

# Carnegie Mellon University

## Office of the Assistant Vice Provost for Educational Outreach

K-12 Educational Outreach Newsletter - January 2020

**Be the first to hear about CMU K-12 Educational Outreach news and events by [subscribing to our newsletter!](#)**

Greetings Carnegie Mellon University campus contacts! The Office of the Assistant Vice Provost for Educational Outreach has compiled the information for this newsletter to serve as a new method for collaboration across campus partners. We hope that you will enjoy reading about the upcoming events and details from programs, departments, schools and colleges at our university and how they're connecting with the K-12 community! Subsequent issues of this newsletter will be sent out to our contacts on a bi-monthly schedule as we [receive news and updates](#).

Should you choose to be removed from this periodic newsletter, we will be sad to see you go, but you may do so by scrolling to the bottom of this newsletter, and selecting to either [update your preferences or unsubscribe](#).

### January 2020 Headlines

- [TechNight Sessions Resume](#)
- [LearnLab News and Updates](#)
- [CS Academy 25 Million Runs!](#)
- [Back-to-Back ETC Events](#)
- [ECE Outreach Mobile Labs](#)

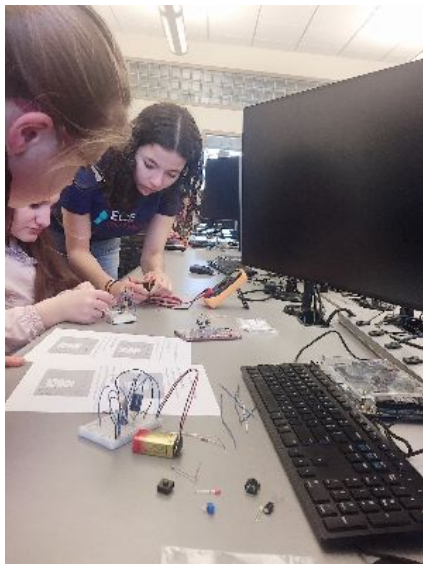
#### Women@SCS Tech Nights

Women@SCS's Tech Nights program resumes its free weekly workshops on February 10th and will meet on Mondays from 7 to 8:30 pm in GHC 4405 throughout the Spring. TechNights focuses on encouraging middle school girls to explore creative technologies by combining accessible presentations on a myriad of topics with fun hands-on activities run by SCS students. Our aim is to empower and engage the next generation of women in technology. The program has been running since 2005 with great success and is sponsored this year by Duolingo. Please check out our [website](#) for more information!

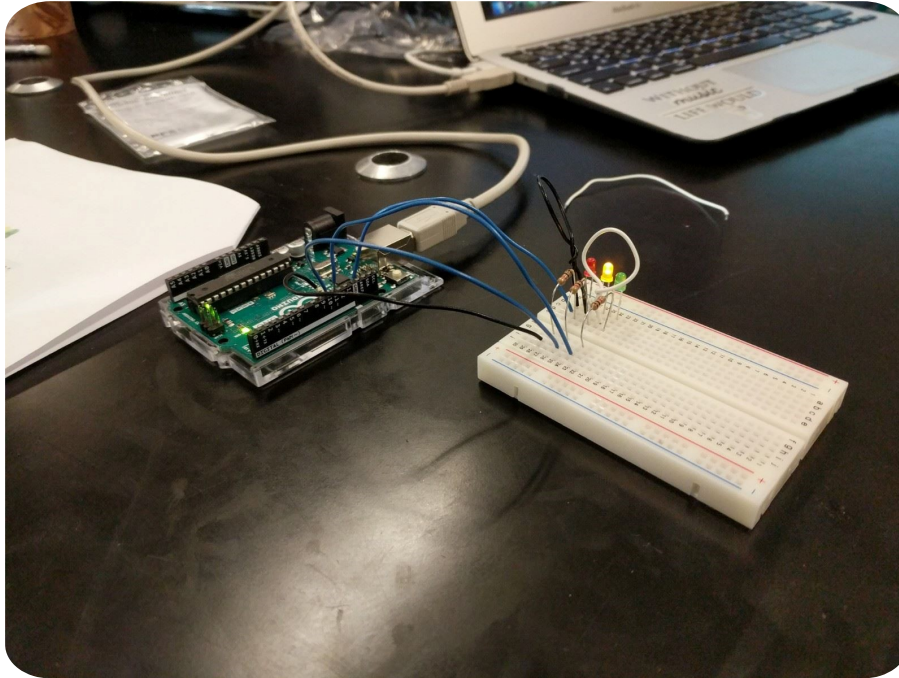


# Computer Science Academy

High school students and teachers have now used CMU CS Academy to run their code over 25 million times. This milestone was achieved by teachers leading 500 classrooms filled with a total of over 8,000 students using CMU CS Academy in their high school classrooms around the world!



ECEOutreach is a program run by the Electrical and Computer Engineering department of Carnegie Mellon University that aims to provide high school and middle school students with opportunities to learn about and explore engineering through short lectures and hands-on labs. We run Mobile Labs each year, where we visit high schools in the Pittsburgh Community and conduct lab sessions ranging from topics like programming in Python to sound analysis to energy conversion. This year, we are seeking to expand our outreach to more high schools in Pittsburgh. If you know any high school that might be interested in hosting our program, let us know by emailing the program's chair



# GELFAND OUTREACH

Spring 2020 [Registration Open Now!](#)

These STEM classes are for students in grades K-9 and are all hands-on, challenging and FUN!

Spring Series Saturday morning workshops are held on CMU's campus on the following dates:

January 25th

February 22nd

February 29th

March 21st

April 4th

Summer 2020 schedule coming soon!

The logo for Carnegie Mellon University, featuring the text "Carnegie Mellon University" in white serif font on a red rectangular background.The logo for LearnLab Pittsburgh Science of Learning Center. It features a stylized blue sunburst icon to the left of the word "LearnLab" in a large, bold, black sans-serif font. Below "LearnLab" is the text "Pittsburgh Science of Learning Center" in a smaller, black sans-serif font.

It is shaping up to be a busy 2020 at the LearnLab. LearnLab's third annual Research in Practice Summit in November was a wildly successful outreach effort, bringing dozens of local and regional K-16 practitioners together to learn about CMU's educational technology innovations. The Summit led to several new outreach connections and potential partnerships that are currently in development - see below for more details, and stay tuned for more news later this year!

A key LearnLab project, Multiplier Effects in Mathematics Education (or MEME for short), found a new school collaborator through this event: New Kensington-Arnold School District. Led by PIs Vincent Alevan and Ken Koedinger, this project builds on the LearnLab team's long history of developing effective online learning experiences, especially for middle and high school mathematics. This project explores two strategies to make these adaptive "cognitive tutors" even better. One strategy is directed at student motivation for learning math and, in particular, is designed to better engage them through brief activities to help them appreciate why learning math is useful for their future. A second strategy involves prior student math performance data to identify what's particularly hard for students to learn and to create more deliberate, focused practice activities to help students learn that hard content more smoothly and effectively.

MEME has shown great promise in early deployments, and the project team continues to look for participants in pre-algebra and algebra math classrooms in grades 6-9 to use their online learning experiences. The MEME project is currently being deployed in New-Kensington Arnold and West Mifflin School District, with several additional partners also showing interest in collaborating later this year. The team continues to seek out new school partners, so if you think anyone in your network might be interested, please reach out to [Nikki Lobczowski](#) or [Ashley Coudriet](#).

In other news, NoRILLA, an award-winning mixed-reality STEM learning system developed by Nesra Yannier and Ken Koedinger, is being deployed in Windber Area School District and Franklin Area School District in the spring. The system also launched in a local HeadStart program recently with funding from the PNC Foundation and in partnership with Trying Together, and the NoRILLA team is in early conversations with several other potential partners. NoRILLA also launched the SmartRamps Intelligent Science Station recently at Trinity Area School District elementary schools, and it is available currently for other schools. Please contact [Nesra Yannier](#).

Please visit our [website](#) for more information about the LearnLab.



Kicking off the new year in ETC fashion, the department was involved with two back-to-back events. First, on the 26th, the ETC demoed Alice VR and other ETC projects at the 7th Annual YouthPlaces College Fair along side of other CMU representation. YouthPlaces serves young people—ages 12 to 18—through social and emotional development, leadership development, work-readiness, college planning and prep, and health and wellness utilizing a trauma-informed care approach. A nonprofit organization, YouthPlaces has provided Allegheny County youth in at-risk communities with safe spaces since 1997. Neighborhood-based adult mentors and youth leaders shape quality out-of-school time programs that serve more than 1,600 youth year-round. For more information, visit [youthplaces.org](http://youthplaces.org).

The very next day, NOVA place was bustling again w/ more than 600 students and educators for the AIU3 Steam Showcase and Remake Learning Assembly. Throughout the morning, afternoon, or evening guests could experience the region's premier STEAM learning showcase and the latest from the Remake Learning Network including exciting outreach opportunities from various CMU departments, spinoffs, and initiatives. The Allegheny Intermediate Unit, also known as the AIU, is a regional public education agency and a crucial part of Pennsylvania's public education system. Our caring staff of educators, administrators and support staff provide specialized services to Allegheny County's suburban school districts as well as non-public, charter and vocational-technical schools. Our agency is a liaison with the Pennsylvania Department of Education and we proudly operate three schools for exceptional children, 11 family centers and about 130 programs for children, adults and families. For more information, visit [aiu3.org](http://aiu3.org).

## Carnegie Mellon University Leonard Gelfand Center

### CMU Student Employment Opportunities in the K-12 Community

**Did you know that the Leonard Gelfand Center hires more than 40 CMU students annually to support K-12 initiatives?** We're hoping to double that number this academic year and spread our reach in the community! Consider posting our [job flyer](#) or sending it to students who may have an interest in K-12 educational outreach! Work study positions are available!

#### LGC Gelfand Outreach Summer Teaching Assistant Intern

The Gelfand Outreach Summer Series classes are STEM focused. Teaching Assistant Interns support the instructor by helping with morning set-up and afternoon clean-up of the classroom, supervising students at drop-off and pick-up locations, escorting students to the

The recreational activities afternoon position is that of a camp counselor. Individuals are responsible for overseeing the students and fostering a safe, friendly and fun time on campus. The counselor plans the daily activities, supervises lunchtime and is responsible for directing the parent pick-up at the end of the day.

**Interested applicants should apply on Handshake, Posting #3413995** LGC - Summer Teaching Assistant Intern at Carnegie Mellon University Oakland campus.

### LGC Tutoring @ CMU

Over the past decade, the Leonard Gelfand Center has supported local K-12 schools and after school programs via the LGC Tutoring program. This program provides opportunities for CMU students to share their expertise and passion for learning with children in the community. A Former tutor shared the following quote regarding his tutoring experience:

"I would like to extend my sincerest thanks for the opportunity to work at the LGC during my time at CMU. The speaking skills, communication abilities, and confidence that I built over the years as an LGC employee have been invaluable. I will never forget how impact the experience of teaching and tutoring has been on my own personal development." C. Breze, SciTech Tutor 2014-2018.

**Tutoring positions are available now and are currently posted on Handshake (#2878242).** From there, tutor applicants are screened, Act 153 Clearances are obtained, and tutors are trained before joining their teachers and/or existing team of tutors already providing services at any given location. Opportunities vary by location from a traditional tutoring role to a more specialized teaching assistant role. Schedules are planned on a case by case basis to ensure the best match for tutors and also site partners. We have a number of different partner sites and are developing new relationships each year to expand [this program](#).

### LGC STEM Ambassadors

**Did you know?** Leonard Gelfand Center STEM Ambassadors support Carnegie Mellon educational outreach initiatives by presenting hands-on activities, demonstrations, panel discussions and tours that teach K-12 students about science, technology, engineering or mathematics subjects and research. During Fall 2019 the STEM Ambassadors' schedule had programs on 14 different dates, including events such as SciTech Days at Carnegie Science Center, the STEAM Carnival at the Pittsburgh Children's Museum, three on-campus field trip groups, and the KidZone at Carnegie Mellon's homecoming. These student employees can participate in paid weekly professional development programs to learn how to present a variety of STEM-focused lessons and demonstrations. These sessions will also include information about working with children of different ages. STEM Ambassadors can also design new demonstrations and hands-on activities.

Students who are interested can **learn more about the STEM Ambassador opportunity by contacting [Dr. Judith Hallinen](#)** directly.

### The Alice Project



Alice is an innovative block-based programming environment that makes it easy to create animations, build interactive narratives, or program simple games in 3D.

#### **Eric Brown**

Director

[The Alice Project](#)

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### Career & Professional Development Center

**Carnegie  
Mellon  
University**

Career &  
Professional  
Development  
Center

The CPDC empowers students and alumni to optimize their professional and life potential through career exploration, experiential learning, and connections with employers and opportunities.

#### **Pati Kravetz**

Associate Director for Experiential Learning & Student Employment

[Career & Professional Development Center](#)

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### Center for Architecture Explorations



## Center for Architecture Explorations

The [Center for Architecture Explorations \(CAE\)](#) develops programs that serve unique Kindergarten-professional architectural education paths. The CAE builds on our School's experience with youth education, university service learning projects, engagement with the architectural practice, and academic research to explore ways we can support architectural education pedagogy and foster equity and diversity in building industry professions.

### **Jenna Kappelt**

Manager of Outreach Programs

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### **Computer Science Academy**



CMU CS Academy is a project in Carnegie Mellon University's School of Computer Science that has the goal of developing a novel, world-class, online, interactive high school computer science curriculum that is entirely free.

### **Erin Cawley**

SCS - CMU [CS Academy](#) Program Manager

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### **Department of Physics**

#### **Physics Outreach**

### **Diane Turnshek**

Physics Department - Special Lecturer

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### **ECE Outreach**





ECE Outreach is a program run by the Electrical and Computer Engineering department of Carnegie Mellon University that aims to provide high school and middle school students with opportunities to learn about and explore engineering through short lectures and hands-on labs. Run with the help of several volunteer undergraduate and graduate students, professors, and staff at CMU. All the materials are available on our website for free.

[eceoutreach@gmail.com](mailto:eceoutreach@gmail.com)

<http://eceoutreach.ece.cmu.edu/>

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### Entertainment Technology Center

Providing leadership in education and applied research that combines technology and art, to explore learning, storytelling, innovation and entertainment, and to create experiences that educate, engage and inspire.

Imagine working with some of the smartest, most creative people on the planet to produce interactive media that's entertaining and engaging. Carnegie Mellon University's Entertainment Technology Center (ETC) excels at the intersection of technology, art and design. Here creative individuals are challenged to explore, experiment and collaborate to create games, designs and stories using the latest technologies.

#### John Balash

Director of Educational Engagement

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### Martin Luther King, Jr. Day Writing Awards

#### Jim Daniels

Thomas Stockham Baker University Professor

of English

Founder/Director, [Martin Luther King, Jr. Day](#)

[Writing Awards](#)

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#### Maureen Rolla

Department of English

Administrative Coordinator

[MLK, Jr. Day Writing Awards](#)

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### Mellon College of Science

Mentoring High School Students Towards Summer Session

alba@cmu.edu

## MoneyThink CMU



# Moneythink

## Carnegie Mellon University

**Money is the biggest barrier to college success.  
We help students overcome that challenge.**

Moneythink is a movement of college students working to restore the economic health of the United States through financial literacy education in underprivileged areas. CMU students are trained to serve as mentors to low-income teens in high school classrooms located right here in Pittsburgh. Our mentors lead students through a weekly program focused on the real-world financial decisions and deliver effective financial and career education to our students.

moneythinkcmu@andrew.cmu.edu

## Office of the Assistant Vice Provost for Educational Outreach (AVPEO) Leonard Gelfand Center

# Carnegie Mellon University

## Leonard Gelfand Center

The Leonard Gelfand Center works with faculty, students and staff through on-campus and community-based activities that improve educational opportunities, especially in the areas of science, technology, engineering and mathematics education for youth. The Leonard Gelfand Center for Service Learning and Outreach was endowed by alumnus Mark Gelfand to create and strengthen partnerships with local schools and education providers.

### Dr. Judith Hallinen, EdD

#### [AVPEO](#)

Director of the [Leonard Gelfand Center for Service Learning and Outreach](#)

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412-268-1498

- Supports faculty Broader Impacts work
- Point of contact for PA Act 48, [K-12 educator PD](#)
- Designs & implements K-12 programs
- Advises [StuCo](#) (Student College)
- Consults with CMU students wishing to pursue careers in K-12 education

### Kristin Lavery, MAT

Assistant Director of the [Leonard Gelfand Center for Service Learning and Outreach](#)

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- Business Manager & Department Initiator for AVPEO/LGC
- [StuCo](#) Course Administrator
- [K-12 LGC Tutoring Coordinator](#)
- [Gelfand Outreach](#) database developer
- [STEM Career Explorations and 360 Lab Tours](#) project manager

Program Director of the [Leonard Gelfand Center for Service Learning and Outreach](#)

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- [Gelfand Outreach](#) Program Director for Saturday and Summer programs
- Creates schedule and calendar for Gelfand Outreach programs
- Organizes and provides support for on and off-campus STEM outreach activities
- Manages GO Teaching Assistants and office student employees

**Miriam Wertheimer, MAT**

Program Administrator of the [Leonard Gelfand Center for Service Learning and Outreach](#)

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- Gelfand Outreach Program Coordinator
- [K-12 LGC Tutoring Coordinator](#)

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### Office of the Provost - Simon Initiative

Named for the late Nobel and Turing Award laureate and CMU Professor Herbert A. Simon, the Simon Initiative harnesses a cross-disciplinary learning engineering ecosystem that has developed over several decades at Carnegie Mellon. The initiative's goal is to measurably improve student learning outcomes.

**Maggie Hannan**

Associate Director of K-12

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### Pittsburgh Supercomputing Center



Pittsburgh Supercomputing Center is a joint effort of Carnegie Mellon University and the University of Pittsburgh. Established in 1986, PSC provides university, government and industrial researchers with access to several of the most powerful systems for high-performance computing, communications and data storage available to scientists and engineers nationwide for unclassified research. PSC advances the state of the art in high-performance computing, communications and data analytics and offers a flexible environment for solving the largest and most challenging problems in computational science.

[BEST](#) - **Bioinformatics Education for Students** & [Project GCode](#)

**Cheryl Begandy**

Director, External Relations

**Vivian Benton**

Communications/Publications Project Manager

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## School of Computer Science

**Johnathan Reynolds**

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### *Thank you to our contributors!*

This newsletter is a collaborative project across CMU schools, colleges, departments, offices, programs and student organizations with information compiled and shared by the Office of the Assistant Vice Provost for Educational Outreach and the Leonard Gelfand Center with the CMU campus community. We hope to expand our reach with each issue as this project grows and continually improves for our audience. If you have questions or comments about the individual articles, please reach out to the program contact directly. If you would like to add an additional CMU K-12 Educational Outreach directory listing or news item for subsequent issues of this newsletter, please contact [Kristin Lavery](#).



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