



Nabil Souhair

Address: Via Fontanelle, 40, 47121, Forlì, Italy

Email address: nabil.souhair@gmail.com **Email address:** nabil.souhair2@unibo.it

Phone number: (+39) 3453283457

Website: <https://www.unibo.it/sitoweb/nabil.souhair2/en>

LinkedIn: <https://www.linkedin.com/in/nabil-souhair-80b70ba9/>

Twitter: <https://twitter.com/nabilsouhair> **GitHub:** <https://github.com/Astronab>

ResearchGate: <https://www.researchgate.net/profile/Nabil-Souhair>

Gender: Male **Date of birth:** 31/07/1992 **Nationality:** Italian, Moroccan

WORK EXPERIENCE

[31/01/2022 – 01/08/2022] **Visiting research scientist**

Institute of Space Systems - University of Stuttgart

City: Stuttgart

Country: Germany

Main activities and responsibilities:

In the framework of the European baked Horizon 2020 project DISCOVERER, I held an experimental test campaign on the air breathing helicon plasma thruster in order to assess its performance, by means of a thrust stand, momentum flux probe and a B-dot probe.

[31/10/2019 – Current] **Research fellow**

Alma Mater Studiorum - Università di Bologna

City: Forlì

Country: Italy

Main activities and responsibilities:

Development of a multi-fluid plasma numerical code and coupling with a Particle-In-Cell code for the simulation and optimization of a Helicon Plasma Thruster.

[15/06/2021 – Current] **Examining commissioner**

Alma Mater Studiorum - Università di Bologna

City: Forlì

Country: Italy

Main activities and responsibilities:

Examining commissioner for the Italian State Examination for the Industrial Engineering Habilitation (commissario negli esami di stato abilitazione alla professione di Ingegnere Industriale)

[01/07/2020 – Current] **Race performance engineer**

Alma Automotive S.r.l.

City: bolo

Country: Italy

Main activities and responsibilities:

I worked as a consultant with the task of analysing the vehicle and engine performance of race cars in the F1 Championship.

[28/02/2021 – 31/05/2021] **Contract professor**

ISAERS Academy Forlì AvioLab

City: Forlì

Country: Italy

Main activities and responsibilities:

Lectured the Turbine Engines module within the "Aeronautical Maintenance Technician" course
<https://www.isaers.com/ifts-tecnico-manutentore-aeronautico/>

[01/01/2019 – 31/10/2019] **R&D engineer**

T4i Technology for Propulsion and Innovation S.p.a. - CISAS Colombo, University of Padova

City: Padova

Country: Italy

Main activities and responsibilities:

Performed qualification tests (thermo-vacuum, vibration, life endurance) on the Plasma Thruster REGULUS. Moreover, I have assessed the in-orbit demonstration mission scenario, including the evaluation of different orbital scenarios and in-orbit thrust measurement.

[01/01/2019 – 01/06/2019] **High-school teacher**

Technical high-school "Luciano Dal Cero", San Bonifacio (Verona), Italia

City: Verona

Country: Italy

Main activities and responsibilities:

I taught mathematics courses (enhancement) for five classes.

[01/10/2018 – 30/12/2018] **Design engineer**

Cascade Corporation S.p.a.

City: Verona

Country: Italy

Main activities and responsibilities:

I was involved in the design of a variety of products that enable the conventional lift truck to pull, push, clamp, lift, sideshift and rotate any unit load.

[30/09/2017 – 30/09/2018] **Research assistant**

Alma Mater Studiorum - Università di Bologna - AVIO S.p.a.

City: Forlì

Country: Italy

Main activities and responsibilities:

Researcher assistant in the field of solid rocket propulsion. Development of a gas-dynamics code with stationary mono-dimensional and non-stationary zero-dimensional internal ballistics, along with a 3D surface regression module of the burning surfaces during combustion process and study of the anisotropies in the propellant combustion.

[31/01/2017 – 31/08/2017] **Solid Rocket Engineer (trainee)**

AVIO S.p.a.

City: Colleferro (Rome)

Country: Italy

Main activities and responsibilities:

Testing and validation of the 3D solid rocket internal ballistic simulator code developed in partnership with the University of Bologna.

[28/02/2017 – 31/10/2017] **Senior race engineer - Telemetry engineer**

EKS Motorsport

City: Petaling Jaya

Country: Malaysia

Main activities and responsibilities:

I worked as a Senior Race Engineer during the race weekends of the Blancpain GT Series ASIA Edition - GT4 championship. I was responsible of two Porsche Cayman GT4 and four drivers. The championship was held in Malaysia, Thailand, Japan and China.

EDUCATION AND TRAINING

[31/10/2019 – 31/10/2022] **Doctor of Philosophy (Ph.D)**

Alma Mater Studiorum - Università di Bologna <https://www.unibo.it/sitoweb/nabil.souhair2/en>

Address: Via Fontanelle, 40, 47121, Forlì

Field(s) of study: Aerospace propulsion , Mechanics and Advanced Engineering Sciences

Thesis: Development of a Numerical Tool for the Simulation, Design and Optimization of a Plasma Thruster

[2014 – 2018] **Master of Science (MSc)**

Alma Mater Studiorum - Università di Bologna

Address: Via Fontanelle, 40, 47121, Forlì

Field(s) of study: Aerospace engineering , Aeronautics and Astronautics

Thesis: 0D Unsteady - 1D Quasi-Stationary Internal Ballistic coupling for a solid rocket motor simulator

[2013 – 2015] **Post-graduate Diploma/Master**

MTS Motorsport Technical School of Monza <https://mtschool.it/formazione/master-race-engineer/>

Address: Via Vedano, 5, Monza

Field(s) of study: Race car engineering

[2010 – 2014] **Bachelor of Science (BSc)**

University of Padova

Address: Padova

Field(s) of study: Mechanical engineering

Thesis: Design of a hydraulic tipper for extrusion dies

[2005 – 2011] **Highschool diploma**

High-school of applied science G. Galilei, Verona

LANGUAGE SKILLS

Mother tongue(s): Italian, Arabic

Other language(s):

English

LISTENING C2 READING C2 WRITING C2

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C2

French

LISTENING B1 READING B1 WRITING A2

SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2

HONOURS AND AWARDS

[15/09/2021] **ASI-SGAC prize** Awarding institution: Italian Space Agency

I won the Italian Space Agency prize for participating as a delegate to the 72nd International Astronautical Congress and the Space Generation Congress at Dubai.

[28/10/2021] **Luigi G. Napolitano Award (SHORTLISTED FINALIST)** Awarding institution: International Astronautical Federation and the Napolitano family

The Luigi G. Napolitano Award is presented annually by the Space Education and Outreach Committee (SEOC) of the International Astronautical Federation to a young scientist, below 30 years of age, who has contributed significantly to the advancement of the aerospace science and has given a paper at the International Astronautical Congress on the contribution. I have been shortlisted as finalist.

NETWORKS AND MEMBERSHIPS

[31/12/2015 – Current] **Mensa International – The High IQ Society**

Mensa was founded in England in 1946 by Roland Berrill, a barrister, and Dr. Lance Ware, a scientist and lawyer. They had the idea of forming a society for bright people, the only qualification for membership of which was a high IQ. The original aims were, as they are today, to create a society that is non-political and free from all racial or religious distinctions. The society welcomes people from every walk of life whose IQ is in the top 2% of the population.

[31/12/2016 – Current]

Space Generation Advisory Council – in support of the United Nations Programme on Space Applications (SGAC)

SGAC is a non-governmental organization and professional network which "aims to bring the views of students and young space professionals to the United Nations (UN), space industry and other organizations".

[2016 – 2018] **The Planetary Society**

Student member

PROJECTS

[31/12/2015 – 31/12/2017] **ALMA-X - European Rover Challenge**

I founded and served as project leader of ALMA-X, a student team with the aim of designing the first Martian Rover of the Alma Mater Studiorum University of Bologna in order to participate to the European Rover Challenge.

<https://www.alma-x.it/>

[31/12/2013 – 31/12/2014] **TEAM Sobyen Healthcare - Dyson Award**

I and a group of students of the university of Padova have designed an innovative medical bed/wheelchair in order to join the Dyson Award international competition. The project passed the national phase.

VOLUNTEERING

[31/05/2021 – Current] **Red cross rescuer** Forlì-Cesena

DRIVING LICENCE

Motorbikes: A

Cars: B

Reference: Aerotecnica Missili & Spazio 100(10)

- [2021] **Design and In-orbit Demonstration of REGULUS, an Iodine electric propulsion system**
<http://dx.doi.org/10.1007/s12567-021-00374-4>

Reference: CEAS Space Journal 14, pages 79-90 (2022)

[2021]

IMPROVEMENT OF A NUMERICAL TOOL FOR THE SIMULATION OF A HELICON PLASMA THRUSTER ESTORIL

[https://www.researchgate.net/publication/](https://www.researchgate.net/publication/350187031)

[350187031 IMPROVEMENT OF A NUMERICAL TOOL FOR THE SIMULATION OF A HELICON PLASMA THRUSTER ESTORIL](https://www.researchgate.net/publication/350187031)

Reference: Conference: 7th Space Propulsion Conference At: Virtual conference Volume: SP2020-00070

- [2021] **REGULUS: INTEGRATION AND TESTING OF AN IODINE ELECTRIC PROPULSION SYSTEM**

[https://www.researchgate.net/publication/](https://www.researchgate.net/publication/352246150)

[352246150 REGULUS INTEGRATION AND TESTING OF AN IODINE ELECTRIC PROPULSION SYSTEM](https://www.researchgate.net/publication/352246150)

Reference: Conference: 7th Space Propulsion Conference At: Virtual conference Volume: SP2020-00109

[2019]

Enhancement of microsatellites' mission capabilities: integration of REGULUS electric propulsion module into UniSat-7

[https://www.researchgate.net/publication/](https://www.researchgate.net/publication/338254305)

[338254305 Enhancement of microsatellites' mission capabilities integration of REGULUS electric propulsion module into UniSat-7](https://www.researchgate.net/publication/338254305)

Reference: Conference: 70th International Astronautical Congress At: Washington D.C.

- [2019] **REGULUS: Iodine Fed Plasma Propulsion System for Small Satellites**

[https://www.researchgate.net/publication/](https://www.researchgate.net/publication/338254385)

[338254385 REGULUS Iodine Fed Plasma Propulsion System for Small Satellites](https://www.researchgate.net/publication/338254385)

Reference: Conference: 36th International Electric Propulsion Conference At: Vienna

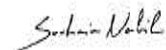
- [2019] **0D Unsteady - 1D Quasi-Stationary Internal Ballistic coupling for ROBOOST simulation tool**

<http://dx.doi.org/10.2514/6.2019-4140>

Reference: Conference: AIAA Propulsion and Energy 2019 Forum

Autorizzo il trattamento dei miei dati personali presenti nel curriculum vitae ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 e del GDPR (Regolamento UE 2016/679).

Forlì, 16/09/2022



Nabil Souhair

	<p>Formazione culturale:</p> <p>Ho partecipato al seguente workshop:</p> <ul style="list-style-type: none"> - Virtual School on Numerical Methods for Parallel CFD, CINECA <p>Ho partecipato ai seguenti corsi formativi:</p> <ul style="list-style-type: none"> - "Neutronica e Plasmi", LM Ingegneria energetica, 6 CFU, 2020/2021 - I semestre - "Fisica relativistica", LT Fisica, 6 CFU, 2020/2021 - II semestre <p>Ho partecipato ai seguenti seminari e convegni di rilievo internazionale:</p> <ul style="list-style-type: none"> - 7th Space Propulsion Conference 2021 Estoril - 72nd International Astronautical Congress Dubai - 8th Space Propulsion Conference 2022 Estoril - International Electric Propulsion Conference 2022 Boston (MA), USA - 73rd International Astronautical Congress Paris
	<p>Titoli studio ulteriori rispetto al requisito di accesso (seconda laurea, master, dottorato di ricerca, scuole di specializzazione etc..)</p> <ul style="list-style-type: none"> - Laurea triennale in Ingegneria Meccanica presso Università di Padova - Master 1 livello in Motorsport Engineering presso MTS – Motorsport Technical School - Dottorato di ricerca in Meccanica e Scienze Applicate dell'Ingegneria presso Università di Bologna (ottenimento del titolo previsto per l'anno 2022/2023)

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5

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4

Contributo Amministrativo Pagato



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IL QUESTORE