Formula SAE Italy 2023

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www.formula-ata.it
Formula SAE Italy is organized by
ANFIA - Associazione Nazionale Filiera Industria Automobilistica
www.anfia.it
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Formula SAE Italy 2023
July 12th - 16th
@ «Riccardo Paletti» racetrack - Varano de’ Melegari (PR)

Official Handbook

Introduction
The Formula SAE Italy 2023 will follow the FSG Rules 2023, with some exceptions and additions and the official Formula SAE Rules valid for 2023 for all administrative and documents requirements. The Formula Driverless 2023 will follow FSG rules with few exceptions. The Cost event will follow FSG rules and the Business Presentation event will follow the scheme tested in 2021 edition and shared with FS Austria with some updates.

The additional regulations, valid for the Italian event, are the ones reported on the official Formula ATA web site (www.formula-ata.it under the “Information & Rules” section).

These guidelines are written with the only purpose to help competitors and guests during the event. In case of doubt, please refer to the event officials. Please remember that motorsport can be dangerous, take always the maximum care during the entire event.

Formula SAE is an educational event where all the students have the possibility to learn while having fun.
In case of emergency

In case of any emergency situation please refer to the officials/staff. During the dynamic events ambulance will be on site. In case of need, ask someone with a two-way radio.

In case of an emergency outside the event, call 112. This number is free of charge and works with both mobile and coin telephones.

Useful phone numbers are the following

General Emergency Number 112
Carabinieri Fornovo Taro office +39 0525 2114
Parma Hospital
-First aid service: +39 0521 702111 - 703111
-First aid service: +39 0521 703084
Borgo Taro Hospital
-First aid service: +39 0525 9701
-First aid service: +39 0525 970216, ext. 4216

WHAT SHOULD I DO IN CASE OF ELECTRIC SHOCK?

- Call for medical help. Ambulances are onsite for medical assistance.
- Push one of the emergency shutdown buttons and wait until the TSAL (Tractive System Active Light) is green. Don’t act if light is red or turned off.
- Try to speak with the wounded and ask him/her about his/her health.
- Insulate yourself if you must move a wounded away from a live contact - wear dry gloves or cover your hands with cloth and cover potential contact paths with the car with the HV isolation blanket.
- Watch your step to make sure that you do not slip or fall when trying to move the wounded.
- Do not move the wounded if there is a possibility of neck or spinal injuries unless it is absolutely necessary (for example from a path of live current).
- Cover burns with a sterile dressing. On the surface, electrical burns may not look serious, but the burn can be severe deeper in the tissue.
- Keep the wounded comfortable, warm and at rest, and monitor breathing.
Cost Event Committee

Actis Enrico Dayco Purchasing - Global Commodity Manager & Iveco Plant Purchasing Manager
Anzalone Massimo Valeo Industrial Management Controller
Bertolino Luca Dayco New Technology Introduction Buyer (NTI Buyer)
Boschetto Carlos Dallara Group Design Engineer
Cacopardo Aldo Doc Finance Marketing Manager
Della Rossa Michele Menarini Diagnostics Business Controller
Di Milano Gerardo Step Italia Accounting Specialist
Donato Paolo Polo Messap Technology Manager
Giorgioni Carlo - Freelance Finance and Controlling Consultant
Girimonte Mariangela CNH Industrial Cost Manager
Juricic Matija Rimac Technology Process Engineer - Dispensing
La Valle Martina Ycom Project Manager
Leacci Christian Stellantis Virtual Engineer - HEV Capability & Vehicle Energy Management
Loparco Denis Marelli VWE Methods & Tools Manager - Strategy - Cost & Partnerships
Lorenzoni Francesco Maserati Sport segment Car Engineer
Manegatti Marco Dallara Automobili Sales Specialist
Parodi Domenico Aiplr Electric Distribution System Lead Engineer
Piccolisi Denis Dallara Automobili Design Engineer
Pinto Valerio Bosch CVT - Bari Design Development Engineer
Prazi Giovanni Arik Industrial Controller
Russ Davide Stellantis Big Global Assistant Chief Engineer - Electrical Drive Systems - Propulsion Systems - Engineering
Scaramaglia Filippo - System Engineer
Scolletta Nicola Iveco Group Off Road Technical Certification
Silatchom Fabrice Spencer Italy Senior Technical Buyer
Suleman Shalom Beamit Additive Manufacturing Technologies Quality Assurance Specialist
Sureka Abhant Schaeffler ByWire Technology Motorsports System Engineer & Data Analyst
Szymczak Sebastian Aconext Gmbh Data Analyst
Topini Giacomo Automobili Lamborghini Motorsport Procurement
Trumeci Niko Rimac Powertrain Engineer - Gearbox
Vallerani Ernesto James Aerea Junior Mechanical Design Engineer

Business Presentation Event Committee

Albiero Giancarlo ANFIA Aftermarket and Motorsport Area
Assiattini Giovanni Italdesign ULS Project Manager
Bacci Alberto Dallara Dallara Academy Coordinator
Bonadio Giulia Salesforce Strategic Account Executive, Marketing Automation - ESMB Italy
Caldano Enrico Valeo Project Director
Creswick Noah Audi of America Manager, User Experience - Product Planning
Debernardi Andrea ANFIA Head of ANFIA Components Group
Dei Gtlinger Laura Assoknowledge Confindustria SIT President
Dugam Adriana AVL Software and Functions Process Engineer - Process Management Support
Gazzulli Piero IVYIQION Strategic Accounts Support
Grassi Luca Dallara Key Account Manager
Lodovico Carla Brick&Kids Country Head
Marcellini Carlotta Viteco Account Manager Stellantis Europe
Must Francesca FreeMove eSolutions Strategic Product Manager
Negri Stefano Youdesign Manager - Business Development DWEA
Pregnolato Emanuela ANFIA Economics and Project Manager
Rabel Franz AVL Head of Business Presentation @ FS Austria

Design Event Committee

Alme Boot Marco Iveco Group Electrification Technologies - Speciality & Innovation Manager
Airale Andrea BeonD President & CEO
Airola Amilcare Valeo Product Technical Leader
Annichiarico Claudio Meccanica 42 Chief Executive Officer
Anzissio Franco Iveco Group Electrification Technologies - Project Leader
Approsto Angelico SKF Senior Technologist - R&D
Badia Tiziano Bugatti Rimac Italy EE Project Lead
Basilicic Marco Centro Ricerche Fiat Advanced Vehicle Concept Engineer Specialist
Batistinza Alessio Stellantis Customer Experience Functional Product Specialist
Bassatti Walter YCOM Technical Director
Biffani Pietro Paolo Iveco Group Head of Powertrain Product Engineering
Bignotti Luca Vallyr CEO
Broggi Alberto Vistlab General Manager
Brusaglio Giampiero - Electrical Vehicle Expert
Calderini Daniele Dallara Group DIL Activities & Track Performance
Cerriello Giovanni DTS Fuel System Chief Engineer & Validation Manager
Cina Marco Valeo R&D Director
Coeli Paolo Stellantis EE - Regional Planning - Cross-Carline & Diversity
Collotta Davide Pysrrim Electronics Product Manager
Colombo Maurizio - Vehicle Expert
Concari Nando Dallara Group Vehicle Technical Advisor
Contardi Mattia Iveco Group ePowertrain System Design and Validation Manager
Cuomo Raffaele Maserati ADAS Design Release Engineer
Davide Giacomo Dallara Group Chief Executive Officer
Davide Fabio Italdesign-Giugiaro Ads/AD Team Coordinator
Davide Alan Automobili Pininfarina Energy Storage System Manager
De Vita Luca ANFIA Technical & Regulatory Affairs Area
Del Toro Paolo Iveco Group Head of Powertrain Testing Operation & Prototype
Di Stazio Quirino Maserati Electric Power Steering Component - ADAS Area Responsible
Espostio Daniele Vallyr General Manager
Espostio Filippo DTS Spa Product Engineering Staff
Ferrugia Mario University of Malta Associate Professor, Mechanical Engineering
Ferrara Ferrari Stellantis EE Production Execution South Europe Manager
Fermini Gianluca Gecom CEO
Fregonese Raffaele Maserati Propulsion Systems - Electrified Architecture - Charging Systems Architecture Responsible
Gamberini Giorgio Italdesign-Giugiaro Business Development Director IG/V
Guccione Stefano Automobili Pininfarina Head of e-Powertrain Architecture and Integration
Heindeel Flake Italdesign Head of EE Architecture and Integration
La Tassa Silvio Danesi Engineering Head of Engineering
Laviole Francesco Iveco Group ePowertrain Testing & Certification Manager
<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Librizzi Mario</td>
<td>Maserati</td>
<td>Team Leader Infotainment Validation</td>
</tr>
<tr>
<td>Lilli Francesco</td>
<td>Stellantis</td>
<td>Head of Global Connectivity</td>
</tr>
<tr>
<td>Lodigiani Federico</td>
<td>Dallara Group</td>
<td>Automotive Designer</td>
</tr>
<tr>
<td>Luca Stefano</td>
<td>Stellantis</td>
<td>Senior Technical Specialist for Foundation Brakes</td>
</tr>
<tr>
<td>Masucci Salvatore</td>
<td>Ferrari</td>
<td>Engine Performance Project Leader</td>
</tr>
<tr>
<td>Migliaccio Guido</td>
<td>Stellantis</td>
<td>Propulsion Quality Engineering Manager</td>
</tr>
<tr>
<td>Mirabella Valentino</td>
<td>Stellantis</td>
<td>Vehicle Dynamics Virtual Analysis Engineer</td>
</tr>
<tr>
<td>Molena Elena</td>
<td>Iveco Group</td>
<td>Battery System Engineer</td>
</tr>
<tr>
<td>Monti Francesco</td>
<td>Podium Advanced Technologies</td>
<td>CEO</td>
</tr>
<tr>
<td>Morosone Giulio</td>
<td>Automobili Pininfarina</td>
<td>Chassis &amp; Vehicle Dynamic Director</td>
</tr>
<tr>
<td>Novati Nicolò</td>
<td>Pirelli Tyre</td>
<td>Testing Engineer</td>
</tr>
<tr>
<td>Primon Alfredo</td>
<td>Centro Ricerche Fiat</td>
<td>Head of BMS Innovation Team at CRF/Stellantis</td>
</tr>
<tr>
<td>Ravera Federico</td>
<td>Danesi Engineering</td>
<td>Head of Simulation</td>
</tr>
<tr>
<td>Razelli Eugenio</td>
<td>Motor Valley Accelerator</td>
<td>President</td>
</tr>
<tr>
<td>Ricci Claudio</td>
<td>Danesi Engineering</td>
<td>Head of Advanced Vehicle Dynamics (AVD)</td>
</tr>
<tr>
<td>Ricciardi Francesco</td>
<td>Bylogica</td>
<td>CEO</td>
</tr>
<tr>
<td>Roger Martin</td>
<td>Automobili Pininfarina</td>
<td>Director of Powertrain and HV Systems</td>
</tr>
<tr>
<td>Sacchi Matteo Eugenio</td>
<td>Stellantis</td>
<td>Vehicle Dynamics Global Performance Specialist</td>
</tr>
<tr>
<td>Santopietro Vincenzo</td>
<td>Stellantis</td>
<td>Manager of AI Data Management for Autonomous Driving</td>
</tr>
<tr>
<td>Tola Roberto</td>
<td>Centro Ricerche Fiat</td>
<td>E2E Prototyping and Validation Manager</td>
</tr>
<tr>
<td>Toso Andrea</td>
<td>Dallara Group</td>
<td>Director of Academic and Cultural Programs</td>
</tr>
<tr>
<td>Trolano Francesco</td>
<td>Alten</td>
<td>Business Manager</td>
</tr>
<tr>
<td>Vetrano Antonio</td>
<td>Stellantis</td>
<td>Global Small Gasoline Calibration and Applications Manager</td>
</tr>
<tr>
<td>Zeharia Dario Simone</td>
<td>Bugatti-Rimac</td>
<td>System Integration Lead Engineer</td>
</tr>
<tr>
<td>Zanzola Marco</td>
<td>Centro Ricerche Fiat</td>
<td>E2E Prototyping and Validation Engineer</td>
</tr>
</tbody>
</table>

**Give Shape to Ideas That Drive the World**

**CECOMP**

THE CECOMP GROUP COVERS A WIDE RANGE OF OFFERS: FROM THE DESIGN OF THE MODEL, TO THE ENGINEERING OF THE MOLDS, TO THE REALIZATION OF THE COMPONENTS, BOTH FOR VEHICLES IN PRODUCTION AND FOR PROTOTYPES, SHOWCASES, ONE-OFF VEHICLES AND TURNKEY PROJECTS

**Motor Valley**

The land where speed was born
Formula SAE Italy 2023

Sponsor Special Awards

**Award for the best Car/Resources balance**

Award presentation by a Dallara executive spokesperson

- Trophy
- Cheque of € 700

**ITT Award for the Best 1E classified team**

Award presentation by an ITT executive spokesperson

- Cheque of € 1,000

**Podium Advanced Technologies Best Battery Award 2023**

Award presentation by Francesco Monti, CEO of Podium Advanced Technologies

- Cheque of € 1,500

To the team who did the best job in putting together all the battery system project requirements and constraints and developed the most innovative battery system concept.

**Teoresi Award 2023 - Electronics development process: innovative controls, methods and architectures**

Award presentation by Natale Gentile, Country Business Development Manager Automotive

- Trophy + Intrepid Control Systems innovative tools for engineers in the vehicle networking, testing and embedded engineering fields

**Special Awards**

**Most Friendly Team**

- Trophy

**Best Class 1C Classified in the Cost Event**

- Trophy

**Best Class 1D Classified in the Cost Event**

- Trophy

**Best Class 1E Classified in the Cost Event**

- Trophy

**Best Class 1C Business Presentation Event**

- Trophy

**Best Class 1D Business Presentation Event**

- Trophy

**Best Class 1E Business Presentation Event**

- Trophy

**Best Class 1C Design Winner**

- Trophy

**Best Class 1D Design Winner**

- Trophy

**Best Class 1E Design Winner**

- Trophy

**ANFIA Special Award (for Italian students only)**

Award presentation by a representative of ANFIA

- Cheque of € 500

To the best document (delivered by 30th June 2023) describing the EU legislation about type approval of vehicles, imagining to have to type-approve one’s FSAE Italy car. The documents are judged by Alberto Musso, Responsible of ANFIA Technical and Regulatory Affairs Area and Chairman of the OICA Technical Committee. Application to ANFIA Technical and Regulatory Affairs Area - Extracurricular paid internship of 6-9 months starting in October 2023: for all students that delivered the document. First 15 minutes selection meeting (in English) during Formula SAE Italy (on Thursday, July 13 or Friday, July 14), with Alberto Musso; eventual second meeting, in Italian (in presence at ANFIA Headquarters in Torino or remotely) in September 2023.
We are a worldwide leader in the design, engineering and manufacturing of acoustic and soft trims, as well as plastic and composite components and systems for the automotive sector.
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td><strong>Tuesday, July 11</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:00 - 19:00</td>
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<td>Camping Check-in @ Camping</td>
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<tr>
<td><strong>Wednesday, July 12</strong></td>
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<tr>
<td>8:30 - 12:00</td>
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<td>Campsite Check-in @ Campside</td>
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<tr>
<td>8:30 - 13:00</td>
<td></td>
<td>Registration for all classes, Team Leaders, Faculty Advisors, ESO/ASR and Drivers Registration @ Registration Office, Pit set up</td>
</tr>
<tr>
<td>10:30 - 11:30</td>
<td></td>
<td>Briefing Volunteers &amp; Technical Inspectors @ Meeting Tent</td>
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<tr>
<td>13:00 - 14:30</td>
<td>Lunch Break*</td>
<td></td>
</tr>
<tr>
<td>14:00 - 19:00</td>
<td></td>
<td>Registration for all classes, Team Leaders, Faculty Advisors ESO/ASR and Drivers Registration @ Registration Office, Pit set up</td>
</tr>
<tr>
<td>14:30 - 19:00</td>
<td></td>
<td>Technical Inspections 1C/1D/1E @ Scrutineering Area</td>
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<tr>
<td>19:15 - 19:45</td>
<td></td>
<td>Safety Team meeting (ANFIA+1E / 1D) @ Recharging area</td>
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<tr>
<td>19:30 - 20:30</td>
<td></td>
<td>Team Leaders Briefing @ Meeting Tent</td>
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<tr>
<td>21:00 - 21:45</td>
<td></td>
<td>Opening Ceremony (with ANFIA presentation)</td>
</tr>
<tr>
<td>21:45</td>
<td></td>
<td>Welcome Party @ Varano de’ Melegari Party Area</td>
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<tr>
<td>23:30</td>
<td></td>
<td>Site Closes</td>
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<tr>
<td><strong>Thursday, July 13</strong></td>
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<tr>
<td>7:30</td>
<td></td>
<td>Site Opens</td>
</tr>
<tr>
<td>8:00 - 10:00</td>
<td></td>
<td>Drivers, Faculty Advisors &amp; ESO/ASR Registration @ Entrance Registration Office</td>
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<tr>
<td>14:00 - 19:00</td>
<td></td>
<td>Refuelling area opens @ Paddock Refuel Station</td>
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<tr>
<td>14:30 - 19:00</td>
<td></td>
<td>Business Presentation Event (All Classes) @ Business Presentation Rooms</td>
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<tr>
<td>10:00 - 11:00</td>
<td></td>
<td>Business Presentation Event (All Classes) @ Business Presentation Rooms</td>
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<tr>
<td>12:00</td>
<td></td>
<td>Lunch Break*</td>
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<tr>
<td>13:00 - 14:30</td>
<td></td>
<td>Refuelling area opens @ Paddock Refuel Station</td>
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<tr>
<td>14:30 - 18:30</td>
<td></td>
<td>Site Closes</td>
</tr>
<tr>
<td><strong>Friday, July 14</strong></td>
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<tr>
<td>7:30</td>
<td></td>
<td>Site Opens</td>
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<tr>
<td>8:00 - 12:00</td>
<td></td>
<td>Battery Charging Class 1D/1E @ Charging Area</td>
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<tr>
<td>8:00 - 8:30</td>
<td></td>
<td>Briefing Volunteers &amp; Technical Inspectors @ Scrutineering Area</td>
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<tr>
<td>8:00 - 8:20</td>
<td></td>
<td>Design Judges Registration and Photo @ Paddock Registration Office</td>
</tr>
<tr>
<td>8:20 - 8:40</td>
<td></td>
<td>Design Judges Briefing @ Design Event Area</td>
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<tr>
<td>8:30 - 12:30</td>
<td></td>
<td>Technical Inspection 1C/1D/1E @ Scrutineering Area</td>
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<tr>
<td>8:30 - 13:00</td>
<td></td>
<td>Refuelling area opens @ Paddock Refuel Station</td>
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<tr>
<td>9:00 - 12:30</td>
<td></td>
<td>Brake Test 1C/1E @ Brake Test Area</td>
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<tr>
<td>9:00 - 13:00</td>
<td></td>
<td>Tilt Noise and Rain Tests 1C/1D/1E @ Scrutineering Area</td>
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<tr>
<td>9:30 - 12:30</td>
<td></td>
<td>Business Presentation Event 1C/1E @ Presentation Rooms</td>
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<tr>
<td>9:30 - 12:30</td>
<td></td>
<td>Cost Event (All Classes) @ Pits</td>
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<tr>
<td>9:30 - 13:00</td>
<td></td>
<td>Design Event 1C/1E @ Pits</td>
</tr>
<tr>
<td>9:30 - 13:00</td>
<td></td>
<td>Emergency Brake Test 1D @ Straight before the hairpin</td>
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<tr>
<td>13:00 - 14:00</td>
<td></td>
<td>Design Event 1D/3 @ Pits</td>
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<tr>
<td>14:00 - 19:00</td>
<td></td>
<td>Practice Area 1C/1E @ Practice Area</td>
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<tr>
<td>14:00 - 19:00</td>
<td></td>
<td>Drivers Briefing @ Meeting tent</td>
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<tr>
<td>14:00 - 14:30</td>
<td>Lunch Break*</td>
<td></td>
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<tr>
<td>14:30 - 19:00</td>
<td></td>
<td>Business Presentation Finals 1D/1E @ Meeting tent</td>
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<tr>
<td>14:30 - 19:00</td>
<td></td>
<td>Business Presentation Finals 1C @ Meeting tent</td>
</tr>
<tr>
<td>14:45 - 19:00</td>
<td></td>
<td>Panoramic Photograph @ Acceleration</td>
</tr>
<tr>
<td>14:45 - 19:00</td>
<td></td>
<td>Design Judges Buffet</td>
</tr>
<tr>
<td>15:00 - 18:00</td>
<td></td>
<td>Transponders Delivery @ Scrutineering Area - Noise Test</td>
</tr>
<tr>
<td>15:00 - 18:30</td>
<td></td>
<td>Practice Area 1C/1E @ Practice Area</td>
</tr>
<tr>
<td>15:00 - 19:00</td>
<td></td>
<td>Brake Test 1C/1E @ Brake Test Area</td>
</tr>
<tr>
<td>16:30 - 17:30</td>
<td></td>
<td>Business Presentation Finals 1C @ Meeting tent</td>
</tr>
<tr>
<td>18:00 - 19:00</td>
<td></td>
<td>Business Presentation Finals 1C @ Meeting tent</td>
</tr>
<tr>
<td>19:15 - 20:00</td>
<td></td>
<td>Panoramic Photograph @ Acceleration</td>
</tr>
<tr>
<td>19:15 - 20:00</td>
<td></td>
<td>Design Judges Buffet</td>
</tr>
<tr>
<td>20:30 - 22:00</td>
<td></td>
<td>Design Finals - One to One @ Meeting tent</td>
</tr>
<tr>
<td>22:00 - 22:30</td>
<td></td>
<td>Design Finals Exhibit (Open Tent) @ Meeting tent</td>
</tr>
<tr>
<td>22:45</td>
<td></td>
<td>Site Closes</td>
</tr>
</tbody>
</table>
The restaurant of the circuit will be opened from 11.45 to 14.30, in order not to be crowded inside.

Pits

Pit number

The pits of the circuit will be shared by two teams which will enter from the Pit Lane side or from the Paddock side. Some additional gazebos will be placed inside the paddock.

Pit set up

When: Wednesday, 12th July, 8:30 – 13:00 and 14:00 – 19:00

All teams vehicles have to wait before entering the event site for unloading their cars and materials. Please follow the instructions of the officials. Walking speed is the maximum allowed speed in the venue.

ONLY 1 vehicle will be authorized to enter the paddock, but after the unload it shall be parked in the free parking area at the entrance of the Varano Circuit.
Registration and information

Registration of team members
Upon arrival at the Varano Circuit, the Team Leader ONLY must register the team at the Reception Desk by:

a) Bringing the ANFIA Limitation of Liability and signing the list of signatures IN FRONT OF the ANFIA Staff to confirm the correctness and validity of all other members’ signatures.

b) Communicating any changes in the list of team members, previously submitted, and in that case, filling out all the necessary registration documents for every new member and bringing photocopies of his/her health insurance card, passport or ID.

Then he/she will receive badges for all team members, additional team members, team guests, the dynamic area passes for drivers, which must be worn at all times.

No pass will be handed to any team member except than the Team Leader.

After the registration all the other team members will be allowed to enter the circuit.

Energy meter delivery
The energy meter kit will be delivered on Wednesday, 12th July, from 8:30 - 13:00 and from 14:00 - 19:00 and Thursday, 13th July, from 8:00 - 10:00 at the Registration Office at the Circuit Entrance.

Trasponder delivery
The car transponders will be delivered on Friday 14th July, from 15:00 to 18:00 at the Scrutineering Area - Noise test. They will be picked up by the officers in the Parc Fermé after the endurance. In case the car will not participate in the endurance event, it will be Team Leader responsibility to return it back at the registration office (before the Closing Ceremony).

Registration of Faculty Advisor
Faculty Advisors are kindly requested to register at the Reception Desk on Wednesday, 12th July, from 8:30 - 13:00 and from 14:00 - 19:00 together with his/her team or on Thursday, 13th July, from 8:00 - 10:00.

Drivers registration
Every team must register as drivers at least 4 members.

Drivers will have to submit the R. Paletti Circuit release and waiver of liability completely filled out, together with the photocopy of a valid government issued driver’s license.

Drivers are requested to present those documents at drivers’ registration desk on Wednesday, 12th July, from 8:30 - 13:00 and from 14:00 - 19:00 or on Thursday, 13th July, from 8:00 - 10:00.

Drivers will receive a written briefing and will sign it for receipt.

Drivers will have to pass the egress test and the main hoop height test to be allowed to drive the car; as soon as they pass the tests they will be handed a red wristband.

ESO / ASR registration
Electric teams, including driverless car equipped with electrical powertrain, must register at least 1 ESO (Electrical Safety Officer).

ESOs are requested to register at the Reception Desk on Wednesday, 12th July, from 8:30 - 13:00 and from 14:00 - 19:00 or on Thursday, 13th July, from 8:00 - 10:00.

ESOs will receive an orange wristband and an orange t-shirt/team, which must be worn during the team’s dynamic events.

For driverless team, ESO will be registered also as ASR (Autonomous System Responsible).

ASRs are requested to register at the Reception Desk on Wednesday, 12th July, from 8:30 - 13:00 and from 14:00 - 19:00 or on Thursday, 13th July, from 8:00 - 10:00. ASRs will receive an orange wristband and an orange t-shirt/team, which must be worn during the team’s dynamic events.

Certification of participation
A certificate of participation will be sent to the Team Leader for every team member after the event as a .pdf file.

Parking
At the entrance of Varano Circuit there will be a free parking area for all vehicles.

Visitors
Visitors are welcome during the 5 days of the event. Entrance is free in the public areas and grandstands while inside the paddock it is on payment. Tickets can be bought at the Registration Office and can be paid cash or by credit card or online:

https://www.ciaotickets.com/it/biglietti/formula-sae-italy-varano

Under-age participants must be accompanied by an adult at all times, who will be responsible for any dangerous action they will cause to themselves, other persons and facilities. Pets are NOT allowed, except guide dogs. Please note to all spectators closed toed shoes are preferred.

TARIFFS

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<tr>
<th>TICKET</th>
<th>REDUCED TICKET (ONLY FOR PERSONS AGED UP TO 18)</th>
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<td>ONE DAY</td>
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GUIDED TOUR ONLY ON FRIDAY, SATURDAY AND SUNDAY (IN ADDITION TO THE REGULAR TICKET): € 08,00
Formula Driverless

Formula Driverless (class 1D) debuted in the Formula SAE Italy during the 2018 edition, following the innovative technological trends of the automotive industry. It follows the FSG DV Rules with some exceptions which you can find in the Information & Rules 2023. The division between Static and Dynamic events is maintained. The cars will take part in all the dynamic events in autonomous mode only, without any human driver sitting inside. All the vehicles should allow for a human driven mode according to the rules for performing the brake test. The minimum number of human drivers is 1 for each driverless team.

Static Events

1D Statics Events are the same (Business, Cost and Design) of the other classes with a few differences. The Cost event will follow FSG model and a new rule for the Business Presentation event has been defined in 2021 in collaboration with FS Austria. One only panel of judges is planned for the Design Event, that follows a precise list of evaluation items. The judgement of the design of the car isn’t separated from the autonomous system judgement even if judges are focused on this latter. There aren’t Design Finals for 1D class.

Track Marking

DE6.3.1 The markings of all dynamic events will have the following characteristics:

- The track is marked with cones.
- The left borders of the track are marked with small blue cones.
- The right borders of the track are marked with small yellow cones.
- Exit and entry lanes are marked with small orange cones.
- Big orange cones will be placed before and after start, finish and timekeeping lines.
- If not defined otherwise in chapter D of the FSG rules, the maximum distance between two cones in driving direction is 5m. In corners, the distance between the cones is smaller for a better indication.
- The start, finish and time keeping lines as well as keep out zones around the time keeping equipment are marked with red, orange or pink paint.
- Additionally for skid pad, autocross and trackdrive, track limit lines on either side of the track and entry/exit lanes may be marked with yellow, green or white paint.
- There are no track limit lines for acceleration and Emergency Brake System (EBS)-test.

All lines chalk-marked.

Dynamic Events

Driverless cars compete in the following Dynamic Events:

- Acceleration
- Skidpad
- Autocross
- Trackdrive

ACCELERATION

When: Saturday 15th July, 9:30 - 12:30
Where: @ Straight before the hairpin

SKIDPAD

When: Friday 14th July, 14:30 - 17:30
Where: @ Skidpad

AUTOCROSS

When: Saturday 15th July, 14:30 - 18:00
Where: @ Skidpad

TRACKDRIVE

When: Sunday 16th July, 14:30 - 19:00
Where: @ Skidpad
General Rules

Pits are located inside the garage of the Varano Circuit. Inside the whole area of the Varano Circuit all the rules stated by the official SAE regulation apply. It is forbidden to walk on the gravel traps of the Circuit. Team members must leave the Circuit during the night, within the scheduled time.

Ask questions
If you have a question - ask!
If you have any questions about any part of the competition, schedule, procedures, rules or anything else, just ask to the Team’s relation Officer. Rules questions may be presented to the technical inspectors. It all starts with asking and remember, there are no dumb questions. Please: do not fear to fail by asking anything you need or clarify any doubt you might have!

Ask for help
If you need help - ask the officials. Announcements requesting parts, tools or assistance can be made by the announcer.

Announcement
Although there are loudspeakers, it could be difficult for announcements to be heard everywhere, especially close to a running engine. You can help us make sure everyone knows what’s being announced by passing the announcements along to your team mates and other teams in your area. This is important and we appreciate your help.

Two ways radios
Two ways radio are used both by teams and by STAFF. Please, make sure to use CCTCS/DCS squelch and not to use the same frequencies of the staff: point penalties may apply!

Be on time
The schedule is included in the Student Handbook and posted online. Possible modifications are communicated online and through announcements. It’s Team responsibility to be on time.

Be careful
Don’t take any risk when working on your car - follow safe working practices.

Bring your documentation
When Teams come to tech inspection must bring all the documentation and correspondence connected to SES submission, Impact Attenuator Data Report and any Rules Questions submitted. The inspectors do not have this material and Teams may need it to answer questions about their vehicles design and construction. The inspectors want you to pass tech, and pass it easily, but they need your help to make it happen.

Don’t run
Running tells people there’s an emergency. Don’t run unless life is in danger.

Event Closing Times
Remember that Acceleration and Skid Pad close at exactly the time communicated by the officials. Car must have crossed the starting line by that time or it can’t run: it is recommended to get in line early.

Have Fun, Drive Safe, Use Common Sense

Keep the Officials Informed
Keep the officials informed if you run into any problems that need our attention or might push your team against a time limit. It is Team responsibility to verify that the information has been received by the appropriate people.

Removing Cars Overnight
Removing the car from the track overnight is forbidden.

Weather
Weather is the main thing Organizers cannot force or control. It is good to be prepared for all weather types from sun to heavy rain. Pack long and short sleeve apparel, sun block, raincoats and comfortable closed-toe shoes.
Innovating and supporting the automotive industry transformation

Saleri is a leader in the design, development and manufacture of Thermal Management systems and cooling systems for the automotive industry. Research and development, flexible technical solutions and continuous improvement of quality standards are the distinctive features of the Saleri method and represent the added value of every product.

The business has a long-standing relationship with the most prestigious car manufacturers and is capable of satisfying the growing demand for innovative temperature management solutions both for vehicles fitted with an internal combustion engine and for those with new generation electric engines.
**Bicycles, Skateboards, Rollers, Scooters and other similar vehicles**

They are NOT allowed inside the paddock. The security service is allowed to take badge away of the team member, who will not comply with this rule. The badge return will be upon penalties to the team, depending on its gravity.

**Alcohol**

PLEASE NOTE: Alcoholic drinks are strictly forbidden inside the circuit during the event, under penalty of the team disqualification. Alcohol test can be done by any official at any time during the competition. 0.00 g/l is the allowable alcohol content during this event for everyone. If ANY team member (driver or not) is found with an alcohol level higher than 0.00 g/l, the relevant team member will be immediately disqualified and the drivers of the team will be verified before any driving event.

**Fires and Smoking**

No open fires are allowed in the pits, track and engine running areas, cigarettes, camping stoves and microwave ovens included. Smoking is strictly forbidden in the pits, tracks, buildings and engine running areas.

**Photographers**

**Authorization**

The staff is solely responsible for authorizing photographers/spotters to enter the dynamic event area. Photographers/spotters must be registered for the competition, sign all required waivers, read any required material, agree that they understand and have no questions regarding the policies and procedures for photographers, and agree to abide by these policies and procedures at the risk of being escorted from the dynamic area. Videographers are classified as photographers. Photographers must have photographic equipment - cell phones are not cameras. Photographers and spotters are explicitly restricted to photographic activities.

**Limit and penalty**

Limit and penalty - Each university is limited to one (1) photographer/videographer. Additional photographers must remain outside the dynamic event area. Unauthorized photographers will lead to a penalization of their team:

- 1st time: 5 points;
- 2nd time: 10 points;
- 3rd time: 50 points.

**Access Policy**

Access Policy - Properly accredited photographers/spotters representing universities may only access the dynamic areas while their teams are actually running in an event. University photographers/spotters will not be granted dynamic area access independent of their team.

**Fuel**

Only the fuel provided by the organizer may be used at the event. Unleaded gasoline with an octane rating of 98 RON and E85 will be the only fuels available at the event. Only the fuel provided by the organizer may be used at the event. No cell phone is allowed in the area. Open fuel containers are not allowed. As soon as the car is refueled for the first time, it must proceed with the engine turned off to the tilt table.

Any other vehicle must be at least 5 meters away from the Fuel Area.

It is forbidden to make use of any device producing flames, sparks or smokes near the Fuel Area. No cell phone is allowed in the area. Open fuel containers are not allowed. As soon as the car is refueled for the first time, it must proceed with the engine turned off to the tilt table.

**Working on Electric Cars**

Any vehicle that has not passed E-Scrutineering needs to have HVD disconnected. The team safety responsible and at least one more team member, who can intervene in case of emergency, must attend every activity on the tractive system. In absence of the team safety responsible, none is allowed to act on the tractive system. Anytime the tractive system is turned on, all driven wheels shall be lifted off the floor (and all parts, such as nuts, near wheels must be tightened). After any activity on the tractive system during which seals were broken an E-Scrutineering is mandatory.

For activities on the inactive tractive system the team safety responsible shall follow this procedure:

1. Lock out the tractive system master switch.
2. Check for zero-potential.
3. Disconnect HVD.
4. Install a green sign declaring the car as electrically secured (see image below). Sign shall include name of the safety responsible.
5. It is team’s responsibility to expose the sign in A4 format near the car in a visible position.
6. At the end of activity, remove immediately the sign.

It is recommended lifting driven wheels off the floor during any maintenance activity.

In case of measurements on the active tractive system or an activation of the tractive system in the pit for testing please follows this procedure:

1. Be sure the team safety responsible is supervising the activity and a team member who is not involved in the activity is present and can intervene in case of emergency.
2. Separate the car with a red or orange tape (not provided by the organization).
3. Install a yellow sign declaring the high voltage hazard. (See the image below). The sign shall include the name of the safety responsible. It is team’s responsibility to expose the sign in A4 format near the car in a visible position.
4. Remove all driven wheels of the car and tighten all parts, such as nuts, near wheels.
5. Wear compliant safety gloves and use appropriate tools.
6. Be prepared to push an emergency button at any time.
7. Turn on the tractive system only for the shortest time needed. The activation of the tractive system or the spinning of motors in the pit is only permitted if the car is lifted off and the driven wheels are demounted.

Basic maintenance and testing activities for the accumulator container is allowed in the recharging area following FSAE Italy Covid19 protocol; in case a team needs to perform advanced maintenance activity (e.g. grinding, drilling, etc.), the team may get authorization by a scrutineer who checks safe conditions are met in the pit area.

A car not having passed yet the E-Scrutineering, when moved around or taken to the static events MUST have the HVD disconnected.

When moving around an electric car, the tractive system master switch must be turned off and the key must be kept by the safety responsible, who must always stand near the car moved around. If any of the above-mentioned instructions are not respected, it may result in a deduction of points or disqualification.

The tractive system master switch must be locked, whenever the team safety responsible has to go away from the vehicle, even during nights.
Accumulators can be recharged exclusively in the two designated charging areas. No charging is allowed during the night. Both the team Safety Responsible and at least one more team member have to be present during the charging. Only two team members of each team are allowed in the charging areas. Accumulators must be removed from the car for charging within a removable accumulator container and placed on the accumulator container hand cart for charging.

While charging, the accumulator container has to report a label with the following information:
1. Team number
2. Approximate time at which the recharge will end
3. Name of Safety Responsible

Charging will be allowed only after the electrical technical inspection. The charging area is equipped with the following AC socket-outlets:

- Single-Phase 230V 50Hz 16A P+N+E Schuko
- Single-Phase 230V 50Hz 16A IEC 60309, 6h (180°), P+N+E (Blue - 3 poles)
- Three-Phase 400V 50Hz 16A IEC 60309, 6h (180°), 3P+N+E (Red - 5 poles)
- Three-Phase 400V 50Hz 32A IEC 60309, 6h (180°), 3P+N+E (Red - 5 poles)

Each team must verify that the AC plug of their charger is compliant with one of the available socket-outlets. If not, the team has to replace it with a compatible one or bring compliant adapter.
Engine Running

ENGINES CAN NOT BE RUN IN THE PIT GARAGES.

Engines may be run ONLY in the designated “engine running area” in the paddock, provided that the car has passed technical inspections and the following conditions are satisfied:

1. The car is on an adequate stand (NOT on coke crates, plastic boxes etc.).
2. The drive wheels are at least 10.2 cm (4 in) off the ground or the drive wheels have been removed.
3. A fire extinguisher must be at hand.
4. Only the driver and 2 team members are allowed in the engine running area. If an electric car is running the Safety responsible must be in the area.
5. The driver must be seated and belted in the cockpit, wearing a full safety suit.
6. The gearbox must be in neutral or the CVT disengaged.

The exhaust system may be very hot, pay attention.

Scrutineering

Know the Rules - Read the rules again: rules understanding is critical to success!

WELDING AND GRINDING PROCEDURES

Welding and grinding will be permitted inside each team pit provided that the necessary safety aspects have been taken into account.

Safety glasses and gloves must be worn during those operations; same procedure may be applied to other tool usage at the discretion of the organizers.

A fireman must be present when welding, call for them every time you need to weld. We remember you that it will be not present an official welder on site.

DYNAMIC AREA ACCESS

All the Track Area of the Varano Circuit will be defined as “Dynamic Area”.

Only the cars waiting to attend the specific test may enter the “Dynamic Area”.

Only team members with a valid “Dynamic Pass” may enter the “Dynamic Area” to follow the corresponding car: four (4) “Dynamic Pass” will be given to each team.

At any time, no more than four team members may enter the dynamic area, including the driver (or drivers).

REMEMBER: CLOSED TOE SHOES!
Scrutineering

When:  
Wednesday 12th July, 14:30 - 19:00  
Thursday, 13th July, 09:00 - 13:00 and 14:30 - 19:30  
Friday, 14th July, 08:30 - 12:30 and 14:30 - 19:00  
Saturday, 15th July, on request

Where: Paddock

Heads of event: Silvio La Tassa - Mechanical Inspections

Pre-check the car.  
During registration you will be informed about the order... given your technical inspection number: the queue for the technical inspection follows these numbers. Please fill the first part of the technical inspection sheet, regarding tires, before queuing and line up with everything you need.

What to bring to Tech. Inspections:

- Vehicle;
- Dry and wet tires;
- Driver’s equipment including helmets, suits, gloves, eye protection, balaclava, socks, and shoes for all drivers (Note: This includes your arm restraints);
- Fire extinguishers;
- Push bar;
- Structural Test documents and supporting documentation or test pieces Technical Inspection form;
- EV only - Data sheets for all used parts in the tractive system;
- EV only - Approved technical document (ESF) signed by ESA;
- EV only - Tools and protection equipment as defined in the FSE rules;
- EV only - Spare accumulators;
- EV only - Clear pictures of parts not reachable during inspection (HV fuse box, ...);
- EV only - Spare samples of self-developed printed circuit with HV and LV;
- All of your team’s drivers;
- Impact attenuator test piece;
- Monocoque test specimens - if applicable;
- Tools to disassemble any parts of the car that the inspectors want to examine. This includes accessing your restrictor, removing body panels or any parts that are blocking inspection and to allow examination of your EV systems;
- Copies of your team’s rules questions and Committee’s answers;
- Material to record the inspectors’ comments.

The technical inspections will be held inside the scrutineering areas of the circuit. The only permitted modifications are according to rule SAE IN.14.2.2 otherwise the car must be re-scrutinized and reapproved.

If your car isn’t ready when your number is called, you’ll lose your position and go to the back of the inspection line.

The Technical Inspectors wish every team to pass tech inspection as quickly and easily as possible. Many inspectors are former competitors and they know the amount of time and effort Teams invested in completing their car and preparing it for the competition.

Technical inspections take longer when scrutineers have to explain noncompliant items and the process is quicker if everything complies.

Please make inspection easier by yourselves, and for organizers, by understanding the rules, pre-inspecting your car and being prepared.

E-technical inspectors will mark different approved parts (i.e. insulation monitoring device, accumulator containers, energy meter, tires, rims etc.). The car can be disqualified from any dynamic event if using unmarked parts or substituting marked parts: parts with broken seals are equivalent to being unmarked and seals must only be replaced by a technical inspector.

For E-cars, e-technical inspections will be held before the mechanical inspections to ensure everyone's safety.

However, Chiefs of Technical Inspection may allow exceptions to perform the mechanical technical inspection without having done the electric inspections, but only if the accumulator container is carried on the hand cart.

Car not passing e-tech will not be allowed to proceed with the other inspections and tests; moreover, the vehicle is not allowed to take part in any dynamic event if any of the e-tech seals are broken and until the IMD Test is passed again.

Device to be used for checking compliance to EV3.6.3 rule.

Regarding rule EV3.6.3 ANFIA will not use a special device to check the compliance to the temperature limits.

PLEASE NOTE: It is a team’s responsibility to keep track of how quickly cars are going into Tech Inspection: It is suggested to have someone to keep an eye on how the numbers are progressing. No more than 3 cars will be allowed to queue.

If you miss this window, you have to return your “old” tag and take a new number.

Before passing electrical inspection, the car may only be moved around on the event site with all master switches and shutdown buttons in off-position and the HVD disconnected. GLV-master switch, TS-master switch have to be turned off.

Please remember that the Safety responsible shall attend to E-technical inspection.
SMART HINTS

Self-inspection - Teams must self-inspect their car and be sure that it complies with the Rules before bringing it to tech inspection: use the tech inspection form found on the FSAE Online website during your self-inspection. It's Team responsibility to properly prepare and self-inspect their car; if inspectors discover a large number of rules violations, or an incomplete self-inspection, then they may suspend their work and send Team back to its paddock to make corrections.

Rules Question Documentation - If a Team submitted a rules question and received an interpretation from the Rules Committee, it has to bring copies of both the question and answer to technical inspection: without this, the inspectors won't know the Committee’s interpretation and might make their own. Impact Attenuator Test Piece - Bring the Impact Attenuator Test piece, “Impact Attenuator Data Requirement”, and also copies of Impact Attenuator Data report and any related correspondence with the officials (IN5.1.1).

Monocoque Test Specimens - Monocoque builders must bring the test pieces required by Rule IN5.1.1 “Monocoque Laminate Testing.” Restrictor Check - During inspection Team needs to disassemble air intake system to allow a no-go gauge to be inserted into the restrictor: bring the tools required (CV1.7.3)! If you do not pass the inspection, please write down the name of the responsible of your inspector’s team, so to be able to ask for him/her later.

Decisions of the inspectors and the Chief Technical Inspectors concerning vehicle compliance are final and are not a subject of any discussion or appeal.

Energy Meter delivery

The energy meter will be delivered during the registration and a deposit of 50,00€ will be asked each team and returned back at the end of the event, only if the EM will be delivered as it was originally.

The energy meter must be mounted on the vehicle before the technical inspection. During the technical inspection, the energy meter will be checked.

The energy meter responsible will read out data from time to time to determine if the 80kW limit was obeyed during the dynamic events: data used to calculate the efficiency scoring will be read in the parc fermé. Any attempt to manipulate the intended function of the energy meter may lead to a disqualification from the entire event. For any question about energy meter, ask for energy meter responsible at event control.

Please be aware that the energy meters NEED TO BE RETURNED to the registration desk before the closing ceremony of the event.

Energy Meter delivery

When: Wednesday 12th July, 8:30 - 13:00 and 14:30 - 19:00
Where: Registration Area
Heads of event: FLAG-MS

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We Solve It!
ITT Motion Technologies division
Brake Pads Experts.
We are engineers, innovators and problem solvers.
We convert unique ideas into sophisticated solutions that matter.
**Tilt, Rain, Noise & Brake Test**

Before proceeding to the tilt test team must refuel.

Follow specific safety guidelines while in the fueling area:

1. Engines must be off; cars are to be pushed to and from fueling.
2. Only the vehicle push crew and the driver are allowed to enter the fueling station: the driver must be outside of the vehicle.
3. Only the driver, in a driving suit, with vehicle fire extinguisher in hand, is permitted in the area as fuel is dispensed.
4. A permanent line mark must be used to indicate the “full” level.
5. Tank is to be filled to this level each time fuel is received.

No vehicle is permitted at this station until it has passed technical inspections. A maximum of four (4) team members with the dynamic pass, including the tallest driver, are allowed in this area; car must be completely filled with fuel, water and oils.

The tallest driver must be seated in the cockpit, completely dressed up (helmet, socks, gloves...) and belted in: if the test is passed another sticker is applied to the car.

**RAIN TEST**

The rain test is for e-cars only: vehicle will be rain-tested after having passed E-technical inspection, mechanical technical inspection and Tilt Test.

During the rain test, the tractive system has to be active and none of the driven wheels may be in contact with the ground.

It is not allowed to have a driver seated in the car during the rain test and no one is allowed to stand in the water of the rain test during the test itself.

**READY-TO-DRIVE - SOUND - TEST**

Ready to drive test sound will be checked during the e-technical inspections. In addition to sound characteristic, inspectors check Ready-To-Drive signal is emitted only if all requirements are fulfilled (no fault for GLV system, brake pedal is pressed...).

**NOISE TEST**

A car is allowed to noise test area once it has the scrutineering and tilt table stickers. In order to check the RPM value, every team must provide a tool to monitor RPM directly from ECU (i.e. dashboard, laptop). The car must be compliant to the Rules at all engine revs up to the regulated limit. Noise level can be measured at any time during the dynamic events: penalties may be assessed if the sound level exceeds the mandated maximum, and noise sticker can be removed by officials.

**BRAKE TEST - Class 1C, 1E, 1D**

**EMERGENCY BRAKE TEST - Class 1D only**

Head of event: Francesco Ristori
**COMBUSTION CARS** - A car is allowed to enter the brake test area once it has the scrutineering and the tilt table stickers. The car must start its run and accelerate getting into the 2nd gear; as the car reaches the braking area the driver must brake strong enough to fully lock all four wheels. If the vehicle passes the test, another sticker will be applied and the vehicle can then proceed to the practice area or to the dynamic events.

The brake test can be repeated every time an official deems it necessary, and it can be repeated if modifications are performed on the system or after an accident.

**ELECTRIC CARS** - A car is allowed to enter the brake test area once it has passed the scrutineering (both), tilt test, rain testing and ready-to-drive-sound-testing. Each driver must be instructed as to the proper procedure for the brake test: if the vehicle passes the test, another sticker will be applied and the vehicle can then proceed to the practice area or to the dynamic events. When braking, the tractive system has to be switched off by the driver and the brake pedal must be actuated as far as possible. The brake test is successful if all four wheels lock and within 5 seconds the Tractive System Active Light goes off. The brake test can be repeated every time an official deems it necessary. Re-certification may be required if work is performed on the vehicle’s braking system or if the vehicle is involved in an accident that results in vehicle damage.

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**Static Events**

Teams that want to receive a feedback about their static events can ask directly to the judges on Saturday 16th July at the event venue: afterwards, no requests of feedback will be accepted.

**Design Event**

The design event will be held in each team pit. The winner of the Design Event will get 150 points. Please be on time and have all engineering documentation with you. Make sure the car is in race-ready condition and team members are well prepared. For each team the design event will take up to 45 minutes.

First year cars: It is the teams’ responsibility to prove to the judges that their vehicle is a first-year car: second year cars are not allowed. If the structure of the frame is not obviously a completely new design from previous years, then photo documentation should be provided to prove that the car is new as defined by the rules.

How to prepare: Students should bring any and all information they feel is relevant (charts, graphs, parts, photos, video, etc.) to support their design efforts. The judges will give more credit (higher Design score) to documented engineering than to word of mouth: simply showing up with a great car is not good enough. A high emphasis is placed on the student team’s ability to design, build, refine & validate, and understand their own car.

**DESIGN FINALS**

Design finals will be held according to the schedules in the Meeting Tent. The three best classified teams in Class 1E and Class 1C will be admitted. Finalist teams must attend to the finals with their cars and whatever they think is needed for an engineering discussion. Design finals will consist in two phases: the first one to one with Judges and then the Design Finals Exhibit (Open Tent).

**Cost Event**

The cost event will be held inside each team pit. Team needs to show a printed copy of the Cost Report, plus one more printed or electronic. The report will follow the guidelines set forth in the published rules. Teams have to present its vehicle at the designated time to the Cost Judges for Cost Report review; Team that miss cost appointment will potentially lose all cost points. The schedule for these appointments will be in the registration packets. For each team the cost event will take about 30 minutes.
Business Presentation Event

The business presentation event will be held inside the presentation rooms A, B, C and D according to the schedule assigned to each Team; Teams that don’t arrive on time for their assigned time-slot won’t be allowed to make their presentation and consequently will get zero points for the event and be excluded for the following Stage (if applicable). The presentation rooms will be located in the “Paddock alto” and will be equipped with 50-inch TVs with HDMI cable (Type A). It is the team’s responsibility to make sure that their laptops are suitable for connection: if not, judges might assign lower score based on the effective performance of the team.

Competitors must convince the judges that their project represents a profitable enterprise for the manufacturer/ investor tiding together all the aspects needed: marketability, manufacturability, technical aspects and product appeal.

BUSINESS PRESENTATION FINALS
Business presentation finals will be held according to the schedules in the Meeting Tent. The three best classified Teams in Class 1D, Class 1E and Class 1C will be admitted.

Dynamic Events

GENERAL INFORMATION

The dynamics at Formula SAE Italy comply with the FSAE rules. The team will receive the car transponder on Friday 14th July, from 15:00 to 18:00 at the Scrutineering Area - Noise test.

To be allowed to compete in the dynamic events of the day, all drivers must sign the written drivers’ briefing for receipt during the registration. Drivers must read carefully this document. In addition, they must attend an event dedicated briefing (i.e. the Friday meeting for Acceleration, Skid pad and Autocross, the Saturday meeting for the Endurance).

Any driver that fails attend the dedicated briefing will be excluded from the corresponding events. The 4 team members need to have the dynamic pass to enter the dynamic area. If the dynamic event captain declares damp or wet conditions, the announcements will be made at the dynamic area (at staging and alignment lines).

Closed-toed shoes are mandatory in all dynamic areas. Any team member with dynamic pass that fails to comply with this rule might be not allowed to enter the dynamic area.

After each dynamic event and before the following one, please check for leakages, broken parts and fasteners.

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when: Saturday 18th June 9:00 - 13:00 for STAGE 2 BPE - Business Pitch Performance
Where: Digital Platform

When FINALS:
Class 1D: Thursday 13th, July 19:30 - 20:30
Class 1E: Friday 14th, July 16:30 - 17:30
Class 1C: Friday 14th, July 18:00 - 19:00
Where: Meeting Tent

Head of event: Enrico Rebaudo and Valentina Temporelli

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Podium Advanced Technologies is focused on innovation and technical excellence, working with a number of high-tech, high profile engineers at the top of their respective fields, always looking for exceptionally talented people with visions, ideas, and strong values.

If you are interested in joining a young and dynamic environment which encourages people to grow and share their skills and expertise, apply for a position at podium-tech/careers.
Practice Area

When and Where:

Class 1C/1E

14th July, - 9:30 - 12:30
Sat 15h July - 9:30 - 13:00
15:00 - 19:00

@ Practice Area

During the scheduled time, a practice area will be available. The practice area has the only purpose to check car’s functionality and set it up, simulating the driving condition of the track, not to prove full performance of the car. If other vehicles are waiting, any team may not run more than 5 (five) minutes inside the practice area, then the team may line up in the queue again. **Precedence will be given to teams running their first practice.** Whenever the Team moves its car, the following rules must be followed:

- Driver inside the cockpit, dressed up with a safety suit
- Fire extinguisher in the push-pull bar or accompanying the car
- The car must be pushed-pulled around.

The Practice Area will not be available on Sunday.

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**Flags**

The following is a brief description of the flags that can be used with their meaning. Any variations from this list will be explained at the drivers’ meetings.

- **Black Flag** - Pull into the penalty box for discussion with the Chief Marshall/ Director of Operations or other officials concerning an incident. A time penalty may be assessed for such incident.
- **Black Flag - With Orange Dot** - “Mechanical Black Flag” - Pull into the penalty box for a mechanical inspection of your car, something has been observed that needs closer inspection and that can be a fire that needs immediate extinguishing.
- **Blue Flag** - Pull into the designated passing zone to be passed by a faster competitor. Obey the corner workers hand signals at the end of the passing zone to merge into competition.
- **Checkered Flag** - Your session has been completed: exit the course where signaled.
- **Green Flag or Italian Flag** - Your session has started, enter the course under direction of the starter. (NOTE: If you stall the vehicle, please restart and await another green flag as the opening in traffic may have closed.)
- **Red Flag** - Come to an immediate safe controlled stop on the course. Pull to the side of the course as much as possible to keep the course open. Follow marshal’s directions.
- **Yellow Flag (Stationary)** - Danger, SLOW DOWN, be prepared to take evasive action, something has happened beyond the flag station, NO PASSING unless directed.
- **Yellow Flag (Waved)** - Great Danger, SLOW DOWN, evasive action is most likely required, BE PREPARED TO STOP, something has happened beyond the flag station, NO PASSING unless directed.
Red & Yellow Striped Flag - Something is on the racing surface (e.g. oil) that should not be there. Be prepared for evasive maneuvers to avoid the dangerous situation.

White Flag - There is a slow moving vehicle on the course that is much slower than you are: be prepared to approach it at a cautious pace.

Additional Signs

Fire on Board - Marshalls are warning driver about a fire or a severe risk of fire on his car, driver is required to stop as soon as possible off the track and close to a Fire Fighter or a Marshall.

Lollipop - To help the driver in the restart from passing area, a lollipop with red round sign STOP may be presented in front of the helmet of the driver. ONCE LOLLIPOP IS RAISED, THEN DRIVER IS ALLOWED TO START and re-enter the track.

Weather Conditions

WET: Teams must fit rain tires to their vehicle if the course is declared wet.

DAMP: Teams have the option of dry or rain tires if the course is declared damp.

Teams are allowed 10 minutes to change their tires in the driver change area if a dry track is declared damp, or if a dry or damp track is declared wet.

If the tire change is happening at the same time as a scheduled driver change, the 10 minutes are in addition to the 3 minutes allowed for the driver change.

Teams are allowed to change their rain tires to dry tires if the course is dry or damp. However, this change is not permitted during the driver change, and the time taken to change the tires is included in the team’s total time for the event.

The following chart summarizes the possible track condition changes, the team’s options, and the time allotted for changes.

<table>
<thead>
<tr>
<th>Track Initial Condition</th>
<th>Team’s Current Tire Choice</th>
<th>Track Declared</th>
<th>Tire Change</th>
<th>Time Help</th>
<th>Allowed at Driver Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry</td>
<td>Dry</td>
<td>Damp</td>
<td>Optional</td>
<td>10 minutes</td>
<td>Y</td>
</tr>
<tr>
<td>Dry</td>
<td>Dry</td>
<td>Wet</td>
<td>Mandatory</td>
<td>10 minutes</td>
<td>Y</td>
</tr>
<tr>
<td>Damp</td>
<td>Dry</td>
<td>Wet</td>
<td>Mandatory</td>
<td>10 minutes</td>
<td>Y</td>
</tr>
<tr>
<td>Damp</td>
<td>Rain</td>
<td>Wet</td>
<td>--</td>
<td>--</td>
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</tr>
<tr>
<td>Damp</td>
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<tr>
<td>Wet</td>
<td>Rain</td>
<td>Dry</td>
<td>Optional</td>
<td>Zero</td>
<td>N</td>
</tr>
<tr>
<td>Wet</td>
<td>Rain</td>
<td>Dry</td>
<td>Optional</td>
<td>Zero</td>
<td>N</td>
</tr>
</tbody>
</table>

Acceleration Event

Acceleration will run in parallel with the Skid Pad event. There will be 2 lanes, one for the first driver and one for the second driver.

The event WILL STOP at the scheduled time, no matter how long Teams have been in the queue and how long the waiting line is.

Each driver can take the second run immediately after the first one without going back to the end of the queue.

The first driver line will have the priority over the second driver line.

The car must proceed slowly during the realignment for the second run.

Excessive speed will be cause for disqualification.

Only team members with “Dynamic Pass” may stay with their car on the waiting line.

Class 1D:
When: Saturday, 15th July 9:30 - 12:30
Where: Straight before the hairpin
Head of event: Francesco Ristori

Class 1C, 1E:
When: Saturday, 15th July 9:30 - 13:00
Where: Acceleration
Head of event: Nicola Rizzini
Skid Pad Event

Skid Pad will run in parallel with the Acceleration event. There will be 2 lanes, one for the first run and one for the second run. The event WILL STOP at the scheduled time, no matter how long Teams have been in the queue and how long the waiting line is. Each driver can take the second run immediately after the first one without going back to the end of the queue. The first driver line will have the priority over the second driver line. Only team members with “Dynamic Pass” may stay with their car on the waiting line.

Class 1D:
When: Friday, 14th July
14:30 - 17:30
Head of event: Francesco Ristori

Class 1C, 1E:
When: Saturday, 15th July
9:30 - 13:00
Where: Skidpad
Head of event: Caterina Secchieri

Autocross Event

The autocross event will be held on the racetrack. There will be 2 lanes, one for the first driver and one for the second driver. The event WILL STOP AT 18:30, no matter how long Teams have been in the queue and how long the waiting line is. Each driver can take the second run immediately after the first one without going back to the end of the queue.

The first driver line will have the priority over the second driver line. More than one car may be on the track at the same time; in case of delay due to yellow flag caused by other cars the run may be repeated immediately.

For safety reasons, at the Autocross start, one team member with “Dynamic Pass” and quick jack and fire extinguisher is allowed to assist the car, in case of need.

Class 1C, 1E

When: Class 1D
Saturday, 15th July
14:30 - 18:00
Where: Skidpad
Head of event: Francesco Ristori

When: Class 1C, 1E Saturday, 15th July
15:30 - 19:30
Where: Track Area
Head of event: Anja Herrmann Praturlon
The starting order for the event will be based primarily on the Autocross event. The start sequence will be from the slowest to the fastest autocross times. If a team did NOT score in the autocross event, the vehicle will run at the beginning of the Endurance event, with the order based first on the finishing order of the Acceleration event, and then on the finishing order of the Skid Pad event.

Teams without a score in any event used to determine the run order will run in the order established by the race direction.

The circuit of the endurance event is shown in the following picture.

Following the established starting order, the starter will instruct the vehicles to be ready and line up at the entrance of the track.

An official will perform a safety check of the vehicle and of the driver restraint system.

The starter will stage the vehicle's front tires on a starting line. When there is an opening on the track the starter will wave a flag signaling the go-ahead for the driver to start.

If vehicle stalls, the driver must wait for another flag before being allowed on the course.

**Endurance Event & Parc Fermè Procedure**

When:
Sunday, 16th July
10:00 - 19:00

Where:
Track Area
Head of event:
Anja Herrmann
Praturlon

The vehicle is expected to be ready for competition with 1st driver at team’s start time. If the endurance event is running late, the vehicle is still expected to be ready when its run order position is reached. If the vehicle is not ready when the official starter motions the vehicle to the starting line, a two-minute penalty will be assessed and the team will lose their time slot to run the event.

There will be more than one car on the track, so please pay attention to all the flags shown by the marshals and officials otherwise you may be penalized or disqualified.

PLEASE NOTE: IF THE VEHICLE CANNOT BE RESTARTED WITHOUT EXTERNAL AID, THE CAR WILL BE DEEMED DISABLED AND DISQUALIFIED FROM THE EVENT.

On the last lap of the first driver, a checkered flag will be displayed and the vehicle directed to the driver change area.

It is the driver’s responsibility to exit the track; any person directing the car off the course is an additional aid only.

Only three people (including drivers) are allowed in the driver change area at once. After the vehicle arrives in the driver change area, the team has three minutes to get the second driver belted in and rolling out of the driver change area.

Only adjustments to fit the second driver may be performed on the vehicle. No other work is allowed.

During driver’s change, car and safety equipment (i.e. suits and belts) will be checked by technical inspectors; only after this check the 2nd driver is allowed to enter the track.

In addition to D8.12 FSAE rules, the team of Electric Vehicle is not allowed to reset any control unit during Driver Change nor power cycling GUVS master switch.

In case vehicle requires power cycling GUVS master switch in order to activate tractive system, the team needs to request during technical inspection an exception for operating GUVS master switch during Driver Change.

PLEASE NOTE: NO REPAIRS OR WORK MAY BE PERFORMED ON THE VEHICLE DURING THE EVENT (with the exception of tire changes due to weather conditions).

If a blue flag is shown to your car YOU HAVE TO MOVE INTO THE SLOW LANE and slow down. Before entering the track again, YOU HAVE TO WAIT FOR THE GREEN FLAG or other sign (e.g. lollipop) being shown at the end of the slow lane: not respecting this flag/sign may lead, further to a time penalty, to serious accidents with injuries for you, for the other drivers and for the marshals!

Be responsible!

All the cars that end the Endurance event will be taken directly at the refueling station. No team member except the driver may enter that area: after the fuel consumption measurement, all the cars will be conducted directly to the Parc Fermé.

Team members are not allowed to enter the Parc Fermé before Officials communication.

**Additional Endurance Penalties**

The Chief Marshall/Director of Operations may disqualify a vehicle if, for any reason including driver inexperience and mechanical problems, it is too slow or being driven in a manner that, in the sole opinion of the event officials demonstrates an inability to properly control the car.

**Results**

The results of the static events will be published on FSAE Italy website (www.formula-ata.it) at the end of the statics without revealing the order of the first 3 classified teams. They will also be published at the circuit, near the Registration Office.

The results of each dynamic event will be published as soon as they are ready near the Registration Office.
Protest
If a team has a question about any official action it must be brought to the staff’s attention for an informal preliminary review before a protest can be filed.

Any team intending to protest decisions or results must present a written issue to the Formula SAE Italy 2023 organizers.

The protest may occur only in case something happened which they feel has caused harm to their team or has had a substantive effect on their score.

Teams may not protest for rule interpretations or actions that have not caused them any damage. In order to have a protest considered, a team must post a twenty-five (25) points protest bond which will be forfeited if their protest is rejected.

The protest period expires 30 minutes after the score has been published. Protest must be in written format and handed only by the team leader.

Failure of a team member to follow a decision directed specifically to that team or team member will result in a twenty five (25) point penalty.

Offensive Behavior
Any offensive behavior will be penalized with a penalty from 25 points to the exclusion from the competition.

Camping information
Please be informed that the only vehicles admitted inside the campsite are the motor caravans.

ADDRESS
Via Guglielmo Marconi, Varano de' Melegari (Parma).

CAMPING CHECK IN
It is foreseen on Tuesday, 11th July 2023 from 15:00 to 19:00 and Wednesday, 12th July 2023 from 8:30 to 12:00.

It is MANDATORY for all teams to comply with the timetable. Please take with you the FINAL camping list to report any changes on the list already submitted.

In order to comply with the COVID-19 procedures for risk mitigation and to maintain appropriate and applicable social distancing measures, at the campsite, the Team Leader only (or one team member only) will be allowed to register the team and also will be informed about the area reserved which will be assigned by the organization. It will be no longer possible choosing the space as happened before.

Teams will be informed later about detailed COVID-19 risk assessment and managing.

ARRIVAL AND DEPARTURE
• Teams arrival: Tuesday, 11th July 2023 from 15:00
• Teams departure: Monday 17th July 2023 within 14.00.

At their arrival team members will be given wristbands for camping, which MUST be worn for the whole period.

CHARGE AND DISCHARGE OPERATIONS
Vehicles (cars and small vans; no trucks) are allowed to enter in the campsite to unload all equipment. After discharging operations, vehicles MUST be parked in the free authorized parking areas, located in the Municipality of Varano de’ Melegari (Authorized parking areas). Only ONE vehicle will be allowed to enter in the campsite during the 6 days of the event to charge and discharge materials and must be parked outside right after. Only one green P will be given to all teams during the registration on July 12th, 2023.

AVAILABLE SERVICES
• Toilets and showers
• Electricity
• Free parking area
• Security service 24 hours a day
• Night medical assistance
• No camper service. In the town of Collecchio (about 20 km in Parma direction) there are 3 areas with camper services

Please note that also inside the paddock of Varano circuit, there are showers, toilets and sinks that teams can use during the event.

Please use sinks when possible (i.e. dishwashing) to avoid overcrowding toilets.
Camping Rules

Please pay attention to some behavior rules, in order to assure everyone’s safety, peace and calm during the stay. Therefore, everyone needs to comply with the following points:

1. RESPECT THE VENUE AND THE FACILITIES
The Municipality of Varano gives hospitality to all the FSAE Italy participants during the event, allowing them the use of its football ground and inside facilities, so please leave the venue as you found it. Everyone needs to respect its own delineated space and the escape routes.

2. KEEP THE VENUE CLEAR OF ALL LITTER AND WASTE
Please use the appropriate dustbins available inside the campsite.

3. PARKING
All vehicles must be parked outside the campsite in free authorized parking areas, located in the Municipality of Varano de’ Melegari. If a vehicle will be parked in a non authorized area, it will be fined or removed by the municipal local police.

4. NOISE LEVELS
Since the campsite is located next to private houses, please give consider to noise levels. After midnight till 7.00 am please lower your voice and turn off the music.

5. OPEN FIRES
No open fires are permitted. Please use the appropriate barbecue equipments only in the two reserved areas and with a fire extinguisher to be on hand during equipment. If you have gas bottles, please keep them upright, away from sunlight and heat sources.

6. ELECTRICITY
Please be sure to take some useful electrical equipment for the connection to the electrical boards; i.e. industrial plugs, electrical extensions.

7. DANGEROUS BEHAVIOURS
Please consider that dangerous behaviors and alcohol abuse may cause you and other people serious harms.

A behavior against the rules can lead to penalties that will compromise the result of your team.

Motor Valley
The land where speed was born
Staff

Eighteen years of event, thousands of engineering students from all over the world, hundreds of experts coming from F1, motorsport and automotive industry offering time, skills and experience for free: this is the Formula SAE/Student spirit!

Without you this event wouldn’t be possible! Thank you!

TOGETHER
EVERYONE
ACHIEVES
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