

# Eliseu Antonio Kloster Filho

2332 Campus Drive  
Evanston, IL, 60201

ekloster@u.northwestern.edu  
+1 (872) 810 5780

## Education

---

### Northwestern University

B.A. Physics and Astronomy, Integrated Science (3.86/4.00 GPA)

Evanston, IL

September 2021 – June 2025

Relevant coursework: PHYSICS 450: Quantum Computing; PHYSICS 465: Advanced Topics in Nonlinear Dynamics (Disordered systems, complex networks); PHYSICS 414-1: Electrodynamics 1 (Relativistic Field Theory); PHYSICS 414-2: Electrodynamics 2 (Electromagnetic waves, nonlinear optics); PHYSICS 339: Quantum Mechanics; MATH 381: Fourier Analysis and BVP; MATH 382: Complex Analysis.

### Institute for Pure and Applied Math (IMPA)

Summer course, 2d Computer Graphics

Rio de Janeiro, Brazil

January 2021 – March 2021

Created a vector graphics renderer from scratch, including antialiasing filters, projective transformations, and a quad-tree based acceleration algorithm. This course is geared towards undergraduate and master's students.

## Research Experience

---

### Northwestern University

Center for Applied Physics and Superconducting Technologies

Evanston, IL

March 2023 – Present

“Measuring material losses in superconducting quantum circuits using coplanar waveguide microwave resonators”

- Using superconducting microwave resonators as a proxy to investigate the performance improvement of superconducting qubits fabricated with various structural changes.
- Measuring intrinsic material losses of niobium superconducting films capped with thin layers of non-oxidizing materials, and their impact on qubit coherence time.

### Northwestern University

Center for Interdisciplinary Exploration and Research in Astrophysics

Evanston, IL

June 2022 – December 2022

“Migration of giant planets in protoplanetary disks”

- Awarded \$4000 Summer Research Grant to investigate the effect of planet eccentricity on the migration rate and direction of giant planets. Studied how the stability of elliptical orbits is affected by the interplay between the disk and the planet.
- Modified FARGO3D code, a hydrodynamics simulator, to allow the simulation of planetary systems with low-mass gas disks.

## Work Experience

---

### Northwestern University

Teaching Assistant, PHYSICS 130-1: College Physics

Evanston, IL

September 2022 – December 2022

- Led weekly discussion sections and office hours for 57 students. Graded assignments, and assisted in administrative activities.

## Leadership Experience

---

### Northwestern University

Northwestern University Space Technology and Rocketry Society

Evanston, IL

October 2021 – Present

- Member of one of seven funded teams in NASA's 2023 BIG Idea Challenge, awarded \$167,928.38 for team of 25 students.
- Lead of the avionics team (7 people). Schedule and run weekly meetings while coordinating progress with other teams.

## Honors and Awards

---

- Selected to Integrated Science Program (Northwestern University).
- Technology Fellow at Fundação Estudar (full cost of attending a higher education institution, 18 awarded that year).
- Selected to the Brazilian Training team for International Astronomy Olympiads (40 out of 780 000 students were selected).
- Accepted at Stanford Pre-Collegiate Summer Institutes program.
- Winner of MIT Latin America vs COVID-19 Challenge (30 winning teams out of 4000).

## Other

---

**Languages:** Portuguese (native), English (fluent), German (beginner)

**Technical Skills:** Python (Qiskit, NumPy, SciPy, Scikit-learn, Pandas, Matplotlib, PyTorch, NetworkX), Mathematica, C/C++, Lua, JavaScript, Shell Script, SolidWorks, nTopology, Arduino, Machine Shop Tools.