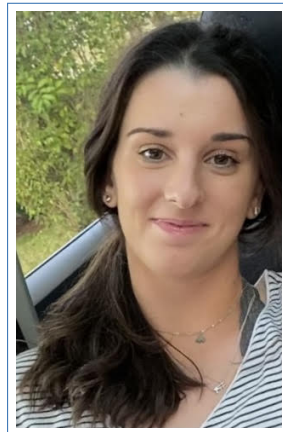


Artemis Anna Pados

Curriculum Vitae

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in artemis-pados



Briefly Stated - Objective and Personal Aspiration

My objective is to attend a University with a distinguished program in STEM and be a member of their women's tennis team. This will allow me to pursue my passion for excellence in mathematics, sciences, and the sport of competitive tennis. As I mature academically, I realize that what I love is building, step by step, an abstract mathematical and scientific world from fundamental principles and then passing my knowledge and understanding to others. After my undergraduate studies, I will work toward a Ph.D. degree in Mathematics, Computer Science, or Engineering. I hope to work with the finest mathematicians and scientists, make new discoveries and contribute to the technological advancement of our society, and give back, in particular, to young women in STEM as a full-time educator.

Academic Education

Summer 2021 **Stanford University, Stanford, CA**

- MATH 51 Linear Algebra, Multivariate Calculus, and Modern Applications
- **Grade A**

2018-Present **Stanford Online High School, Stanford, CA, (GPA: 3.9/4.0, weighted 4.34/4.0)**

- (Grade 9-Present)
- Ranked #1 College Preparatory Private Highschool in America 2020; ranked #4 Best High School for STEM in America in 2020; ranked #1 Best Online School in America in 2020
www.niche.com/k12/stanford-online-high-school-redwood-city-ca/rankings/

2017-2018 **K12 International Academy though Evert Tennis Academy, (GPA: 4.0/4.0)**

- (Grade 8)
- Certificate of Honor Roll for superior academic performance

2015-2017 **State University of New York at Buffalo, Buffalo, NY, (GPA: 4.0/4.0)**

- University courses: GSE 120 LEC Logic and GSE 121 LEC Logic and Sets (through the UB Gifted Math Program)

2014-2018 **Nichols School, Buffalo, NY**

(Grades 5-7) ○ Grade A in all courses

2008-2014 **Elmwood Franklin School**, *Buffalo, NY*

(Grades PreK-4) ○ Grade A in all courses

Academic Enrichment

Summer 2021 **Summer Research Fellowship, I-SENSE Institute, Florida Atlantic University (FAU)**, *Boca Raton, FL*

- Topic: Infrastructure Systems - Mobility Sensing and Analytics for Smart Cities
- 2021 Sensing and Smart Systems REU program, Institute for Sensing and Embedded Network Systems Engineering (I-SENSE), FAU
- Advisor: Dr. Jason Hallstrom, Director of I-Sense, Professor of Electrical Eng. & Computer Science
- Period: 06/07/2021-08/06/2021, 15hrs/week
- Paper to be submitted to ACM SE 2022 conference.

Summer 2021 **Summer Research, Florida International University (FIU)**, *Miami, FL*

- Topic: Natural Language Document Processing for the US Patent and Trademark Office
- Advisor: Dr. Mark Finlayson, Professor and Eminent Scholar, School of Computing and Information Sciences, FIU
- Period: 06/01/2021-08/02/2021, 20hrs/week

Summer 2020 **Harvard University Pre-College Summer School**, *Cambridge, MA*

- "Introduction to Programming, Computational Science, and Data Visualization" course
- Received perfect score and outstanding evaluation by teacher
- Class consisted of coding and data visualization using Python language

2018-Present **Member of the Women in STEM Club**, *Stanford Online Highschool*

- Meets once per week during school year

2018-Present **Member of the Athletics Club**, *Stanford Online Highschool*

- Meets once per week during school year

2018-Present **Member of the Girls Can Code Club**, *Stanford Online Highschool*

- Meets once per week during school year

Summer 2018 **Summer at Stanford University**, *Stanford, CA*

- One-week intensive courses:
 - "Computational Thinking in Mathematics and Beyond using Wolfram language"
 - "Approaching Infinity"

2015-2017 **State University of New York at Buffalo (UB) Gifted Math Program (GMP)**, *Buffalo, NY*

- Selected among a group of 60 students from a pool of 400 highest achieving students as a 4th grader after a rigorous 4 hr in-class test (usual application is as a 6th grader)
- Received perfect score in all years of study
- GMP 1 (2015-2016):
 - Advanced Algebra, Geometry, Probability
- GMP 2 (2016-2017):
 - Set theory, Basic Number theory, Groups, Relational Systems, Logic, and Proofs

Publications

- [1] Artemis Pados, "The Dynamic Republic", in *Proceedings 3rd Harvard-Japan International Young Researcher's Conference (IYRC)*, Sept. 19-20, 2020, pp. 162-164. Prepared in Grade 10.
- Abstract: The ancient Greek philosopher, Plato, writes in Book IV of "The Republic" that there are three parts to the human soul – "appetite, spirit, and wisdom"- and these categories directly translate to how an ideal state/society should be run. In this research paper, I argue that there are two main flaws with Plato's ideal city structure and I explain how these flaws may be rectified.
 - [View/download paper](#)

Conference Presentations

- [1] Artemis Pados, "The Dynamic Republic", in *Proceedings 3rd Harvard-Japan International Youth Researcher's Conference (IYRC)*, Sept. 19-20, 2020. Prepared in Grade 10.
- [Watch my presentation](#)

Lattice Point Geometry/Discrete Math Problem Portfolio

May 2021 **"Exercise Portfolio"**, *Lattice Point Geometry, Discrete Math, Stanford Online High-school*

- I took "University Discrete Mathematics" and "University Lattice-Point Geometry" (each semester long). The courses formed a sequence and were proof based. During Lattice-Point Geometry, I created a LaTeX portfolio in which I compiled exercises and proofs that I completed throughout the progression of the course. I engaged rigorously with significant mathematical concepts, including topics not typically studied at the secondary or undergraduate level. I explored the algebraic structure of the lattice plane, Pick's, Blichfeldt's, and Minkowski's Theorems, and harnessed concepts of number theory, linear algebra, and graph theory. The journey through the proofs of my portfolio shows discoveries of many, often surprising, interrelations between seemingly disparate areas of mathematics.
- [View/download portfolio](#)

Sample Academic Distinctions

Spring 2021 **Lattice Point Geometry (proof-based university course)**, *Stanford Online High-school*

- Received Grade A in University course

Fall 2020 **Discrete Mathematics (proof-based university course)**, *Stanford Online Highschool*

- Received Grade A in University course

Fall 2020 **SAT Score 1530 (800 Math, 730 English)**

Spring 2020 **AP Calculus BC**, *Stanford Online Highschool*

- Course and exam taken in sophomore year; received 5/5 on AP Exam

2016-2017 **GSE 120 LEC Logic and GSE 121 LEC Logic and Sets**, *SUNY Buffalo (UB)*

- Received perfect score (A or 4.0) for two University-level mathematics courses as a middle school student.
- Was admitted to highly selective UB Gifted math program as 4th grader (most students apply in 6th grade)

2013-Present **Placed in higher grade math throughout all of schooling (elementary, middle, and high school)**, *Elmwood Franklin School, Nichols School, Stanford Online Highschool*

- Currently in high school taking math courses at University level
- Placed in 8th grade math while in 7th grade at Nichols school, only student who received this distinction
- Placed in 5th grade math while in 4th grade at Elmwood Franklin School, only student who received this distinction

2010-2015 Received multiple distinctions in **National French Language Contest (Concours National de Français)**: Placed 2nd, 3rd, and 4th in the country in multiple years, American Association of Teachers of French (AATF)

Computer Skills

- Python
- C++
- Java
- Wolfram Language
- LaTeX

Languages

- English (native)
- Greek (fluent)
- French (proficient)

Selected Highschool Courses

Freshman Year (Fall 2018-Spring 2019):

Honors Precalculus and Trigonometry, *Stanford Online Highschool*

- Grade A

Honors Physics, *Stanford Online Highschool*

- Grade A

Sophomore Year (Fall 2019-Spring 2020):

AP Calculus BC, *Stanford Online Highschool*

- Grade A and 5/5 on AP Exam

History and Philosophy of Science, *Stanford Online Highschool*

- Grade A

Junior Year (Fall 2020-Spring 2021):

AP Physics C Mechanics (Fall) and Electricity and Magnetism (Spring), *Stanford Online Highschool*

- Grade A for both

Programming in C++, *Stanford Online Highschool*

- Grade A

Discrete Mathematics Proof-Based University course (Fall), *Stanford Online Highschool*

- Grade A

Lattice Point Geometry Proof-Based University course (Spring), *Stanford Online Highschool*

- Grade A

Senior Year (Fall 2021-Spring 2022):

AP Computer Science, *Stanford Online Highschool*

- Course to come

AP United States History, *Stanford Online Highschool*

- Course to come

Logic University course (Fall), *Stanford Online Highschool*

- Course to come

Number Theory University course (Spring), *Stanford Online Highschool*

- Course to come

AP Language and Composition, *Stanford Online Highschool*

- Course to come

Sample Papers in Language and Philosophy

Spring 2021 (Grade 11) **"An Act of Reality"**, *Modes of Writing and Argumentation course, Stanford Online Highschool*

- In this English course paper, I analyze Tom Stoppard's *Rosencrantz and Guildenstern are Dead* which is a tragicomedy with absurd dialogue and plot that expands upon the two titular characters in William Shakespeare's *Hamlet*. I argue that the two plays work together to show a similarity relationship between the world of the stage and real life, drawing upon our model of competence and blurring the lines between reality and acting through their treatment of confinement and death.
- [View/download paper](#)

Spring 2021 (Grade 11) **"Two Pinocchios"**, *Modes of Writing and Argumentation course, Stanford Online Highschool*

- [View/download paper](#)

Spring 2021 (Grade 11) **"A New Little Red Riding Hood"**, *Modes of Writing and Argumentation course, Stanford Online Highschool*

- [View/download paper](#)

- Spring 2021 **"On Liberty in Surveillance"**, *Democracy, Freedom, and the Rule of Law* course, (Grade 11) *Stanford Online Highschool*
- In this Philosophy course paper, I analyze John Stuart Mill's ethical system emphasizing the importance of individuality to society and state in his extended essay titled "On Liberty." . In the 21st century United States, there is evidence of growing direct or indirect surveillance of citizens by private or government entities which invokes mass debate about the utility and purpose of such practices and their possible infringement upon privacy and freedom. In this paper, I argue forcefully against surveillance in accordance with Mill's ideas in that it consciously or subconsciously changes the way people think and act, which goes against his Liberty Principle, and evidently hinders community advancement – an ultimate goal of a democratic society
 - [View/download paper](#)
- Fall 2020 **"From MLK to BLM"**, *Democracy, Freedom, and the Rule of Law* course, *Stanford Online Highschool*
- In this Philosophy course paper, I analyze Dr. Martin Luther King Jr.'s "Letter from Birmingham Jail". I investigate the conditions that led to the formation of the MLK and BLM movements and the mission of the organizations (particularly in regard to safeguarding democratic values) using as well an article from the Black Lives Matter official website. I compare and contrast the ways in which King and the founders of BLM respond to directed criticism and analyze the nature of the particular opposition each movement receives. My discussion leads to a broad parallelism between the work of Martin Luther King and the Black Lives Matter organization and overall show BLM as a modern version of King's work.
 - [View/download paper](#)
- Fall 2020 **"Back to Isidora"**, *Modes of Writing and Argumentation* course, *Stanford Online Highschool*
- [View/download paper](#)
- Fall 2020 **"Character Contest"**, *Modes of Writing and Argumentation* course, *Stanford Online Highschool*
- [View/download paper](#)
- Fall 2020 **"A Story of Untold Details"**, *Modes of Writing and Argumentation* course, *Stanford Online Highschool*
- [View/download paper](#)
- Fall 2020 **"A (Non-)Resembling Representation"**, *Democracy, Freedom, and the Rule of Law* course, *Stanford Online Highschool*
- [View/download paper](#)
- Fall 2020 **"Wisconsin V. Yoder: An Equality in Diversity Perspective"**, *Democracy, Freedom, and the Rule of Law* course, *Stanford Online Highschool*

- [View/download paper](#)

Spring 2020 **"A Window to the Soul of Mr. Frederick Douglass"**, *Textual Analysis and Argumentation course, Stanford Online Highschool*

- [View/download paper](#)

Spring 2020 **"In Support of Mathematical Platonism"**, *History and Philosophy of Science course, Stanford Online Highschool*

- I proposed the topic for this research paper to be, as indicated by the title, a support to a Platonist view of Mathematics. In constructing my argument that this view is most appropriate, I define Mathematical Platonism against its close alternatives and analyze the underlying theses of its definition. I explore the assumptions, foundations, and implications of mathematics, how they affect one's larger metaphysics, and attempt to address the age-old question of whether abstract objects exist. I investigate the views that counter Platonism, canvassing Intuitionism as it relates to the discussion, and finally attempt to refute the counterclaims using Fregean techniques.

- [View/download paper](#)

Spring 2020 **"A Dialogue on Discovery"**, *History and Philosophy of Science course, Stanford Online Highschool*

- [View/download paper](#)

Fall 2019 **"In Search of 'That Which Has No Part' "**, *History and Philosophy of Science course, Stanford Online Highschool*

- [View/download paper](#)

Volunteer Work/Community Engagement

- Summer 2020 **Little Me Academy High School**, *Cagayan de Oro, Philippines*
- Taught 10th Grade math live via Zoom to high school class amidst the coronavirus pandemic
- Summer 2020 **Tutoring underprivileged university students at Florida Atlantic University (FAU)**, *Boca Raton, FL*
- Tutored underprivileged university students via Zoom in Calculus 1 and 2 amidst the coronavirus pandemic
- Spring 2020 **Assembled 400 disposable face shields for the Memorial Healthcare System of South Florida**, *Boca Raton, FL*
- Participated as a volunteer in the FAU effort to produce 16,500 disposable face shields for local hospitals and medical practices
- Spring 2017 **Leadership Summit: Kids Escaping Drugs**, *Buffalo, NY*
- Selected as 1 of 2 students with leadership qualities to represent Nichols School
- 2015-2017 **Cystic Fibrosis Charity Run**, *Delaware Park, Buffalo, NY*
- Participated 3 consecutive years
- 2009-2012 **Roswell Park Comprehensive Cancer Center**, *Buffalo, NY*
- Christmas piano and chorus recitals 4 consecutive years

Tennis Training

In tennis, I try to become as skilled a player as I can possibly be. Every day I train to grow my game and add a new element to my skill set. I love the sport and I see it as a combination of physical, mental, technical, and tactical skills. I would describe my tennis game style as an all-court player. I like to structure my points by looking for a forehand after a strong serve and most of all by making my opponent uncomfortable. A strength of mine on the tennis court is variety – from dropshots to heavy balls to serving and volleying, my touch at the net is a dominating element of my strong doubles game.

Personal Tennis Metrics:

- Highest ITF Juniors Ranking 639 1\1\21
- Current UTR 8.91 7\7\21

Fall 2017- **Evert Tennis Academy, Boca Raton, FL**

- Present
- Training 3-5hr/day for 5 days/week
 - Full time student-athlete

2010-2017 **Miller Tennis Center, Buffalo, NY**

- Training 2hr/day for 5 days/week

Tennis Distinctions

2012-Present **ITF World Juniors** (International Tennis Federation) highest ranking 639 (1\1\21)

- College Tennis **4-star recruit** in Class of 2022
- Junior ITF World Ranking (18 and under) **#776** (as of May 2021)
- **UTR** 8.91 7\7\21

Nov 2019 **Champion ITF Doubles; Quarterfinalist Singles, St. Johns Antigua and Barbuda Cup**

Nov 2019 **Finalist ITF Doubles, Naussau, Bahamas**

Nov 2019 **Finalist ITF Doubles; Semifinalist Singles, Basseterre, St. Kitts and Nevis**

July 2019 **USTA Zone Team Championships, Oklahoma City, OK**

- Selected to represent the USTA Florida section (one of the most competitive sections in the US) to play Position #1 against other sections throughout the United States

July 2019 **Finalist ITF Doubles, Quarterfinalist Singles, Emmstad, Curacao Open**

June 2019 **Chrissie Evert Best Results Award, Evert Tennis Academy, Boca Raton, FL**

May 2019 **Finalist, "Bobby Curtis" Doubles Girls 16s Florida State Championships, Orlando, FL**

Apr 2019 **Champion Doubles, USTA Florida L5 Girls 16s Championships, Ft. Myers, FL**

Apr 2019 **Finalist ITF Doubles, Le Diamant, Martinique**

Mar 2019 **Finalist ITF Doubles, Bayamon, Puerto Rico**

Feb 2019 **Champion Singles, USTA Florida L5 Girls 16s Championships, Altamonte Springs, FL**

- Feb 2019 **Quarterfinalist ITF J3 Singles**, *La Libertad, San Salvador, El Salvador*
- Nov 2018 **Champion ITF Doubles**, *St. Johns Antigua and Barbuda Cup*
- Oct 2018 **Champion ITF Doubles**, *Emmasted Curacao Open*
- July 2018 **USTA Zone Team Championships**, *Arlington, TX*
- Selected to represent the USTA Florida section (one of the most competitive sections in the US) to play Position #1 against other sections throughout the United States
 - 4-1 record
- June 2018 **Chrissie Evert Sportsmanship Award**, *Evert Tennis Academy, Boca Raton, FL*
- Apr 2018 **Winners Team Florida Challenge Girls 14s (Position #1 player on team)**, *Daytona Beach, FL*
- 3-0 record
- Oct 2017 **Winner Consolation Draw, “Bobby Curtis” Doubles Girls 14s Florida State Championships**, *Orlando, FL*

Non-Academic Extracurricular Activities

School Athletics Teams, *Nichols School, Buffalo, NY*

- Soccer, Basketball, and Softball; Softball Champions in 2017 Softball Division 1 Diocesan Northtown League

Theater

- Participated in leading roles in theatrical productions throughout school years and in summer camps including *The Raven’s Tale*, *Schoolhouse Rock*, *The Seussical*, *Dear Edwina*, *Bye Bye Birdie*, and *Annie*

Piano

- 2-4 recitals annually
- Earned 5/5 Superior performance in all 3 years of my participation in the competition of the National Federation of Music Clubs

Ballet, *American Academy of Ballet, Buffalo, NY*

- Trained 5 years in classical ballet in the American Academy of Ballet
- Participated in the annual *Nutcracker Production* as well as the annual recital

References

Academic:

Dr. Dana Paquin, Department of Mathematics, *Associate Professor Cal Poly, Stanford Online Highschool*

○ dpaquin@calpoly.edu, dpaquin@stanford.edu

Dr. Tom Hendrickson, English Department, *Stanford Online Highschool*

○ tghend@stanford.edu

Dr. Heather Walker-Dale, Core (Philosophy) Department, *Stanford Online Highschool*

○ hwd7@stanford.edu

Mr. Shahram Mostarshed, Department of Physics, *Stanford Online Highschool*

○ smostars@stanford.edu

Athletic:

Jacopo Tezza, Academy Director, *Evert Tennis Academy*

○ jacopo.tezza@evertacademy.com

Cassiano Costa, Ph.D., Fitness Trainer, *Costa Performance*

○ cassiano@costaperformance.com

Kristen Maines, Head Coach, *University at Buffalo, SUNY*

○ ktortman@buffalo.edu

Smaranda Stan-McNerney, Associate Head Coach, *University at Buffalo, SUNY*

○ sstan@buffalo.edu