

Nicolas Crespo

Print Name

March 15, 2024

Date

JEFFERSON SCIENCE ASSOCIATES, LLC/
THOMAS JEFFERSON NATIONAL ACCELERATOR FACILITY

JSA/Jefferson Lab High School Summer Honors Program Application

Address: 605 Kanawah Run, Yorktown VA 23693

Telephone No. 757 621 2453

Date of Birth: 05/11/2006

e-mail Address: nicolasecrespo@gmail.com

Citizenship: US

*Participants must be U.S. citizens or to Permanent Resident Aliens. The latter requires a copy of both sides of the alien registration card to be submitted WITH THIS APPLICATION.

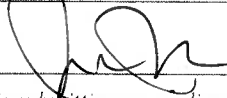
Parent/Guardian Contact Information

Name: Berna Berker

Phone: 757 598 1757

email: bernaberker@yahoo.com

Parent/Guardian Signature and Date:



03/15/24

I am aware that my minor dependent is submitting an application for the JSA Jefferson Lab High School Summer Honors Program, beginning June 26 to August 4, 2023. I understand that transportation is not provided and participants are expected to fulfill the attendance and program requirements.

How did you learn about this program? I learned about this program through friends who also participated in this program and through the JLab website.

Have you attended any educational programs at Jefferson Lab? ☐ Yes ☒ No

If yes, describe or list which program(s): _____

Have you been previously employed by JSA/Jefferson Lab? ☐ Yes ☒ No Dates: _____

Do you have any relatives working at JSA/Jefferson Lab? ☐ Yes ☒ No

Name: _____

Relation: _____

DEPENDENTS OF JSA/JEFFERSON LAB EMPLOYEES ARE NOT ELIGIBLE FOR THIS PROGRAM

Name and Location of High School: Tabb High School, 4431 Big Bethel Rd, Yorktown, VA 23693

Counselor's Name: Kristie Shepard

Current Grade Level: 12

Grade Point Average: 4.71979

List the courses you have taken and your grades in the following subject areas:

Science

Math

English

Biology: A Chemistry: A Calculus II (MTH 263, MTH 264): A AP English Language and Composition: A

Computational Physics
AP Physics: B (PHY 201, PHY 202): A Honors Research and Statistics (MTH 245): A AP English Literature and Composition: A

Computer Science, Engineering Design, Innovation and Entrepreneurship
(CSC 221, CSC 222, CSC 223, CMDA 2014): A Multivariable Calculus (MTH 263): A

Introduction to Java Programming: A Linear Algebra (MTH 264): A

AP Computer Science: A

Other classes and/or special interests JSA/Jefferson Lab may consider relevant:

Accepted to Summer Math Academy at the University of Toronto, took Mathematical Logic class

Took Discrete Structures of Computer Science class at the College of William and Mary

Accepted to Center for Talented Youth Program at Johns Hopkins University, took Intro to

Java Programming Class (A)

What computer operating systems do you have experience with?

I have experience with Windows, MacOS, and Linux, all through both personal interest and through my
internship at NASA Langley with the Formal Methods Group.

What programming languages do you have experience with?

I have experience in Java through various programming classes, Python, R, and C++ through the Computer Science
Strand at the Governor's School for Science and Technology, HTML/CSS and Lua through personal interest, and
NASA's PVS language based on Lisp + KeYmaeraX's tactic language called Bellerophon through my internship
at NASA Langley with the Formal Methods Group.

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List any academic or community service awards or special recognition you have received:

Publication "A General Framework for Formal Verification of Runtime Assurance" accepted to 2024 NASA Formal Methods Symposium, awarded 1st place in 2022 and 2023 Beta Club State Competition in the Technology Category, qualified for national competition. Awarded Honorable Mention at Tidewater Science Fair in the Computer Science Division, awarded Honorable Mention in the Great Computer Challenge in the Scientific Programming Category, awarded GSST Outstanding Junior Research Award, awarded 2022 and 2023 Tabb High School Most Outstanding Boys Tennis

List any extracurricular activities you are involved in, especially those in which you have a leadership role:

Summer Internship and Mentorship at NASA Langley Research Center with the Formal Methods Team and Dr. Tanner Slagel,
Co-Founder of SOAR Network (Student Opportunity and Resource Network), a volunteer organization to aid incoming and military students create academic and extra – curricular connections in their community), board Member of the Governor's School Py Club (programming club),
YCSD Gifted Education Advisory Committee Liaison for Tabb High School, 4-year Team Captain and #1 Player of Tabb Boys Varsity Tennis Team,
Treasurer of the Beta Club, member of Mu Alpha Theta, Science National Honor Society, and National Honor Society,

Outline any previous work experience, including volunteer work:

Employer	Supervisor	Your Responsibilities	Dates	Phone
N/A	N/A	Founded Serve it Forward, a volunteer organization holding free, weekly tennis clinics for local underprivileged Hispanic communities. (Tennis Coach)	June 2023 - present	757 621 2453
Sleep in Heavenly Peace	Katie Morgan	Cut, sanded, and built beds for the needy, built climbing wall and park bench at CHATS in	June 2022	757 223 7078
CHATS (Cole's Autism Therapy Station)	Katie Morgan	volunteering events through the York County Youth Volunteer Corps	November 2022	757 223 7078

Provide two adult references we may contact (not family members), at least one of whom is a math or science teacher who has taught you at school:

Name	Phone
Gaelen Venturi	757-766-1100 ext. 3392
Dr. Islam Bedir	757-766-1100 ext. 3312

HAVE THE TWO ADULT REFERENCES COMPLETE REFERENCE FORMS
AND RETURN THEM TO YOU IN SEALED ENVELOPES.

ONE OF THE REFERENCES **MUST BE** A MATH OR SCIENCE TEACHER
WHO HAS TAUGHT YOU AT SCHOOL.

Use the space below to describe what you expect to gain from an experience at Jefferson Lab - how will it be a benefit to you? (use up to one additional page, if necessary)

Engaging in an experience at Jefferson Lab holds immense promise for me, both personally and academically. My internship at NASA Langley showed me how inspiring and eye-opening research can be, and I fully anticipate Jefferson Lab to have a similar impact on my academic journey.

Surrounded by a community of driven individuals sharing similar aspirations, I hope to be inspired to continue my studies in computer science and mathematics. The esteemed reputation of Jefferson Lab and its excellence in research gives me confidence that it will be ideal setting for such experiences and exploration.

While my plans for undergraduate have a focus in computer science and mathematics, I am intrigued by the idea of pursuing graduate studies in a more specialized subtopic of computer science. At Jefferson Lab, I look forward to immersing myself in various niche areas of computer science and contributing to innovative projects that will broaden my exposure to the field, thus guiding my future decisions about specialized studies in computer science.

I am confident this experience will be a catalyst for the fulfillment of my aspirations and provide me with a deeper understanding of the possibilities of my professional and academic future.

Use the space below to indicate what contributions you believe you would make to Jefferson Lab. What special skills or attributes would you bring to the organization?

My experience at NASA Langley Research Center, where I contributed to computer science research resulting in the publication of the paper "A General Framework for Formal Verification of Runtime Assurance", immersed me in the dynamic landscape of a real-world research environment. Apart from learning to use new operating systems, technologies and programming languages, I also developed a better ability to collaborate effectively in research projects. Working with Dr. Tanner Slagel, Dr. Cesar Munoz and Dr. Lauren White expanded my technical expertise and taught me invaluable lessons in approaching intricate problems with diligence and creativity. I believe these skills will prove to be indispensable in my experience at Jefferson Lab and as I continue my journey in computer science research.

Being thrust into an unfamiliar, fast-paced environment at NASA Langley has also presented constant challenges, forcing me to quickly adapt and learn. Such skills have made me confident in my ability to adjust to any research setting and further fueled my desire to continue to learn and innovate in the field of computer science.

JSA/Jefferson Lab High School Summer Honors Program

Student Reference Form

_____ has identified you as a reference on his/her application to participate in the JSA/Jefferson Lab High School Summer Honors Program. Please complete this reference form, seal it in an envelope, and sign across the flap before returning it to the student.

How do you know this student? Student in Computer Science class

How long have you known this student? 8 months

Please rate this student's academic performance in comparison to his/her peers: superior good average poor

Please rate this student's overall character in comparison to his/her peers: superior good average poor

On a scale of 1 (lowest) to 5 (highest), rate the student on the following:

<u>5</u>	self discipline	<u>4</u>	originality	<u>5</u>	academic ability
<u>5</u>	ability to follow directions	<u>4</u>	leadership	<u>4</u>	integrity
<u>4</u>	initiative	<u>5</u>	independence	<u>5</u>	professionalism
<u>4</u>	cooperation	<u>5</u>	reliability	<u>5</u>	work ethic

Please add any information you would like us to consider in evaluating this student.

Please indicate one of the following:

☒ I recommend this student without reservation ☐ I recommend this student with reservation*
☐ I recommend this student ☐ I do not recommend this student*

* If you have reservations or do not recommend the student, please explain:

Print Name: GAELAN VENTURI Position: INSTRUCTOR

Signature: Gaelan Venturi Date: 03/15/23

School: NHREC Governor's School for Science & Technology

Thank you for your cooperation.

JSA/Jefferson Lab High School Summer Honors Program
Office of Science Education, c/o Carol McKisson
Thomas Jefferson National Accelerator Facility
628 Hofstadter Road, Suite 6
Newport News, VA 23606

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Student Reference Form

Nicolas Crespo has identified you as a reference on his/her application to participate in the JSA/Jefferson Lab High School Summer Honors Program. Please complete this reference form, seal it in an envelope, and sign across the flap before returning it to the student.

How do you know this student? He was a student in my Computational Physics class.

How long have you known this student? Since Fall 2022

Please rate this student's academic performance in comparison to his/her peers: superior good average poor

Please rate this student's overall character in comparison to his/her peers: superior good average poor

On a scale of 1 (lowest) to 5 (highest), rate the student on the following:

<u>5</u> self discipline	<u>5</u> originality	<u>5</u> academic ability
<u>5</u> ability to follow directions	<u>5</u> leadership	<u>5</u> integrity
<u>5</u> initiative	<u>5</u> independence	<u>5</u> professionalism
<u>5</u> cooperation	<u>5</u> reliability	<u>5</u> work ethic

Please add any information you would like us to consider in evaluating this student.

Nicolas is an excellent student and will be a great addition to your program.

Please indicate one of the following:

☒ I recommend this student without reservation ☐ I recommend this student with reservation*

☐ I recommend this student ☐ I do not recommend this student*

* If you have reservations or do not recommend the student, please explain:

Print Name: Islam Bedir Position: Faculty/PhD.

Signature: [Signature] Date: 03/12/2024

School: Governor's School For Sci & Tech

Thank you for your cooperation.

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Thomas Jefferson National Accelerator Facility
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Newport News, VA 23606