



Center for Excellence in Education

JOSH BARR, Communications Manager

CEE CELEBRATES 35TH ANNIVERSARY! ALUMNI AND SUPPORTERS CELEBRATE MILESTONE

Nearly 300 program alumni and supporters of CEE gathered at the **Broad Institute of MIT and Harvard** in Cambridge, MA, for the Center for Excellence in Education's 35th anniversary celebration.

CEE hosted a series of panels and discussions over the weekend, as well as *CEE Talks* in which alumni of the Center's Research Science Institute and USA Biology Olympiad discussed interests, careers and ground-breaking research.

"CEE is dedicated to providing programs that nurture students' excellence and leadership – and it is very rewarding to see their progress and achievements," **CEE President Joann P. DiGennaro** said. "We are thrilled with the work of CEE and look forward to the future."

The weekend also included two panel discussions dedicated to CEE cofounder **Admiral H.G. Rickover**, father of the nuclear navy and civilian uses of nuclear power, and his legacy in engineering, education, science and technology.

Saturday's events included a panel of Nobel Laureates who discussed their research and discoveries. That evening, at a formal dinner, **Dr. Wolfgang Ketterle**, Nobel Laureate, received the National Medal for Excellence and **Bahia El Hariri** received the International Medal for Excellence. Ketterle was introduced by **Dr. Shamit Kachru**, RSI'86. El Hariri was introduced by **Dr. Wissam Jaber**, RSI'93.

The evening was moderated by **Dr.** Jason Koh, RSI'85.

Sunday morning featured a CEE Luminaries Discussion with four alumni from CEE's Research Science Institute: Pinterest Co-Founder and CEO **Ben Silbermann** (RSI'98), CRISPR pioneer **Feng Zhang** (RSI'99), Google



Her Excellency Bahia El Hariri was presented the International Medal for Excellence in Education. Below, Wolfgang Ketterle, Ph.D. was presented the National Medal for Excellence in Education.



fellow **Diane Tang** (RSI'90) and Harvard professor **Lauren Williams** (RSI'94).

"The weekend exceeded all expectations!" DiGennaro said. "Thank you to all of our terrific panelists, presenters and moderators who helped make this weekend so memorable. Thank you also to all of our 35th anniversary sponsors – the **Claude Moore Charitable Foundation**, Regeneron, Citadel/Citadel Securities, Akamai Foundation, Two Sigma and the **Department of Defense**. Thank you to those who were able to join us in Cambridge and to Eric Lander, Ph.D., and the Broad Institute for hosting us. And most of all, thank you to every person who has made CEE a national and international leader in nurturing STEM talent."



J. Hamilton Lambert, first chairperson of the CEE's Board of Trustees, was the Keynote Speaker at the 35th Anniversary Celebration dinner.

RSI'19 REGISTRATION OPEN FOR PROGRAM AT MIT

CEE is now accepting online applications from high school students for the 2019 Research Science Institute, held in collaboration with Massachusetts Institute of Technology from June 23 to August 3. Visit <u>www.</u> <u>cee.org</u> for application information.

The 2018 RSI this past summer was another tremendous success. Congratulations to those selected for top five oral presentations and the *(continued on page 2)*

CEE IN PARTNERSHIP WITH UC SAN DIEGO; <u>USABO'19 REGI</u>STRATION OPEN

Registration is underway for the 2019 USA Biology Olympiad. Schools can register online at <u>www.usabo-trc.org</u>.

The 16th annual USA Biology Olympiad (USABO) National Finals moved to the University of California San Diego this past summer in a collaboration between the University and CEE. Nearly 10,500 students from 479 schools in 47 states participated in the nationwide high school competition in 2018. (continued on page 3)

RSI'18 CONCLUDES WITH TOP 10 WINNERS

(RSI continued from page 1)

top five written reports of research. Two students were honored both for their oral and written presentations, **Lyna Kim** of Los Angeles and **Tarun Prasad Murali Prasad** of Tamil Nadu, India.

The RSI 2018 Written Report Award Winners were:

- Lyna Kim of Los Angeles -- Optimizing the Energy Density of Azobenzene-Functionalized Solar Thermal Fuels via Metallic Phosphate Frameworks
- Lauren Li of Portland, Oregon -- Clonal Contributions of T-Cell Infiltration in Solid Tumors
- Kevin Liu of Carmel, Indiana-- Number Fields Generated by Torsion Points on Elliptic Curve
- Tarun Prasad Murali Prasad of Tamil Nadu, India --Active Learning and its Application in the Analysis of Scientific Data: Predicting Mie Scattering by Nanoparticles
- Sanjay Raman of Redmond, Washington-- An Analysis of the Photon Identification Mechanism in CMS 2016 Data

The RSI 2018 Oral Presentation Award Winners were:

• Walker Anderson of Doylestown, Pennsylvania -- NP-Completeness of the Five Cells Pencil Puzzle

- Lyna Kim of Los Angeles -- Optimizing the Energy Density of Azobenzene-Functionalized Solar Thermal Fuels via Metallic Phosphate Frameworks
- Jonathan Lu of Dallas -- Organized Microphase Separation of Active Spinner Particles in Dense Colloidal Solutions
- Tarun Prasad Murali Prasad of Tamil Nadu, India --Active Learning and its Application in the Analysis of Scientific Data: Predicting Mie Scattering by Nanoparticles
- Rahul Subramaniam of Cos Cob, Connecticut --Investigation of a Novel
 - Medication for Treatment of Multiple Myeloma

Additionally, **William Ellsworth** of Marietta, Georgia, and **Matthew Tan** of Stevensville, Michigan (pictured at right), were named Rickoids of the Year.

William and Matthew were chosen by their peers for this award which recognizes their academic acumen, leadership and personal demeanor.





The date for CEE's 2019 Annual Congressional Luncheon will be announced online in January.

Ms. Dana Miller Ervin is a staff member for the U.S. House of Representatives Appropriations Committee where she serves as a non-partisan investigator with expertise in defense, energy and cyber programs.

Miller Ervin's background includes 16 years working in media, including tenure as an investigative associate producer

for 60 Minutes. She also has worked for *CBS This Morning* and ABC's *Nightline*. She received a Peabody Award, the RTNDA Award for Overall Excellence, the Alfred I DuPont Award, an Emmy Award for Investigative Reporting and two Emmy Awards for research.

Miller Ervin graduated Phi Beta Kappa and Magna Cum Laude from Brown University.

CEE WELCOMES NEW TRUSTEES

Ms. Amy Gowder is Vice President and General Manager for Lockheed Martin's Training and Logistics Solutions line of business within the Rotary and Mission Systems business area. She is responsible for the execution and strategic growth of Lockheed Martin's mission readiness and sustainment programs with 5,400 employees around the globe.



Gowder has held several other leadership positions at Lockheed Martin. In 2012 she was named A Top 40 Under 40 Aviation Executive by Aviation Week.

Gowder graduated from Massachusetts Institute of Technology's Sloan Fellows Program with a Masters of Business Administration. She received her Bachelor of Science degree from Arizona State University.

USABO'18 SPARKLES IN SOUTHERN CALIFORNIA SUN

(USABO continued from page 1)

"It was a very successful first year for USABO at UCSD and we look forward to the continued partnership between UCSD and CEE," said Pam R. Taub, RSI'93 and associate professor of medicine in the UC San Diego Health System, Division of Cardiovascular Medicine.

During 10 sunny days, the finalists participated in intensive theoretical and practical tutorials and also studied with leading U.S. biologists, experts in the fields of cellular and molecular biology, plant anatomy and physiology, animal anatomy and physiology, genetics and evolution, ecology, ethology and biosystematics.

The young scholars were mentored by USABO Vice President Xiaojun (Bill) Li and USABO Special Projects Advisor Kathy Frame.

At the closing USABO medal ceremony, **Kit Pogliano**, Dean of UC San Diego's Graduate Division and a professor in the Division of Biological Sciences, was the Keynote Speaker.

Congratulations to Team USA 2018 Gold Medalists: Lucy Chen, Mounds View HS, Arden Hills, Minnesota; Allen Huang, Canyon Crest Academy, San Diego, California; Alexander Tsao, Troy High School, Fullerton, California; and Jason Yang, West Windsor-Plainsboro High School North, Plainsboro Township, New



2018 USABO Gold Medalists: Allen Huang, Lucy Chen, Alexander Tsao and Jason Yang.

Jersey.

Silver medalists were **Charles Huang**, Lynbrook High School, San Jose, California; **Edward Lee**, LASA High School, Austin, Texas; **Nithin Parsan**, Clemens High School, Sugar Land, Texas; and **Wenbo Wu**, Thomas Jefferson High School for Science & Technology, Falls Church, Virginia.

Bronze medalists were **Bhav Jain**, Franklin Regional Senior High School, Murrysville, Pennsylvania; **Derrick Liang**, Thomas Jefferson High School for Science & Technology, Herndon, Virginia; **Atharv Oak**, West Windsor-Plainsboro High School South, Princeton, New Jersey; **Henry Shen**, Oak Ridge High School, Oak Ridge, Tennessee; and **Jason Zhang**, Troy High School, Troy, Michigan.

MEET DR. FRANK STEARNS, NEW USABO MANAGER

Dr. Stearns earned his B.S. in Biology from Washington and Lee University, a M.Sc. in Entomology from the University of Delaware, and his Ph.D. in Biology



from the University of Maryland. He was most recently a Postdoctoral Fellow in the Department of Chemical and Biomolecular Engineering at Johns Hopkins University. His research has focused on population and quantitative genetics, and ecology. "I'm excited to be working with all of the talented students who will be competing at the 2019 IBO in Budapest," Stearns said.

Lenhard Ng, RSI'89, and **Lauren Williams**, RSI'94, were named Simons Fellows in Mathematics.

Jeffrey Wang, RSI'95, and Raag D. Airan, RSI'98, are among the co-authors of *Noninvasive Ultrasonic Drug Uncaging Maps Whole-Brain Functional Networks*, published in the Nov. 7 edition of *Neuron*.

Several CEE alumni made Forbes' 30-under-30 lists for 2019: Aziz Alghunaim, RSI'09, co-founder of Tarjimly, was named to the social entrepreneurs list; Sami Ghoche,

CEE ALUMNI MAKING NEWS

RSI'05, co-founder of Forethought, made the Enterprise Technology list; **Dhruvik Parikh**, RSI'17, a Stanford University undergraduate student, made the Energy list; **Erin Smith**, RSI'17, founder of FacePrint, made the Healthcare list.

On the Forbes' 2018 lists, **Shiv Gaglani**, RSI'05, co-founder of Osmosis, made the Education list; **Will Zeng**, RSI'06, Director, Software and Applications, Rigetti Computing, made the Science list; and **Jonathan Gootenberg**, USABO'08'09, of the CRISPR lab, made the Healthcare list. Jonathan is a recent graduate of the Zhang Lab. Jonathan and Omar Abudayyeh presented a CEE Talk at CEE's 35th Anniversary Celebration. They will be the inaugural McGovern Institute Fellows to continue their successful scientific partnership in a joint lab starting in 2019. Earlier this year, Gootenberg, Abudayyeh, et al, published "SHERLOCKv2, a portable, multiplex nucleic acid detection system."

Three RSI'17 students placed in the Regeneron STS 2018: Isani Singh, third place; Vinjal Vale, seventh place; Syamantak Payra, ninth place.

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BEN SILBERMANN TO RECEIVE SEN. JOSEPH I. LIEBERMAN AWARD

CEE is proud to announce that **Ben Silbermann**, RSI'98 and Pinterest founder and CEO, will be presented the **Joseph I. Lieberman Award for Outstanding Achievement** at the 2019 Annual Spring Congressional Luncheon. Be sure to check www.cee. org for details about the luncheon.

The award acknowledges Silbermann's significant business accomplishments and recognizes Senator Lieberman's longtime support as a CEE Trustee.



FENG ZHANG WINS KEIO PRIZE

CEE Trustee Feng Zhang, RSI'99, has been named winner of the prestigious Keio Medical Science



Prize. Zhang was recognized for the groundbreaking development of CRISPR-Cas9-mediated genome engineering in cells and its application for medical science. In its 23rd year, the Keio is awarded to a maximum of two scientists each year. The winners receive a certificate of merit, a medal and a monetary award of approximately \$90,000.

WHERE ARE THEY NOW? CATCHING UP WITH CEE PROGRAM ALUMNI

Allison Armour-Garb, RSI'84 New York State Education Department P-20 Policy Coordination and Strategic Planning

Jud Bowman, RSI'98 Sift Founder and CEO

Katie Byl, RSI'86 University of California at Santa Barbara Associate Professor, Robotics and Autonomous Systems

Melissa Graebner, RSI'88 University of Texas Associate Professor of Management **Roger Horton, RSI'849** Schools That Can Manager of Maker Programs

Wissam Jaber, RSI'93 Emory University School of Medicine Associated Professor of Medicine (Cardiology) Director of Interventional Cardiology

Jonathan Marcus, RSI'01 Jump Trading, LLC Quantitative Developer

Shamit Kachru, RSI'86 Stanford University Chair of Physics Department Jason Koh, RSI'85 NorthShore University HealthSystem Director of the NorthShore Orthopaedic Institute Department Chair of Orthopaedic Surgery University of Chicago, Professor of Surgery

Victor Li, USABO'03 StemCellerant Co-Founder and CEO

John Miller, RSI'87 Johns Hopkins University Department of Applied Mathematics, Senior Lecturer

Rebekah Rogers, RSI'01

University of North Carolina-Charlotte Assistant Professor,

Department of Bioinformatics

Sam Waldman, RSI'94 Neutralino Space Ventures Founder

Brien Wheeler, RSI'85 Amazon Senior Manager, Software Development

David Wang, USABO'05 University of California-Irvine Assistant Professor of Finance, Paul Merage School of Business

CEE's Teacher Enrichment Program is in its seventh year of professional development programming for urban and rural teachers in select states.

To date, **TEP** has reached more than 2,846 teachers from 1,295 schools, impacting an estimated 498,130 students in California, Florida, Illinois, Indiana, Maryland, Pennsylvania, South Carolina, Texas, Virginia, and Washington, D.C. New cities for TEP during the 2017-2018 school year included Moss Landing, CA; Frederick, MD; Spartanburg, SC; and Danville and Fredericksburg, VA.

In June, TEP capped off the school year with a half-day workshop, titled "Engaging Students in STEM: Hands-On Learning and Real World Applications," in Tysons, VA. Dr. Melissa Kosinski-Collins of Brandeis University, Pravin Mathur of Clark-Nexsen, and CEE Trustee Doug Himberger of Himberger Consulting spoke about the skills used by scientists and engineers every day, and how teachers can foster those STEM skills in their students. Representatives from Aurora Flight Sciences, A Boeing Company; Lockheed Martin; Micron Technology; Northrop Gunman; GMU Biology Department; and the US Patent and Trademark Office demonstrated engaging low-cost activities and resources available to teachers for their students.

TEACHER ENRICHMENT PROGRAM





Middle and high school STEM teachers met with representatives from industry, academia, and government to learn about cutting-edge research.

TEP COMING TO WEST VIRGINIA!

The Teacher Enrichment Program continues to expand and will debut in West Virginia in 2019. TEP events are scheduled in Martinsburg, Fairmont and Charleston in March. <u>Check the CEE website</u> for more information on locations, speakers and online registration.

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ABOUT CEE

The Center for Excellence in Education (CEE) nurtures high school and university scholars to careers of excellence and leadership in STEM and encourages collaborations between and among leaders in the global community. Founded in 1983 by the late Admiral H.G. Rickover and Joann DiGennaro, President of the Center, the organization's programs help keep the U.S. competitive in STEM and encourage international collaboration.

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