Allan Attia-Chemla

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EDUCATION

Stanford University September 2024 - June 2026
M.S. in Aeronautics and Astronautics, GPA: 4.04/4.00 *Stanford, CA*

- Honors & Awards:
  - NASA Space Technology Graduate Research Opportunities fellowship (NSTGRO 2025 cohort)
  - "Space Scholarship" from Fondation Ailes de France sponsored by the French Space Agency (CNES) and Eutelsat
  - Merit-based Jean Walter ZELLIDJA Research Scholarship from the Académie Française

CentraleSupélec, Paris-Saclay University September 2022 - July 2024
Engineering Program: B.S. & M.S. in Mechanical Engineering, GPA: 4.2/4.0 *Paris, France*

- **Ranked 1st in my class of 1,000**
- Coursework: *Fluid Mechanics, Heat Transfer, Materials, Transport Phenomena, Continuum Mechanics, Reactive Media, Probability Theory, Control Theory, Partial Differential Equations, Design & Piloting of a Space Launcher*

Lycée Louis Le Grand September 2020 - July 2022
Double major: Mathematics and Physics (CPGE: MPSI-MP), GPA: 4.0/4.0* *Paris, France*

- Two-year post-secondary intensive preparatory program in advanced math and physics for top-ranking engineering schools
- Coursework: *Real Analysis, Topology, Linear Algebra, Quantum Physics, Mechanics, Electromagnetism, Thermodynamics*

EXPERIENCE

NASA – National Aeronautics and Space Administration August 2025 - present
Graduate Research Fellow – PI: Prof. Mark Cappelli, NASA Collaborator: Dr. Kurt Polzin *Stanford, CA*

Selected for the NASA Space Technology Graduate Research Opportunities (NSTGRO) fellowship to support my research on "Computational Modeling of a Lithium Magnetoplasmadynamic Thruster for Nuclear Electric Propulsion"

- Developed a design and operations tool to extend the lifetime of high-power self-field MPD thrusters for long-duration Mars missions by delaying *onset*, the transition to unstable discharge that drives anode erosion
- Implemented a 0D linear stability model and developed a 1D two-fluid plasma solver; coupled them to evaluate near-anode growth rates and map *onset* thresholds across operating conditions

Stanford Plasma Dynamics Modeling Laboratory September 2024 - December 2024
Research Assistant – PI: Dr. Ken Hara *Stanford, CA*

- Studied the implementation of a 2D kinetic Hall thruster model in C++ using Particle-in-Cell (PIC) simulations

CentraleSupelec Space Center for CubeSats January 2023 - July 2024
Structural and Thermal Engineer – 3U CubeSat "ESUS" *Paris, France*

ESUS is scheduled for launch in 2027, sponsored by Thales Alenia Space and the French Space Agency (CNES)

- Performed 3D CAD design in SolidWorks to define the ESUS architecture and support qualification
- Built the first Structural and Thermal Model (STM) of ESUS – first STM built at CentraleSupelec
- Defined a mechanical test protocol to replicate launch and on-orbit loads, including quasi-static, sinusoidal, and random vibration tests; realized in an ISO 6 clean room
- Contributed to structural finite element analyses in COMSOL
- Presented and validated Phase B (Preliminary Design and Technology Completion) to CNES and Thales Alenia Space
- Trained new structural and thermal ESUS team members and, with them, supported hardware delivery under volume constraints and schedule milestones

LEADERSHIP

Stanford University March 2025 - June 2025
Teaching Assistant for the course ME 70 – Introductory Fluids Engineering *Stanford, CA*

- Led problem-solving sessions and held office hours, supporting ∼50 students on fluid mechanics concepts

Forum – CentraleSupelec Career Fair October 2022 - July 2024
Corporate Relations Manager of France's largest student career fair (210 companies, 3,000 students) *Paris, France*

- Led sales strategy within a 33-student team to generate $1.6M in revenue for non-profit associations; owned 25 key accounts (Amazon, Thales, ArianeGroup, CNES, Safran, among others) and closed $190,000 in sales

Yaniv Association – Nonprofit June 2019 - August 2026
Qualified counselor (BAFA certification) *Paris, France*

- Organized holiday camps, mentoring and supervising groups of ∼100 children aged 5-17 each year

SKILLS

Languages: French (native), English (fluent, TOEFL iBT: 105/120), Spanish (basic)
Technical Skills: SolidWorks, Comsol, Granta Edupack, Python, SQL, LaTeX, C++, Matlab, and Simulink