BRUNO FLAVIO DI DIO
Materials Engineer

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👤 Born: Italy, Naples, September *1993*
🏠 France, Paris, 75020

SKILLS - LANGUAGES

Field of Expertise:

- Polymer Technology
- Rheology

Computer Skills

- Matlab: Proficient
- OriginLab: Proficient
- Visual Basic: Advanced
- SQL: Basic knowledge
- Microsoft Excel: Advanced

Languages

- Italian: Native speaker
- English: Fluent
- French: Beginner

EDUCATION

🎓 Master's degree: Materials Engineering

University of Naples Federico II | 2016 – 2018

- Final grade: **110/110 with honors**
- Average of marks**: 29.5/30**

Relevant courses:

- Polymers', Metals', Composites' technology
- MATLAB (FEM, Partial Differential Equations)
- Materials Technology Laboratory
- Thermodynamics of Materials
- Nanomaterials

Thesis:

"Design, Synthesis and Functionalization of Hydrogel-Based Biosensors"

🎓 Bachelor: Materials Engineering

University of Naples Federico II | 2012 – 2016
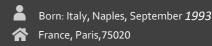
- Final grade: **109/110**

AWARDS

2017-2018: "Best student of Materials Engineering" prize (Master's Degree) – University of Naples Federico II

PROFILE

Materials Engineer with a solid background in **Polymer Technology** and **Rheology**. Familiar with **Laboratory** environment and **Programming Languages**.
- One year of experience in Formula 1.
- PhD Candidate in **Rheology** of **Soft Materials** at ESPCI Paris - PSL (Marie Skłodowska-Curie Actions)

WORK EXPERIENCE

PhD Candidate - Marie Skłodowska-Curie Actions

ESPCI ParisTech - PSL

January 2020 - Present | Paris 75005, France

Subject: **Supramolecular Double-Networks based on Microgels with Associative Interactions**

With the aim of tailoring the rheology of dense microgel suspensions via controlled changes of particle microstructure and interactions, my investigations mainly involve:

- Oscillatory **Rheology** measurements in **linear** and **non-linear** regime of soft materials
- Use of **Rheo-Optical** Methods and **Dynamic Light Scattering**
- **Synthesis** and Functionalization of Polyelectrolyte **Microgels**

Red Bull Toro Rosso - Formula 1 Team

14 Months: July 2018 – August 2019 | Faenza, Italy

Bill of Materials Engineer
8 Months: January 2019 - Present

Worked in Design Office Coordination department, developing a CAD integrated application to allow the efficient search within the database of commercial proprietary parts.

- **Programming** in **Visual Basic** (writing codes for data extraction and manipulation)
- Managing the proprietary parts database (**SQL**)
- **3D CAD** models conformity check and correction for commercial components (**NX 12**)

Bill of Materials Engineer - Intern
6 Months: July 2018 – December 2018

Curricular Internship

Italian Institute of Technology (IIT)

6 Months: November 2017 - April 2018 | Naples, Italy

Worked in team of 10, conducting experiments with microfluidics, analyzing data and reporting results.

- **Microfluidic** production of polymer microparticles
- Configuring the microfluidic platform (installation and setup)
- Experimental measurements of diffusion (**Fluorescence** and **Confocal Microscopy**)
- Collection and analysis of flow data (**Matlab**)

LAB EXPERIENCES

- **Materials Characterization:** DSC; DTA; TGA; Rotational Rheology
- **Chemistry laboratory**: acquisition of operational skills and manipulation of chemical systems
- Construction of a Charpy pendulum for **mechanical testing** of materials
- **Polymers' Technology**: Film Blowing Extrusion; Microfluidics