



John Wiley Jones
**Outstanding
Students
in Science**

Awards Ceremony
March 30, 2022

RIT | College of
Science

About John Wiley Jones

CHEMIST, BUSINESSMAN, AND BENEFACTOR



John Wiley Jones started his business career by producing Sunny Sol bleach in a bathtub in the basement of his parents' home and selling it door-to-door out of the trunk of his car.

In 1929, he started Jones Chemical Company, which has become the world's leading re-packer of chlorine and other chemicals used for water purification. With twelve production facilities in the United States, Jones Chemicals, Inc. makes and distributes chlorine and other chemicals used in water purification, paper and textile manufacturing, food production, pharmaceuticals, and industrial manufacturing.

John Wiley Jones had a passion for science education and was a generous contributor to academic excellence at RIT. In 1974, Jones Chemicals established the John Wiley Jones Distinguished Lectureship in Science to make a significant contribution to the education programs of RIT's College of Science. Jones' intention was to bring eminent scientists to the RIT campus with the expectation of a formal lecture presentation that would be open to the public. The company also created an endowment to support science education at RIT, the first grant of its kind in the university's history.

A portion of this endowment was used to establish the John Wiley Jones Award for Outstanding Students in Science as a tangible expression of Mr. Jones' wish to help and encourage young people preparing themselves for careers in scientific fields. He believed that protecting the environment and making the world safer and more fruitful for all people posed a significant challenge for future scientists.

In their selection of the John Wiley Jones Outstanding Students in Science, five academic units of the College of Science must consider the student's academic achievements, citizenship, and contributions to the quality of campus life. This year's recipients will receive a cash award and a certificate.

WELCOME

Dr. Larry Buckley

Senior Associate Dean for Academic Affairs
RIT College of Science

JOHN WILEY JONES DISTINGUISHED SPEAKER

Dr. David Weitz

Professor of Physics and Applied Physics
Harvard University

PRESENTATION OF AWARDS

Zoë LaLena

Chester F. Carlson Center for Imaging Science

Matthew Law

School of Chemistry and Materials Science

Cade Reinberger

School of Mathematical Sciences

Ashley Martsen

School of Physics and Astronomy

Ian Freezman

Thomas H. Gosnell School of Life Sciences

Zoë LaLena

CHESTER F. CARLSON CENTER FOR IMAGING SCIENCE



Zoë LaLena is an exceptional third-year student who is completing her BS in imaging science and minors in public policy and computer science.

Zoë quickly emerged as a leader in her first semester at RIT. She was elected by her classmates to be a project manager for the Freshman Imaging Project. She regularly rallied classmates to stay focused on their goals and led by example by spending many hours in the lab. She continued working on the project over the summer, and was hired to be a TA for the class the following two years.

Undeterred by the challenge of working remotely through the COVID pandemic, Zoë kept her summer team organized and focused through regular Zoom calls. Eventually, this dedication led to an incredible discovery of a palimpsest (parchment with hidden underwriting) in RIT's Cary Collection. This discovery was publicized by local and national media outlets including an Evan Dawson WXXI interview. She also presented the findings to the Rochester chapter of the Imaging Science and Technology Society, as well as at the International Congress on Medieval Studies, May 2021.

Zoë is an excellent ambassador for the entire college. She is the president of the College of Science Student Activities Board (COSSAB) where she leads various outreach, networking, and social activities for her peers. Zoë regularly volunteers for science demonstrations at campus-wide events, such as Imagine RIT, Brick City Homecoming, and open houses to share her love of science with others. She is also a member of the RIT Honors Program.

Zoë has a heart for service and is always ready to volunteer. She is a strong and confident person who treats all people with civility and understanding. She is a role model for all young people in STEM. The Chester F. Carlson Center for Imaging Science is proud to name Zoë as a 2022 John Wiley Jones Outstanding Student in Science, and we look forward to seeing what comes next!

Matthew Law

SCHOOL OF CHEMISTRY AND MATERIALS SCIENCE



Matt Law is a fourth-year biochemistry student from Conesus, New York.

Matt has excelled in both academics and research, impressing us with his academic brilliance and his research prowess. He jumped into research with Dr. Hans Schmitthenner during his first semester at RIT. Matt has been working to make a deca-peptide that is a breast cancer targeting agent to which our dyes and metals could be coupled. He partnered with a graduate student to pioneer the methodology. When the grad student graduated, Matt became our

resident expert on synthesizing peptides. He presented his work at the national American Chemical Society meeting and is now working with Dr. Schmitthenner to complete a full manuscript.

Matt is well rounded with many interests. He has been an honors student since his sophomore year. He is an active member and leader in the RIT ASBMB Student Chapter and was a co-author of a monthly COVID newsletter. He also headed a number of social activities including our popular Trivia Night for students and faculty. The questions and answers were designed by Matt, and the attendees thoroughly enjoyed the game. His efforts have greatly enhanced the chemistry and biochemistry community during his time on campus.

Matt maintains a stellar GPA and has been named to the Dean's List in every semester at RIT. He has received many other accolades including the Undergraduate Award in Biochemistry and the RIT Outstanding Undergraduate Scholar Award. Matt was also nominated to be a College of Science Undergraduate Student Delegate at commencement.

We know that Matt is destined to be a brilliant scientist and he will be known for his energy, dedication, cleverness, and leadership. He is an ideal candidate to explore new areas of biochemistry and biology which will broadly impact scientific advancements. We know Matt will represent RIT in wonderful ways wherever he goes and make us exceedingly proud of him.

Cade Reinberger

SCHOOL OF MATHEMATICAL SCIENCES



Cade Reinberger is an honors student and computational math major from Cincinnati, Ohio.

Cade began research during his first semester at RIT after reaching out to his differential equations professor, Dr. Nate Barlow. Cade responded to an optional homework problem, politely pointing out a typo in one of Dr. Barlow's 2020 papers. Cade was given credit for the fix in a corrigendum to the paper, which appeared in December of 2020. Cade joined the research group of Dr. Barlow and Dr. Steve Weinstein and has been working with them nonstop

ever since, for credit, for pay (as a 2021 Emerson Fellow), and volunteer work. Cade has contributed to two manuscripts (one under review at a journal, one in preparation) and is part of another project with Math Modeling Ph.D. student, Nastaran Naghshineh, that will ultimately lead to another publication.

Cade's research has the end goal of finding convergent power series solutions to nonlinear ordinary differential equations, with applications ranging from fluid mechanics to epidemiology to astrophysics. One highlight from Cade's first project was showing, for the first time, that the infinite series for the nonlinear pendulum converges over a quarter-period as long as the pendulum is initialized at the top of its trajectory. He accomplished this through an examination of singularities of elliptic functions in the complex plane. In Cade's most recent work, he has proven convergence for an exact re-summation of the infinite power series solution to the Sakiadis problem describing the boundary layer over a moving flat plate. For both the pendulum and the Sakiadis problem, these formulations allow one to construct analytic and exact solutions for problems that are usually only solved numerically. Cade's other research contributions are too numerous to list here.

During his first two semesters at RIT, Cade enrolled in Honors Multivariable and Vector Calculus and then Honors Linear Algebra with Dr. Carl Lutzer. Cade earned the top grade in both of these classes and was commended for his collegiality in working with peers and creativity in the problem-solving process.

Outside of the classroom, Cade leads the RIT Quiz Bowl club as president, where he ranks first among all current and former RIT students in total points scored. Upon graduation, Cade plans to continue his studies in applied mathematics.

Ashley Martsen

SCHOOL OF PHYSICS AND ASTRONOMY



Ashley Martsen is a fourth-year student from Otis, Massachusetts, who is graduating with a BS in physics and minors in Italian, astronomy, math, and English.

Ashley started research during the fall of her second year, where she began working with Dr. Michael Lam studying pulsars and variations in single pulse parameters. She is still working with Dr. Lam for her capstone project, studying pulsar mode changes and nulling in the millisecond pulsar J1909-3744.

During the summer of 2021, Ashley completed an REU with the National Radio Astronomy Observatory working with Dr. Scott Ransom to study the polarization of the pulsars in the Terzan 5 stellar cluster. This project is currently being finalized as a paper that will be published. Along with working with pulsars, Ashley also spent her junior year working with Dr. Jeyhan Kartaltepe adapting the program SCARLET to model merging galaxies to deblend the galaxies into separate parameters.

Beyond research, Ashley has also worked as a Learning Assistant in a variety of physics classes since her second year, including classes for physics majors. She has tutored for the HEOP for STEM classes since her second year as well. She served on the EBoard for the Fiber Arts club as Vice President during the '19-'20 academic year and then President in '20-'21. Ashley also led the RIT Chapter for the Society of Physics Students as Secretary in '20-'21 and then President in '21-'22. She has been a panelist for open houses for the School of Physics and Astronomy many times during the past two years. She is proud to have been on the Dean's List every semester, as well as being awarded the Outstanding Undergraduate Scholar Award and the Physics Faculty and Alumni Scholarship both during the '20-'21 academic year.

In the fall she will be attending a Ph.D. program in Astrophysics to study pulsars and will be joining the NANOGrav collaboration.

Ian Freezman

THOMAS H. GOSNELL SCHOOL OF LIFE SCIENCES



Ian Freezman is a third-year biotechnology and molecular bioscience major with a minor in music performance. During his time on campus, Ian has worked multiple jobs, participated in research, volunteered at open houses, maintained an outstanding GPA, and honed his musical talents.

Ian joined the Hudson Lab during his first year at RIT. In 2021, Ian received an Emerson Fellowship which provides a stipend for 10 weeks of summer research. Ian's primary research project is the isolation and characterization of novel antibiotic compounds

from bacteria. He is currently drafting a publication for his work on the antibiotic producing strain RIT 621. Other projects Ian is involved in include characterizing cellulose degrading bacteria and studying bacterial plastic degradation.

When thinking about his most valuable experience on campus, Ian mentions being a Learning Assistant for introductory biology with Dr. Dina Newman. In this role, Ian enjoyed giving back to others and helping his peers succeed. He continues to support others as a teaching assistant in the microbiology lab. Ian has also taken a leadership role in training others who join the Hudson lab including students in their first year all the way up to those pursuing a Ph.D.

Ian has received many outstanding recognitions during his time at RIT including his recognition as an RIT Outstanding Undergraduate Scholar and being consistently named to the Dean's List. His talents also lie in music as he auditioned for and received an RIT Performing Arts Scholarship before arriving at RIT. Ian was also a finalist in Dr. Munson's 2021 Performing Arts Challenge for playing fingerstyle guitar.

Ian has made a great impact during his time at RIT and we know he will go on to great things following graduation.

