The pursuit of excellence
# Table of contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>5</td>
</tr>
<tr>
<td>In case of emergency</td>
<td>6</td>
</tr>
<tr>
<td>Staff</td>
<td>8</td>
</tr>
<tr>
<td>Awards</td>
<td>13</td>
</tr>
<tr>
<td>Site Plan</td>
<td>16</td>
</tr>
<tr>
<td>Official Schedule</td>
<td>18</td>
</tr>
<tr>
<td>Pits</td>
<td>21</td>
</tr>
<tr>
<td>Registration and information</td>
<td>22</td>
</tr>
<tr>
<td>General Rules</td>
<td>26</td>
</tr>
<tr>
<td>Scrutineering</td>
<td>36</td>
</tr>
<tr>
<td>Static Events</td>
<td>45</td>
</tr>
<tr>
<td>Dynamic Events</td>
<td>48</td>
</tr>
<tr>
<td>Results</td>
<td>57</td>
</tr>
<tr>
<td>Protest</td>
<td>57</td>
</tr>
<tr>
<td>Offensive Behavior</td>
<td>57</td>
</tr>
<tr>
<td>Camping</td>
<td>58</td>
</tr>
<tr>
<td>Volunteers</td>
<td>68</td>
</tr>
</tbody>
</table>
Formula SAE Italy, Formula Electric Italy & Formula Driverless 2019
“Riccardo Paletti” Circuit, Varano de’ Melegari - July 24th - 28th

Official Handbook

Introduction
The Formula SAE Italy, Formula Electric Italy 2019 will follow the official SAE rules valid for 2019. The Formula Driverless 2019 will follow FSG rules with few exceptions. The Business Presentation event and the Cost event will follow FSG rules.
The additional regulations, valid for the Italian event, are the ones reported on the official Formula ATA website (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.

Formula SAE Italy is organised by

In collaboration with
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 +39 0521 702111 - 703111
-First aid service: +39 0521 703084
Borgo Taro Hospital +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.
Staff

ORGANIZING COMMITTEE

**Steering Committee**

Claudio Annicchiarico  
Head of Formula Driverless

Giampiero Brusaglino  
Electric Technical Manager

Cesare Certosini  
Head of Formula Driverless Dynamics

Paolo Mario Coeli  
Formula SAE Italy Director of Operations

Anna Maria Costa  
Event Organization

Raffaele Fregonese  
Formula SAE Italy Director

Miriam Gangi  
Event Organization and Communication Manager

Anja Herrmann Pratturon  
Head of Dynamics

Silvio La Tassa  
Head of Mechanical Inspections

Francesco Laviola  
Head of Formula Electric Italy

Selene Migliaccio  
Event Organization and Responsible for relations with the teams

Robert Prete  
Safety Manager

Massimo Rosaschino  
Dynamics Logistic Manager

Claudia Rossi  
Event Organization - Paddock manager

Mariangela Scoiati  
Event Organization and Communication

**Executive Committee**

Giorgio Brunelli  
Dynamics Security Responsible

Piero Ciadamidaro  
Scoring Responsible

Giacomo Danisi  
Head of Design Judges

Carlo Giorgioni  
Head of Cost Judges

Domenico Pareo  
Cost Event Support

Enrico Rebaudo  
Business Presentation Manager

Konstancja Stronska  
Volunteers Coordination Responsible

Valentina Temporelli  
Business Presentation Manager

media Group

Daniele Bottallo  
Photographer

Fabrizio Giuliano  
Video Maker

Andrea Napolinone  
Social Media Manager

Giuseppe Pagano  
Video Maker

Giorgio Perottino  
Photographer
### Design Event Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization/Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRICOLA Rocco</td>
<td>Aptiv - PE Engineer Systems</td>
</tr>
<tr>
<td>ANDREOLETTI Fabio</td>
<td>FCA Italy - Autonomous Driving Engineer</td>
</tr>
<tr>
<td>ANNICHICCHIO Claudio</td>
<td>Meccanica 42 - CEO</td>
</tr>
<tr>
<td>ANZILOSO Franco</td>
<td>FCA Italy - Electrified Vehicles Planning Manager</td>
</tr>
<tr>
<td>BADIA Tiziano</td>
<td>KGR Elettronica - Direttore Tecnico</td>
</tr>
<tr>
<td>BATTIATZA Alessio</td>
<td>FCA Italy - Diesel Engine Calibration Specialist</td>
</tr>
<tr>
<td>CAROLA Marco</td>
<td>Robert Bosch - Technical Interface</td>
</tr>
<tr>
<td>CAMPALESE Carlo</td>
<td>Maserati - Electric PWT Chief Engineer</td>
</tr>
<tr>
<td>CANTELLA Andrea</td>
<td>Valeo - Product Technical Leader - Expert Dual Mass Flywheel</td>
</tr>
<tr>
<td>CASTELLI Pier Guida</td>
<td>Sabeti - Product &amp; Innovation Responsible</td>
</tr>
<tr>
<td>CERIELLO Giovanni</td>
<td>DTS - Product Engineering</td>
</tr>
<tr>
<td>CINA Alessandro Pietro</td>
<td>FCA Italy - Vehicle Integration Responsible</td>
</tr>
<tr>
<td>CIPETTI Marco</td>
<td>Dayco - Testing Manager</td>
</tr>
<tr>
<td>COSELI Paolo</td>
<td>FCA Italy - Powertrain &amp; Feature Portfolio Planning</td>
</tr>
<tr>
<td>COLOMBO Maurizio</td>
<td>Automotive Expert</td>
</tr>
<tr>
<td>CONCARI Nando</td>
<td>Dallara - Project Manager</td>
</tr>
<tr>
<td>DALLARO GIULIANO</td>
<td>Dallara Group - President</td>
</tr>
<tr>
<td>DANSI Giacomo</td>
<td>Daniel Engineering - Chief Executive Officer</td>
</tr>
<tr>
<td>DANNA Fabio</td>
<td>Italdesign - Project Manager Electrical / Electric &amp; Electronics</td>
</tr>
<tr>
<td>DE LAURENZI Antonio</td>
<td>Ferrari F1 - Head of Aerodynamic Modelling</td>
</tr>
<tr>
<td>DE VITA Luca</td>
<td>ANFA - Technical &amp; Regulatory Affairs Area</td>
</tr>
<tr>
<td>DI ROSA Giuseppe</td>
<td>Lamborghini, Vehicle Dynamics Simulations / Chassis Targets</td>
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<tr>
<td>DI VINCENZO Andrea</td>
<td>Aston Martin Lagonda - IV BATTERY PACK - Commodity Leader</td>
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<tr>
<td>ESPOSITO Daniele</td>
<td>Dayco - TVD/Dencover Testing Supervisor</td>
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<tr>
<td>ESPOSITO Filippo</td>
<td>DTS - Product Engineering</td>
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<tr>
<td>FERRARA Ferdinando</td>
<td>FCA Italy - Electrical/Electronic Engineering - Pomigliano Sub Unit Responsible</td>
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<tr>
<td>FREGONESI Raffaele</td>
<td>Maserati - Electrified Powertrain Concept &amp; Validation Responsible</td>
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<tr>
<td>FRUMUSA Vincenzo</td>
<td>FCA Italy - LCV Quality Vehicle Line</td>
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<tr>
<td>GAMBERINI Giorgio</td>
<td>Italdesign - Business Development Director</td>
</tr>
<tr>
<td>GIANETTI Giacomo</td>
<td>Dayco - Senior Design Engineer</td>
</tr>
<tr>
<td>GOKCE Can</td>
<td>FCA Italy - Electric Vehicle Integration Responsible</td>
</tr>
<tr>
<td>GUCCIONE Stefano</td>
<td>Maserati - Electrified Powertrain - Advanced Concept</td>
</tr>
<tr>
<td>HAHN Christoph</td>
<td>MathWorks - Senior Education Technical Specialist</td>
</tr>
<tr>
<td>LAVIOLETTO Francesco</td>
<td>GM Propulsion System Europe - Controls Development Workgroup Leader</td>
</tr>
<tr>
<td>LILLI Francesco</td>
<td>FCA Italy - EMMA - Product Development - Head of Advanced E/E</td>
</tr>
<tr>
<td>LOMBARDI Emanuele</td>
<td>FCA Italy - GSE Turbo Engines Program Manager</td>
</tr>
<tr>
<td>MACKERATIN Roberto</td>
<td>Bitron - Electrified Powertrain - System Development Manager</td>
</tr>
<tr>
<td>MANZILLA Claudio</td>
<td>Lamborghini - Transmission Development Engineer &amp; E-Axle Development Responsible</td>
</tr>
<tr>
<td>MERLIN Marco</td>
<td>Tcom - Head of Design Office</td>
</tr>
<tr>
<td>MONTI Francesco</td>
<td>Padovan Advanced Technologies - CEO - Head of Mobility Business Line</td>
</tr>
<tr>
<td>MORSONE Claudio</td>
<td>Automobili Pininfarina - Chassis Engineer</td>
</tr>
<tr>
<td>NARDONE Miriam</td>
<td>Dayco - TVD Lead Engineer</td>
</tr>
<tr>
<td>OCEANO Andrea</td>
<td>CUNA Representative - Technical secretary for Italian committee on “Electric, hybrid and fuel cell vehicles”, “Vehicle fuelled with gaseous fuels” and “Fuel specifications”</td>
</tr>
<tr>
<td>OEST Holger</td>
<td>Continental Automotive Italy - Global Account Director BMW Group</td>
</tr>
<tr>
<td>OLLINO Paolo</td>
<td>Italtrain - FCA MBAD - FCA MBAD - MBI 500 BCV project manager</td>
</tr>
<tr>
<td>PAIARDI Marco</td>
<td>Aptiv - Product Engineering Mechanical</td>
</tr>
<tr>
<td>POERIO Nicola</td>
<td>Centro Ricerche Fiat - DAS Innovation Specialist</td>
</tr>
<tr>
<td>RICCI Claudio</td>
<td>Dallari Engineering - Head of Advanced Vehicle Dynamics</td>
</tr>
<tr>
<td>RICCI Roberto</td>
<td>Continental Automotive Italy - Product and Application Engineer</td>
</tr>
<tr>
<td>RIVAGLI Luca</td>
<td>Dayco - CEA Lead Engineer</td>
</tr>
<tr>
<td>SACCHI Matteo</td>
<td>FCA - Vehicle Dynamic Engineer</td>
</tr>
<tr>
<td>SAVIO Walter</td>
<td>Centro Ricerche Fiat - Responible E/E Prototyping and Testing - E/E Innovation - PD</td>
</tr>
<tr>
<td>SASSO Marco</td>
<td>Fiat - Product Technology</td>
</tr>
<tr>
<td>TAMPOLLI Raffaele</td>
<td>Tampolli Engineering - Race Car Manufacturer at Tampolli Engineering</td>
</tr>
<tr>
<td>TESTA Maximiliano</td>
<td>Agrati - Group Product Development Director</td>
</tr>
<tr>
<td>TOSSIANO Gianluca</td>
<td>Teoresi - Technology Leader</td>
</tr>
<tr>
<td>TOSO Andrea</td>
<td>Dallara - Head of Vehicle Dynamics</td>
</tr>
<tr>
<td>VACCHINI Gabriele</td>
<td>Danfisa Engineering - Head of Road Testing</td>
</tr>
<tr>
<td>VEUZZEA Davide</td>
<td>Robert Bosch - Group Manager Engineering Services</td>
</tr>
<tr>
<td>VIOLA Gianfablo</td>
<td>Valeo - System Engineer</td>
</tr>
</tbody>
</table>

### Cost Event Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization/Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIS ENRICO</td>
<td>Dayco - Global Commodity Manager</td>
</tr>
<tr>
<td>ALIOISE Filippo</td>
<td>DALLARA Automobili - Design Office</td>
</tr>
<tr>
<td>ARMANDO Davide</td>
<td>DALLARA Automobili - Design Engineer</td>
</tr>
<tr>
<td>BENVENUTI Alberto</td>
<td>Dallara - Indoor Testing Engineer (R&amp;D division)</td>
</tr>
<tr>
<td>CACOPARDO Aldo</td>
<td>Dallia - Design Manager</td>
</tr>
<tr>
<td>CAVALIERO MAURO</td>
<td>Valeo - R&amp;D Controller</td>
</tr>
<tr>
<td>CAZZINI Guido</td>
<td>DALLARA Automobili - Quality Assurance</td>
</tr>
<tr>
<td>DEI L'ISOLA Andrea</td>
<td>Zappas Industries - Design Engineer</td>
</tr>
<tr>
<td>DI MARTINO Gerardo</td>
<td>Dallara Group - Sales Specialist</td>
</tr>
<tr>
<td>DONDINO Paolo</td>
<td>Polo Mesap - Technical Manager - Polo Mesap “Smart Products and Manufacturing”</td>
</tr>
<tr>
<td>FORNARO Debra</td>
<td>Dallara Compositi - Quality Assurance Engineer</td>
</tr>
<tr>
<td>GUIDONI GIULIANO</td>
<td>Dallara - Plant Controller</td>
</tr>
<tr>
<td>LUZI Claudio</td>
<td>FCA Italy - Cooling Virtual Analysis Specialist - Engine Systems - Cooling System - EMAF s.r.</td>
</tr>
<tr>
<td>LORIENZON Francesco</td>
<td>Teorela - Vehicle Test Engineer</td>
</tr>
<tr>
<td>MANA Mattia</td>
<td>Valeo - Product Technical Leader</td>
</tr>
<tr>
<td>MARCELLA Luca</td>
<td>Process Engineering SpA</td>
</tr>
<tr>
<td>MARZLINOI Giuseppe</td>
<td>Mechanical Engineer - Simulation</td>
</tr>
<tr>
<td>MELI Angelica</td>
<td>Fabbrica Dallara - Production Planner</td>
</tr>
<tr>
<td>MENGATTI Marco</td>
<td>DALLARA Automobili - Sales Operations</td>
</tr>
<tr>
<td>NENCI Federico</td>
<td>Dallara Compositi - Key Account Manager</td>
</tr>
<tr>
<td>PALMISANO Andrea</td>
<td>Dallara Compositi - Logistic and Machine Shop Planner</td>
</tr>
<tr>
<td>PANZA LUCA</td>
<td>Avio Aero (GE Aviation Business) - Lead Design Engineer</td>
</tr>
<tr>
<td>PARDO DOMENICO</td>
<td>FCA Italy - Powertrain Engineering - Benchmarking and Powertrain Technologies - Electrified Propulsion System Engineer</td>
</tr>
<tr>
<td>PEROLO Matteo</td>
<td>Dallara - Vehicle Dynamicist (R&amp;D Division)</td>
</tr>
<tr>
<td>PINTO Valerio</td>
<td>Design Engineer</td>
</tr>
<tr>
<td>PRATI Claudio</td>
<td>DALLARA Automobili - Project Cost Controller</td>
</tr>
<tr>
<td>RATTALINO Valerio</td>
<td>Valeo - System Engineer</td>
</tr>
<tr>
<td>RUSSO Davide</td>
<td>FCA Italy - Engine Systems - Fuel System - Project Chief</td>
</tr>
<tr>
<td>SCARANGELLA Filippo</td>
<td>Mechanical Engineer - Simulation</td>
</tr>
<tr>
<td>SCOVOLI Roberto</td>
<td>FCA Italy - Powertrain Engineering - Benchmarking and Powertrain Technologies - Assistant Chief Engineer - Project Manager Turbogasoline Engines</td>
</tr>
<tr>
<td>SILATOMICKA Fabrice</td>
<td>Dallara Compositi - Data Analyst</td>
</tr>
<tr>
<td>SULMAN Shalom</td>
<td>Dallara Compositi - Quality Assurance</td>
</tr>
<tr>
<td>TRENINO Filippo</td>
<td>FCA Italy - Global Benchmarking Manager</td>
</tr>
<tr>
<td>WILLIAMS Dom</td>
<td>DALLARA Automobili - Design Engineer</td>
</tr>
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</table>

### Business Presentation Event Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization/Role</th>
</tr>
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<tbody>
<tr>
<td>ALBREITTO Giancarlo</td>
<td>ANFA - Aftermarket and Motorsport Area</td>
</tr>
<tr>
<td>ASSETTATI Giovanni</td>
<td>Italdesign - Project Manager - Ultra Limited Series Production</td>
</tr>
<tr>
<td>AVERSA Paolo</td>
<td>City University of London - Associate Professor of Strategy and MBA Director, Cass Business School</td>
</tr>
<tr>
<td>BONZAI Matteo</td>
<td>Dallara - Administration &amp; Accounting Project Leader</td>
</tr>
<tr>
<td>BORRINI Davide</td>
<td>F1 Race Team Operations Manager</td>
</tr>
<tr>
<td>CAVICCHI Fulvio</td>
<td>Autosprint Journalist, Social Media Manager of ALIAN SARL</td>
</tr>
<tr>
<td>CROWLEY Monica</td>
<td>Audi - Project Management</td>
</tr>
<tr>
<td>D'ALESSANDRO Sebastiano</td>
<td>Tesa - Sales Manager Automotive Italian &amp; Global KAM FCA</td>
</tr>
<tr>
<td>DEFRANCO Andrea</td>
<td>ANFA - Head of Automotive Components Group</td>
</tr>
<tr>
<td>DEITINGER Laura</td>
<td>Knowsknowledge Compatia - IT President</td>
</tr>
<tr>
<td>DONOTTO Silvia</td>
<td>ANFA - Data Analyst</td>
</tr>
<tr>
<td>GARZUZI Serena</td>
<td>Supply Chain Specialist - Sales and Logistic Support</td>
</tr>
<tr>
<td>Name</td>
<td>Company/Role</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>GENTILI Luca</td>
<td>Continental Automotive Italy - Advanced Purchasing Team Leader</td>
</tr>
<tr>
<td>GRASSI Luca</td>
<td>Danesi Engineering - Technical Account Manager</td>
</tr>
<tr>
<td>LOIDICE Cinzia</td>
<td>bricks4Kids Italy - Country Manager</td>
</tr>
<tr>
<td>MANNI Francesca</td>
<td>FCA Italy - Human Resources Manager</td>
</tr>
<tr>
<td>MELANI Marco</td>
<td>Dallara Group - Group Controller</td>
</tr>
<tr>
<td>NUCCIARELLI Alberto</td>
<td>Fabbrica Dallara - Production Planner</td>
</tr>
<tr>
<td>NERVI Claudio</td>
<td>FCA Italy - Head of Feature Portfolio Planning</td>
</tr>
<tr>
<td>OLLINO Giulia</td>
<td>FCA Italy - Jeep Brand - EMEA Product Manager Cherokee, Wrangler and Gladiator</td>
</tr>
<tr>
<td>PASTORELLI Mirko</td>
<td>ZF Group Italy - Sales Account Manager</td>
</tr>
<tr>
<td>PESARE Salvatore</td>
<td>ZF Group Italy - Technical Project Manager Steering System</td>
</tr>
<tr>
<td>REBAUDIO Enrico</td>
<td>Continental Automotive Italy - CPT Italy - Director CC FCA EMEA</td>
</tr>
<tr>
<td>RIO Giacomo</td>
<td>Schaeffler - Customer Relationship Marketing Intern - Global Key Account Automotive</td>
</tr>
<tr>
<td>SCIOLARI Alessandro</td>
<td>Scientific Director Assoknowledge ConfInox</td>
</tr>
<tr>
<td>SECONDO Francesco</td>
<td>Robert Bosch - Technical Leader</td>
</tr>
<tr>
<td>SPERATI Maurizio</td>
<td>Altair - VP Global Account Management FCA and Country Automotive Operations</td>
</tr>
<tr>
<td>TEMPORELLI Valentina</td>
<td>Schaeffler - Customer Relationship Marketing Director - Global Key Account Automotive</td>
</tr>
<tr>
<td>TETI Francesco</td>
<td>Intec - Solutions Automotive Sales Manager</td>
</tr>
<tr>
<td>ZANETTI Andrea</td>
<td>Zappas Industries - Process Engineering Specialist</td>
</tr>
</tbody>
</table>

**Formula SAE Italy, Formula Electric Italy & Formula Driverless 2019 - Awards**

**Sponsor Special Awards**

**ANSYS Discovery Live Contest**
Judge: Vincenzo Stirparo, KITE Group
- 1st Place Award: 2 tickets Ferrari GT race + Hot Lap with Ferrari GT car (location TBD)
- 2nd Place Award: 2 tickets Ferrari GT race + Official Lego Ferrari GT car model (location TBD)
- 3rd Place Award: 2 tickets Ferrari GT race (location TBD)

**Best integration between powertrain and chassis controls**
Judge: Giuseppe Di Rosa, Lamborghini - Vehicle Dynamics Simulations
- Trophy

**Award for the best Car/Resources balance**
Award presentation: Gian Paolo Dallara, Dallara Group - President
- Trophy
- Cheque of € 750,00

**DRIVing the Future**
Award presentation: Simonetta Esposito - Senior Communications Manager
- Trophy
- Cheque of € 500,0
Other Special Awards

Best Class 1E Design Winner Trophy

Design, Innovate, Succeed!
Join #teamAltair today!

Altair transforms design and decision making by applying simulation, machine learning and optimization throughout product life cycles. Our Academic Program gives you access to the FREE HyperWorks® Student Edition, sponsorships for student teams, comprehensive training materials and much more!

For more information visit altairuniversity.com/academic

First Italian Team Classified in the Endurance Event - Class 1C
First Italian Team Classified in the Endurance Event - Class 1E
Award presentation: Giulia Grassi - Red Bull Student Marketeer

- Visit to Toro Rossa Factory (Transport included from Bologna to Faenza)

Driverless and electric vehicle SW development process flexibility award
Judge: Paolo Bizzarri, Teoresi - Technology Development Manager

- Trophy
- Cheque of € 500,00

See. Think. Self drive.
Award presentation: Alessandro Vitali, ZF Group - EMEA Regional & Steering Key Account Manager

- Trophy
- Cheque of € 500,00

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 Business Presentation Event Trophy
Best Class 1C Design Winner 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 1 C Design Winner Trophy
Best Class 1 D Design Winner Trophy
Do you want to create a safer greener world?

We're engineering one every day.

TOMTOM.COM/CAREERS
<table>
<thead>
<tr>
<th><strong>Official Schedule</strong> (This programme could be subject to changes)</th>
</tr>
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<tbody>
<tr>
<td><strong>Tuesday, July 23</strong></td>
</tr>
<tr>
<td>15:00 - 19:00</td>
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<tr>
<td><strong>Wednesday, July 24</strong></td>
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<tr>
<td>08:30 - 12:00</td>
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A driving force. Worldwide.

Agrati is worldwide leader in fastener solutions. Every year we produce 8 billion pieces for the assembly of 60 million automobiles all over the world.

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, 24th July, 15:00 - 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, additional team members and team guests

Upon arrival at the Varano Circuit, the Team Leader 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.

A yellow wristband with barcode will be given to the Team Leader, which will be used during the team leaders’ briefing.

During registration, he/she will also receive a number corresponding to the scrutineering order.

Energy meter delivery

The energy meter kit will be delivered on Wednesday, 24th July, 15:00-19:00 at the Registration Office. The kit includes the energy meter box, a wiring harness set with connectors and a current sensor.

Trasponder Delivery

The car transponders will be delivered on Friday 26th 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 24th July, from 08:30-13:00 or from 15:00 to 19:00 together with his/her team or on Thursday 25th July, in the morning.

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 24th July, from 08:30-13:00 or from 15:00 to 19:00 and on Thursday 25th July, from 08:00 to 10:00.

Drivers will receive a blue wristband with a barcode on it, which will be used during the drivers’ briefings.

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.

Those tests are performed during technical inspections or, if necessary, under appointment anytime before the start of the first dynamic event the driver wants to participate.

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 Thursday 25th July, from 08:00 to 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).

ASR are requested to register at the Reception Desk on Wednesday 24th July, from 8:30 to 13:00 and Thursday 25th July, from 08:00 to 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.

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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.
Formula Driverless

Formula Driverless (class 1D) debuted in the Formula SAE Italy & Formula Electric 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 2019. The division between Static and Dynamic events is maintained. The cars will take part in all dynamic disciplines completely autonomously with no driver sitting in the vehicle but with an algorithm able to identify the best path.

Statics Events

1D Statics Events are the same (Business, Cost and Design) of the other classes with a few differences. Cost Event and Business Presentation Event follow the FSG model. 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 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
- Trackdrive

The Autocross event will not take place.
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 at the scheduled hour.

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 way radios
Two ways radio are used both by teams and by STAFF. In Italy only the use of LPD radio device is free. The use of PMR446 radio devices is subject to general authorization and to the payment of a contribution to Italian Communication Ministry.
Please, make sure to use CCTC/DCS squeich 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.

Drivers briefings
Attending drivers’ briefings is mandatory for Team members planned to drive: check the schedule for Briefing times.
Please consider that the barcode scanning before the drivers’ briefing could take some time: therefore, we ask all drivers to arrive earlier.

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, FMEA 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.

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.
For example, if it’s needed a quick re-inspection to get to an event before it closes let us know - the inspectors can be ready, but only if Teams keep us informed.
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 a Team decision, after having the written permission from the officials.
If Team wants to take its car off site it must take the vehicle to tech inspection and have an inspector removing part one of the tech sticker.
When Team returns, it’s the team’s responsibility to have the items worked on re-inspected.
No guarantee can be assured on the time of re-inspection, therefore do not relay on an immediate re-inspection to participate to the dynamic events.
There is no certainty that the permission will be granted due to organizational matters or schedule changes.

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, rain coats and comfortable closed-toe shoes.

Have Fun, Drive Safe, Use Common Sense
Passes and Allowed Areas

- **Paddock & Track**
  - Staff
  - Senior Technical Inspector
  - Technical Inspector
  - Judge
  - Dynamic Pass
  - Press Pass

- **Paddock Only**
  - Team Leader
  - Team Member
  - Faculty Advisor
  - Team Guest
  - Guest
  - Visitor
  - Team Guest

- **Sponsor**
  - ANFIA Organizing Committee
  - Event Support

Main Event Sponsor: dalara
Bicycles, Skateboards, Rollers 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 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

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

Properly accredited photographers/spotters representing universities may only access the dynamic events area 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. No fuel may be brought to the event. Unleaded gasoline with an octane rating of 98 RON and E85 will be the only fuels available at the competition. Every team should have communicated to ANFIA the exact tank capacity. The official marshals have the right to check fuel compliance during the entire event. Refueling will be carried out at the Fuel Station, located in a Fuel Area subject to the following prescription:

- Only one car may enter the Fuel Area;
- To reach the refueling area the driver must be seated in the cockpit wearing a full safety suit while pushed to and from the area;
- The refueller must be able to accomplish to his job without any part removed from the car;
- During the refueling the driver must stand out of the car at a safety distance following the instructions of the official marshals. No other team member can enter the Fuel Area;
- 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 re-fueled 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 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 you need. The activation of the tractive system or the spinning of motors in the pit is only permitted if 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; 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.
Mobility of the future

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We’re working toward a vision of mobility that is accident-free, stress-free and emissions-free as possible. We also want to make it accessible and affordable. To achieve this, we’re harnessing our innovation leadership in the automotive domain to develop pioneering technologies and business models for the mobility of the future.

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www.bosch-mobility-solutions.com

SAFETY FIRST
THIS CAR IS ELECTRICALLY SECURED

WARNING
HIGH VOLTAGE MAINTENANCE
ONLY AUTHORIZED TEAM MEMBERS CAN CROSS LINE
Accumulators can be recharged exclusively in the designated charging area. No charging is allowed during the night. The team Safety Responsible and at least one more team member have to be present during the charging. No more than four team members of each team are allowed in the charging area.

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

Recharge will be allowed only after the electrical technical inspection.

The recharge 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-outlet. If not, the team has to replace it with a compatible one or bring compliant adapter.

**ENGINE RUNNING**: 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 dis-engaged.

*The exhaust system may be very hot, pay attention.*
Scutineering

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; some 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, more than four team members may enter the dynamic area, including the driver (or drivers).
Spectators are not allowed to enter the Dynamic Area.

REMEMBER: CLOSED TOE SHOES!
The technical Inspection number is provided during the team registration.

ANFIA has the right to re-order the scrutineering queue, in case the scrutineering slot of a team coincides with a time slot of the team for a static event.

The technical inspections will be held inside the scrutineering area of the circuit. Additional time for re-inspection, if necessary, will be available under demand. The only permitted modifications are according to rule SAE IN.14.2.2 otherwise the car must be re-scrutinized and reapproved.

Teams removing their car from the event site will lose all their stickers from technical inspection (Scrutineering, E-Scrutineering, Brake, Noise, and Tilt Table). 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.

If a Team expect to have a time conflict with a Static Event (Design, Cost or Presentation) please be aware that the Static Event has priority. If Team vehicle is undergoing Technical Inspection, and members have to leave to attend a Static Event, Team simply need to Inform the Inspector: Team will be allowed to remove car from the Technical Inspection area, to resume Technical Inspection later.

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 (INS.1.1).

Monocoque Test Specimens - Monocoque builders must bring the test pieces required by Rule INS.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. The responsible will hand out the energy meter and needed connectors and he will help with the installation, if needed, and he will answer upcoming questions. 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.

Tilt, Rain, Noise & Brake Test

TILT TEST

Before proceeding to the tilt test, the 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. NO TAPE
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 oil.

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 tests are 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 electronic systems have 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.

When: Thursday, 25th July
09:00 - 13:00 / 14:30 - 19:30
Friday, 26th July
09:00 - 12:30 / 14:45 - 19:00
Saturday, 27th July
09:30 - 12:30
Where: Scrutineering Area
READY-TO-DRIVE - SOUND - TEST

Ready to drive test sound will be checked at noise test stand.
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.
The noise test can be repeated every time an official deems it necessary, and it can be repeated if modifications are performed on the exhaust system or after an accident.
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

When:  
Friday, 26th July 09:00 - 12:30 / 15:00-19:00  
Saturday, 27th July 09:00 - 13:00 / 15:00 - 19:00

Where:  
Friday, 26th July Main Straight (Zone A)  
Saturday, 27th July Morning: Track (Zone B)  
Afternoon: Practice Area (Zone C)

Under request, till the scheduled start of Endurance:
Sunday, 28th July Morning: Practice Area (Zone C)

EMERGENCY BRAKE TEST

When:  
Friday, 26th July 09:30 - 12:30

Where:  
Straight between Parabolica and 1° Esse turns

Head of event:  
Cesare Certosini

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.
Static Events

Teams that want to receive feedback about their static events can ask directly to the judges on Saturday 14th July at the event venue: afterwards, no request 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.
Finalists 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.
Sprints from 0 to 100 km/h in 2.7 seconds.
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Dynamic Events

GENERAL INFORMATION

The dynamics at Formula SAE Italy & Formula Electric Italy comply with the FSAE rules. The team will receive the car transponder during the registration.

To be allowed to compete in the dynamic events of the day, all drivers 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 to 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.

Practice Area

When and Where:

Class 1C/1E

Friday, 26th, July 09:00 - 12:30 / 15:00 - 18:30
Saturday, 27th, July 09:30 - 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 3 (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.
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.

Chequered 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>
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</tr>
<tr>
<td>Damp</td>
<td>Dry</td>
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</tr>
<tr>
<td>Damp</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>Damp</td>
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</tr>
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<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.

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.

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**OUR JOB IS YOUR JOB.**
**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 19:30, 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 lane. 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.

**Endurance Event & Parc Fermé Procedure**

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. Teams must run in the assigned heat- morning or afternoon. The circuit of the endurance event is shown in the following picture. Only team members with a “Dynamic Pass” may follow their car up to the staging area. Spectators may follow the event from the grandstands.

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.
RESULTS

The results of each static and 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, Formula Electric Italy & Formula Driverless 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, 23rd July 2019 from 15:00 to 19:00 and Wednesday, 24th July 2019 from 8:30 to 12:00. It is MANDATORY for all teams to comply with the timetable.

ARRIVAL AND DEPARTURE
- Teams arrival: Tuesday, 23rd July 2019, 15:00
- Teams departure: Monday 29th July 2019 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 are allowed to enter the campsite to download all equipment. After downloading, they MUST be parked in the free parking area next to the campsite. Only ONE vehicle is allowed to enter the campsite during the 4 days of the event to charge and discharge materials and must be parked outside soon afterwards.

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: see Google maps for reference

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

We would like to draw your attention to some behavior rules, in order to assure everyone’s safety, peace and calm during the stay. Therefore, we ask everybody to comply with the following points:

1. **RESPECT THE VENUE AND THE FACILITIES**
   The Municipality of Varano gives hospitality to all the FSAE Italy & F Electric 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.

   We ask everybody to respect your 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 (ref. map of the authorized parking areas in Varano on https://www.formula-ata.it/parking-in-varano). If a vehicle parks 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 consider noise levels. After 24.00 till 7.00 o’clock please lower your voice and turn off the music.

5. **OPEN FIRES**
   No open fires allowed. Please use the appropriate barbecue equipment only in the two reserved areas and with a fire extinguisher to be on hand during use. 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.

In case of behavior against the rules, we remind you, it could cost possible penalties which will affect on your team final result.
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We’re creating the most innovative technologies for maps, autonomous driving and in-vehicle user experience. And we won’t stop. It’s in our tech to keep moving.
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Fourteen 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 MORE**