



Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



AIDAA XXIV International Conference

Programme

ASSOCIAZIONE ITALIANA
DI AERONAUTICA E ASTRONAUTICA



Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



Instructions for Speakers and Chairperson

Speakers Guidelines

A Chairperson responsible for introducing the speakers, controlling the session's timing and facilitating questions will be present at each session.

Prior to the Conference

Please ensure that you check the conference program carefully to confirm your presentation day and time. Ensure overhead projections/power point slides contain minimal information and that they are large enough to be read from all parts of the room. Body text should be in a clear font with a background contrasting with the print. Please, avoid highly patterned backgrounds or overcrowding charts or photographs.

Prior to your Presentation

10 minutes before the start of your session, proceed to your allocated room to meet with your session Chairperson.

Audio Visual Setup

There will be a PC and Beamer in each room with Microsoft PowerPoint and Adobe Acrobat Reader installed.

On the desktop, folders are created for each session (i.e. Session 1A, Session 2C, etc.). Please copy your file into the appropriate folder.

During Your Presentation

Presentations **are limited to 20 minutes** (including 5 minutes for questions and answers). If your presentation exceeds the time limit you will be asked to stop because this will disrupt scheduling and encroach on the next speakers time slot (please be considerate).

Session Chairperson Guidelines

The Chairperson's role on the day is to:

- Meet each speaker in the room that he will be chairing 10 minutes before the session start;
- Introduce himself to each speaker;
- Keep the session timing and keep the conference flowing and on schedule. **If a speaker is missing**, the Chairperson will allocate more time for discussion, without altering the original session timing, to allow delegates from other sessions to attend the planned presentations;
- Thank each speaker at the conclusion of their speech;
- Invite questions to the speaker/s at the conclusion of their presentations (when time allows) and encourage discussion between audience and speaker/s. When necessary the Chairperson may exercise the 'Chairperson's prerogative' to ask questions;
- Manage questions in an orderly flow and repeat questions if necessary.



Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



Local Organizing Committee

Scientific Committee

Prof. Giuseppe Davì Chair
Prof. Giovanni Tesoriere Co-Chair
Prof. Caterina Grillo Secretary
Prof. Alberto Milazzo
Prof. Ivano Benedetti Treasurer and Scientific-Logistic
Coordinator
Prof. Andrea Alaimo Scientific-Logistic Coordinator
Prof. Calogero Orlando Communication Coordinator
Dr. Antonio Esposito

Dott. Gaetano Bergami, President of AIDAA Emiliano-Romagnola
Prof. Pierangelo Masarati, Presidente of AIDAA Milano
Prof. Leonardo Lecce, President of AIDAA Napoli
Prof. Giuseppe Davì, President of AIDAA Palermo-Enna
Prof. Attilio Salvetti, President of AIDAA Pisa
Prof. Mario Marchetti, President of AIDAA Roma
Prof. Erasmo Carrera, President of AIDAA Torino
Prof. Stefano Debei, President of AIDAA Veneta
Prof. Aldo Frediani, Editor in Chief of Aerotecnica Missili e Spazio
Prof. Luciano Galfetti, Coordinator of the Study program at Politecnico di Milano
Prof. Paolo Tortora, Coordinator of the Study program at Università di Bologna - Symposium Organizer
Prof. Antonio Viviani, Coordinator of the Study program at Seconda Università di Napoli
Prof. Gennaro Cardone, Coordinator of the Study program at Università di Napoli Federico II
Prof. Ugo Galvanetto, Coordinator of the Study program at Università di Padova
Prof. Maria Vittoria Salvetti, Coordinator of the Study program at Università di Pisa

Prof. Guido De Matteis, Coordinator of the Study program at Università di Roma La Sapienza
Prof. Dario Pastrone, Coordinator of the Study program at Politecnico di Torino
Prof. Alfredo Anglani, Coordinator of the Study program at Università del Salento
Prof. Caterina Grillo, Coordinator of the Study program at Università di Palermo
Prof. Andrea Alaimo, Coordinator of the Study program at Università di Enna Kore
Prof. Ivano Benedetti, Treasurer and Scientific-Logistic Coordinator of AIDAA 2017
Prof. Calogero Orlando, Communication Coordinator of AIDAA 2017
Prof. Marco D'Errico, Symposium Organizer
Prof. Michèle Lavagna, Symposium Organizer
Prof. Sabrina Corpino, Symposium Organizer
Prof. Michele Grassi, Symposium Organizer
Prof. Fabio Santoni, Symposium Organizer
Prof. Pascal Bauer, Symposium Organizer
Prof. Giorgio Guglieri, Symposium Organizer
Prof. Francesco Marulo, Symposium Organizer
Prof. Pascal Revel, Symposium Organizer





Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



Plenary Session Programme - Palermo

Day	Location	Time	Speaker/Chair
Monday	University of Palermo	9.30	G. Tumino VEGA and SPACE RIDER Development Programmes Manager, ESA <i>ESA's Vega and Space Rider Space Transportation Development Programmes: Status and Perspectives</i>
	Orto Botanico Palermo	16.50	D.G. Hull Professor of Flight Mechanics - University of Texas at Austin, USA Co-Editor in Chief of Journal of Optimization Theory and Applications
		17.10	S. Mancuso Senior Project Resource Assessment Lead Officer - ESA
Tuesday	University of Palermo	9.00	M.H. Aliabadi Professor of Aerostructures - Head of the Department of Aeronautics - Imperial College London, UK <i>Structural Health Monitoring for Life Management of Composite Airframe</i>
		11.20	J.C. Halpin JCH Consultants - Cofounder of Journal of Composite Materials - Former Associate Professor at Washington University in Saint Louis, USA <i>The ATR in the US</i>
		11.50	A. Luzi ATR Engineering Senior Vice President Executive Assistant <i>Latest development of ATR product family – A long lasting success story</i>
		13.20	L. Liggio Coordinator of the project WInSiC4AP - Management Consultant of the Distretto Tecnologico Sicilia Micro e Nano Sistemi Scarl <i>Presentation of the project WInSiC4AP</i>



Associazione Italiana di Aeronautica ed Astronautica
 XXIV International Conference
 18-22 September 2017 | Palermo – Enna



Plenary Session Programme - Enna


Wednesday	MARTA Centre Enna	9.00	T. McDonald Chief Scientist - Electro Magnetic Applications, Inc. (EMA), USA <i>The US EM Aerospace Technology Landscape</i>			
		11.20	P. Bruno NAGSF Deputy On-Site Commander <i>Nato Aircraft Ground Surveillance Systems</i>			
		11.50	P. Gaudenzi Professor of Aerospace structures and constructions - Head of Dipartimento di Ingegneria Meccanica e Aerospaziale - University of Rome "La Sapienza" <i>Round Table: The Aerospace National Cluster and the Aerospace Districts in the framework of the EU and MIUR funding policy</i>			
Thursday	MARTA Centre Enna	8.30	R. Formaro Head of Technology and Engineering Division, Italian Space Agency, Italy <i>Technology and Small Platform Development</i>			
		9.00	A. Gabrielli Head of Launchers and Space Transportation Department, Italian Space Agency, Italy - Italian Delegate to the ESA launcher programme board (PB-LAU)	A. Cramarossa Head of the ASI President Technical Cabinet, Italian Space Agency, Italy - Italian Delegate to the ESA launcher programme board (PB-LAU)	E. D'Aversa VEGA Office Manager Launchers and Space Transportation Dept., Italian Space Agency, Italy	<i>Access to Space for Small Platforms</i>
		11.10	S.P. Mahulikar Professor of Aircraft, Rocket & Space Propulsion, Indian Institute of Technology Bombay, India <i>Additional aerothermal concepts for configuration design of lifting-body of hypersonic reusable vehicle</i>			
		11.40	G. Pagnano Clean Sky JU - Head of Unit (Coord. PO) - Chief Technical Officer, Brussels, Belgium <i>Clean Sky Round Table</i>			



Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



Palermo, 18 September 2017 – University of Palermo - Morning sessions

8.00	Registration		
8.30	Opening Ceremony & Welcome Address Prof. G. Davì (Chair of Organizing Committee - President of the Palermo-Enna AIDAA section), Prof. G. Tesoriere (Co-chair of Organizing Committee - Vice Rector of the Kore University of Enna), Prof. L. Lecce (President of AIDAA), Prof. G. La Loggia (Head of DICAM), Prof. G. Perrone (Head of DIID)		
9.30	Plenary Speech - Dr. G. Tumino - ESA's Vega and Space Rider Space Transportation Development Programmes: Status and Perspectives		
10.00	Break		
	Session 1A: Composites Room: A - Chair: M. Marchetti	Session 1B: Space Guidance & Navigation Room: B - Chair: G. Chiocchia	Session 1C: Propulsion Room: C - Chair: S. Khurana
10.10	90 - A. Riccio et al. Numerical study on induction heating of adhesive for bonding of composite materials	25 - F. Aponte et al. Experimental simulation of planetary entries	2 - P. Bauer et al. Ram accelerator thrust modeling for different bores
10.30	69 - P. Bettini et al. Composites interlaminar toughening techniques by means of interleaved nano-fiber veils: experimental evaluation	12 - F. Menzione et al. GNSS based consider marginalized filtering and optimal low thrust control for smallsatellite autonomous target orbit acquisition	3 - P. Bauer et al. Numerical study of 3d gaseous detonations in a square channel
10.50	41 - E. Carrera et al. Numerical simulation of failure in fiber reinforced composites	27 - S. Sgubini et al. Guidance along constrained re-entry trajectories	37 - F. Bertelli et al. Development of a model of distributed turboelectric propulsion system for transport aircrafts
11.10		78 - F. Stesina et al. Guidance and control strategies for spacecraft rendezvous with non-cooperative target	114 - M. Panelli et al. Development and Validation of Models for hollow cathode analysis and design
11.30	Coffee break		
	Session 2A: Structural modelling Room: A - Chair: A. Riccio	Session 2B: Space systems Room: B- Chair: G.B. Palmerini	Session 2C: Flight mechanics & Navigation Room: C - Chair: C. Grillo
11.50	19 - M. Zaccariotto et al. A new approach to couple fem meshes and peridynamic grids	14 - A. Stolfi et al. Performance analysis and gains tuning procedure for a controlled space manipulator used for non-cooperative target capture operations	22 - S. Draghi et al. Optimal planning of aerial multi-field missions
12.10	123 - U. Galvanetto et al. Impact location and force reconstruction in composite panels, a numerical investigation	21 - A. Calvi The Euclid thermo-mechanical systems: status approaching the spacecraft critical design review	50 - C. Grillo et al. An EKF based procedure for automatic path following in turbulent air
12.30	62 - Oliveri et al. An efficient Ritz based analysis tool for the design of variable angle tow composite plate assemblies	35 - A. Mistretta et al. European C-band klystron design and current development status	32 - M. Bruglieri et al. Helicopter emergency medical service optimization
12.50	17 - Wang et al. Efficient numerical methods for aeroelastic analysis of wing-propeller configurations in compound helicopters	58 - G.M. Infantolino et al. On-board telemetry monitoring via support vector machine with application to Philae solar generator	6 - U. Mercurio et al. Development certification and initial flight testing of an Optionally Piloted Aircraft at the Italian Aerospace Research Center
13.10	Lunch		



Associazione Italiana di Aeronautica ed Astronautica
 XXIV International Conference
 18-22 September 2017 | Palermo – Enna



Palermo, 18 September 2017 – University of Palermo - Afternoon sessions


	Session 3A: Materials Room: A - Chair: S. Belouettar	Session 3B: AeroSpace Systems Room B - Chair: F. Bernelli Zazzera	Session 3C: Fluid Dynamics Room C - Chair: G. Chiocchia	Session 4D: <i>Flight Mechanics–Miele Session</i> Room: Orto Botanico - Chair: F. Giannessi
14.30	38 - L. Di Landro et al. Set-up for the permeability measurement of fabrics for liquid resin infusion techniques	26 - R. Volpe et al. Selecting optimal inspection trajectories for close space target observation	80 - S. Khurana et al. Parametric design study for a hemispherical body with a breathing blunt nose	104 - M. Pontani Optimal image trajectories using continuous thrust
14.50	15 - A. Delfini et al. Low earth orbit atomic oxygen erosion of space composite materials	9 - G. Impresario et al. Remotely piloted aircraft systems: rules, scenarios and technology	83 - B. Rocchio et al. Towards a general dynamic stall model	105 - P. Teofilatto et al. The global optimization problem and the contribution of prof. Angelo Miele: the Green's theorem approach
15.10	20 - R. Pastore et al. Radar absorbing materials and structures behaviour in reverberation chamber environment	91 - R. Fauci et al. MINI IRENE. Deployable heat shield for suborbital flight test	5 - C. Purpura et al. Numerical rebuilding of low enthalpy hypersonic flow in the Ghibli facility	106 - C. Grillo et al. Optimal flight path determination in turbulent air: a modified EKF approach
15.30		110 - G. Russo et al. HYPLANE: The future of sub-orbital space access is today	109 - C.S. Greco et al. Synthetic jet-based control of a cylinder wake	
15.50	Transfer to Orto Botanico			
	Plenary Session: Memorial Angelo Miele			
16.30	Greetings from the Rector of the University of Palermo Prof. Fabrizio Micari			
16.40	Memories of Angelo Miele - Prof. F. Giannessi			
16.50	Plenary Speech - Prof. D. Hull			
17.10	Plenary Speech - Dr. S. Mancuso			
17.30	Springer Celebration 50 th anniversary of JOTA			
18.00	Cocktail dinner			



Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



Palermo, 19 September 2017 – University of Palermo - Morning sessions

8.00	Registration		
9.00	Plenary Speech - Prof. M.H. Aliabadi - Structural Health Monitoring for Life Management of Composite Airframe		
	Session 4A: Composites Room: A - Chair: U. Galvanetto	Session 4B: Space systems Room B - Chair: M. D'Errico	Session 4C: Internationalization: the gateway to implement academic resource for the aviation sector Room: C - Chair: P. Bauer
9.30	102 - F. Ricci et al. Interaction of guided waves with discontinuities and defects in composite structures	64 - C. Paris et al. The LARES-Lab thermo-vacuum facility with FBG sensors monitoring capability	93 - P.Revel et al. Future workforce for aerospace: risks and opportunities
9.50	87 - A. Sellitto et al. Numerical investigation on delamination growth in composite panels including fiber bridging effects	66 - I. Ciufolini et al. Measurement of frame dragging of general relativity through passive satellites	95 - D. Hanus et al. Aviation and the 4 th industrial revolution: the prominent role of networks of excellence
10.10	36 - M. Guida et al. Fuselage advanced composite design to comply with an emergency landing test	74 - M. Massari et al. Performance evaluation of a semi-active damping system for landing in microgravity	94 - M. M. Prats et al. PEGASUS industry alliance: graduates' opportunities and technology transfer
10.30		89 - R. Fauci et al. The USV3 DWS project: unmanned space re-entry vehicle deployable wing system	97 - G. Chiocchia et al. The education of the Aerospace Engineers of the 21st century: a challenge for universities
10.50	Coffee break		
11.20	Plenary Speech - Prof. J. C. Halpin - The ATR in the US		
11.50	Plenary Speech – Dr. A. Luzi - Latest development of ATR product family – A long lasting success story		
	Session 5A: Space Systems Room A - Chair: M. Lavagna	Session 5B: Green A/C Design Room B - Chair: A. Frediani	Session 5C: Internationalization: the gateway to implement academic resource for the aviation sector Room: C - Chair: P. Bauer
12.20	29 - A. Vricella et al. Concept design of space debris removal with linear electromagnetic accelerator system	24 - Broglia A. et al. FLYNK – the future all-electric commuter concept for metropolitan areas	92 - P. Bauer et al. Internationalization of academics: a key for aeronautics and aerospace development
12.40	79 - G. Impresario et al. PRISMA mission: opportunities and main innovations	31 - S. Bagassi et al. The windowless concept: preliminary design of short-medium range windowless aircraft	96 - F. Bernelli et al. The value of peer-evaluation for the improvement of quality of the aerospace higher education across europe
13.00	60 - G. Giardina Interplanetary supply chain network for space exploration: study of modeling framework for a space mission	63 - R. Pecora et al. Design and testing of a multi-morphing high lift device for the next generation green regional aircraft	98 - G. Chiocchia et al. National qualification frameworks for aerospace engineering education in western Europe and in the Russian federation: the AirQual project 2009-11
13.20	Plenary Presentation of the project WInSiC4AP - Dr. L. Liggio		
13.50	Lunch		



Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



Palermo, 19 September 2017 – University of Palermo - Afternoon sessions

15.00	<p>Excursion in Palermo</p> <p>Visit to Cappella Palatina</p> <p>Walk along the Cattedrale and Corso Vittorio Emanuele</p> <p>Visit to Palazzo Alliata di Villafranca</p>
18.00	<p>Transfer to Enna</p>
20.30	<p>Cocktail dinner</p>





Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



Enna, 20 September 2017 – University of Enna Kore - Morning sessions

8.00	Registration		
8.30	Opening Enna Sessions & Welcome Address Prof. C. Salerno (President of the Kore University of Enna), Prof. G. Puglisi (Rector of the Kore University of Enna), Dr. F. Colianni (Councilor for Public Instructions and University Relations - City of Enna)		
9.00	IDS presentation - A. Guidoni (Sales and Marketing Manager) Plenary Speech - Dr. T. McDonald - The US EM Aerospace Technology Landscape		
	Session 6A: Design Room A - Chair: L. Lecce	Session 6B: Space Systems Room B - Chair: F. Bernelli Zazzera	Session 6C: IDS Round Table Room C - Chair: A. Guidoni (Sales and Marketing Manager)
9.40	18 - S. Mukhopadhyay et al. Conceptual sizing of a long range transport aircraft	100 - A. Ercoli Finzi et al. Lessons learned from the SD2 operations on the comet 67/P	ROUND TABLE: Electromagnetic Technology in Aerospace Rod Perala - EMA Sanjeev Sikka – NFOTEC Amedeo Capozzoli – University of Naples Federico II Mauro Coltelli - INGV
10.00	23 - A. Bernasconi et al. Conceptual design of a structural-battery hybrid-electric aircraft	75 - M. Eugeni et al. Preliminary design of a mission to Triton based on a concurrent engineering approach	
10.20	47 - A. Frediani et al. Parsifal project: a breakthrough innovation in air transport	113 - O. Bischoff et al. Fractionated sensors to enhance the Earth Observation service: the Satellite Swarm Sensor NETwork (S3NET) study	
10.40	99 - F. Nicolosi et al. Aircraft directional stability and control: new improved approach in tail design	43 - V. Franzese et al. Autonomous optical navigation for interplanetary cubesats	
11.00	Coffee break		
11.20	Plenary Speech – Lt. Col. P. Bruno Nato AGS Systems		
11.50	ROUND TABLE - The Aerospace National Cluster and the Aerospace Districts in the framework of the EU and MIUR funding policy - chaired by P. Gaudenzi		
13.10	Lunch + AIDAA National Committee		



Associazione Italiana di Aeronautica ed Astronautica
 XXIV International Conference
 18-22 September 2017 | Palermo – Enna



Enna, 20 September 2017 – University of Enna Kore - Afternoon sessions

	Session 7A: Structural Modelling Room A - Chair: A. Alaimo	Session 7B: Small Satellite Applications and Technologies Room B - Chair: M. D'Errico	Session 7C: Systems Room C - Chair: I. Dimino
14.30	52 - A. Pagani et al. Vibrations of structures subjected to pre-stress states	120 - invited – V. Stanzione et al. S-200 All-Electric multi-purpose Mini-platform: new enabled mission scenarios	10 - A. Esposito et al. An open circuit wind tunnel to characterize anti-icing systems
14.50	65 - M. Filippi et al. Advanced structural models for rotordynamics analyses	61 - Invited – E. Miotti et al. PLATINO: an opportunity for developing a smallsat platform concept	88 - L. Mazzola et al. Passive anti-icing system: new multifunctional coating for aeronautical applications
15.10	73 - G. Giunta et al. Analysis of fibre-metal laminates by means of higher-order hierarchical beam models	112 – E. D'Aversa et al. Status of Small Spacecraft Mission Service (SSMS) development for Vega	40 - G. Janszen et al. Pressure effects in self-healing fuel tanks
15.30	54 - E. Zappino et al. A variable kinematic one-dimensional model for the hygro-mechanical analysis of composite materials	72 – P.Tortora et al. Ground segment solutions for small satellites	116 - C. Orlando et al. NLG shimmy active controller design: a population decline swarm optimizer - P _D SO approach
15.50	Coffee break		
16.10	LEDA Shaking Table Demonstration		
16.50	IDS Demonstration		
17.20	Full Flight Simulator Demonstration		
18.00	AIDAA General Assembly		
	FREE TIME		
21.00	Conference Dinner		

ASSOCIAZIONE ITALIANA
 DI AERONAUTICA E ASTRONAUTICA



Enna, 21 September 2017 – University of Enna Kore - Morning sessions

8.00	Registration		
8.30	Plenary Speech – Dr. R. Formaro - Technology and Small Platform Development		
9.00	Plenary Speech – Dr. A. Gabrielli, Dr. A. Cramarossa and E. D’Aversa - Access to Space for Small Platforms		
	Session 8A: Acoustic Room A - Chair: D. Dimitriu	Session 8B: Small Satellite Applications and Technologies Room B - Chair: P. Tortora	Session 8C: Metallic Structures Room C - Chair: E. Carrera
9.30	68 - M. Cinefra et al. Preliminary vibro-acoustic analysis about the use of metamaterials in the fuselage of a regional turboprop aircraft	71 - D. Modenini et al. On-board precise GPS navigation solution for small satellite missions	56 - A. Nardone et al. Design, optimization and manufacturing of metallic wing structures of light aircraft
9.50	7 - M. Viscardi et al. Nano-filler smart technologies for vibro-acoustic response improvement in the next generation aircraft	85 - J. Prinetto et al. Main belt active asteroids samples collection and return mission design	103 - A. Nasrollahi et al. Ultrasonic-GW tomographic analysis and probabilistic reconstruction approach for SHM applications
10.10	11 - F. Marulo et al. Acoustical properties of PVP/Graphene blankets	57 - M. Zannoni et al. Preliminary mission analysis and design of a CUBESAT mission to the Didymos binary asteroid system	16 - G. Petrone et al. Dynamics of stiffened cylinders
10.30	8 - M. Viscardi et al. An innovative viscoelastic treatment for the internal noise reduction in a regional aircraft	82 - F. Stesina et al. CUBESAT mission for inspection of in orbit platforms	28 - S. Santhosh et al. Determination of surface finish and metal removal rate by varying parameters in wire cut EDM and optimization with statistical tools and genetic algorithm
10.50	Coffee break		
11.10	Plenary Speech – Prof. Mahulikar Shripad P. - Additional aerothermal concepts for configuration design of lifting-body of hypersonic reusable vehicle		
11.40	CLEAN SKY ROUND TABLE chaired by G. Pagnano		
13.00	Lunch		



Enna, 21 September 2017 – University of Enna Kore - Afternoon sessions

	Session 9A: Acoustic Room A - Chair: I. Benedetti	Session 9B: Small Satellite Applications and Technologies Room B - Chair: M. Lavagna	Session 9C: Systems Room: C - Chair: A. Esposito (UniNa)
14.00	67 - M. Cinefra et al. Acoustic analysis of passive metamaterial panels using the finite element method and homogenized properties	84 - M. D'Errico et al. A small-sat based distributed radar for parasitic remote sensing	70 - F. Fusco et al. Design and validation of a vehicle tracking system based on GNSS data and supporting the communications with the CIRA'S optionally piloted aircraft
14.20	42 - S. De Rosa et al. Towards a digital plane wave superposition for vibroacoustics problems	44 - R. Opromolla et al. Technologies and algorithms for autonomous pose determination for small satellites	39 - V. Anastasio et al. Innovative "SMART-GRID" concept for aeronautical electrical networks
14.40	45 - C. Poggi et al. Pressure-based integral formulations for the analysis of sound scattered by moving bodies	49 - L. Olivieri et al. Docking mechanisms for nano and micro satellites	76 - I. Dimino et al. Definition, design assessment and parameterization of a metasensor for LC&A and load monitoring purposes
15.00	121 - D. Dimitriu et al. Aviation noise impact: the importance of an aviation community platform and need for further research	46 - F. Sansone et al. Relative navigation technologies for small spacecraft	115 - A. Esposito et al. A pilot mental workload case study in a Full Flight Simulator
15.20	Coffee break		
	Session 10A: Fluid Dynamics & Fluids Structures Interactions Room A - Chair: S. De Rosa	Session 10B: Small Satellite Applications and Technologies Room B - Chair: M. Grassi	Session 10C: Structures and Materials Room C - Chair: A. Milazzo
15.40	77 - L. Polito et al. Compressible boundary layers: evaluation of predictive methods by means of CFD analysis	81 - F. Stesina et al. E-ST@R-II project: from design to orbit operations	118 - I. Benedetti et al. A computational framework for modelling damage and failure in polycrystalline materials
16.00	30 - M. Esposito et al. Wind tunnel tests and fem analysis aimed to optimize the demolition system of a nuclear power plant chimney	86 - M. Locatelli et al. ECLIPSIS: formation flying CUBESATS for exozodiacal dust imaging	101 - E. Monaco et al. Multi-parameters selection and statistical paths analysis implementation in a guided waves based SHM systems for reliable identification and localisation of damages in composites stiffened plates
16.20	55 - I. Dimino et al. Conceptual design of a morphing winglet for green regional A/C	48 - L. Olivieri et al. Technologies to join spacecraft using a tethered electromagnetic probe	119 - A. Alaimo et al. Experimental evaluation of a piezoelectric wind energy harvesting device
16.40		117 - F. Santoni et al. In orbit operation of Ursa Maior, towards LEDSAT and 1KUNS	53 - E. Zappino et al. Thermo-piezo-elastic analysis of complex structures using a node dependent kinematic one-dimensional model
17.00	Excursion to Piazza Armerina Cocktail dinner & Best Paper Awards Ceremony Visit to "Villa Romana del Casale"		
22.00	Close		



Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



Logistics - Palermo

- **Sessions and Plenary Lectures**

The Conference is mainly organized into three parallel sessions that will be held in the "Aula Capitò" and in the C330 and C340 classrooms. Clear signs will be visible in the corridors and UniPa Staff will be available to help the Delegates reach the conference rooms.

The Chairmen should reach the conference rooms beforehand and ensure the regular upload of the presentations. A member of Staff will be allocated to each room, to assist the Chairmen with any technical issue may arise.

All the plenary lectures will be held in the Aula Capitò.

- **Miele Session - Miele Memorial - Transfer to the Orto Botanico - Wine & Cheese reception**

On the afternoon of Monday (September 18th) a further Flight Mechanics session, the Miele Session (Session 4D, 14:30-15:30) will be held at the Orto Botanico of Palermo, in memory of late Prof. Angelo Miele. The Delegates interested in the Miele Session (Session 4D) should contact Prof. Caterina Grillo on Monday morning to arrange a transfer to the Orto Botanico. Please note that this special session is NOT the Angelo Miele Memorial, that will follow it.

The Miele Memorial will follow the Miele Session at the Orto Botanico and will involve all the Delegates. A Bus service will be available for the transfer from the campus of the University of Palermo to the Orto Botanico. The buses will be available at 15:50 at the UniPa campus.

After the Miele Memorial, a Wine & Cheese reception will be offered to the invited Delegates (Member and Non-Member full fee) at the Orto Botanico, to celebrate the 50th anniversary of the Springer Journal of Optimization Theory and Control. The buffet has been kindly offered by Springer publishers.

After the reception, a bus service will be available from the Orto Botanico to Piazza Giuseppe Verdi, close to the Teatro Massimo, for the interested Delegates.

- **Wi-Fi credentials at UniPa**

At registration, wireless credentials will be provided to the interested Delegates. Please NOTE that for Wi-Fi use the devices must be suitably set up.

The Delegates who need to use the Wi-Fi connection at the University of Palermo are invited to configure their system (possibly before reaching the Campus) following the instructions at the link: <http://www.unipa.it/amministrazione/area7/servizi/wireless/>

Alternatively, they can download the scripts for automatic configuration from the link: <https://cat.eduroam.org/?idp=941>

- **Excursion in Palermo**

The conference Delegates are entitled to the excursion in Palermo, on the afternoon of Tuesday (September 19th). Please inform the Staff at the welcoming desk for the registration of any additional accompanying person. The fee for the accompanying persons is €16 and it will include the entrance to the Cappella Palatina and Palazzo Alliata and the use of whippers.

A bus service will be available at the UniPa campus at 14:45 for the transfer to the Cappella Palatina. The buses will collect the Delegates at the end of the visit and will transfer them back to the campus, where the buses for the subsequent transfer to Enna will be available.

- **Transfer to Enna and luggage tags**

A bus transfer from the campus of the University of Palermo to the Campus of the University of Enna is arranged for the Delegates. The buses will be available at the UniPa campus after the excursion in Palermo.

A special luggage service is organized for the Delegates that will travel to Enna on Tuesday. The Delegates leaving their accommodation in Palermo on Tuesday morning will be able to deposit their luggage at the welcoming desk at the UniPa conference venue, where it will be stored and guarded. The luggage will be suitably tagged, so that the Delegates will be able to collect it before boarding on the bus to Enna. The Delegates can express an option at the registration desk, on Tuesday morning, if they want their luggage stored in the bus before their return from the excursion in Palermo.



Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



Logistics - Enna

- **Sessions and Plenary Lectures**

The Conference is mainly organized into three parallel sessions that will be held in the M.A.R.T.A. Centre of the University of Enna “Kore”. Maps of the building will be visible at the “AIDAA Registration Desk Enna” and UniKore Staff will be available to help the Delegates to reach the conference rooms (ROOM “A”, “B” and “C”).

The Chairmen should reach the conference rooms beforehand and ensure the regular upload of the presentation. A member of Staff will be allocated to each room, to assist the chairmen with any technical issue may arise.

The plenary lectures and the round tables will all be held in the ROOM “C”.

- **L.E.D.A. Shaking Tables, Full Flight Simulator and IDS Demonstrations**

On the afternoon of Wednesday (September 20th) a demonstration of the shaking tables facility (starting at 16:10) will be performed in the L.E.D.A. Centre, the building on the side of the M.A.R.T.A. Centre.

Immediately after, the demonstration of the CESSNA Full Flight Simulator and the demonstration of the IDS unmanned systems (16:50-18:00) will be performed in the Simulator Hall (ROOM “C”) of the M.A.R.T.A. Centre.

- **AIDAA General Assembly**

On Wednesday afternoon (September 20th) the AIDAA General Assembly will take place at 18:00 in the Simulator Hall (ROOM “C”) of the M.A.R.T.A. Centre.

After the Assembly a bus transfer will transfer the delegates to the Conference Hotel “Federico II Palace” for the Conference Dinner.

- **Excursion to Piazza Armerina**

All the conference Delegates have been invited by email to join the excursion to Piazza Armerina “Villa Romana del Casale”, on the afternoon of September 21st. Only few tickets are still available and should be booked at the welcoming desk in Palermo on Monday morning (September 18th), up to the maximum allowable number of attendants. The fee for the accompanying persons is €30 and it will include the cocktail dinner and the entrance to the Villa Romana del Casale. The bus transfer from the M.A.R.T.A. Centre to Piazza Armerina will be available at the end of the conference at 17:00.

- **Bus Transfer in Enna**

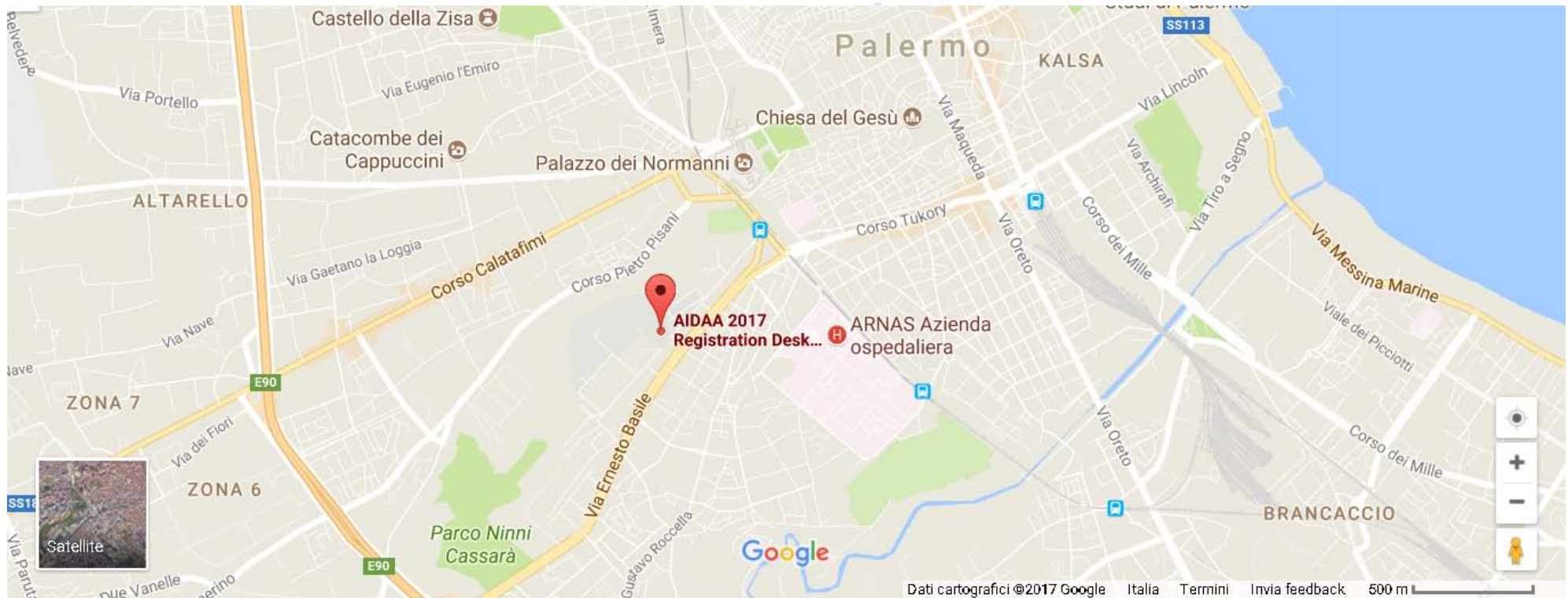
The conference venue in Enna (M.A.R.T.A. Centre) is not served by public transport, thus the Organizing Committee has arranged a private transfer service from the conference Hotel “Federico II” to the M.A.R.T.A. Centre and vice versa. The transfer timetable is available on the conference website (www.aidaa2017.com) and will be posted in the Hall of the “Federico II Palace”. The timetable can also be consulted by your personal badge via a QR code reader.

The delegates who have not reserved a room at Federico II are invited to inform the staff at the welcoming desk in Palermo in order to arrange a transfer from their selected accommodation.



Venue

University of Palermo, Scuola Politecnica, Viale delle Scienze, 7, Palermo





Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



Venue

University of Enna Kore, Centro M.A.R.T.A., Contrada Santa Panasia, Enna





Associazione Italiana di Aeronautica ed Astronautica
XXIV International Conference
18-22 September 2017 | Palermo – Enna



SPONSOR

