

# Master ONLINE

**CFD** 

FULL SIMULATION CFD OF RACE CAR OR VEHICLE IN GENERAL: FSAE, GP2, F3, PIKES PEAK, LMP1-2-3, DAKAR, RALLYS, etc....

→ Also in other fields: fans, eolic, gears, movements, vibrations, waves, sea, more than 2 fluids, etc....

# ONLINE (5 MONTHS)

Practices with FSAE (rules 2019 and 2020), F1 concept for 2022.

Also Formula E, Actual F1, etc....

(150 € by Month iiiiiii)

Other possibility: buy full Course (cheaper); write us about



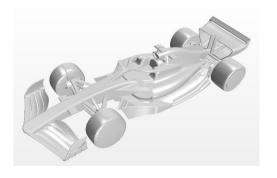


# FULL CARS- to analyze during the course, and more....

FSAE 2019



F1 2022



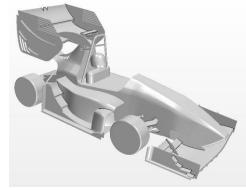
LMP1 LEMANS



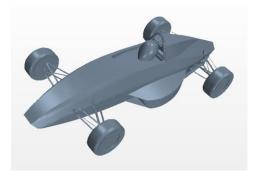
MEGANE TC2000



**FSAE 2021** 



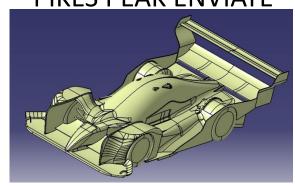
MINI F1



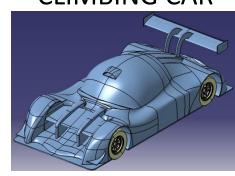
F1 2019



PIKES PEAK ENVIATE



**CLIMBING CAR** 



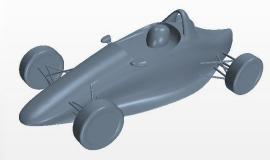
**APRILIA 125** 



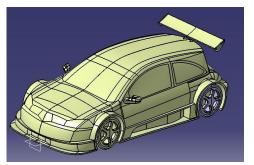
**FORMULA E** 



FORMULA RDV



**MEGANE TROPHY** 



And more....



It is a unique course in the world for its specialization and for its practical examples taken from the "REAL" professional world: each case and each simulation corresponds to "Real" cases that we have worked on in numerous projects and activities around the world. The used Cad's, cannot be found on the Internet and are a jewel....





### **Course Duration**



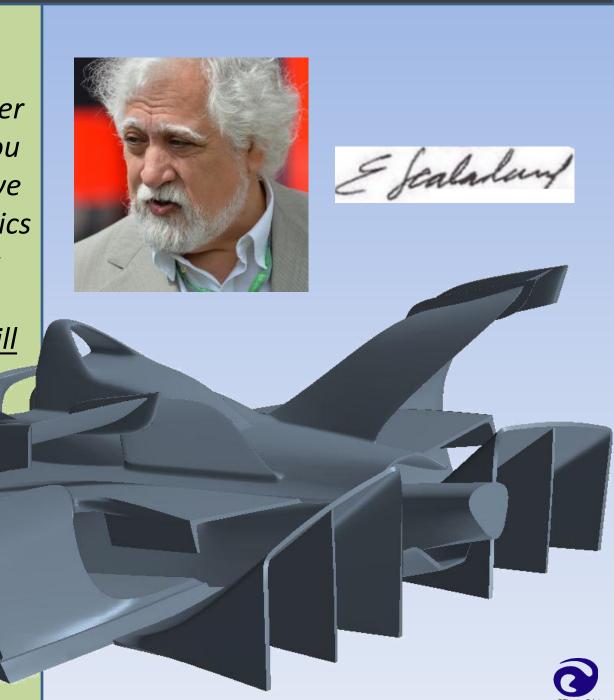
→ If you by the FULL COURSE, the Student is able to organize the time an its schedule.

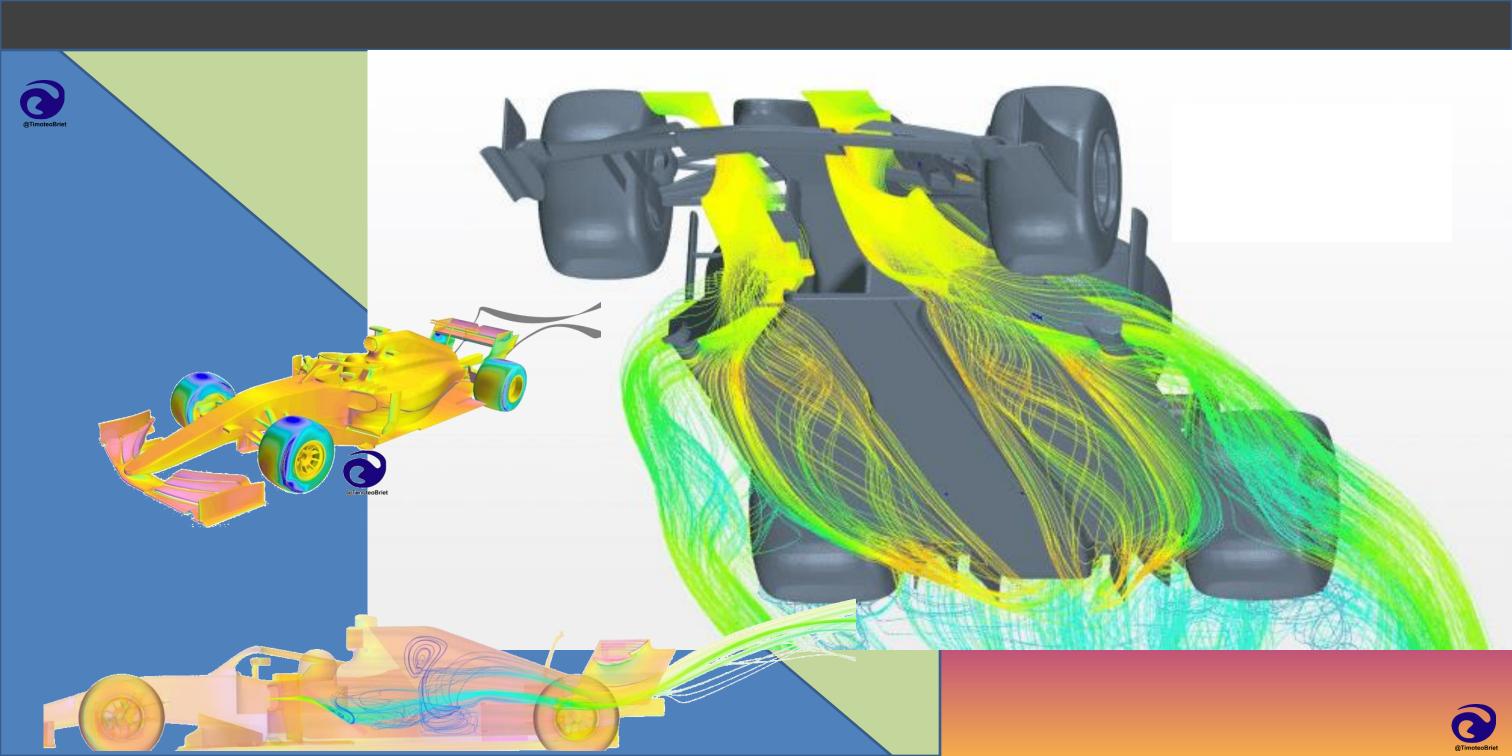




This is a very specialized knowledge, but easily adaptable to any other field of engineering; as you can read at the end of this document, you should send us your updated CV, including what preferences you have regarding the Course; that is: if you prefer more external aerodynamics and less Heat transfer, etc... Just remember, this Course is properly generated and organized, so there is no need to vary excessively in knowledge and its development. In the End Courses, the Student, will receive a important Certificate (with the sign of Enrique Scalabroni and others) and Recommendation letters.

Ideal course for Engineering Students, participants in Formula SAE-Student, Motostudent, Competition Team and Company Engineers, Amateurs, etc..., and in general, passionate students or Engineers who wish to enter the exciting world of F1 ENGINEERING.







# Programme general – Knowledge - 1

- CFD theory.
- Cad: Conditions and work with them.
- First samples in CFD. With boundary layer, statics and transients.
- Samples in CFD about heat transfer (engine, brakes, exhaust, radiators, etc).
- Calculation mass flow for refrigeration.
- Samples in CFD about gases combination for exhausts.
- Samples in CFD about engine alternative aspiration.
- Samples in CFD about radiators.
- Wings and elements deflection by load air.
- F1 elements: Description of each of them in Cad;
   combination, assembly, etc.
- Tires, rims and fans rotating.
- Calculation forces, moments, vibrations and aero balance.
- Generation full Aero Map static.
- Air Box, Intakes, restrictors, etc, Engine.





# Programme general – Knowledge - 2

- Shape optimization in CFD.
- Sloshing fluid in tanks.
- CFD about full F1.
- Substituting full F1 parts.
- Automation of the Simulation.
- Generation stream lines, core vortex,
  - vortices,
  - pressures, velocities, vectors, etc....
- Overtaking (full process or translation),
  - between cars, in CFD.
- Transfer function aerodynamic.
- Post rig analysis.
- Aero Post Rig analysis.
- Mass Damper design.
- F1 design with full suspension.
- CFD sample about F1 behaviour in corner.
- Generation full Aero Map transient.
- Fluids in Tank.
- Eolic generator and much more.





## **Programme in detail – Knowledge**

#### Pack 1

Theory Heat equation; CFD creation Open, screens, import and split geometry F1 simple simulation Car simple simulation Bernoulli channel simulation Boundary layer and Step simulation Cylinder simulation **Body Ahmed simulation** Karman transitory simulation Building transitory simulation Sample car in CAD Megane ST2000 sim Sample car in CAD Porsche 919 EVO sim

#### Pack 2

Theory Mesh Boundary layer Surface mesh Mesh volume and volume control Making the best mesh Transient simulation meshing Rotation with contact simulation Rotation without contact simulation Rotation fan simulation Rotation 2 fans simulation Rotation rim simulation Aprilia 125 cc simulation Megane ST2000 simulation Propeller ship simulation Gears pump simulation Climbing car with exhaust simulation

Numerical values, streamlines, sections, fields, etc

#### Pack 3

Work with Parts **Automatization** Meshing Tail Heat Transfer building simulation Heat Transfer air convection simulation Heat Transfer sphere simulation Heat Transfer brakes in F1 simulation Heat Transfer pc box simulation Chevrolet radiator simulation Porous media simulation Radiator simulation Radiator F1 simulation F1 concept for 2022 season simulation





### Programme – Knowledge

Pack 4

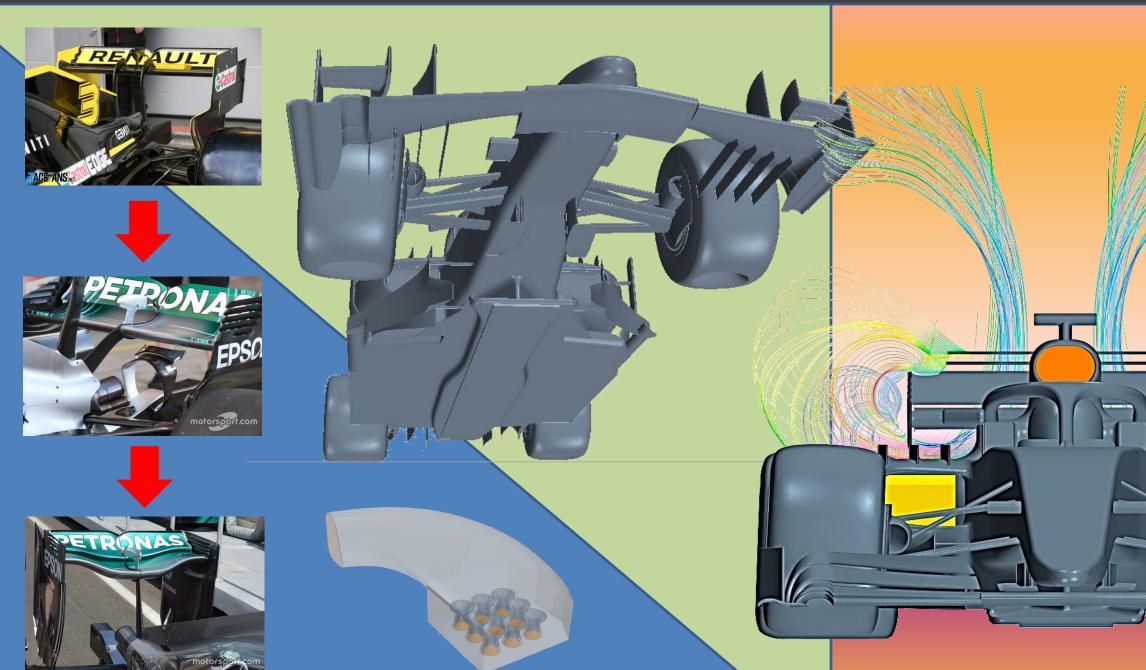
DFBI eolic simulation
Eolic and fan in the same axis simulation
Eolic with tower simulation
Plate with any rotation axis simulation
Admission restrictor Audi simulation
Admission alternative pistons simulation
Air box trumpets admission simulation
Movements any trajectory simulation
Formula E simulation
Formula FSAE Rules 2019-2020 simulation

#### Pack 5

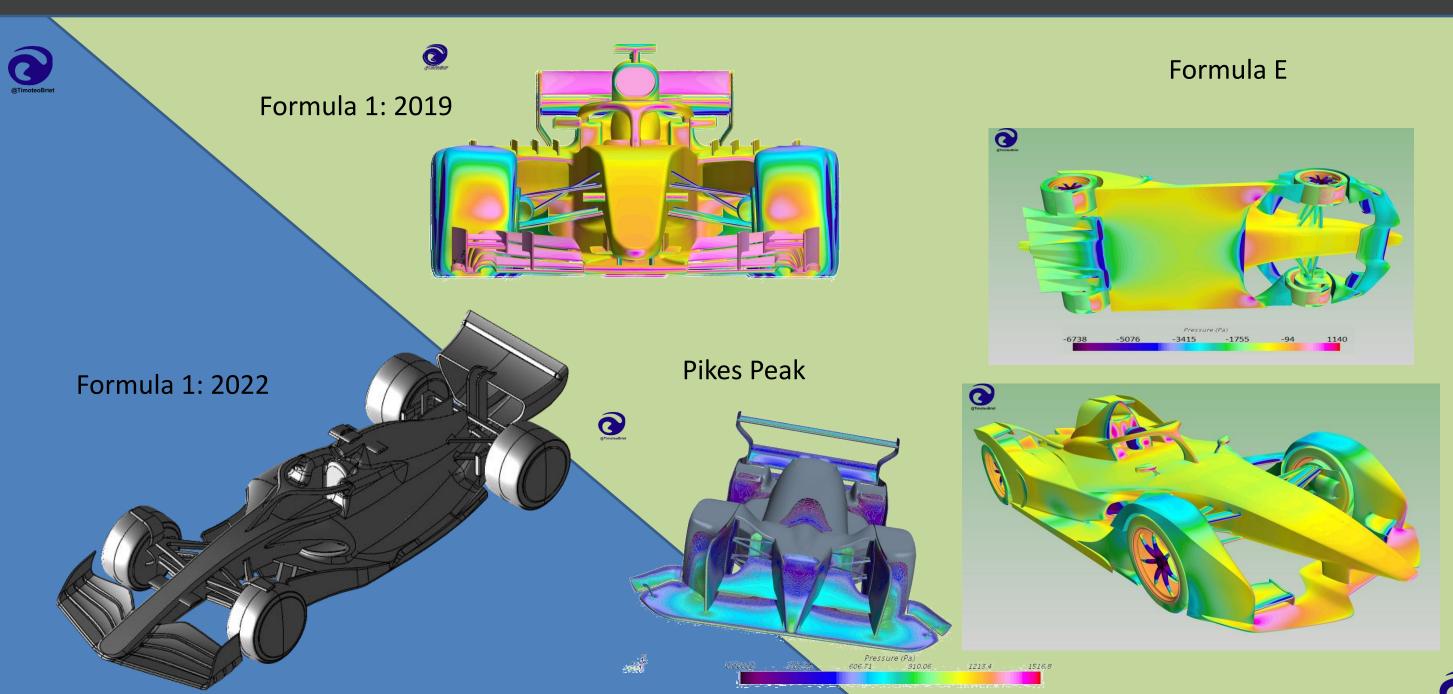
Caudal refrigeration calculation simulation Introduction fuel in tank simulation Tank fluid with agitator simulation Chimneys fabric simulation F Tuga exhaust chemical composition simulation Fuel movement in tank braking simulation Fuel movement in tank corners simulation Ships sea waves simulation Brake waves in ports simulation F1 cad 2019 rules simulation -1 F1 cad 2019 rules simulation – 2 F1 2019 rules cad Perrin simulation - 3 **Enviate Pikes Peak simulation** Megane Trophy simulation Aero Post Rig Analysis



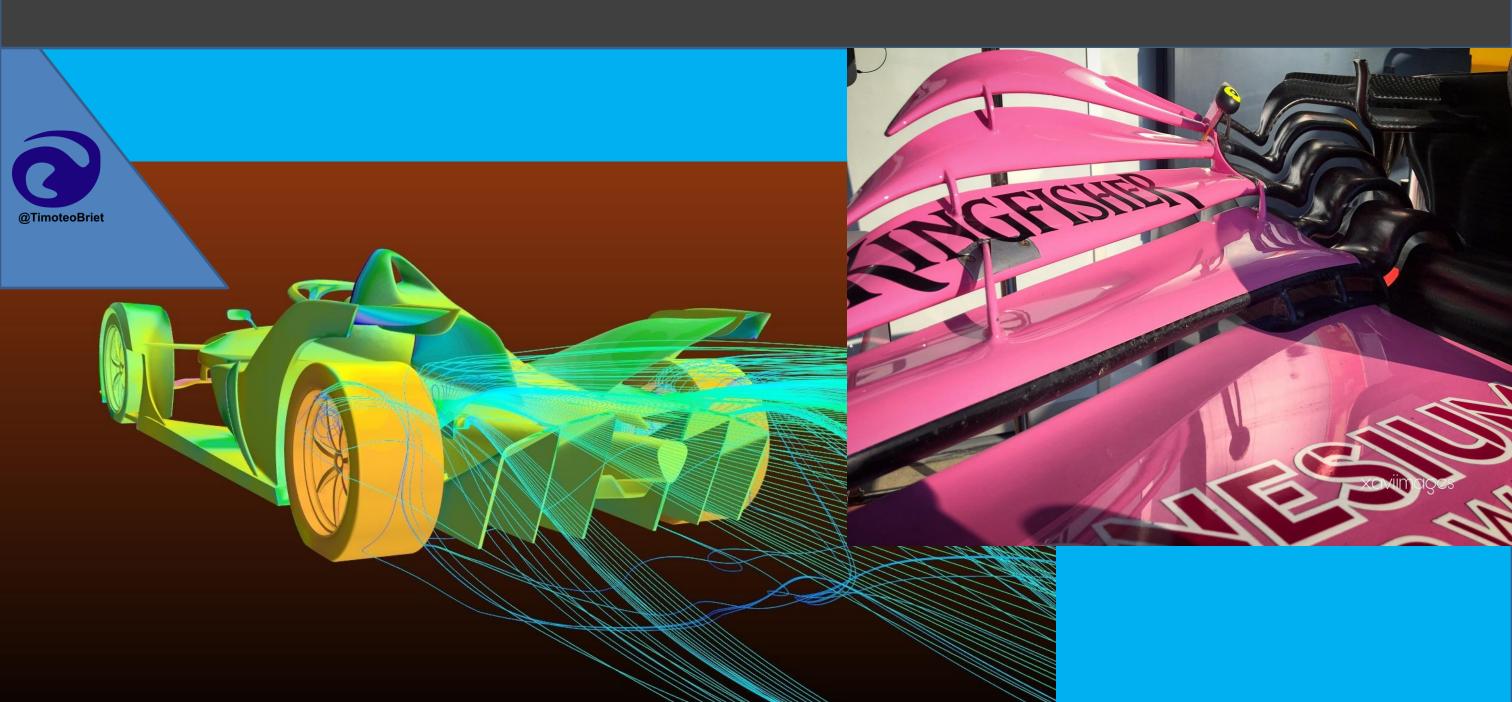
















# **Our Experience**

anamentalisti kanamentalisti kanamentalisti kanamentalisti kanamentalisti kanamentalisti kanamentalisti kanamen

Training in various Masters of
Engineering Competition and
University Professor as Polytechnic of
Valencia, UJI, Nebrija, Ismans (Le
mans), Sun Red team. Works for Pikes
Peak Climbing, Tata Motors, Aprilia,
Campos Racing, Peugeot, BP, Johnson
Matthey, Rubrica, etc... Free
conferences and periodic talks in
Universities, Articles, etc... and 23
books published with ISBN, especially
(Amazon): "How to design a Race Car,
step by step").





























## **Students Background**

This course has been received by numerous students over the last 12 years. Many of them were already working in F1 as Enrique Scalabroni (Ferrari, Williams, etc) or Albert Fábrega (specialized F1 journalist), and others, thanks to this Course, have been able to work (David Rodríguez (Manor F1 and Mercedes F1), José Carbonell, Carlos Sánchez (Racing Point F1)), etc....











### **ONLINE - 5 months: Development, Conditions and Price**

Send us an email with your updated CV and all your personal data; we will send you another message in reply, with our account number where you will need to make a deposit of **150 Euros**, for the first month (also **150 Euros** every month).

In this moment, we will send you a Software and installation instructions.

All info is in English.

The student will receive all information and Documents, in 5 packs (1 every month).

Pdf's, videos, samples simulations in detail obviously, Excel sheet's, CAD's, readme, images, animations, books, etc....

# THIS SPECIAL MASTER, IS FOCUSED IN THE PERSONAL WORK OF EVERY STUDENT, AND THE CONTACT STUDENT-PROFESSOR IN ORDER TO ASK ANY DOUBT AND QUESTION.

The student must to read the Readme in every pack, and to do or repeat the Practices.

When the student have a doubt, must to send us an mail with the doubt and/or simulation; we will answer as soon as possible (in the same day sure) with a VIDEO or something as that.

The main goal:

A PERFECT KNOWLEDGE FOR THE STUDENT.

→ This Master is the best option, because the student not have a timetable.

In the end of Course, we send it a Certificate signed also by Enrique Scalabroni.





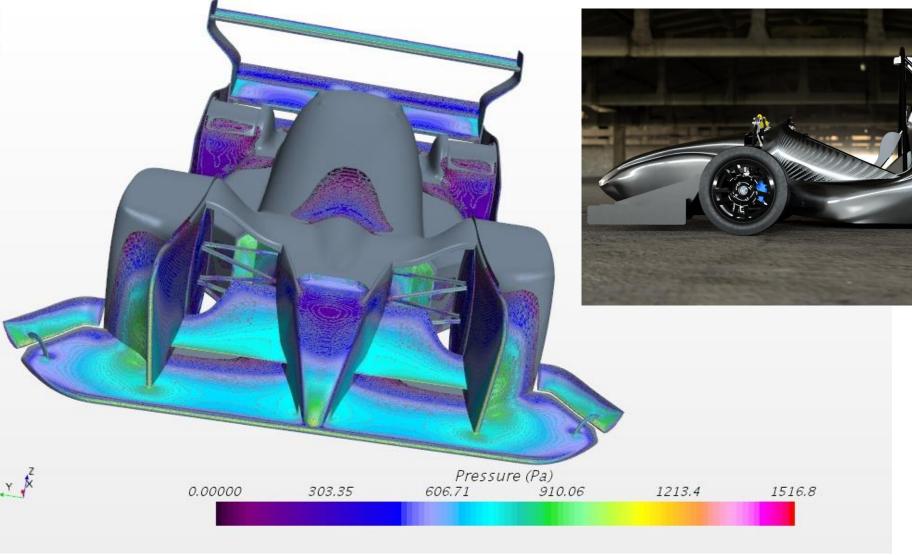
#### **Certificate**



The student will receive a Certificate for this master.

That is very important, because the student will see all knowledge, part by part and more, and that is very important for the Companies and Teams.

Also recommendation letters, when the student needs.







### **Contact**

Timoteo Briet Blanes

Tel: 34-660762816

Mail:

racecarsengineering@gmail.com

**Twitter: @TimoteoBriet** 





All images in this pdf: Xavi Gàzquez:
Fotographer F1.

#### **COURSE CFD**



#### **Contact**

Timoteo Briet Blanes

Tel: 34-660762816

Mail:



**Twitter: @TimoteoBriet** 











