

Rhodes Information Initiative



Spring 2023 Newsletter



Director's Memo

Last summer, as Duke returned to normal operations, we organized our first in person Plus Programs in two years. We are hugely grateful to university leadership for their help arranging an on-campus housing option. Across Code+, Data+, and CS+, we had almost 75 students living together on campus, a rich community where students interacted and socialized frequently during the program. As well as being more fun, we think it might have created a bubble that

protected the students from COVID. Between all three programs, 156 students participated in Plus Programs projects.

Last summer we introduced Climate +, a new member of the +Program family that was developed by iiD in partnership with the merged Nicolas Institute for Environmental Policy Solutions / Duke University Energy Initiative. Kyle Bradbury joined the leadership team, and he showcased student projects at the Duke Climate Commitment strolling supper in the fall.

This coming summer we are launching Applied Ethics +, a new partnership with the Science and Society Initiative, and welcoming Esko Brummel to the leadership team. It looks to be an extraordinary summer – stay tuned!

James Moody, Associate Director, Lisa Liester, Associate Director, Robert Calderbank, Director

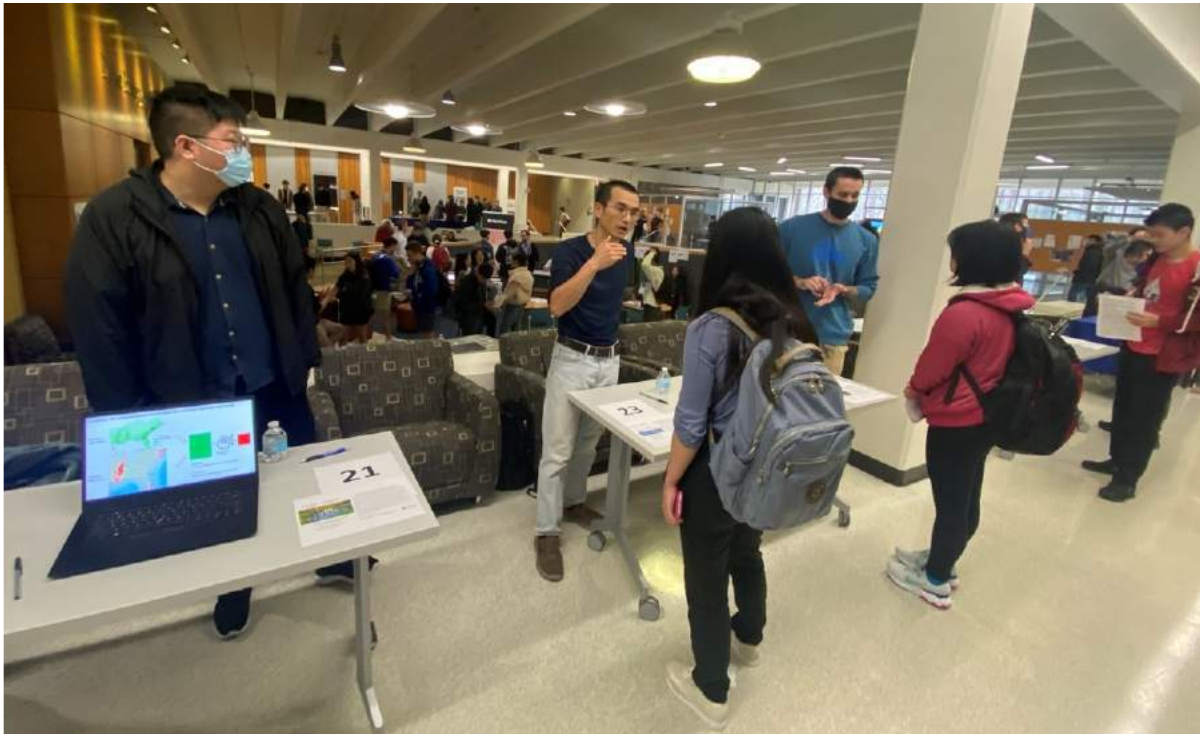


Duke Mathematics Professor Ingrid Daubechies Wins 2023 Wolf Prize for Mathematics

Mathematics professor Ingrid Daubechies is the 2023 winner of the Wolf Prize for Mathematics for her work on wavelet theory and applied harmonic analysis. Dr. Daubechies is the first woman to ever win the prize since its inception in 1978. The Wolf Prize is awarded to outstanding scientists and artists from around the world, (regardless of nationality, race, color, religion, gender, or political views) for achievements in the interest of humanity and friendly relations

among people. The prize in each field consists of a certificate and a monetary award of \$100,000. To date, 375 scientists and artists from around the globe have been honored.

Read more on Duke Today: <https://today.duke.edu/2023/02/duke-professor-wins-one-most-prestigious-awards-mathematics>



Duke Programs

Plus Programs Opens Applications for 2023

Duke's Plus Programs launched the 2023 season with an Information Fair on January 19th, 2023 to showcase the 2023 lineup of summer projects for undergraduate and graduate students. In addition to last year's newly added [Climate+](#) program, 2023 welcomes the first year of the [Applied Ethics+](#) program.

Climate+ is aligned with Duke University's commitment to advancing interdisciplinary understanding of the causes and societal impacts of climate change as well as potential solutions for long-term sustainability, including climate change mitigation and adaptation

strategies. In addition to experiencing all the general educational benefits of the Data+ program, this summer's Climate+ teams will work on diverse topics including electricity consumption, wetland carbon emissions, climate change's impacts on river and ocean ecosystems, and the use of remote sensing data to inform climate strategies.

The new Applied Ethics+ program engages interdisciplinary teams of Duke undergraduate and graduate students collaborating with clients to address pressing real-world challenges in policy, technology, research, and ethics. Participating students can expect to learn how to critically assess policy and ethical issues related to research and technology with clients who are leaders in shaping society through science and technology.

Additionally, the [Data+](#) program continues to welcome undergraduate and masters students interested in exploring new data-driven approaches to interdisciplinary challenges. It is suitable for students from all class years and from all majors. Students join small project teams, working alongside other teams in a communal environment. They learn how to marshal, analyze, and visualize data, while gaining broad exposure to the modern world of data science. The projects come from an extremely diverse set of subject areas.

Plus Program participants will receive either a \$5,000 stipend, out of which they must arrange their own housing and travel, or an option to live on campus with room and board and a \$1000 stipend. Funding and infrastructure support are provided by a wide range of departments, schools, and initiatives from across Duke University, as well as by outside industry and community partners.

Students interested in Plus Programs can learn more, review our 2023 projects, and apply here:

<https://bigdata.duke.edu/participate/data-plus/>

Duke Programs

TEN-WEEK SUMMER PROGRAMS IN TECHNOLOGY AND DATA SCIENCE that provide valuable experience. Students participate in small project teams and receive mentorship from faculty, graduate students, and IT professionals.



Data

-  Explore new data-driven approaches to interdisciplinary challenges.
-  Learn how to marshal, analyze, and visualize data, while gaining broad exposure to the modern world of data science.
-  bigdata.duke.edu/data

CS

-  Get involved in computer science research projects with faculty in a fast-paced and supportive community environment.
-  A rich entry point into computer science research and applications beyond the classroom.
-  cs.duke.edu/csplus

Code

-  Rising sophomores and juniors with little to no experience in coding can gain exposure to industry tools to create a solution for a real-world challenge at Duke or beyond.
-  Build tech and communications skills to prepare for industry internships.
-  codeplus.duke.edu

Climate

-  Participate in projects that focus on the causes and societal impacts of climate change, and propose potential solutions for long-term sustainability.
-  Engage with climate, environment, and energy researchers and practitioners.
-  bigdata.duke.edu/climate

DISCOVER THE POSSIBILITIES OF A CAREER IN TECHNOLOGY



Data+ Spotlight on Esko Brummel: From Participant to Project Manager to Project Lead, and Beyond!

In 2017 as a master's student in Bioethics and Policy, Scott "Esko" Brummel joined Data+'s 2017 project, "[Understanding Duke](#)

[Research Based on Large-Scale Faculty Publication Records](#)", and over the summer found an exciting way to research issues with data. Esko continued to develop these ideas in 2021 and 2022 by creating and managing two other Data+ projects focused on access to healthy foods in low resource communities in Durham. In year 1, The "[From Farm to Table](#)" team used modern geospatial data analysis techniques, the team identified optimal locations for food distribution hubs, analyzed demographic data about the distribution area, and built an ArcGIS web app to allow interactive exploration of their results. The following summer, Esko's team "[Farm to Fork](#)" collaborated with Duke School of Medicine's Root Causes Fresh Produce Program, community members, and physicians throughout the Duke Health network to integrate data from food deliveries to Duke Health patients with patient health record data and other available data sources. They created a dashboard that can analyze, predict, and manage the Root Causes' "Food as Medicine" program.

In summer 2023, Esko is the program manager for the [Applied Ethics+](#) program at Duke. Along with founding director of [Duke Science and Society](#) and Robinson O. Everett Distinguished Professor of Law & Philosophy at Duke Law School [Nita Farahany](#), and Deputy Director of Science and Society Michael "Buz" Waitzkin, Esko is managing the 7 new Applied Ethics+ projects that will launch this summer. Hear more about Esko's work in Data+ and the new Ethics+ projects below!



Rhodes iiD Welcomes Duke Math Faculty

This Fall, iiD welcomed several Math faculty from Duke to our space on the third floor of Gross Hall to increase collaborative opportunities with the Math Department, and to partner on seminars and talks relevant to both communities. Professors [Lillian Pierce](#), [Colleen Robles](#), [Xiuyuan Cheng](#), and [Jiangfeng Lu](#) now have offices in iiD.

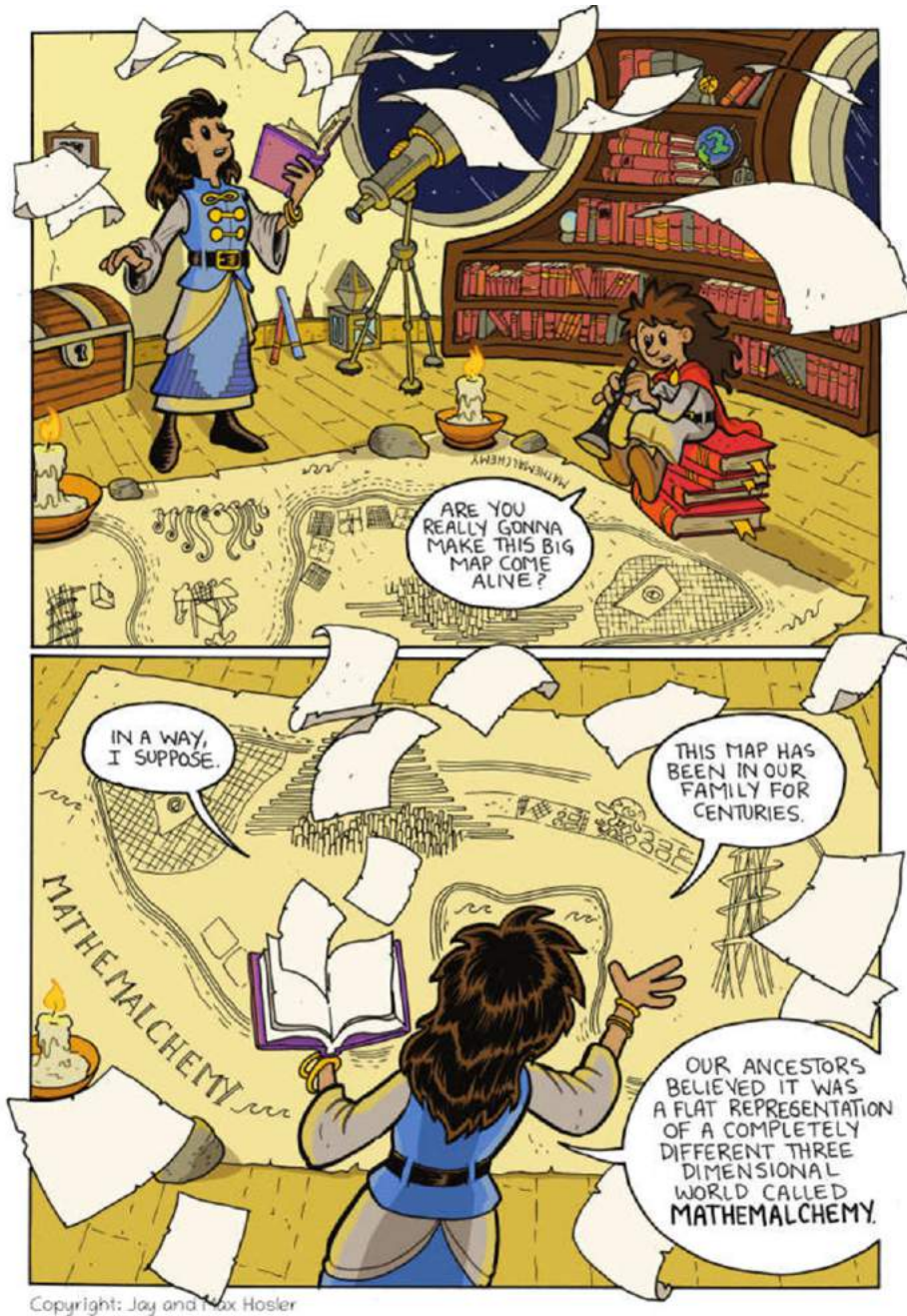
Additionally, iiD has added a Math grad student lounge and additional offices, an extra refrigerator, and a new toaster oven to help our new Math residents feel at home. The new toaster oven has been especially anticipated, as it was the top requests from incoming grad students!



Rhodes iiD Social Events

Rhodes iiD has resumed hosting social events for students and faculty to meet and mingle after Duke University approved in person events with food this Fall. iiD hosted a Fall gathering, a holiday party before the Winter Break, and most recently a Chinese Tea Party to Celebrate the Year of the Rabbit. Enjoying some time together over pizza, special teas, cupcakes and other treats has been extra special after 3 years of virtual gatherings. iiD is happy to once again have students and faculty filling the halls!

We plan to host another event in March to celebrate Spring and Pi Day!



Mathemalchemy Inspires a Comic on the Adventure of the Imagination

Mathemalchemy continues to amaze and inspire as it travels the country on tour. [Jay Hosler](https://www.jayhosler.com/), an artist best known for his science oriented comics, has created a wonderful tribute to the inspiration of Mathemalchemy. This comic is now available in its complete form for download here: <https://mathemalchemy.org/a-comic-book-adventure-in-math-and-art/>

There is now a Mathemalchemy Puzzle!

An ideal Valentine's Day gift for anyone interested in mathematics or art or puzzles – available for purchase

here: <https://www.boutiquemathemalchemy.com/octopi-puzzle>

Or email kathy.peterson@duke.edu to make a purchase.

This email was sent to: michael@gowancommunications.com. [Manage Preferences](#) or [Unsubscribe](#)

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