

Pamela Yaninska

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EXPERIENCE

Graduate Research Assistant, McGill University, Canada

Supervised by Prof. Cynthia Chiang at McGill Radio Lab

May 2021 -
Aug 2023

- Project 1 (instrumentation and analysis):
 - Contributed to the development of a low-noise amplifier for a radio telescope
 - Analyzed radio astronomy spectra using Python
 - Contributed to the creation of comprehensive hardware testing documentation
 - Provided on-site analysis and instrumentation expertise during two deployments at Uapishka Station in Northern Quebec
- Project 2 (analysis):
 - Collaborated closely with a postdoctoral researcher to utilize interactive data visualization tools with Python for radio telescopes, enhancing data exploration and analysis capabilities

Graduate Research Assistant, McGill University, Canada

Supervised by Prof. Hendricks and Prof. Wiseman at Hendricks Lab and Wiseman Lab

Jan 2020-
Apr 2021

- Analyzed microscopy image series using spatiotemporal image correlation spectroscopy in MATLAB
- Applied image processing techniques to analyze microscopy images
- Applied thermodynamic principles to interpret protein transport within the cell
- Conducted experiments using a clean room environment, microscopy, cell culture, and optical trapping techniques

MITACS Research Intern, McGill University, Canada

Supervised by Prof. Adam Hendricks at Hendricks Lab

Aug 2019-
Oct 2019

- MITACS Globalink Research Internship (2019)
- Applied image processing techniques to analyze microscopy image series
- Conducted experiments using microscopy, immunofluorescence, and optical trapping

Undergraduate Research Assistant, Universität Leipzig, Germany

Supervised by Prof. Joseph Käs at Soft Matter Physics Division

Dec 2017-
Jul 2019

- Used thermodynamics to understand and describe the behavior of soft matter in physics, in the context of cancer cell jamming and migration
- Performed cancer cell jamming analysis using MATLAB
- Conducted experiments with cancer cells and tumors using microscopy techniques

Physics Intern, Universität Leipzig, Germany

Supervised by Prof. Joseph Käs at Soft Matter Physics Division

Aug 2017-
Dec 2017

- Investigated individual and collective migration of cell lines using MATLAB
- Conducted experiments using fluorescence and confocal microscopy, and cell culture

SKILLS

Instrumentation: lab equipment (VNA, Scope, SigGen, SigAnalyzer, FieldFox, multimeter); soldering; hand tools (cutters, strippers, crimps, drills, screwdrivers, wrenches, pliers); hardware documentation (assembly and testing protocols, BOMs); work in a clean room environment; microscopy (optical trap, STORM, TIRF)

Programming & Softwares: Python (NumPy, SciPy, Matplotlib), Jupyter, Unix, GitHub, SciNet, kiCad, \LaTeX , MATLAB, ImageJ, Inkscape, MS Office, Google Suite

Languages : English (Fluent), Bulgarian (Native), German (Basic)

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|-------------|--|------------------------|
| EDUCATION | M.Sc Physics, McGill University, Canada <ul style="list-style-type: none">• Master's thesis: "ALBATROS Front-End Electronics Development"• Awards: Grad Excellence Award (2022), Trotter MSI Grad Award (2021), MITACS Globalink Graduate Fellowship (2020) | Oct 2023 |
| | B.Sc Physics, Leipzig University, Germany <ul style="list-style-type: none">• Bachelor's thesis: "Cancer Cell Jamming and Taxol" | Sep 2019 |
| PUBLICATION | <ul style="list-style-type: none">• Linda Balabanian, Dominique V. Lessard, Karthikeyan Swaminathan, Pamela Yaninska, Muriel Sébastien, Samuel Wang, Piper W. Stevens, Paul W. Wiseman, Christopher L. Berger, and Adam G. Hendricks, <i>Tau differentially regulates the transport of early endosomes and lysosomes</i> | Oct 2022 |
| CONFERENCES | 10th SCAR Open Science Conference "Antarctica in a changing world" , Virtual Oral presentation: "ALBATROS front-end electronics development for low frequency radio observations from the sub-Antarctic and Arctic" | Aug 2022 |
| | 65th Biophysical Society Annual Meeting , Virtual Poster presentation: "STICS analysis reveals the role of tau phosphorylation in regulating lysosome transport" | Feb 2021 |
| | 4th Soft Matter Day , Universität Leipzig Poster presentation: "Molecular markers for breast cancer and jamming in MDA-MB-436" | Jul 2019 |
| TEACHING | Graduate Teaching Assistant at McGill University, Canada <ul style="list-style-type: none">• Created and corrected assignments and held weekly office hours for courses in Astrophysics; Everyday Physics; Space, Time and Matter. | 2021-2022 |
| | Undergraduate Teaching Assistant at Universität Leipzig, Germany <ul style="list-style-type: none">• Corrected assignments for Experimental Physics (EP) III (Atoms and Molecules); EP IV (Thermodynamics and Soft Matter); EP I (Mechanics, Waves and Thermodynamics); EP II (Electricity and Wave Optics) | 2017-2019 |
| | STEM Educator at Space Challenges Junior Program, Bulgaria <ul style="list-style-type: none">• Promoted space exploration and STEM to children at a science museum | Apr 2015 - Apr 2016 |
| TRAINING | Aviation and Aerospace Training, Canada <ul style="list-style-type: none">• Private Pilot License ground school, CPAQ AERO, McGill Students' Flying Club• Introduction to Aerospace Engineering I, TUDelft, OpenCourseWare | Ongoing |
| WORKSHOPS | CRAQ summer school on Cosmology at McGill University, Montreal | Jul 2022 |
| | Dunlap Institute Summer School on Astronomical Instrumentation at UofT, Toronto | Jul 2021 |
| | Space Challenges Program at Sofia University, Sofia <ul style="list-style-type: none">• Head member of the team responsible for the development of a fully autonomous robotic rover. Awarded first place in Robotics competition : Robopartans part 1 and 2 | Sep 2014 - Nov 2014 |
| | Space Camp Turkey at Izmir, Turkey <ul style="list-style-type: none">• Astronaut training for students: simulated space mission, prototype rocket construction, space training simulators, lectures on astronomy and space exploration | Aug 2012 |