

Science Undergraduate Laboratory Internships (SULI)

Summer 2022 - Application for: Carol Ann Surles-Law

APPLICANT PROFILE

General Applicant Information

First Name: Carol

Middle Name: Ann

Last Name: Surles-Law

Previous Last Name(s):

Primary Email Address: cas6nub@virginia.edu

Alternate Email Address 1: cann2002@verizon.net

Alternate Email Address 2:

ORCID: [0000-0002-7455-8942](https://orcid.org/0000-0002-7455-8942)

Current Address

Primary Phone Number: 757-310-8717

Alternate Phone Number:

Citizenship/Languages/Eligibility Information

I will be 18 years of age or older by the time the internship begins: Yes

Are you a U.S. Citizen? Yes

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EDUCATIONAL BACKGROUND

Academic Information

Are you currently attending a community college or 2-year college?	No
Current academic status:	Sophomore
If you are selected as a participant in this DOE program, will you receive academic credit from your university/college for participating?	No

Undergraduate Institution Information

College/University Country:	United States and U.S. Territories
College/University State/Province/Territory:	Virginia
College/University Name:	University of Virginia
College/University Address:	University of Virginia, Charlottesville, VA 22903
College/University City:	Charlottesville
College/University Zip Code:	22903
Expected/Declared Major:	Architecture, Regional Planning, and Related - Architecture
Minor and/or Concentration Expected/Declared:	<ul style="list-style-type: none"> Business, Finance, Management, Marketing, and Related - Business Administration, Management and Operations Business, Finance, Management, Marketing, and Related - Real Estate and Real Estate Development
Expected Degree From This College/University:	Bachelor's
Expected/Completed Graduation Date:	May / 2024
Transcript:	CASL_OTranscript_2021.pdf
Does this institution provide grades?	Yes
GPA Scale:	4.0
Total Attempted Credits:	44.00
Total Earned Credits:	44.00
Total Quality Points:	164.00
GPA:	3.73

Science, Technology, Engineering and Mathematics (STEM) Courses

Course Title:	CAAD 3D Geometrical Mod & Vis
Course Number:	ARCH 2710
Enrollment Status:	Recently Completed

Awards or Honors

Award Title:	University Achievement Award Scholarship (UAA)
Month & Year Received:	April / 2020
Awarding Institution:	University of Virginia

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High School Graduation or GED

Date of High School Graduation or GED:	June / 2020
Country:	United States
City:	Newport News
State/Province/Territory:	VA

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WORK EXPERIENCE & SKILLS

Work Experience

Name of Place of Employment or Activity:	PMA Architects
Dates of Employment or Activity:	From 1/2/2020 To 5/30/2020
Hours Per Week:	8.0
Primary Duties:	Creating models of case studies
Tasks Performed:	Usage of CAD programs including SketchUp

Professional Associations

Are you a member of any professional organizations?	No
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Computer Skills

Computer related skills:	I took a CAD class for architectural visualization that aided my proficiency in Rhino, Grasshopper, Enscape, and V-Ray. My previous internship allowed for me to gain a basic understanding of SketchUp. In addition, I am able to navigate the Microsoft Office Suite and several Adobe applications, such as Photoshop, In-Design, and Lightroom.
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Laboratory/Technical Skills

Experience with advanced laboratory techniques or equipment:	I have had experience using a Laser Cutter, by way of Rhino software, for model making. I have also attended several wood-cutting workshops.
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PROGRAM INFORMATION

Eligibility

Have you previously participated in 2
SULI appointments? No

Previous DOE Internship/Fellowship or Lab Activity Experience

Have you ever had an
internship/fellowship with the
Department of Energy or any of its
National Laboratories (such as SULI,
CCI, VFP) or attended an activity at
one of the National Laboratories
(such as a Mini-Semester or
Sustainable Research Pathways)? No

Availability

What is the earliest date you can
begin your internship? 5/1/2022

When do you need to complete your
internship? 9/30/2022

First Choice Host DOE Laboratory

DOE Laboratory: Thomas Jefferson National Accelerator Facility (TJNAF)

First Choice Research Area: Engineering Computer

Second Choice Research Area: Accelerator Physics/Science

Third Choice Research Area: Computer Science and Technologies

Second Choice Host DOE Laboratory

DOE Laboratory: Brookhaven National Laboratory (BNL)

First Choice Research Area: Engineering Computer

Second Choice Research Area: Engineering Civil

Third Choice Research Area: Engineering Materials

Relatives Employed at DOE Laboratories

Are you a relative of an employee at
the proposed host DOE laboratories? Yes

Name: Lisa R. Surles-Law

Relationship: Mother

DOE Laboratory: Thomas Jefferson National Accelerator Facility (TJNAF)

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ESSAYS

Research Experience:	As an architect major, the elements of research are foundational to the work that we do. We work in a collaborative environment that fosters diverse ideas and the ability to work individually, as well as with others. One project in particular, spanning over the course of a semester, had our studio focus on an infill site on the Charlottesville downtown mall. Collaboratively, we gathered data and necessary measurements to create a physical model of our assigned site. We each designed our own structures to fit into this larger community model. I contributed to our work environment by taking advantage of desk critiques and helping to refine my peers' projects, as well as receive feedback on my own. This internship would offer me a unique opportunity to focus on scientific research as opposed to design research.
Research Interests:	I have always been fascinated by physics and how things work. Specifically, the nature of matter and the ability to understand more about the atom. I have selected Jefferson Lab because of the fundamental research going on, but also because I have always been excited about the structures and buildings on the campus. I live in Newport News and have been to many Open Houses. I have enjoyed seeing the facility develop over the years. As an architect major, I now would like to have the opportunity to participate in that development. I feel that some of my fundamental skills can be utilized and built upon with this internship.
Personal Experience:	My internship with PMA architects was a really great experience that showed me that I enjoy working with a mentor. It also showed me that I do well with working towards end goals and deadlines. I found that I was able to look at tasks creatively, which comes from my developed skills in art and drafting. In addition to interning, the collaborative nature of studio culture has also enhanced my ability to contribute to a team effort in a constructive way.
Professional Goals:	Architecture has so many practical applications that I would like to use my academic career to explore as much as I can. I am currently interested in theme park design and residential and office building. The SULI program would help me to see the application of my field in a very unique environment and challenge my application of newly acquired skills. I am currently working towards my bachelor's degree, majoring in pre-professional architecture, and I would like the ability to work in various areas of architecture over the course of my professional career.

RECOMMENDATIONS

Recommendation 1:	First Name: Belen Last Name: Gonzalez-Aranguren Email: bg4tz@virginia.edu Status: Received 1/8/2022
Recommendation 2:	First Name: Kyle Last Name: Schumann Email: schumann@virginia.edu Status: Received 1/12/2022

01/06/2022

Test Credits

Test Credits Applied Toward Architecture Undergraduate

Transferred to Term 2020 Fall as

ARTS	1000T	Non-UVa Transfer/Test Credit	TE	3.00
ARTS	1000T	Non-UVa Transfer/Test Credit	TE	3.00
EVSC	1010	Intro Environmental Sciences	TE	3.00
Repeated: Repeat-Include in GPA Only				

Test Credit Total:	6.00
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Beginning of Undergraduate Record**2020 Fall**

School:	School of Architecture			
Major:	Architecture Undeclared			
ARCH	1020	Experiencing Architecture	A+	3.0
ARH	1010	History of Architecture I	A-	3.0
PHYS	1050	How Things Work	CR	3.0
PLAN	1010	Intro to Urban & Environ Plan	B+	3.0
SARC	1500	SARC Seminars	A	1.0
Course Topic:	Demystifying Design			
Curr Credits	13.0	Grd Pts	37.000	GPA 3.700
Cuml Credits	13.0	Grd Pts	37.000	GPA 3.700

2021 January

School:	School of Architecture			
Major:	Architecture Undeclared			
PSYC	2559	New Course: PSYC	A	3.0
Course Topic:	Cognition and Cognitive Biases			
Course Topic:	Cognition and Cognitive Biases			
Curr Credits	3.0	Grd Pts	12.000	GPA 4.000
Cuml Credits	16.0	Grd Pts	49.000	GPA 3.769

2021 Spring

School:	School of Architecture			
Major:	Architecture Undeclared			
ARCH	1030	Foundation Studio I	A	4.0
ARH	1020	History of Architecture II	A-	3.0
ENWR	1510	Writing and Critical Inquiry	A	3.0
Course Topic:	Writing about Identities			
EVSC	1010	Intro Environmental Sciences	A-	3.0
Repeated:	Repeat-Include in Credit and GPA			
PSYC	1010	Introductory Psychology	A-	3.0
Curr Credits	16.0	Grd Pts	61.300	GPA 3.831
Cuml Credits	32.0	Grd Pts	110.300	GPA 3.803

2021 Fall

School:	School of Architecture			
Major:	Architecture			
ARCH	1010	Lessons of the Lawn	A	3.0
ARCH	2010	Foundation Studio II	B+	6.0
ARCH	2710	CAAD 3D Geometrical Mod & Vis	B+	3.0
ENTP	1010	Intro to Entrepreneurship	A	3.0
Curr Credits	15.0	Grd Pts	53.700	GPA 3.580
Cuml Credits	47.0	Grd Pts	164.000	GPA 3.727

2022 Spring

School:	School of Architecture			
Major:	Architecture			
ARCH	2020	Foundation Studio III		6.0
ARCH	2220	Principles of Tectonics		3.0
ARCH	2500	Special Topics in Architecture		3.0
Course Topic:	Modes of Inscription			
COMM	2700	Foundations of RE Finance		3.0

End of Undergraduate Record

SULI PROGRAM APPLICATION RECOMMENDATION FOR CAROL ANN SURLES-LAW

Recommender Contact Information

- **First Name:** BELEN
- **Last Name:** GONZALEZ ARANGUREN
- **Title:** ASSISTANT PROFESSOR
- **Department:** ARCHITECTURE
- **Institution/Organization:** UNIVERSITY OF VIRGINIA
- **Telephone:**
- **Email:** bg4tz@virginia.edu

Applicant Information

Association

Describe your relationship to the applicant, including how long you've known the applicant, where, and in what capacity.

I have known Carol for two years in my capacity as a Professor of Architecture at the University of Virginia. As a second year student, Carol was in my section of Foundation Studio II and earned a superior grade in that class. Although I have taught Carol only for a semester, she quickly stood out as a diligent and hard-working student. Her perseverance and interest in pursuing her ideas made it possible for her to finish the course with an B+ grade. She proposed a daring, brilliant and innovative design, with solid technical foundations to revitalize the Downtown of Charlottesville, Virginia. The project achieved an exciting conceptual, spatial and programmatic complexity and a superb degree of graphics development.

Applicant Comments

Please provide substantive comments about the applicant's education, training, aptitude, or promise relevant to the SULI program. Include any relevant additional detail or perspective regarding the applicant's research experience or equivalent experience on complex projects, including the level of independence or other factors that would contribute to the applicant's ability to make an excellent contribution to the SULI program.

From day one, it was clear that she was not there just to obtain a diploma; not only does she have an exceptional gift for exploring concepts, but she showed mature research capability, dedication, and commitment to the work assigned every week. Her outstanding final grade as a result of her hard work and her ability as a designer. Carol's social skills, empathy, and kindness make her always the team leader. Her verbal and graphic communication skills are also excellent, captivating others with her ideas. She was also always very organized, encouraging and showed great leadership. I was impressed by her ability to communicate concepts and methods to students effectively, while sparking their curiosity in the subjects being discussed.

She was stimulated by the constant exchange of knowledge, which helped her grow as a designer. This is exactly the kind of leadership and enthusiasm we seek from our students at the School of Architecture at the University of Virginia.

In conclusion, based on Carol's grades, interpersonal skills, commitment, and participation, I would rate her academic performance at the University of Virginia as superior. If her dedication and achievements at the School of Architecture are

any indications of how she will perform in graduate school, I highly believe that Carol would be an excellent addition to your program.

If you should need any additional information, please feel free to contact me.

Applicant Rating

In comparison to other undergraduate students, please rate the applicant relative to his/her peers on the following qualifications:

	Do Not Know	Below Average	Average	Above Average	Superior
Analytical and Mathematical	X				
Experimental Research				X	
Overall Academic				X	
Initiative and Self Reliance			X		
Motivation toward Scientific Career			X		
Originality of Thought			X		
Emotional Maturity				X	
Ability to Work with Others			X		
Potential for Leadership			X		
Oral Communication Skills			X		
Written Communication Skills			X		

SULI PROGRAM APPLICATION RECOMMENDATION FOR CAROL ANN SURLES-LAW

Recommender Contact Information

- **First Name:** Kyle
- **Last Name:** Schumann
- **Title:** Assistant Professor of Architecture
- **Department:** Architecture
- **Institution/Organization:** University of Virginia
- **Telephone:** 908-507-9493
- **Email:** schumann@virginia.edu

Applicant Information

Association

Describe your relationship to the applicant, including how long you've known the applicant, where, and in what capacity.

I met Carol Ann last February 2021 when she was enrolled in my ARCH 1030 first year architecture design studio here at the University of Virginia. The course had only 14 students and met for over six hours a week, so there was ample time for discussion and individual and small group meetings for me to get to know Carol Ann. She quickly rose to the top of the class in her conceptual agility, analytical skill, engagement with both me and her peers, her technical skill in drawing and modeling, and her enthusiasm for the course.

Before joining UVA, I taught introductory studios at several other institutions including Princeton University, Cornell University, Syracuse University, Wentworth Institute of Technology, and University of Tennessee, and it is clear to me that Carol Ann has all the qualities necessary not just to succeed in her academic and scholarly endeavors, but to excel. Several of my own research projects involve developing new fabrication techniques and material systems in collaboration with engineers and scientists, and it is easy to envision how Carol Ann's skills will translate and bring a valuable perspective to these environments and fields of study.

Applicant Comments

Please provide substantive comments about the applicant's education, training, aptitude, or promise relevant to the SULI program. Include any relevant additional detail or perspective regarding the applicant's research experience or equivalent experience on complex projects, including the level of independence or other factors that would contribute to the applicant's ability to make an excellent contribution to the SULI program.

Carol Ann is enrolled in the pre-professional architecture program here at the University of Virginia. It is a demanding academic program requiring immense creative energies but also analytical and logical reasoning skills, and the ability to solve complex and abstract problems often while also defining the criteria for success. Carol Ann takes all of these challenges in stride, receiving critique and feedback with enthusiasm and never shying away from any opportunity to improve her work. She went above and beyond the course deliverables while completing her projects throughout the semester.

Carol Ann was a valuable member of the studio and the rare type of student whose energy elevates the work of her peers. She has all the signs of a successful team player, eagerly discussing her own work and the work of her peers in a way that encourages everyone to push their projects forward and to develop rigorous ways of working through any issues and challenges that may arise. It is for these reasons that I wholly support Carol Ann's application to the US DOE Science Undergraduate Laboratory Internships program. Her effusive enthusiasm for design and problem solving elevates discussion among her peers, and her dedication and passion prepare her for success both in the university and in her future career. I believe that her unique training in architectural design and reasoning will prove to be an incredible asset in the scientific laboratory. Please do not hesitate to contact me if you have

any questions.

Applicant Rating

In comparison to other undergraduate students, please rate the applicant relative to his/her peers on the following qualifications:

	Do Not Know	Below Average	Average	Above Average	Superior
Analytical and Mathematical					X
Experimental Research	X				
Overall Academic					X
Initiative and Self Reliance					X
Motivation toward Scientific Career				X	
Originality of Thought				X	
Emotional Maturity					X
Ability to Work with Others					X
Potential for Leadership					X
Oral Communication Skills					X
Written Communication Skills				X	