centre National d'Etudes Spatiales - FRANCE

152 - A SYSTEMATIC PERFORMANCE-ORIENTED TUNING FOR SPACE EXPLORATION DESCENT & LANDING GUIDANCE
SIMPLICIO Pedro - University of Bristol - UNITED KINGDOM

664 - MAGNETIC ATTITUDE CONTROL FOR THE MOVE-II MISSION
MESSMANN David - TUM - GERMANY

435 - AUTONOMOUS GNC/IP FOR APPROACH AND HOVERING OF IRREGULAR SMALL BODIES
HAGENFELDT Miguel - DEIMOS - SPAIN

94 - A STUDY ON MISSILE AUTOPILOT DESIGN USING NONLINEAR ADAPTIVE SLIDING MODE CONTROL SCHEME
MOON Gwanyoung - Agency for Defense Development - REPUBLIC OF KOREA

530 - OPTIMAL CONTROL OF SPACECRAFT USING ELECTROSTATIC FORCES
ABDEL-AZIZ Yehia - National Research Institute of Astronomy and Geophysics (NRIAG) - EGYPT

08:30 >> FP - Boundary Layer Transition II

Location: BL28.1.1

Chairs:

LIPATOV Igor - TsAGI - RUSSIAN FEDERATION

BRION Vincent - ONERA - FRANCE

210 - EVOLUTION OF PERTURBATIONS OF LAMINAR FLOW BEHIND THE LEDGE OF THE SURFACE GENERATED BY ITS LOCALIZED VIBRATION
PAVLENKO Alexandr - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

211 - GENERATION OF DISTURBANCES BY VIBRATIONS OF LOCALIZED SURFACE IN A FLAT PLATE BOUNDARY LAYER
KATASONOV Mikhail - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

238 - GENERATION OF DISTURBANCES BY LOCALIZED SURFACE VIBRATIONS IN A STRAIGHT WING BOUNDARY LAYER
KATASONOV Mikhail - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

288 - PARABOLIZED STABILITY ANALYSIS OF CHEMICALLY REACTING BOUNDARY LAYER FLOWS IN PRESENCE OF EQUILIBRIUM CONDITIONS
ZANUS Ludovico - VKI -von Karman Institute for Fluid Dynamics - BELGIUM

292 - ON THE ORIGIN AND DEVELOPMENT OF THE STREAKS IN FLAT PLATE SUPERSONIC BOUNDARY LAYER
KOSINOV Alexander - ITAM Institute of Theoretical and Applied Mechanics - RUSSIAN FEDERATION

294 - ABOUT EXPERIMENTAL STUDY OF LAMINAR-TURBULENT TRANSITION IN 3D SUPERSONIC BOUNDARY LAYERS ON SWEPT WING
KOSINOV Alexander - ITAM Institute of Theoretical and Applied Mechanics - RUSSIAN FEDERATION

295 - THE INFLUENCE OF SMALL ANGLE OF ATTACK ON DISTURBANCES EVOLUTION AND TRANSITION TO TURBULENCE IN SUPERSONIC BOUNDARY LAYER ON SWEPT WING
KOSINOV Alexander - ITAM Institute of Theoretical and Applied Mechanics - RUSSIAN FEDERATION

Thursday 6 July >> Morning

08:30 >> FP - Computational and Experimental Aerodynamics of Air Vehicules I

Location: BL27.12

Chairs:

POLIVANOV Pavel - ITAM - RUSSIAN FEDERATION

YAN Hong - Northwestern Polytechnical University - CHINA

95 - AERODYNAMIC SHAPES OPTIMIZATION ON THE BASE OF METHOD OF LOCAL LINEARIZATION
TAKOVITSKII Sergey - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

119 - PCA-ASSISTED LOCAL FLOW FIELD ANALYSIS AND ITS APPLICATION IN AERODYNAMIC OPTIMIZATION
DENG Kaiwen - Tsinghua University - CHINA

194 - NUMERICAL RESEARCH OF APROPELLER PLANE BASED ON ACTUATOR DISC MODEL
ZHANG Yifei - Tsinghua University - CHINA

255 - NUMERICAL SIMULATION OF THE FLOW AROUND A FLAPPING-WING MICRO AIR VEHICLE IN FREE FLIGHT
MORICHE Manuel - Universidad Carlos III de Madrid - SPAIN

261 - PRELIMINARY DESIGN AND PERFORMANCE VERIFICATION OF A GUIDED ENTRY THRUSTER SYSTEM FOR PRECISION LANDING ON MARS
MARESCHI Vincenzo - Thales Alenia Space - ITALY

283 - AERODYNAMIC PECULIARITIES OF 3D SUPERSONIC FLOW OVER SPACE VEHICLE
PALCHEKOVSKAYA Natalia - Moscow Institute of Physics and Technology - RUSSIAN FEDERATION

08:30 >> FP - International Workshop on ICING II

Location: BL27.13

Chairs:

BONACCURSO Elmar - AIRBUS - GERMANY

POTAPCZUK Mark - NASA Glenn Research Center - UNITED STATES OF AMERICA

555 - ICE ACCRETION ROUGHNESS MEASUREMENTS AND MODELING
MCCLAIN Stephen - Baylor University - UNITED STATES OF AMERICA

372 - ACCOUNTING FOR WALL ROUGHNESS EFFECTS IN TURBULENCE MODELS : AWALL FUNCTION APPROACH
CHEDEVERGNE Francois - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

258 - MULTI-LAYER ICING METHODOLOGIES FOR CONSERVATIVE ICE GROWTH
LAURENDEAU Eric - POLYTECHNIQUE MONTREAL - CANADA

400 - 3D ICE ACCRETION MODELING USING AN INTEGRAL BOUNDARY LAYER METHOD
BLANCHARD Ghislain - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

517 - MODELING OF THE REEMITTED DROPLETS ON A SMALL SCALE ROTATING FAN MODEL: COMPARISON BETWEEN EXPERIMENTAL AND NUMERICAL RESULTS
LAURENT Claire - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

269 - ICING SIMULATIONS ON ENGINE INTAKE
UGUR Nermin - METUAerospace Department - TURKEY

675 - DEVELOPMENT OF A LEVEL-SET BASED MULTI-STEP ICING SIMULATION CODE
AL-KEBSI Ali - Université de Strasbourg - CNRS - FRANCE

Thursday 6 July >> Morning

08:30 >> FP - Launcher Aerodynamics

Location: BL27.11

Chairs:

REIJASSE Philippe - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

NASUTI Francesco - University of Roma - ITALY

116 - SIMULATION OF THE REENTRY VEHICLE SUPERSONIC BRAKE JETS INTERACTION WITH LANDING SURFACE
ZAPRYAGAEV Valeriy - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

561 - NUMERICAL INVESTIGATION OF THE TURBULENT WAKE OF A GENERIC SPACE LAUNCHER AT TRANSONIC SPEED
LOOSEN Simon - RWTHAachen University - GERMANY

496 - TOWARDS AN EFFICIENT AND ROBUST NUMERICAL STRATEGY FOR FAST AERODYNAMIC PERFORMANCE PREDICTION ON LAUNCH VEHICLES
WEISS Pierre-Elie - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

499 - COMPARISON OF HIGH SPEED PIV EXPERIMENTS, UNSTEADY PRESSURE MEASUREMENTS AND DES COMPUTATIONS OF A TRANSONIC ARIANE 5 BASE-FLOW USING POD
SCHRIJER Ferry - Delft University of Technology - NETHERLANDS

08:30 >> PP - Air Breathing II

Location: BL27.18

Chairs:

IVANOV Mikhail - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

BONDARENKO Dmitry - AIRBUS GROUP - RUSSIAN FEDERATION

125 - EXPERIMENTAL EVALUATION OF THE POLLUTANT AND NOISE EMISSIONS OF THE GTCP 36-300 GAS TURBINE OPERATED WITH KEROSENE AND WITH ALOW NOX MICROMIX HYDROGEN COMBUSTOR
KEINZ Jan - Aachen University of Applied Sciences (ACUAS) - GERMANY

606 - LARGE EDDY SIMULATION OF TRAILING EDGE CUTBACK FILM COOLING: IMPACT OF INTERNAL STIFFENING RIBS ON THE ADIABATIC EFFECTIVENESS
STAFFELBACH Gabriel - CERFACS - FRANCE

487 - PRELIMINARY RESULTS FROM A PLASMA-ASSISTED 7-POINT LDI COMBUSTOR
GOMEZ DEL CAMPO Felipe - Case Western Reserve University - UNITED STATES OF AMERICA

249 - TOWARDS A NOVEL 0D GAS TURBINE COMBUSTOR MODELING : BRIDGING THE GAP BETWEEN DIMENSIONAL SIMULATIONS AND ENGINEPERFORMANCE MODELS
DE KERAUTEM Antoine - IFP Energies Nouvelles - FRANCE

464 - NUMERICAL MODELING OF MULTISPECIES ENDOTHERMIC FUEL THERMAL DECOMPOSITION IN THE COOLING SYSTEM OF THE AVIATION RAMJET
TOKTALIEV Pavel - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

37 - FLOW FIELD INVESTIGATION OF 90°, 60° AND 45° ANGLE RIB-ROUGHENED SERPENTINE CHANNEL
Speaker TBC

586 - THE EFFICIENCY OF USAGE OF NEW CONSTRUCTION ROTORS WITH THE ABILITY SIMULTANEOUSLY CHANGE BASIC GEOMETRIC PARAMETERS IN THE DYNAMICS AND THEIR CONSUMPTION IN THE FIELDS OF AVIATION AND HIGH-POWER WIND STATIONS
TURMANIDZE Raul - Georgian Technical University - GEORGIA

Thursday 6 July >> Morning

08:30 >> PP - Hybrid propulsion numerical modeling II

Location: BL27.17

Chairs:

SHIMADA Toru - Japan Aerospace Exploration Agency - JAPAN

CIEZKI Helmut - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

614 - CFD SIMULATION OF HYBRID ROCKET MOTORS FOR INTERPLANETARY CUBESATS
CONTE Antonietta - Politecnico di Torino - ITALY

616 - TRANSITION OF COMBUSTION INSTABILITY BY SWIRL INJECTOR IN HYBRID ROCKET
Changjin LEE - Konkuk University - REPUBLIC OF KOREA

191 - THE OSCILLATION CHARACTERISTICS OF REACTIVE FLOW IN THE HYBRID ROCKET POST CHAMBER
LEE Sulha - Konkuk University - REPUBLIC OF KOREA

629 - MODELING OF HIGH DENSITY POLYETHYLENE REGRESSION RATE IN THE SIMULATION OF HYBRID ROCKET FLOWFIELDS
LECCESE Giuseppe - University of Rome «La Sapienza» - ITALY

08:30 >> PP - LRE II

Location: BL27.14

Chairs:

HAIDN Oskar - TUM - GERMANY

GIRARD Nathalie - CNES, Direction des Lanceurs - FRANCE

140 - NEXT-GENERATION RS-25 ENGINES FOR THE NASASPACE LAUNCH SYSTEM
BALLARD Richard - NASA Marshall Space Flight Center - UNITED STATES OF AMERICA

69 - IMPLICATIONS OF CYCLE VARIANTS, PROPELLANT COMBINATIONS AND OPERATING REGIMES ON FATIGUE LIFE EXPECTANCIES OF LIQUID ROCKET ENGINES
WAXENEGGER Günther - DLR (German Aerospace Center) - GERMANY

535 - EFFECTS OF CU-ALLOY MATERIAL PROPERTIES ON LIFETIME OF A COMBUSTION CHAMBER WITH OR WITHOUT A THERMAL BARRIER COATING
KIMURA Toshiya - Japan Aerospace Exploration Agency - JAPAN

417 - PROMISING HMS APPROACHES FOR LIQUID ROCKET ENGINES
IANNETTI Alessandra - CNES, Direction des Lanceurs - FRANCE

42 - ROCKET PROPULSION IN TAU: AN OVERVIEW OF THE DLR PROTAU PROJECT
JACK Sebastian - DLR (German Aerospace Center) - GERMANY

305 - LASER-IGNITION DEMONSTRATION ON CRYOGENIC ROCKET THRUST CHAMBERS
SOLLER Sebastian - Airbus Safran Launchers - GERMANY

Thursday 6 July >> Morning

08:30 >> PP - Turbomachines

Location: BL27.06

Chairs:

SCHLECHTRIEM Stefan - DLR - GERMANY

SOUVEREIN Louis - Airbus Safran Launchers - GERMANY

189 - THE MODIFIED FUEL TURBOPUMP OF 2ND STAGE ENGINE FOR H3 LAUNCH VEHICLE
NAGAO Naoki - Japan Aerospace Exploration Agency - JAPAN

241 - ON THE EFFECT OF AXIAL TURBINE ROTOR BLADE DESIGN ON EFFICIENCY: A PARAMETRIC STUDY OF THE BALJÉ-DIAGRAM
SOUVEREIN Louis - Airbus Safran Launchers - GERMANY

554 - PRELIMINARY DESIGN OF A RADIAL TURBINE FOR EXPANDER CYCLE ROCKET ENGINE
Speaker TBC

40 - ANALYTICAL AND NUMERICAL ASSESSMENT OF AXIAL THRUST BALANCING SYSTEMS IN LIQUID ROCKET ENGINE LOX TURBOPUMPS
MAIER Sebastian - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

08:30 >> SI - Hypersonics Systems

Location: BL27.05

Chairs:

BEREND Nicolas - ONERA - FRANCE

TURMANIDZE Raul - Georgian Technical University - GEORGIA

505 - SPACELINER CONCEPT AS CATALYST FOR ADVANCED HYPERSONIC VEHICLES RESEARCH
SIPPEL Martin - DLR (German Aerospace Center) - GERMANY

408 - FROM MDO TO DETAILED DESIGN OF HYPERSONIC MORPHING CABIN ESCAPE SYSTEMS
BONETTI Davide - DEIMOS - SPAIN

593 - AERODYNAMIC FIN HINGE MOMENT OPTIMIZATION USING GENETIC ALGORITHM
IPEK Fahrettin Kagan - ROKETSAN - TURKEY

644 - REFEX: REUSABILITY FLIGHT EXPERIMENT A FLIGHT EXPERIMENT TO DEMONSTRATE CONTROLLED AERODYNAMIC FLIGHT FROM HYPERSONIC TO SUBSONIC VELOCITIES WITH AWINGED RLV
RICKMERS Peter - DLR (German Aerospace Center) - GERMANY

53 - HYPERSONIC MORPHING FOR THE SPACELINER CABIN ESCAPE SYSTEM
SIPPEL Martin - DLR (German Aerospace Center) - GERMANY

35 - A NOVEL DESIGN TECHNIQUE OF HYPERSONIC GLIDING VEHICLE
ZHANG Tian-tian - National University of Defence Technology - CHINA

Thursday 6 July >> Morning

08:30 >> SM - Structural Modelling Testing. Validation and Optimization I

Location: BL28.1.2

Chairs:

RICCIUS Joerg - DLR Lampoldshausen - GERMANY

LENCZOWSKI Blanka - AIRBUS GROUP - GERMANY

240 - THE INFLUENCE OF SPAR LOCATION ON THE ELASTIC DEFORMATION AND THE WEIGHT ESTIMATION OF A SWEPT-BACK, HIGH ALTITUDE, SOLAR POWERED FLYING WING UAV
ALSAHLANI Ahmad - University of Salford - UNITED KINGDOM

44 - NOVEL TAILORED SKIN SINGLE DUCT CONCEPT FOR HLFC FIN APPLICATION
HORN Matthias - DLR (German Aerospace Center) - GERMANY

104 - QUIETER PROPELLERS
LEE Heow Pueh - National University of Singapore - SINGAPORE

19 - MODELLING POWDER BED ADDITIVE MANUFACTURING DEFECTS
MEGAHED Mustafa - ESI Group - GERMANY

54 - STUDYING INTERACTION OF THE HOT MAGNETOSPHERE PLASMA WITH COVER GLASSES OF SOLAR ARRAYS
Speaker TBC

99 - ESTIMATION OF THERMAL PARAMETERS BASED ON BAYESIAN INFERENCE METHOD
QIAN Weiqi - CARDC - CHINA

08:30 >> SM - Temperature Resistants Materials/Protections I

Location: BL27.16

Chair:

RICCIUS Joerg - DLR Lampoldshausen - GERMANY

109 - EFFECT OF INVERSE CRIME ON ESTIMATION OF TEMPERATURE-DEPENDENT THERMAL PROPERTIES OF ABLATIVE THERMAL PROTECTION SYSTEMS
Speaker TBC

180 - IMPLEMENTATION OF APPROXIMATE ABLATION MODEL IN AERODYNAMIC HEATING PREDICTION TOOL
SIMSEK Bugra - ROKETSAN - TURKEY

262 - NUMERICAL MODEL SET-UP FOR ACMC CONTROL SURFACE FOR RE-ENTRY VEHICLES
BELARDO Marika - CIRA - Italian Aerospace Research Center - ITALY

08:30 >> Workshop: Issues for Future of aerospace

Location: BL27.15

Chairs:

MERLEN Alain - CNRS - FRANCE

TARAN Jean-Pierre - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

TRANSDISCIPLINARY RESEARCH POLICY FOR PREPARING THE FUTURE?
ANDRIEUX Stéphane - ONERA - FRANCE

MICRO AND NANO SATELLITES: PRESENT & FUTURE
GRAZIANI Fillipo - GAUSS - ITALY

INNOVATIVE ENGINE INTEGRATION SOLUTIONS FOR TRANSPORT AIRCRAFT: CURRENT RESEARCH AND FUTURE CHALLENGES
CARRIER Gerald - ONERA - FRANCE

SUSTAINABLE ACTIVITIES IN SPACE : SPACE DEBRIS PROBLEM IN A NUTSHELL
BONNAL Christophe - CNES - FRANCE

Thursday 6 July >> Afternoon

14:00 >> FD - Flight Control of UAVs

Location: BL27.07

Chairs:

TATRY Philippe - AIRBUS D&S - FRANCE

LOVERA Marco - Politecnico di Milano - ITALY

329 - WIND REJECTION VIA QUASI-CONTINUOUS SLIDING MODE TECHNIQUE TO CONTROL SAFELYAMINI DRONE
PEROZZI Gabriele - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

460 - ADAPTIVE AUGMENTATION OF THE ATTITUDE CONTROL SYSTEM FOR A MULTIROTOR UAV
LOVERA Marco - Politecnico di Milano - ITALY

219 - VALIDATION OF NATURAL FREQUENCIES FORMULAS OF FLIGHT MODES FOR SMALL UAVS
EL-SALAMONY Mostafa - Moscow Institute of Physics and Technology - RUSSIAN FEDERATION

472 - ACCURATE POSITIONING OF MULTIROTOR UAVS FOR CIVIL INFRASTRUCTURE MONITORING
LOVERA Marco - Politecnico di Milano - ITALY

169 - AUTOPORT SYSTEM: A SUITE OF SENSORS AND MECHANISMS FOR MARS UAVS
COMPAGNIN Alberto - Università degli Studi di Padova - ITALY

411 - EXPERIMENTAL VALIDATION OF UNMANNED AERIAL VEHICLES TO TUNE PID CONTROLLERS IN OPEN SOURCE AUTOPILOTS
JIMENEZ SOLER Pedro - Universidad de San Buenaventura - COLOMBIA

14:00 >> FP - Boundary Layer Transition III

Location: BL27.12

Chairs:

LIPATOV Igor - TsAGI - RUSSIAN FEDERATION

ASHWORTH Richard - AIRBUS GROUP - UNITED KINGDOM

309 - EVOLUTION OF LOCALIZED ARTIFICIAL DISTURBANCE IN 2D AND 3D SUPERSONIC BOUNDARY LAYER
YATSKIKH Aleksey - Khristianovich Institute of Theoretical and Applied Mechnics - RUSSIAN FEDERATION

344 - EFFECT OF NOSE-TIP ROUGHNESS ON LAMINAR-TURBULENT TRANSITION
GROMYKO Yury - ITAM Institute of Theoretical and Applied Mechanics - RUSSIAN FEDERATION

419 - CFD AND EXPERIMENTAL SIMULATION OF THE LAMINAR-TURBULENT TRANSITION ON THE HEXAFLY-INT GLIDER MODEL
VOEVODENKO Nina - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

524 - INSTABILITY OF NONCLASSICAL BOUNDARY LAYER FLOW AT TRANSONIC REGIME OF INTERACTION
BOGDANOV Andrey - Institute of Mechanics Moscow Lomonosov State University - RUSSIAN FEDERATION

578 - RECALIBRATION OF THE K-OMEGA-GAMMA TRANSITION MODEL IN UNITS AND APPLICATION TO TRANSITION PREDICTION OF BLUNT CONES
YANG Muchen - Tsinghua University - CHINA

594 - PRESSURE GRADIENT EFFECTS ON WAKE FLOW INSTABILITIES BEHIND ISOLATED ROUGHNESS ELEMENTS ON RE-ENTRY CAPSULES
THEISS Alexander - DLR Göttingen - GERMANY

656 - DIRECT NUMERICAL SIMULATION OF TRANSITIONAL BOUNDARY LAYER WITH LOCAL SEPARATION IN HYPERSONIC FLIGHT
NOVIKOV Andrey - Moscow Institute of Physics and Technology - RUSSIAN FEDERATION

Thursday 6 July >> Afternoon

14:00 >> FP - Computational and Experimental Aerodynamics of Air Vehicules III

Location: BL28.1.1

Chairs:

SKOMOROKHOV Sergey - TsAGI- RUSSIAN FEDERATION

CHEDEVERGNE Francois - ONERA - FRANCE

365 - AERODYNAMIC DESIGN OF A MARTIAN MICRO AIR VEHICLE
DESERT Thibault - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

564 - TECHNIQUE OF FIELD INVESTIGATIONS ON ASSESSMENT OF AERODYNAMIC COMPATIBILITY OF SHIP AND HELICOPTER FOR TAKE-OFF / LANDING OPERATIONS FROM SHIP FLIGHT DECK
Speaker TBC

571 - LONGITUDINAL STABILITY MEASUREMENTS OF A WINGED BICONIC CONFIGURATION IN SUPERSONIC FLOW
FLOCK Andreas - DLR (German Aerospace Center) - GERMANY

587 - TOWARDS AN ACHIEVEMENT OF FAVORABLE AERODYNAMIC INTERFERENCE IN "FLYING WING" LAYOUT WITH UPPER ENGINE LOCATION
Speaker TBC

318 - EFFECT OF THE WING TRAILING-EDGE FLAP AND SPOILER POSITION ON THE JET-VORTEX WAKE BEHIND AN AIRCRAFT DURING TAKEOFF AND LANDING RUN
TSIRKUNOV Yury - Baltic State Technical University - RUSSIAN FEDERATION

380 - DRAG PREDICTION AND DECOMPOSITION OF A REAL AIRCRAFT BASED ON MIDDLE-FIELD AND FAR-FIELD METHODS
DENG Yeming - Tsinghua University - CHINA

14:00 >> FP - Heat Transfer

Location: BL27.11

Chair:

POLIVANOV Pavel - Institute of Theoretical and Applied Mechanics SB RAS - RUSSIAN FEDERATION

30 - NUMERICAL EXPLORATION ON THE DRAG AD HEAT FLUX REDUCTION MECHANISM OF BLUNTED CONE WITH AERODISKS
HUANG Wei - National Univ. of Defense Technology - CHINA

68 - NUMERICAL MODELING OF CONTINUOUS BLOWING SURFACE IN HYPERSONIC BOUNDARY LAYERS
MIRO MIRO Fernando - VKI -von Karman Institute for Fluid Dynamics - BELGIUM

81 - PHYSICAL MECHANISMS OF INCREASED HEAT FLUX ZONE APPEARANCE AND LAMINAR-TURBULENT TRANSITION IN THE BOUNDARY LAYER ON BLUNTED DELTA WINGS AT HIGH FREESTREAM VELOCITIES
SHALAEV Vladimir - Moscow Institute of Physics and Technology - RUSSIAN FEDERATION

396 - INVESTIGATION OF ADVERSE GAS INJECTION THROUGH THE LEADING EDGEOF A SHARP WEDGE INTO HIGH-SPEED
Speaker TBC

495 - DUPLICATION OF REACTING BOUNDARY LAYER BETWEEN HYPERSONIC FLIGHT AND PLASMATRON FACILITY
DURAND Jean-Etienne - VKI -von Karman Institute for Fluid Dynamics - FRANCE

87 - MODELING OF RADIATIVE COOLING OF DISPERSE FLOWS OF THE LOW
Speaker TBC

Thursday 6 July >> Afternoon

14:00 >> FP - International Workshop on ICING III

Location: BL27.13

Chairs:

TROPEA Cameron - Technische Universität Darmstadt - GERMANY

MCCLAIN Stephen - Baylor University - UNITED STATES OF AMERICA

699 - EXPERIMENTAL STUDY OF PROPELLANT LEAKAGE THROUGH A JOULE-THOMSON VALVE
Speaker TBC

512 - PHYSICS OF SLD IMPACT AND SOLIDIFICATION
TROPEA Cameron - Technische Universität Darmstadt - GERMANY

175 - EXPERIMENTAL INVESTIGATION OF SLD IMPACT PHENOMENA
BERTHOUMIEU Pierre - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

265 - FROM HIGH ALTITUDE CLOUDS TO AN ICING WIND TUNNEL: EN ROUTE TO UNDERSTAND ICE CRYSTAL ICING
BANSMER Stephan - Aerospace Engineering Faculty - GERMANY

314 - EXPERIMENTAL AND THEORETICAL INVESTIGATIONS OF SOLID-PHASE ICE ACCRETION
MILLER Alexey - TsAGI Central Aerohydrodynamic Institute - RUSSIAN FEDERATION

339 - MIXED PHASE ICING MODELING ON AIRCRAFT ENGINE INTAKES AND AIR DATA PROBES WITH TAICE 3D
OZGEN Serkan - Middle East Technical University - TURKEY

14:00 >> PP - Electrical propulsion

Location: BL27.18

Chairs:

KOPPEL Christophe - KopooS Consulting - FRANCE

LOVTSOV Alexander - KeRC - RUSSIAN FEDERATION

32 - NUMERICAL MODEL OF AN HELICON PLASMA SOURCE FOR SPACE PROPULSION APPLICATION
MAGAROTTO Mirko - University of Padova - ITALY

126 - RESEARCH OF ELECTRON DISTRIBUTION FUNCTION TRAITS IN DISCHARGE CHAMBER OF ION THRUSTER USING "PARTICLE-IN-CELL" SIMULATION
KRAVCHENKO Dmitrii - SSC Keldysh Research Centre - RUSSIAN FEDERATION

138 - THE LOW-CURRENT CATHODE FOR ASMALL POWER ELECTRIC PROPULSION
PUCHKOV Pavel - SSC Keldysh Research Centre - RUSSIAN FEDERATION

139 - EXPERIMENTAL STUDIES OF AN ION OPTIC SYSTEM WITH IMPROVED MECHANICAL STRENGTH
LOVTSOV Alexander - SSC Keldysh Research Centre - RUSSIAN FEDERATION

378 - MULTIPHYSICS MODEL VALIDATION OF RESISTOJETS WITH CONCENTRIC TUBULAR HEAT EXCHANGER
ROMEI Federico - University of Southampton - UNITED KINGDOM

Thursday 6 July >> Afternoon

14:00 >> PP - GOX/GCH4 combustion

Location: BL27.06

Chairs:

SUSLOV Dmitry - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

IANNETTI Alessandra - CNES, Direction des Lanceurs - FRANCE

340 - HIGH SPEED IMAGING OF A COAXIAL SINGLE ELEMENT GOX/GCH4 ROCKET COMBUSTION CHAMBER WITH SQUARE CROSS SECTION
WINTER Fernanda - TUM - GERMANY

366 - HEAT FLUX AND TEMPERATURE EVALUATION FOR A RECTANGULAR MULTI-ELEMENT GOX/GCH4 COMBUSTION CHAMBER
PERAKIS Nikolaos - TUM - GERMANY

605 - LARGE EDDY SIMULATION OF FLOW AND COMBUSTION IN A SINGLE-ELEMENT GCH4/GOX ROCKET COMBUSTOR
SELLE Laurent - Institut de Mécanique des Fluides de Toulouse - FRANCE

173 - NUMERICAL INVESTIGATION OF A7-ELEMENT GOX/GCH4 SUBSCALE
EIRINGHAUS Daniel - Airbus Safran Launchers - GERMANY

242 - INVESTIGATION ON RECESS VARIATION OF A SHEAR COAX INJECTOR IN A GOX-GCH4 RECTANGULAR COMBUSTION CHAMBER WITH OPTICAL ACCESS
SILVESTRI Simona - TUM - GERMANY

494 - NUMERICAL SIMULATION OF REGENERATIVE COOLING SYSTEM - PERFORMANCE FOR DUCT WITH HYDROGEN SUPERSONIC COMBUSTION
Speaker TBC

347 - MAPPING OF H2O CONCENTRATION OF AND TEMPERATURE IN A TURBULENT METHANE/AIR DIFFUSION FLAME USING MULTISPECTRAL ABSORPTION TOMOGRAPHY
CORBAS Vincent - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

14:00 >> PP - Green liquid propellants II

Location: BL27.14

Chairs:

BATONNEAU Yann - University of Poitiers - FRANCE

WEISER Volker - Fraunhofer-Institut Chemische Technologie (ICT) - GERMANY

364 - GREEN LIQUID OXIDISERS BASING ON SOLUTIONS OF ADN AND AN IN HYDROGEN PEROXIDE FOR HYPERGOLIC PROPELLANTS WITH HIGH PERFORMANCE
WEISER Volker - Fraunhofer-Institut Chemische Technologie (ICT) - GERMANY

349 - PERFORMANCE COMPARISON BETWEEN EXTRUDED AND PRINTED CERAMIC MONOLITHS FOR CATALYSTS
KOOPMANS Robert-Jan - Fotec GmbH - AUSTRIA

45 - MATRIX CONVERSION OF NATURAL AND ASSOCIATED PETROLEUM GASES TO SYNGAS – NEW DEVELOPMENTS AND POSSIBILITIES
ARUTYUNOV Vladimir - Semenov Institute of Chemical Physics - RUSSIAN FEDERATION

Thursday 6 July >> Afternoon

14:00 >> PP - Hybrid propulsion experimental investigations

Location: BL27.17

Chairs:

NATAN Benveniste - Technion - Israel Institute of Technology - ISRAEL

DOSSI Stefano - Politecnico di Milano - ITALY

149 - EXPERIMENTAL AND NUMERICAL EVALUATION OF THE RADIATIVE WALL HEAT FLUX IN THE POST-CHAMBER OF A PARAFFIN-BASED HYBRID ROCKET MOTOR
LECCESE Giuseppe - University of Rome «La Sapienza» - ITALY

661 - EXPERIMENTAL EVALUATION OF PRESSURE-SWIRL INJECTION SYSTEM OVER SOLID FUEL REGRESSION RATE IN HYBRID ROCKETS
DE MORAIS BERTOLDI Artur Elias - ULB, University of Brussels - BELGIUM

159 - OPTICAL ANALYSIS OF THE LIQUID LAYER COMBUSTION OF PARAFFIN-BASED HYBRID ROCKET FUELS
PETRAROLO Anna - DLR Lampoldshausen - GERMANY

27 - DESIGN, ANALYSIS AND TESTING OF A 3D PRINTED SOLID ROCKET PROPELLANT FOR A HYBRID ROCKET ENGINE
Speaker TBC

133 - DESIGN AND EXPERIMENTAL EVALUATION OF LIQUID OXIDIZER INJECTION SYSTEM FOR HYBRID ROCKET MOTORS
BOUZIANE Mohammed - Royal Military Academy of Belgium - BELGIUM

414 - DEVELOPMENT AND TEST OF AN INNOVATIVE HYBRID ROCKET COMBUSTION CHAMBER
LESTRADE Jean-Yves - ONERA - FRANCE

425 - DEVELOPMENT OF A CAVITATING PINTLE FOR A THROTTLEABLE HYBRID ROCKET MOTOR
RUFFIN Alessandro - University of Padova - ITALY

14:00 >> PP - Thermo-acoustics instabilities

Location: BL27.15

Chairs:

HAIDN Oskar - TUM - GERMANY

KNAB Oliver - Airbus Safran Launchers - GERMANY

64 - ANALYSIS OF CONTRIBUTIONS TO HEAT RELEASE RATE OSCILLATIONS IN A GENERIC SOLID ROCKET MOTOR FEATURING A THERMO-ACOUSTIC INSTABILTY
GENOT Aurélien - CNES, Direction des Lanceurs - FRANCE

172 - MODELLING FLAME RESPONSE OF A CO-AXIAL LOX/GH2 INJECTION ELEMENT TO HIGH FREQUENCY ACOUSTIC FORCING
TONTI Federica - DLR Institute of Space Propulsion, German Aerospace Center - GERMANY

267 - ON THE EFFECT OF ACOUSTIC ABSORBERS COUPLED TO ROCKET COMBUSTORS
KINGS Nancy - TUM - GERMANY

352 - LARGE-EDDY SIMULATIONS OF A LAB-SCALE LIQUID ROCKET ENGINE: INFLUENCE OF FUEL INJECTION TEMPERATURE ON THERMO-ACOUSTIC STABILITY
SCHMITT Thomas - EM2C laboratory, CNRS, CentraleSupelec - FRANCE

461 - LOW ORDER INVESTIGATION ON LONGITUDINAL COMBUSTION INSTABILITY IN A VARIABLE GEOMETRY SINGLE ELEMENT COMBUSTOR
FREZZOTTI Maria Luisa - University of Rome «La Sapienza» - ITALY

Thursday 6 July >> Afternoon

14:00 >> SI - Launch of Small Payloads

Location: BL27.05

Chairs:

SIPPEL Martin - DLR (German Aerospace Center) - GERMANY

GIGOU Jacques - ESA - FRANCE

486 - ALTAIR – AN INNOVATIVE LOW-COST AIR LAUNCH SYSTEM FOR SMALL SATELLITES
BEREND Nicolas - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

407 - INDEPENDENT ACCESS TO SPACE FOR EUROPE: NAMMO'S ACHIEVEMENTS IN NANO-LAUNCHER DESIGN
HAEMMERLI Bastien - Nammo Raufoss AS - NORWAY

346 - HYBRID SOUNDING ROCKET HEROS: TRL 9
KOBALD Mario - DLR Lampoldshausen - GERMANY

221 - ALTAIR ORBITAL MODULE DESIGN AND OPERATIONS
TROMBA Andrea - Bertin Technologies - FRANCE

679 - SMALL PAYLOAD TRANSFERS FROM EARTH TO LEO AND LEO TO INTERPLANETARY SPACE USING LASERS
PHIPPS Claude - Photonic Associates, LLC - UNITED STATES OF AMERICA

96 - ARES14BI "HYDRA" - A TWO-STAGE EXPERIMENTAL ROCKET PROJECT WITHIN THE PERSEUS PROGRAM
GUINET Valentin - Institut Supérieur de l'Aéronautique et de l'Espace - FRANCE

600 - SMALL INNOVATIVE LAUNCHER FOR EUROPE: ACHIEVEMENT OF THE H2020 PROJECT SMILE
HAEMMERLI Bastien - Nammo Raufoss AS - NORWAY

14:00 >> SI - Reentry Survivability & Space Surveillance

Location: BL27.08

Chairs:

ANSELMO Luciano - CNR - Consiglio Nazionale delle Ricerche - ITALY

MCKNIGHT Darren - Integrity Applications, Inc. - UNITED STATES OF AMERICA

569 - UPGRADE OF ESA'S DEBRIS RISK ASSESSMENT AND MITIGATION ANALYSIS (DRAMA) TOOL: SPACECRAFT ENTRY SURVIVAL ANALYSIS MODULE
BONETTI Davide - DEIMOS - SPAIN

603 - DEVELOPMENT OF NEW ANALYTICAL MODELS OF PRESSURE AND HEAT TRANSFER DISTRIBUTIONS ON SPACE DEBRIS DURING UNCONTROLLED ATMOSPHERIC ENTRY: PLANAR BODIES
VERANT Jean-Luc - (ONERA) Office national d'Etudes et de Recherches Aerospatiales - FRANCE

599 - DSMC-BASED CORRECTION FACTOR FOR LOW-FIDELITY HYPERSONIC AERODYNAMICS OF RE-ENTERING OBJECTS AND SPACE DEBRIS
FALCHI Alessando - University of Strathclyde - UNITED KINGDOM

521 - MONTE CARLO ANALYSIS OF A LEO REENTRY MISSION BY SOLID ROCKET PROPULSION
MAGGI Filippo - Politecnico di Milano - ITALY

684 - EXPERIMENTAL STUDIES ON THE BURNING OF STRUCTURAL ELEMENTS OF SPACE ROCKETS IN THE ATMOSPHERIC PHASE OF THE DESCENT TRAJECTORY
DAVYDOVICH Denis - Omsk State Technical University - RUSSIAN FEDERATION

Thursday 6 July >> Afternoon

14:00 >> SM - Structural Modeling. Testing. Validation and Optimization II

Location: BL28.1.2

Chair:

LILLO Francesca - AVIO - ITALY

326 - DYNAMICAL CHARACTERIZATION OF PROPELLANT USING THE DMA
RIPANI Enrico - AVIO - ITALY

384 - PROBABILISTIC APPROACH TO DAMAGE MODELING OF AVIATION COMPOSITE MATERIALS
Speaker TBC

615 - MODIFICATION OF SPACECRAFT MATERIALS UNDER ELECTRON RADIATION
PLIS Elena - Assurance Technology Corporation - UNITED STATES OF AMERICA

438 - DESIGN OF A SOLAR CONCENTRATOR DEMONSTRATOR FOR POCKETQUBES
MARTINEZ PINO Daniel - Delft University of Technology - NETHERLANDS

531 - GROUND TEST FOR SPACECRAFT CHARGING AND DISCHARGING AT NRIAG- EGYPT
ABDEL-AZIZ Yehia - National Research Institute of Astronomy and Geophysics (NRIAG) - EGYPT

14:00 >> SM - Temperature Resistants Materials/Protections II

Location: BL27.16

Chair:

BERDOYES Michel - Airbus Safran Launchers - FRANCE

330 - IXV THERMAL PROTECTION SYSTEM POST-FLIGHT PRELIMINARY ANALYSIS
BUFFENOIR Francois - Airbus Safran Launchers - FRANCE

428 - DEVELOPMENT OF AN ITALIAN TECHNOLOGY FOR CMC CONTROL SURFACE FOR RE-ENTRY APPLICATIONS
Marika BELARDO - CIRA - Italian Aerospace Research Center - ITALY

433 - INVESTIGATION OF THE THERMAL PROTECTIVE COATING FOR THE EXPERIMENTAL FLIGHT TEST VEHICLE WITHIN THE INTERNATIONAL HEXAFLY-INT PROJECT
TALYZIN Vadim - Central Aerohydrodynamic Institute (TsAGI) - RUSSIAN FEDERATION

504 - STABILIZATION OF C/C BASED SHELL STRUCTURES FOR HIGH TEMPERATURE RE-ENTRY
DELFINI Andrea - University of Rome «La Sapienza» - ITALY

Poster Presentations

Location: BL27

46 - IGNITION OF HIGH-ENERGY MATERIALS CONTAINING BORON AND ALUMINUM DIBORIDE
KOROTKIKH Alexander - Tomsk Polytechnic University - RUSSIAN FEDERATION

47 - SERVICE SPACECRAFT CONTROL DURING THE SPACE DEBRIS REMOVAL FROM THE GEO PROTECTION REGION BY THE ION SHEPHERD METHOD
OBUKHOV Vladimir - (RIAME) Research Institute of Applied Mechanics and Electrodynamics - RUSSIAN FEDERATION

56 - THE ROLE OF SCIENCE IN CLIMATE INFORMATION DYNAMICS : AN OVERVIEW IN WEST AFRICA COASTAL AREAS
Speaker TBC

77 - AN EXPERIMENTAL STUDY ON PRESSURE LOSS IN SPIRAL COOLING CHANNELS
AHN Kyubok - Chungbuk National University - REPUBLIC OF KOREA

129 - IMAGING AND VERBAL COMMUNICATION SYSTEMS USED IN AVIATION SEARCH & RESCUE MISSIONS
Speaker TBC

130 - QUALITY TESTING OF THE PILOT'S VERBAL COMMUNICATION IN CONDITIONS OF THE OCCURRENCE OF LARGE LINEAR LOADS
Speaker TBC

136 - NUMERICAL SIMULATION OF THE DISTURBANCES EXCITATION IN A SUPERSONIC BOUNDARY LAYER BY THE SOUND WAVE AT DIFFERENT ANGLES
Speaker TBC

190 - AGGLOMERATION AND COMBUSTION COMPLETENESS OF BORON IN COMPOSITE PROPELLANT
ZARKO Vladimir - Institute of Chemical Kinetics and Combustion - RUSSIAN FEDERATION

203 - DESIGN AND ANALYSIS ON THE FIRE PREVENTION SYSTEM FOR SPACE LAUNCH VEHICLE DURING THE FLIGHT
KO Ju Yong - Korea Aerospace Research Institute - REPUBLIC OF KOREA

208 - INVESTIGATION OF NEAR SPACE HYPERSONIC AERODYNAMIC CONFIGURATION
Speaker TBC

233 - COMBUSTION OF SPRAYS FROM TRIPLET INJECTOR WITH GREEN PROPELLANTS: ETHYL ALCOHOL AND HYDROGEN PEROXIDE
BOUST Bastien - PPRIME - FRANCE

273 - PHOTONIC SWARM FOR LOW FREQUENCY RADIO ASTRONOMY IN SPACE
VAN DER MAREL Hans - ASTRON - NETHERLANDS

279 - MEASUREMENTS AND NUMERICAL SIMULATION OF WALL HEAT FLUXES IN A SINGLE-ELEMENT GO2/GCH4 ROCKET COMBUSTOR
HONG Ye - TUM - GERMANY

286 - COST ESTIMATING OF COMMERCIAL SMALLSAT LAUNCH VEHICLES
DRENTHE Nigel - Delft University of Technology - NETHERLANDS

293 - OPTIMIZATION OF THE STARTUP SEQUENCE OF A LIQUID-PROPELLANT ROCKET ENGINE
KIM YoungJun - Korea Aerospace Research Institute - REPUBLIC OF KOREA

301 - NUMERICAL STUDY OF FLOW CHARACTERISTICS OF THE 14-X B HYPERSONIC AEROSPACE VEHICLE INLET WITH BLUNTED LEADING EDGE
ROMANELLI PINTO David - IEAv - BRAZIL

412 - DUSTY PLASMA VOID DYNAMICS IN UNMOVING AND MOVING FLOWS
AZAROVA Olga - Dorodnicyn Computing Center of the Russian Academy of Sciences - RUSSIAN FEDERATION

Poster Presentations

431 - POSTBUCKLING ANALYSES OF CYLINDRICAL STRUCTURES USING HYBRID-GRID SYSTEMS FOR DERIVATION OF KNOCKDOWN FACTOR
PARK Jae-Sang - Chungnam National University - KOREA

451 - ATTITUDE CONTROL OF VEHICLE AT HIGH ROTATION SPEED
Speaker TBC

500 - PERSEUS : COMPOSITE NOZZLE REALIZATION
SHOUTSEN Yannick - University of Bordeaux / IMA - FRANCE

513 - LESSONS LEARNED ABOUT PARAFFIN-BASED FUELS FOR HYBRID ROCKET MOTORS
Speaker TBC

522 - COMBUSTION PROPERTIES OF ALUMINUM-BASED OXIDIZER-LEAN PROPELLANTS
Speaker TBC

546 - PRELIMINARY ANALYSIS FOR THE DESIGN OF A PRANDTLPLANE TRANSPORT AIRCRAFT
PICCHI SCARDAONI Marco - University of Pisa - ITALY

547 - KAPPA: AN OBJECT-ORIENTED C++ LIBRARY FOR KINETIC THEORY COMPUTATIONS
OBLAPENKO Georgii - Saint Petersburg State University - RUSSIAN FEDERATION

581 - SPACE DEBRIS SCAVENGING TECHNIQUE
Speaker TBC

595 - ACOMBINED APPROACH TO THE STAGE SEPARATION COLLISION ANALYSIS OF A MULTISTAGE VEHICLE
Speaker TBC

621 - MODEL OF THE ROCKET ENGINE JET BASED ON DSMC COMPUTATIONS
Speaker TBC

622 - NUMERICAL SIMULATION OF NON-EQUILIBRIUM CHEMICALLY REACTING FLOWS ON HYBRID COMPUTATIONAL SYSTEMS
Speaker TBC

635 - THERMAL ANALYSIS AND PERFORMANCE OF A PRESSURE GAIN COMBUSTION SYSTEM
ANDRIANI Roberto - Politecnico di Milano - Italy

663 - FEATURES OF CONTROL SYSTEM OF SPACE SOLAR POWER STATION
YERMOLDINA Gulnaz - Kazakh National Research Technical University after K.I. Satpayev - KAZAKHSTAN

667 - GRADIENT-DRIFT INSTABILITYAS A SOURCE OF LONG-WAVELENGTH OSCILLATIONS IN HALL THRUSTERS
Speaker TBC

685 - COMPUTATIONAL INVESTIGATION OF THE FINGER SEAL
GOLUBKIN Vyacheslav - CIAM Central Institute of Aviation Motors - RUSSIAN FEDERATION

688 - SPACE-BASED SUSTAINABILITY MANAGEMENT SYSTEM (S-B SMS) : BRIDGING THE GAP
SHU XIAN TOH Ariel - Marchar - PORTUGAL

690 - TRANSPARENT HYDROPHOBIC COATINGS FOR AEROSPACE APPLICATIONS
HOU Xianghui - The University of Nottingham - UNITED KINGDOM

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