# Artemis Pados

Curriculum Vitae



# 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 sports. As a student and athlete, I love mathematics and tennis with the same intensity. As I become more mature academically, I realize that what I love is building, step by step, an abstract mathematical world from fundamental principles. I aspire to study among the best and excel in whatever I choose to pursue. I hope to work with the finest mathematicians and scientists, to make new discoveries and contribute to the technological advancements of our society. After my undergraduate studies, I will move on to work toward a Ph.D. degree in Mathematics, Computer Science, or Engineering.

## Academic Education

2018-Present Stanford Online High School, Stanford, CA, (GPA: 4.38 weighted)

(Grade 9- O Based out of Stanford University

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)

 Received University credit for two 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) • Received A in all courses

2008-2014 Elmwood Franklin School, Buffalo, NY

(Grades  $\circ$  Received A in all courses

PreK-4)

#### **Publications**

- [1] Artemis Pados, "The Dynamic Republic", in *Proceedings 3rd Harvard-Japan International Youth Researcher's Conference (IYRC)*, Sept. 19-20, 2020, to appear.
  - 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.
  - Click to view/download paper
- [2] Artemis Pados, Heather Walker-Dale (mentor), "In Support of Mathematical Platonism", Journal of Student Research (JOFSR), in preparation. JOFSR is an academic, multidisciplinary, and faculty-reviewed student journal (ISSN: 2167-1907) devoted to the rapid dissemination of current research
  - 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.
  - Click to 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.

### Tennis Overview and Education

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 this sport because it is 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. My biggest strength on the tennis court is my variety – from dropshots to heavy balls to serving and volleying, I feel that my touch is a dominating element of my strong doubles game.

Fall 2017- Evert Tennis Academy, Boca Raton, FL

Present • Training 3-5hr/day for 6 days/week

Full time student-athlete

2010-2017 Miller Tennis Center, Buffalo, NY

Training 2hr/day for 5 days/week

# Sample Academic Distinctions

- 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 a 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 well above the expectation for the grade, including many University courses
- 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)

#### Tennis Distinctions

- 2012-Present Competitive tennis in **USTA** (United States Tennis Association) and **Junior ITF** (International Tennis Federation)
  - College Tennis **4-star recruit** in Class of 2022 (as of Aug. 2020)
  - Junior ITF World Ranking (18 and under) #817 (as of Aug. 2020)
  - 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
    - $\circ$  When living in Delray Beach, FL was selected to represent the USTA Florida section (one of the most competitive sections in the US) to play Position #1 in a team competition against other sections throughout the United States
  - July 2019 Finalist ITF Doubles, Quarterfinalist Singles, Emmasted Curacao Open
  - 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
  - $\circ$  When living in Delray Beach, FL was selected to represent the USTA Florida section (one of the most competitive sections in the US) to play Position #1 in a team competition against other sections throughout the United States
  - 4-1 record
- Apr 2018 Winners Team Florida Challenge Girls 14s (Position #1 player on team), Daytona Beach, FL
  - o 3-0 record
- Oct 2017 Winner Consolation Draw, "Bobby Curtis" Doubles Girls 14s Florida State Championships, Orlando, FL

# 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

Course in progress

**Programming in C++**, Stanford Online Highschool

Course in progress

Discrete Mathematics University course (Fall), Stanford Online Highschool

Course in progress

### 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

# Academic Enrichment

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

- o "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
- o GMP 2 (2016-2017):
  - Set theory, Basic Number theory, Groups, Relational Systems, Logic, and Proofs

# Papers in Language and Philosophy

Spring 2020 "A Window to the Soul of Mr. Frederick Douglass", Textual Analysis and Argu-(Grade 10) mentation course, Stanford Online Highschool

- In this English course paper, I analyze the "Narrative of the Life of Frederick Douglass, An American Slave, Written by Himself". I discuss the mental toll that slavery takes on a person by looking into the two different tones presented by Douglass through his sentence structure and his description by adjectives combined with a comparison of emotional responses between enslaved and free folks.
- Click to view/download paper

Spring 2020 "A Dialogue on Discovery", History and Philosphy of Science course, Stanford Online (Grade 10) Highschool

- This paper is written as an exchange between two passionate chemists in the early 1700s. Using a hypothetical dialogue, I analyze what constitutes a scientific discovery and shed light on the controversy behind the theory of Phlogiston in that time period.
- Click to view/download paper

## Fall 2019 "In Search of 'That Which Has No Part' ", History and Philosphy of Science course, (Grade 10) Stanford Online Highschool

- This brief paper discusses the work of the Greek Mathematician Euclid, "The Father of Geometry". The problem at hand is whether the objects in Euclid's postulates, that is, points, lines, circles, etc. reflect reality. I argue that Euclid's postulates should be approached with an instrumentalist attitude.
- Click to view/download paper

# Computer Skills

Python

Wolfram Language

o C++

LaTeX

#### Volunteer Work

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 Florida Atlantic University (FAU), Boca Raton, FL

• Tutored underprivileged university students via Zoom in Calculus 1 and 2 amidst the coronavirus pandemic

#### Spring 2017 Leadership Summit: Kids Escaping Drugs, Buffalo, NY

 Selected as 1 of 2 high achieving 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

o Christmas piano and chorus recitals 4 consecutive years

### Non-Academic Extracurricular Activities

School Athletics Teams, Nichols School, Buffalo, NY

 Soccer, Basketball, and Softball; Champions in the 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

# Languages

- English (native)
- Greek (native)

French (proficient)