FORMULA SAE ITALY 2022: FS TEAM TALLINN WINS THE ELECTRIC CAR AND DRIVERLESS CAR CLASS, RENNSTALL ESSLINGEN TAKES FIRST PLACE IN THE THERMAL COMBUSTION CAR CLASS AND THE ITALIANS FROM THE FLORENCE RACE TEAM TRIUMPH IN CLASS 3

In the Driverless Class, the Federico II University of Naples and the Polytechnic University of Turin teams settled for second and third place, respectively. At the same time, the University of Calabria took third place in the Internal Combustion Car Class. The Italian teams that took first place in the various static events are Squadra Corse Polito Driverless from the Polytechnic University of Turin, E-Team Squadra Corse Driverless from the University of Pisa and Race UP Combustion from the University of Padua.

Varano de’ Melegari, 18 July 2022 - With the closing ceremony at 20.30 yesterday, the 17th edition of Formula SAE Italy - the international educational event organised by ANFIA in partnership with SAE International and the ‘R. Paletti’ Circuit of Varano de’ Melegari and the assistance of the main sponsor, ALTEN, drew to a close. The event was attended by about 1,700 students from eighteen countries (India being the farthest). A total of sixty-four teams competed, of which fifty-four were European, with 20 Italians from fifteen different universities and ten from outside Europe.

The podium in Class 1C (internal combustion cars) was topped by Rennstall Esslingen of UAS Esslingen, scoring high marks in all events. They won both the Design and Cost Events as well as the Endurance and Autocross in Class 1C, thanks to the use of a fan, a solution already seen in F1 in the past, and an agile car that was particularly at home in the more winding parts of the tracks. In second place was FaSTDa Racing Combustion from the University of Applied Sciences Darmstadt, which presented a more conventional but good car. The team took second place in Autocross and Endurance, and in third place was the Unical Reparto Corse team from the University of Calabria, with a well-balanced car that the drivers drove well.

In Class 1E (electric cars), FS Team Tallinn of Tallinn UT/UAS triumphed. They had good performances in the dynamic tests, particularly in the Endurance, where they won, and with first place in the Design Event - while second place went to BRS Motorsport of Hochschule Bonn-Rhein-Sieg, runners-up in Endurance 1E and first place in the Autocross. Third place went to the ARUSE team from the University of Seville, with a good placing in the dynamic tests and victory in the Business Presentation Event.

In Class 3 (presentation of the car’s design only), the Firenze Race Team from the University of Florence took the top spot, followed in second place by Formula Student FEUP from the University of Porto and in third place by the AAM Driverless Racing Team of the Arab Academy for Science, Technology and Maritime Transport.
In Class 1D (Driverless), the first prize went to FS Team Tallinn Driverless from Tallinn UT/UAS. In the dynamic tests, the team had a bit of bad luck and, possibly due to some mistakes, the car also went off the track, but the overall performance was good, as demonstrated particularly with first place in the trackdrive test. Here there is the potential to become a top team in the future. Second place went to UniNa Corse - Squadra Corse Federico II of Naples, the only car among the three on the podium to use a combustion engine. This choice made the driverless challenge more complicated than the electric motor and, therefore, no mean feat to receive this award. In third place, finally, was Squadra Corse Polito DRIVERLESS from the Polytechnic University of Turin, with their first venture with driverless. Despite not having completed any dynamic tests, the validity of the project, which was awarded in the static events (first place in Class 1D in the Cost Event, third in the Design Event and Business Presentation Event), bodes well for participation in future editions.

“Being able to hold the Formula SAE Italy entirely in presence, under safe conditions, was the first remarkable success we achieved in this edition - commented Gianmarco Giorda, Director of ANFIA. Furthermore, it was a return to normality after the impact of the pandemic on the Formula SAE Italy teams as well, with interruptions in the workshops and difficulties in passing the baton from the previous team to the new generation squads within the same university. For students, juries, sponsors and partners, these were five days full of opportunities in which the students gained a unique and highly formative experience, not only in terms of technical skills but also in the understanding of working in a team and competing with teams from all over the world. Moreover, alongside incredible enthusiasm and a desire to learn, there was a sense of cohesion and cooperation; given the international tensions we face today, this gives out an important message.

The event created perfect opportunities for recruitment activities for the automotive and motorsport companies that took part again this year. Having the chance to appreciate the skills and commitment of almost 1,700 young people - and networking, with a parterre of thirty-five qualified sponsors, partners and supporters, to whom our thanks go out for supporting the initiative in such large numbers.

Meeting deadlines for the delivery of documentation, being able to explain and justify in front of a panel of professional engineers the technical choices made in the design of the vehicle, passing the specialised tests to be able to see their prototype run on the track, presenting a business plan for their project and demonstrating that they know how to master the cost and sustainability ratios. These allow students to measure themselves against a preparatory path towards the world of employment valued by companies as the event is becoming a breeding ground for talent”.

Yesterday, the Endurance test (275 points out of a total of 1,000) took place on the track, aiming to assess the overall performance of the individual cars in the race and is one of the main events
of the competition. It takes place along a total track length of around 22 km. Team members are not allowed to interfere with the vehicle during the test; however, there is a driver change midway through the test. The order in which the individual teams take to the track is determined by the results of the Autocross test - which this year had a particularly challenging circuit - leaving the quickest teams last. Final endurance time is calculated by the sum of each driver, plus any penalties, compared with that of the fastest team on the track.

The Endurance event involved the same number of electric and combustion cars (16 and 16), giving thirty-two vehicles on the track. Surprisingly, despite the prohibitive temperatures, there were no retirements or difficulties, proving the excellent level of the teams. Class 1C showed a very consistent level, with good performances for the first cars that tackled the track, followed by the performance of the last three teams, the fastest and most meticulous. The Endurance test of the electric class saw the first two classified teams stand out from all the others thanks to excellent performances.

In this dynamic test, in Class 1C, first place went to the Rennstall Esslingen team from UAS Esslingen, followed by FaSTDa Racing Combustion from the University of Applied Sciences Darmstadt and Unical Reparto Corse from the University of Calabria.

In Class 1E, Endurance FS Team Tallinn from Tallinn UT/UAS won, followed by BRS Motorsport from Hochschule Bonn-Rhein-Sieg and UniBo Motorsport Electric from the University of Bologna.

In Class 1D, which tackled the Trackdrive test instead of the Endurance, first place was taken by FS Team Tallinn Driverless from Tallinn UT/UAS. They were followed in second place by eForce Driverless from the Czech Technical University in Prague and, in third, by UniNa Corse - Squadra Corse Federico II from Naples.

During the awards ceremony, the prizes for the static events - Cost Event, Business Presentation Event and Design Event - were also awarded, thus formalising the winners' podium.

The Class 1D Cost Event saw the Polito Driverless Racing Team from the Polytechnic University of Turin take first place, followed, in second place, by UniNa Corse from the University of Naples Federico II and, in third, Team Bath Racing Electric from the University of Bath. In Class 1E, first place went to the AXL8R Formula Racing team from the Indian Institute of Technology Delhi, followed, in second place, by UH Racing from the University of Hertfordshire and, in third, FS Team Tallinn from Tallinn UT/UAS. Finally, for Class 1C: team Rennstall Esslingen of UAS Esslingen followed by Centaurus Racing Team from the University of Thessaly and Scuderia Tor Vergata from the University of Rome Tor Vergata.

In the Business Presentation Event for Class 1D, E-Team Squadra Corse Driverless from the University of Pisa came first, followed, in second place, by DTU - Self Driving Car Project from the Delhi Technological University and, in third place, by Squadra Corse Polito Driverless from the Politecnico di Torino. In Class 1E, the ARUSe team from the University of Seville was confirmed
first, followed by Dynamis PRC from Milan Polytechnic and the Race UP Electric team from the University of Padua, in second and third place, respectively. Finally, for Class 1C: Race UP Combustion from the University of Padua, Rennstall Esslingen from UAS Esslingen and Centaurus Racing Team from the University of Thessaly.

For the Design Event in Class 1D, in the first place, we find FS Team Tallinn Driverless of Tallinn UT/UAS, followed, in second place, by MoRe Modena Racing Driverless from the University of Modena and Reggio Emilia and, in third, by Squadra Corse Polito Driverless from the Politecnico di Torino. In Class 1E, FS Team Tallinn of Tallinn UT/UAS came first, followed, in second place, by Squadra Corse PoliTO from the Politecnico of Torino and, in third, E-Agle Trento Racing Team from the University of Trento. Finally, for Class 1C: Rennstall Esslingen of UAS Esslingen, followed by Cerber Motorsport from the Bialystok University of Technology and Race UP Combustion from the University of Padua.

We also recognised the special prizes and awards initiated by sponsors. For example, the Dallara “Award for the best Car/Resources balance” went to Rennstall Esslingen - UAS Esslingen; the Erre Technology Group award “Know How, Agility and Problem Solving” to the University of Pisa with the E-team Squadra Corse team, recognised by the company as passionate, creative, well-organised, with an extraordinary capacity for lateral thinking in the face of unexpected challenges and considerable complexity; the Fontana Gruppo Award “Award for the best bolted joints” to UniBo Motorsport from the University of Bologna; the Podium Advanced Technologies award “Podium Advanced Technologies Best Battery Award 2022” to FS Team Tallin of Tallinn UT/UAS thanks to design advancements aimed at minimising the weight of the battery pack, increasing the overall efficiency and safety of the car’s battery pack, and the high quality standard of the battery system itself; the Teoresi award “Electronics development process: innovative controls, methods and architectures award”, presented to UniNa Corse - Squadra Corse Federico II of Naples, a talented team promising to design an innovative electronic system, and which demonstrated knowledge and application of software development methodologies, tools and processes at a highly qualified and professional level.

Finally, the ANFIA Special Award “Type-approve your FSAE Italy car” was awarded to Lisa Salaris, Team Leader of UniTS Racing Team - University of Trieste.

You can find further information on the event’s website (https://www.formula-ata.it/), including the official rankings: https://www.formula-ata.it/results-2022/

At the following link the official daily videos of FSAE Italy 2022: https://bit.ly/3RA4U5M
ANFIA - Italian Association of the Automotive Industry

ANFIA was established in March 1912, for over one hundred years ANFIA mission has always been to represent the interests of its associate members and ensure effective communication between the Italian motor vehicle industries on the one hand and the Public Administration and Italian political bodies on the other hand, with regard to all technical, economic, fiscal, legal, statistical and quality-related issues referred to the automotive sector.

The Association is structured in three product-based Groups, each one chaired by a President.

Components:
- Motor vehicle parts and components manufacturers;
- Car Coachbuilders and Designers: companies working in the sector of design, engineering and style of motor vehicles and/or parts and components for the automotive sector;
- Motor vehicles: motor vehicles manufacturers in general, including trucks, trailers, camper vans, special means of transport.

The Automotive Production Chain in Italy

- 5,156 companies
- 268,300 employees (direct and indirect), the 7% of the employees in the Italian manufacturing sector
- 92.7 billion Euros of turnover, which means 9.3% of the Italian manufacturing sector turnover and of 5.2% of the Italian GDP
- 76.3 billion Euros of tax levy of motorization

Formula SAE Italy

Formula SAE was established in 1981 on the initiative of the Society of Automotive Engineers (SAE) and requires the participating students to design and build a prototype single-seater racing car destined for eventual sale. They must follow specific technical and financial constraints as if a company in the automotive sector commissioned it for a non-professional user. During the event, the teams of students take part in static tests - Design, Business Presentations and Cost Events - and dynamic tests on the track (Acceleration, Skid Pad, Autocross, Endurance; for Class 1D, the Endurance has been replaced by Trackdrive).

The event aims to focus not on the competition itself, but the skills acquired by the young people in terms of engineering knowledge, commitment, organisation and adherence to deadlines, design coordination and product presentation. Thus, the competition is an educational event in which young people can learn teamwork dynamics, with strict rules and deadlines that must be respected and be put to the test in the actual construction and design phases of a prototype and with all the difficulties that this entails. Formula SAE arrived in Italy in 2005, organized by ATA (Associazione Tecnica dell’Autoveicolo). After 12 editions, since 2017, with the acquisition of ATA by ANFIA, the organization of the event passed to ANFIA, which organized 4 editions at “R. Paletti” Racing Track of Varano de’ Melegari (Parma).

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