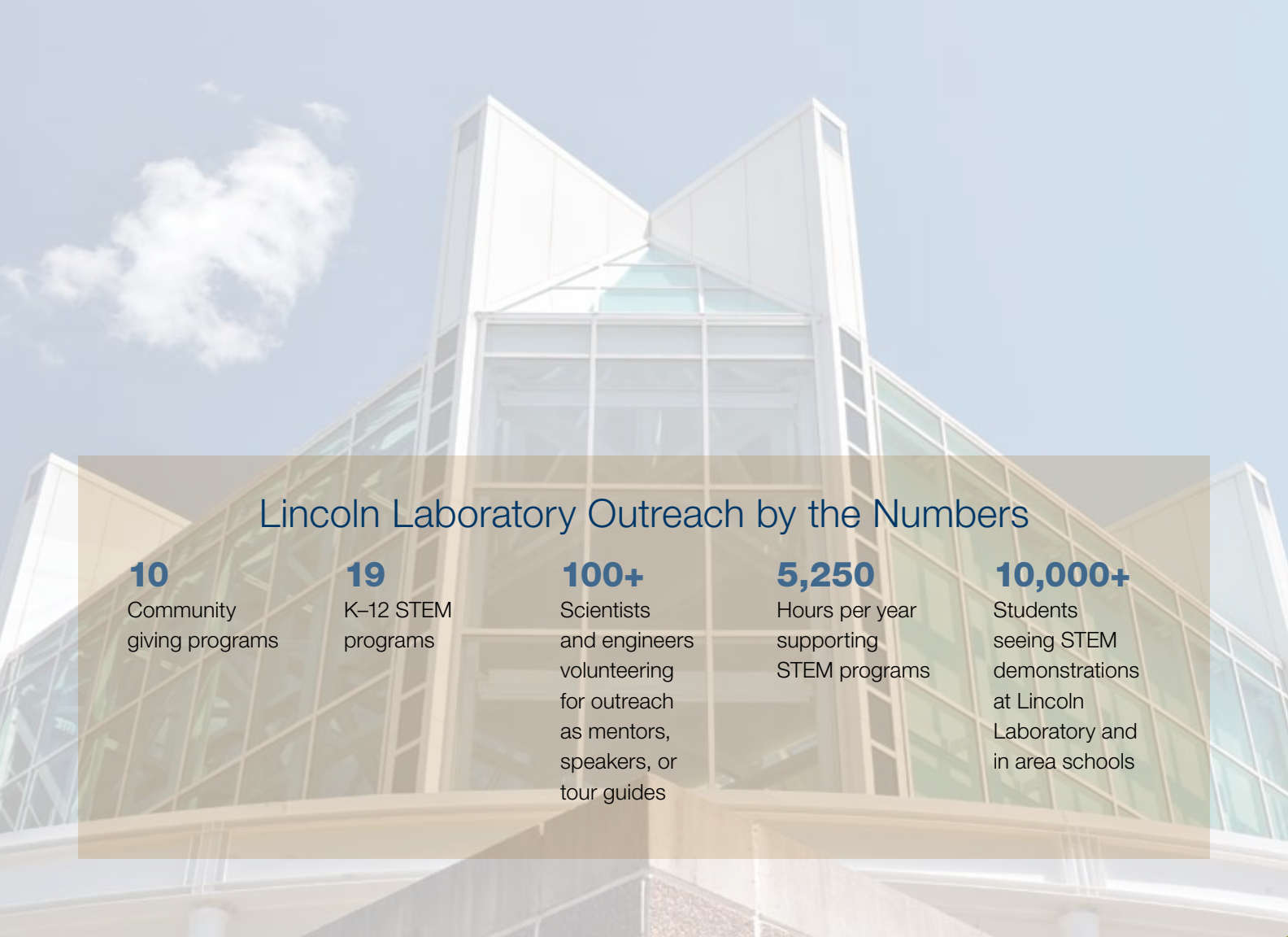
LINCOLN LABORATORY
COMMUNITY OUTREACH

MIT LINCOLN LABORATORY

COMMUNITY INVOLVEMENT **2010**



Lincoln Laboratory Outreach by the Numbers

10
Community giving programs

19
K–12 STEM programs

100+
Scientists and engineers volunteering for outreach as mentors, speakers, or tour guides

5,250
Hours per year supporting STEM programs

10,000+
Students seeing STEM demonstrations at Lincoln Laboratory and in area schools

A Message from the Director

Eric Evans, the Director of Lincoln Laboratory, meets students from Boston, Cambridge, and Lawrence middle schools. These students visited the Laboratory as part of the Science, Technology, Engineering, and Math (STEM) Program offered by MIT's Office of Engineering Outreach Program.

Community outreach and education programs are an important component of the Laboratory's mission. From the beginning, our outreach initiatives have been inspired by employee desires to help people in need and to motivate student interest and participation in engineering and science. There are many opportunities to participate. The Laboratory's educational outreach initiatives offer the opportunity to provide in-classroom and Science on Saturday presentations to regional K–12 schools, to sponsor U.S. FIRST robotics programs, and to participate in mentor-based internships for college and graduate students preparing for science and technology careers. There are also opportunities to be a part of the Laboratory's volunteer base to serve as judges and advisors for local and regional science fairs and science-based activities. The Laboratory is committed to giving back to the community by sponsoring fund-raising and community service events in support of the United Way, the National Multiple Sclerosis Society, the Salvation Army, and other charitable organizations. The involvement of the entire Lincoln Laboratory community is encouraged and suggestions on how we might improve our outreach activities are welcomed.

Eric D. Evans

LLCO is an initiative to promote K–12 STEM educational outreach and ***community involvement and giving*** *in partnership with MIT's Office of Engineering Outreach Programs and the MIT Public Service Center.*

Lincoln Laboratory takes pride in promoting science and engineering education for all grade levels, and supporting the community through giving programs. Outreach programs capitalize on the strengths of the Lincoln Laboratory scientific community and strive to integrate service with education and research.

Lincoln Laboratory has a history of supporting educational outreach through three primary programs: Massachusetts Institute of Technology's (MIT) VI-A Master of Engineering program, Worcester Polytechnic Institute's (WPI) Major Qualifying Project, and the university cooperatives and summer intern program.

However, since 2006, the Laboratory has increased its focus on educational outreach initiatives, spawning the Lincoln Laboratory Community Outreach committee, and cultivating the Laboratory's position to motivate interest and participation in science, technology, engineering, and math programs for K–12 students, develop a program to introduce minorities to engineering careers, and offer classroom presentations and science seminars targeted to specific ages.

MIT Lincoln Laboratory recently became a member of the National Defense Education Program (NDEP). NDEP invests in science, engineering, and math education in K–12 programs and is supported by the Department of Defense Research & Engineering. NDEP's mission is to support a new generation of scientists and engineers who will apply their talents in the nation's defense laboratories.

EDUCATIONAL **OUTREACH**

Science Seminar Series

Dr. Todd Rider coordinates a program that sends technical staff members to local schools, giving presentations to students in grades K–12. More than 7000 students have enjoyed presentations on cryogenics, electronic circuits, paleontology, biotechnology, astrophysics, and other topics. Since the program's inception in 2005, technical staff members have delivered presentations and demonstrations to more than 6000 middle-school and high-school students.

Science on Saturday

This program features on-site science demonstrations by Lincoln Laboratory technical staff. More than 3500 local K–12 students, their parents, and teachers attend Science on Saturday events over the course of the school year. Attendees have enjoyed hands-on demonstrations on rockets, robotics, asteroids, archaeology, optics and lasers, and polymers. Presentations for the current year are:

Feb. 6	Computer Voice Recognition/Speech
Apr. 3	Optics and Lasers
Jun. 5	Digital Electronics and Computers
Oct. 16	Amusement Park Physics
Dec. 4	How Computers Communicate with Each Other

The Robotics Outreach is designed to help students experience how ***interesting and rewarding*** *the life of engineers and researchers can be.*

ROLL
ROBOTICS OUTREACH AT MIT LINCOLN LABORATORY

Robotics Outreach

In addition to hosting hands-on workshops to introduce students to robotics programming, Robotics Outreach at Lincoln Laboratory (ROLL) sponsors several teams, in age groups ranging from 9- to 18-year-olds, at the For Inspiration and Recognition of Science and Technology (FIRST) Robotics regional and national competitions. Volunteers mentor students at weekly sessions that cover programming robots to complete challenges specified by FIRST.

High School Robotics

FIRST competitors of high-school age join FIRST Technical Challenge (FTC) teams, while students in middle school and below join FIRST Lego League (FLL) teams. Twenty Lincoln Laboratory staff members volunteer as coaches and mentors for these teams.

FTC Team 1

Team 2875 was active within the FIRST community and shared the knowledge they gained with other teams. They have presented demonstrations at Lincoln Laboratory's Sons and Daughters Days, mentored the new in-house team, and assisted in mentoring the external team. An initial sign of their hard work was their being named the "Most Helpful Team" at their first scrimmage.

FTC Team 2

The eight students in Team 3590 quickly learned to work as a team, and their skills building with the HiTechnic FTC kit and programming with ROBOTC showed consistent improvement.

External FTC team

Lincoln Laboratory also sponsored a team external to the Laboratory—a high school in nearby Arlington. Laboratory staff members, along with two science teachers from the school, mentored this team. Together, they ensured that this rookie team of eight students had adequate supplies, funds, and guidance to design, build, and program their robot for competition.

Robotics Teams — Grades 4 through 8

FLL Team 1

Team 4851, LLAMAs (short for Lincoln Laboratory Armageddon Machine Activists), was made up of eight middle-school students who built on their experience to beat their ranking last year of 2nd place in state competition. The LLAMAs won the Champion's Award—the most prestigious award for not only technical performance, but also teamwork, respect, and gracious professionalism.

FLL Team 2

Team 1618, RoboThunder, was made up of six 5th- and 6th-grade girls and boys. Two girls are returning FLL participants from last year; and four boys were new to FLL. This team practiced making a program with a high level of repeatability.

FLL Team 3

Team 4855, RoboBeavers, had eight 11-year-old boys. This team was honored with the Leonardo da Vinci Award, a prestigious design award for out-of-box thinking, and exceptionally creative robot design. They employed features such as four-wheel-drive trains and monster-truck-like jumping capabilities.

FLL Team 4

Team 4854, Tropical Transporters, was a rookie team of 9-year-olds—three girls and four boys. New to robotic programming, this team was surprised how quickly they learned to control a robot.

FLL Team 5

Team 6125, the Newtons, had six 9-year-olds. This young group was excited about trying different approaches to accomplish a specific task and fine-tuning program commands.

In addition to hiring MIT graduate students and undergraduates as research assistants, co-ops, and interns, and forging relationships with technical researchers and professors, Lincoln Laboratory and MIT are also partnering in the field of educational outreach for K–12 students.

MIT's Department of Engineering's Office of Engineering Outreach Programs (OEOP) provides deserving students rigorous academic experiences that will give them a better sense of how technical concepts relate to their everyday lives and encourage them to pursue careers in science and engineering. Students are provided engaging, hands-on curriculum that strengthens their foundational math, science, and communication skills in a challenging learning environment with high expectations, paired with access to top positive role models. This year, Lincoln Laboratory became affiliated with four MIT educational outreach programs: MITES, SEED, MSBP, and STEM.

Minority Introduction to Engineering and Science (MITES) Program

This six-week residential summer program for the top high-school students in the nation stresses the value and reward of pursuing advanced technical degrees and careers while developing the skills necessary to achieve success in science and engineering. Lincoln Laboratory's involvement in this program consisted of

- Sponsoring two students in the six-week summer program at MIT
- Hosting 75 students enrolled in the MITES program for presentations and tours

Saturday Engineering and Enrichment Discovery (SEED) Academy

The SEED Academy is a seven-semester technical career-exploration program for promising but traditionally under-served high-school students in Boston, Lawrence, and Cambridge. Lincoln Laboratory

- Sponsored an aeronautics/astrophysics course
- Provided presentations and tours of Laboratory facilities

MIT Science of Baseball Program (MSBP)

This four-week summer program for 8th grade boys from Boston, Lawrence, and Cambridge featured an integrated academic and athletic curriculum to channel the students' enthusiasm for baseball into a renewed excitement for and increased proficiency in the math, science, and culture behind the game. Lincoln Laboratory's involvement in this program consisted of

- Partial sponsorship of one local middle-school student
- Presentations and tours of Laboratory facilities
- Challenging the students to a softball game

The Ceres Connection names minor planets ***in honor of students*** *and their teachers.*

Science, Technology, Engineering, and Mathematics (STEM) Program

STEM is a year-round academic enrichment program including mentoring and a summer institute for middle-school students from Boston, Cambridge, and Lawrence. The courses use lectures, projects, and experiments to help participants develop mathematical thinking and problem-solving abilities in preparation for high-school "gateway" math and science classes, in an attempt to increase the number of local students in the technical workforce. Lincoln Laboratory's involvement in this program consisted of

- Sponsoring a robotics course for 20+ students
- Providing tours of Laboratory facilities
- Presenting a Science on Saturday demonstration at a school location

Ceres Connection

Under the Ceres Connection program, minor planets discovered by Lincoln Laboratory's Near-Earth Asteroid Research program are named in honor of science students in grades 5–12 and their teachers. The honorees are selected through science competitions directed by the Science Education Department at the Society for Science & the Public. To date, approximately 2500 students and their teachers have been honored. Each year, the Ceres Connection program awards about 250 students with this honor.

Science on Saturday on Tour

Lincoln Laboratory is taking the already successful Science on Saturday demonstration "How Computers Work" to MIT to celebrate the 150th anniversary of MIT in April 2011. This demonstration lets children show how computers communicate using 0s and 1s (right). Laboratory scientists will be presenting demonstrations at the Tech Expo for this event, as well.

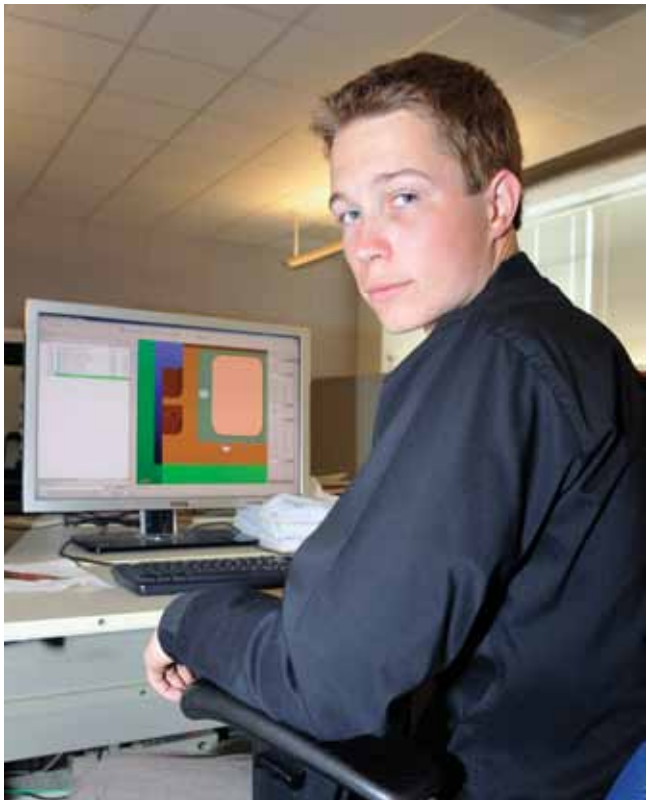
Sister Robotics Teams

ROLL forged a collaboration with Arlington High School by mentoring a rookie team for the FIRST robotics competition. With the help of Laboratory mentors, the Arlington team received guidance on how to design, build, and program their robot for competition. This rookie team even hosted a scrimmage for area teams, learning many new techniques from the visiting teams.

Minuteman Career and Technical High School

Lincoln Laboratory employs students from the Minuteman Vocational School in Lexington, as part of its high-school internship program. The internships comprise twenty weeks over the academic school year and provide students with hands-on experience in a real-world laboratory setting. Senior Michael Jagger (right) worked in the Mechanical Engineering Group and developed drawings and modeling of parts for a sensor Lincoln Laboratory is developing. Additionally, Michael created CAD/CAM drawings for projects using CoCreate OneSpace 2007 and Model Manager.

Senior Ben Caesar worked in the ISR and Tactical Systems Division working on databases and maintaining web pages.



John D. O'Bryant School Program

Students from the John D. O'Bryant School of Math and Science in Roxbury, visited the Laboratory in October 2009 and March 2010. Technical staff members gave presentations on what inspired them to STEM majors and careers. The students received tours of the Flight and Antenna Test Facility.

Cross-teaching with Northeastern University

Lincoln Laboratory is considering initiating a cross-teaching program in which Laboratory staff could teach a university course, and faculty from Northeastern University could host a course on premises at Lincoln Laboratory. Further potential exists for Northeatern University faculty to collaborate on two Laboratory programs, while the Laboratory could offer support in one university program. A variety of educational programs to train students and career professionals in key technologies may be offered.

Leadership Initiatives for Teaching and Technology

The Leadership Initiatives for Teaching and Technology (LIFT^2) program provides middle- and high-school teachers with summer internships in a technical field in an effort to help teachers relate classroom curriculum to authentic and relevant applications in the 21st century workplace. Each summer, two to four teachers participate in this program, gaining insight into new skill sets needed by today's technical workforce, and better helping their students prepare for future careers. In 2010, the Laboratory hosted Kyle Wescott (far right, shown with mentors Jessica Olszta and Wes Olson), a math teacher from Marlborough High School, in the Weather Sensing Group to analyze data related to the Traffic Alert and Collision Avoidance System for avoiding mid-air collisions. Alan Chuckran, a Dracut High School physics teacher, worked in the Surveillance Systems Group evaluating field data to better understand the impact of weather on airport operations. A third internship in both the Net-centric Operations Group and the Airborne Networks Group analyzing wireless network performance was offered to Carla Pavao who teaches math at Hudson High School.

Massachusetts State Science and Engineering Fair

Lincoln Laboratory technical staff have been volunteering as judges for the Massachusetts State Science and Engineering Fair since 2000, evaluating six to eight projects by high-school students. At the 2010 Massachusetts State Science and Engineering Fair, Lincoln Laboratory became a bronze donor of the event by sponsoring winners in the Physics and Engineering competitions. Additionally, nine Laboratory scientists (Shourov Chatterji, Jessica Deniger, Phillip Evans, Caroline Lamb, Todd Rider, Neal Spellmeyer, Zack Weber, Alexandra Wright, and Jung Yoon) participated in the science fair as judges. Lincoln Laboratory has also volunteered judges for InvenTeams competitions in which high-school teams from around the country send research proposals to MIT for judging and potential funding.

Lexington High School Science and Engineering Fair

In 2010, six technical staff (Eric Austin, Anthony Filip, Robert Legge, Brian Shucker, Joseph Stewart, and Grant Stokes) from Lincoln Laboratory supported Lexington High School by volunteering as judges for the school's Science and Engineering Fair.

The Cambridge Science Festival ***makes science accessible,*** *interactive, and fun.*

Cambridge Science Festival

In coordination with MIT, Lincoln Laboratory Community Outreach partnered with Robotics Outreach volunteers to man a booth in the Cambridge Science Festival, a multifaceted, multicultural event, providing robotics demonstrations and hands-on activities to an estimated 15,000 people from the New England region. The Cambridge Science Festival, the first of its kind in the United States, is a week-long celebration showcasing Cambridge as an internationally recognized leader in science, technology, engineering, and math.

Boy Scout Inventing Merit Badge Program

Lincoln Laboratory technical staff members Curtis Heisey and Jonathan Williams took part in the Boy Scouts of America Inventing Merit Badge Workshop sponsored by the Lemelson-MIT Program, School of Engineering, at MIT. Curtis and Jonathan briefed the Boy Scouts on unpatented inventions and open-source technology

Additionally as part of the program, Curtis and Maria Picardi Kuffner hosted an Aviation Merit Badge workshop for 22 local Boy Scouts at Hanscom Air Force Base's Aero Club. The workshop gave scouts the opportunity to learn about aviation as a career and earn the Aviation Merit Badge. This hands-on workshop taught scouts about aircraft and flight, inspection of a plane, aeronautics, map reading and control surfaces on a model aircraft, forces on a plane, demonstrations of a wing section in a wind tunnel, and careers in aviation.

Tours

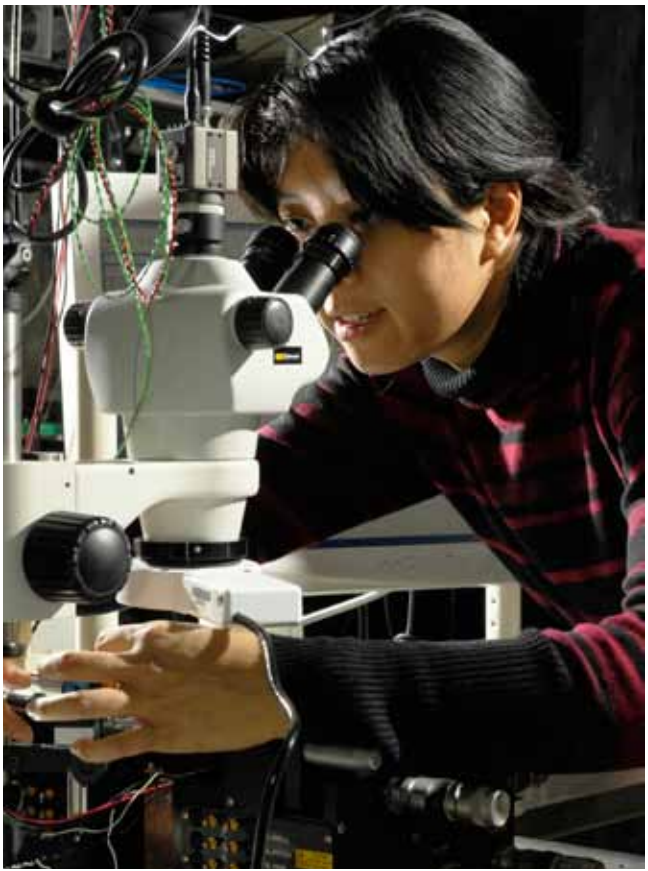
As part of the Lincoln Laboratory Community Outreach Program, tours of Laboratory facilities such as the Microelectronics Laboratory, Air Traffic Control Laboratory, and Flight and Antenna Test Facility were given to a number of groups such as the following:

- New Jersey Institute of Technology Cadets
- DARPA Program Managers
- Air Force Cadets
- USAFMC
- MIT Minority Engineering Interphase Group
- Army Test and Evaluation Command
- U.S. Army Natick Laboratory
- West Point Cadets
- National Reconnaissance Office Fellows
- Leader-to-Leader Group
- Armed Forces Communications and Electronics Association
- ESC Hanscom Air Force Base personnel

EDUCATIONAL **COLLABORATIONS**

Technical Staff Seminars

The technical staff stay current in their field by presenting technical seminars at area universities and hosting technical seminars at Lincoln Laboratory. Seminar series are built to motivate and inspire while facilitating working relationships. Lincoln Laboratory conducts seminar series with researchers at MIT, Northeastern University, and Pennsylvania State University College of Information Sciences and Technology. Lincoln Laboratory also has an in-house education program which offers courses in technical subjects such as electro-optics, classes in software applications, one-day technical seminars, and workshops in leadership and business skills. Last year, the Laboratory hosted 17 seminars under this educational outreach program.



Integrated Photonics Initiative

The Integrated Photonics Initiative is a multiyear, Lincoln Laboratory–funded collaboration between the Laboratory and the MIT Campus to support the research of doctoral candidates working on integrated photonic materials, devices, and subsystems. Its objectives are to identify Department of Defense mission areas that could benefit from integrated photonic technologies, develop these technologies through graduate research, and work to insert the technologies into advanced communication and sensor systems. Current research topics include the development of high-power slab-coupled optical amplifiers, integrated ultrafast optical logic gates, and absorbance modulated optical lithography.

Computer Science and Artificial Intelligence Laboratory

Lincoln Laboratory collaborates with the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL). In 2009, a robotic forklift was developed for military logistics applications. The project aimed to reduce the number of human operators exposed to harm in war-zone storage facilities. There are ongoing collaborations with CSAIL in such areas as cognitive speech systems and high-performance embedded computing. The Laboratory's Technology Office Special Seminars often feature guest speakers from CSAIL to discuss robotic networks and artificial intelligence.

Graduate Fellowship Program

Lincoln Laboratory offers a limited number of graduate fellowships to science and engineering students pursuing MS or PhD degrees at partner universities. The fellowship program awards funds to support a Fellow's stipend, supplement a graduate assistantship, or subsidize other direct research expenses during a student's thesis research. In 2009, this program has awarded funds to four MIT students and seven students at other partner universities.

Lincoln Scholars Program

Technical staff are eligible to apply for entry into the Lincoln Scholars Program for both master's and doctoral Levels which enables the pursuit of advanced degrees on a full-time basis. Last year, 12 staff entered the Lincoln Scholars Program and attended MIT, gaining valuable knowledge applicable to their work and higher education.

MIT VI-A Master of Engineering Thesis Program

Lincoln Laboratory is an industry partner of MIT's Department of Electrical Engineering and Computer Science VI-A Master of Engineering Thesis Program. The VI-A students selected to work at Lincoln Laboratory spend two summers as paid interns, participating in projects related to their fields. The students work with an industry mentor while acquiring experience in testing, design, development, research, programming, and project planning, and are then supported as research assistants while they complete their thesis research at Lincoln Laboratory.

Distance Learning Programs

For talented and motivated staff members interested in pursuing a master's degree, the Laboratory offers the opportunity to participate in distance learning programs offered by Carnegie Mellon University and by the Pennsylvania State University College of Information Sciences and Technology while continuing to work full time at the Laboratory.

WPI Major Qualifying Program

Lincoln Laboratory collaborates with Worcester Polytechnic Institute (WPI) in its Major Qualifying Project (MQP) program, which requires students to complete an undergraduate project equivalent to a senior thesis. The MQP demonstrates the application of skills, methods, and knowledge to the solution of a problem representative of the type encountered in industry. Lincoln Laboratory usually accepts 15–20 students in the MQP per year.

Summer Research Program

Lincoln Laboratory offers undergraduate and graduate students the unique opportunity to gain hands-on experience in a leading-edge research environment. Program participants contribute to projects and gain experience that complements their courses of study. The Laboratory hires approximately 100 students from top universities every summer to participate in Summer Research Program internships.

University Cooperative Education Studies

Technical groups at Lincoln Laboratory employ students from MIT, Northeastern University, and other area colleges as co-ops working full time with mentors during the summer and part time during the academic term. Co-ops participate in building prototypes, help solve problems, assist in research activities, and test applications in the field. Highly qualified students selected as co-ops can become significant contributors to project teams. Currently, sixteen students are working as research assistants on Lincoln Laboratory programs.

MIT Undergraduate Research Opportunities Program

Under the MIT Undergraduate Research Opportunities Program (UROP), Lincoln Laboratory invites undergraduates to participate in on-site research projects. MIT undergraduates may be involved in every phase of research, developing research plans, writing proposals, performing experiments and measurements, analyzing data, and presenting research results. The Laboratory usually hosts five UROP students in the summer and three in the winter.

The synergy between the campus focus on basic research and the Laboratory knowledge of defense applications has ***benefited both communities.***

Naval War College and Maxwell Air University

Lincoln Laboratory recently completed teaching an elective at the Naval War College in Newport, Rhode Island, entitled, Net-Centric and Cyber Operations: Implications for National Security. This course, co-taught by Lincoln Laboratory staff and the Fletcher School at Tufts University, prepares the students, all O-4 and O-5 level officers, for the technology and policy challenges they will face as the DoD enhances information superiority through increased data sharing and collaboration and ensures its ability to operate in cyberspace by securing and defending critical information. This course was first offered in 2008 with a sole focus on net-centric operations policy and implementation challenges. In 2009, the course was enhanced to include cyber operations and an overview of cyber threats. Students have described the Net-Centric and Cyber Operations course as "one of the best at the Naval War College." Based on the popularity of this course, Lincoln Laboratory now offers a similar, but abbreviated, elective at the Air Force Center for Professional Military Education (also known as Air University) at Maxwell-Gunter Air Force Base in Alabama.

Another elective at the Naval War College co-taught by Lincoln Laboratory staff and Tufts University is Homeland Security and Counterterrorism: Technological and Policy Foundations. This course explores in a systematic fashion the critical technologies, capabilities, operational concepts, and policies that will influence how the United States defends its homeland and deals with the threats posed by terrorism. Students examine the fundamental systems and capabilities that are part of homeland security and counterterrorism, and learn to assess the ability of the United States to integrate and employ these systems and technologies to achieve the desired strategic effects of military power. Tufts University and Lincoln Laboratory teach similar courses in Space Technology and Policy, and Ballistic Missile Defense.

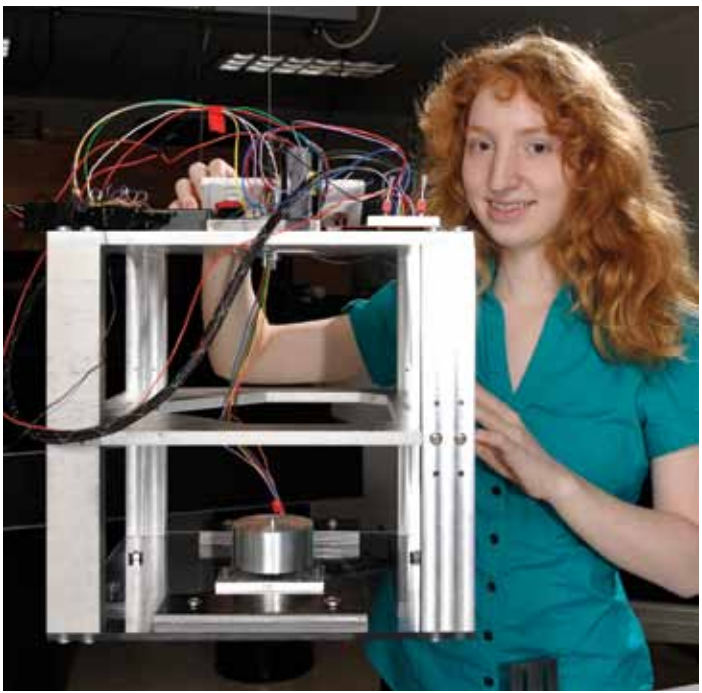
Undergraduate Diversity Awards

The Undergraduate Diversity Awards expand opportunities for women and minorities pursuing bachelor's degrees in engineering and science at selected colleges and universities. The award is typically in the form of tuition assistance, support for technical paper presentations, or funds for independent research projects. Awards are provided each year at colleges and universities where Lincoln Laboratory has little or no presence, such as Bryn Mawr College, Howard University, Mount Holyoke College, New Mexico State University, North Carolina Agricultural and Technical University, Smith College, Spelman College, Stevens Institute of Technology, the University of Puerto Rico, and Wellesley College.

AFCEA International Program

Lincoln Laboratory participates in the Armed Forces Communications and Electronics Association (AFCEA) International Program. AFCEA arranges summer internship opportunities for graduating high-school seniors interested in STEM careers. While three to four students are offered Laboratory internships each summer, at least 40 students tour the Laboratory facilities, seeing the latest research performed at the Laboratory and learning about various career options in math and science. In 2010, the Laboratory's Advanced Sensor Techniques Group, the Chemical, Biological, and Nanoscale Technologies Group, and the Advanced Electro-Optical Systems Group each were assisted by an AFCEA intern. At right, AFCEA intern Katie Coe analyzed proteins using electrophoresis to separate the protein molecules according to size as part of her work producing and extracting proteins.

Introducing High School Girls to Engineering



This one-day event allows high-school girls to visit the science departments of MIT, observe cutting-edge research, see demonstrations in laboratories, and interact with female engineers. Lincoln Laboratory hosts a tour of the facility and, by enabling area participants to attend the event free of charge, exposes more girls to careers in engineering. Typically, about 20 girls attend the facility tour of working laboratories such as the Laboratory's Air Traffic Management Lab, Microelectronics Lab, and biology labs, discovering the different ways science and math are used in Lincoln Laboratory careers. Laboratory staff consider this an opportune time to give a highly personalized tour, and allow in-depth question and answer sessions with female engineers.

COMMUNITY **GIVING**

Lincoln Laboratory employees are actively engaged in many activities supporting worthy causes contributing to the overall quality of life within and outside of our community in partnership with the MIT Public Service Center. LLCO strives to raise awareness of local needs by organizing fundraising and outreach events that support selected charity organizations. A diverse range of opportunities are provided for employees to volunteer their time and resources.

Support the Troops Program

Lincoln Laboratory runs an ongoing campaign of support for deployed U.S. troops. Donations of food, books, games, and toiletries are collected daily, boxed by volunteers, and mailed weekly to military personnel serving in Iraq and Afghanistan. There are typically about 60 soldiers on the mailing list. In the past year, a total of 215 care packages were mailed to 37 different troops.

*Thanks to the **tremendous efforts** of participants and donors, hope for finding a cure for MS is stronger than ever.*

MS Bike & Hike

Lincoln Laboratory forms teams to participate in the annual "Bike and Hike the Berkshires" event to raise funds for the Multiple Sclerosis Society. The 2010 hiking and cycling teams totaled 27 members and raised more than $14,500 for the Multiple Sclerosis Society.

United Way Campaign

Lincoln Laboratory sponsors an annual drive in coordination with MIT to donate to the United Way through paycheck donation or a direct one-time contribution. The United Way helps human service agencies respond to urgent needs in the community and builds a brighter future for those in need.

Alzheimer's Walk

In 2009, Lincoln Laboratory began participating in the Alzheimer's Association Memory Walk— the nation's largest event to raise awareness and funds to fight Alzheimer's disease. In 2010, this relatively new giving program was supported by 16 Laboratory employees and raised more than $11,900 to support research to treat and prevent Alzheimer's disease.

Holiday Drives

The MIT Credit Union in Lincoln Laboratory serves as a drop-off point for Toys for Tots holiday toy drive, providing toys for kids in needy families. Each year, numerous toys are generously donated for holiday delivery.

Giving Tree

Lincoln Laboratory also conducts a "giving tree" during the holidays to respond to specific wishes from local families in need. This program is paired with a food drive, so that each recipient receives a requested gift and a food item for the holidays. Paula Mason, coordinator of the giving tree program, advocated for Laboratory participation in this program which collected gifts for 350 recipients last year.

Food Drive

Lincoln Laboratory Community Outreach promotes food donation drives to support the Food for Free organization, which responds to both waste and local hunger by rescuing fresh food that might otherwise go to waste and distributing it within the emergency food system where it can reach those in need, providing healthy food to more than 60 local emergency food programs, and over 20,000 individuals.

Used Book Drive

In coordination with the MIT Community Giving Fund, Lincoln Laboratory holds an annual used book drive each February. Proceeds support the MIT Community Service Fund, which offers grants to charities in Boston and Cambridge. The most recent book drives raised between $1150 and $2850 in support of community services.

Clothing Drives

Several local shelters—Shelter, Inc. (an emergency and family shelter), On the Rise (a shelter for domestic violence survivors and homeless women), the Salvation Army, and CASPAR (an alcohol and substance abuse program for homeless men and women)—receive donations of gently used clothing from the Laboratory community during annual clothing drives.

Lincoln Laboratory also participates each winter in the **Coats for Kids** drive. Lincoln Laboratory collects warm coats for all ages and delivers them to Anton's Cleaners. All coats are cleaned free of charge and given to those in need through an extensive distribution partnership. The Coats for Kids program, now in its 15th year, aims to provide 60,000 coats in the greater Boston area each winter. Lincoln Laboratory donated more than 500 coats in last year's coat drive.

A program new to LLCO is **Hannah's Socks,** a national program collecting new socks for the homeless, begun by a 4-year-old girl who gave a homeless man her socks because he had none. This national program seeks to collect the least given, but most needed articles of clothing for shelters around the country. Lincoln Laboratory donated 1930 items to support the Pine Street Inn, which serves 1300 people daily from their soup kitchen and several thousand more through their housing programs.

In coordination with a Marine chaplain stationed in Iraq, Lincoln Laboratory Community Outreach hosted a coat drive specifically for Iraqi children, sending 32 care packages to one village in Iraq. Warm clothing has also been donated to orphans and refugees in Afghanistan who lack adequate clothing for cold evenings.

Habitat for Humanity

Lincoln Laboratory's New Employees Network initiated a new outreach activity and invited all employees to join in helping Habitat for Humanity build an affordable house in the local area for a needy family. The Laboratory is happy to aid Habitat for Humanity in its mission to eliminate poverty housing and provide safe, healthy living conditions while strengthening community ties. In July 2010, volunteers from Lincoln Laboratory joined together to seal a foundation, add gravel under a deck, and install a basement drain system.

5K Fun Run

Lincoln Laboratory holds an annual fun run in collaboration with the onsite MIT Fitness Center. Participants run on a prescribed path in the Laboratory/Hanscom neighborhood. This fun run supports a different charity each year while promoting fitness and community service. In 2010, runners participated in this fun run over their lunch time, raising funds from the Laboratory community for the Veterans Hospital in Bedford, Massachusetts.

Marshallese handcrafts are an ***important part of the economy*** *of the Marshall Islands.*

Marshallese Island Outreach

Lincoln Laboratory operates a field site at the U.S. Army Kwajalein Atoll installation located about 2500 miles WSW of Hawaii. Twenty staff members, accompanied by their families, work at this site, serving two- to three-year tours of duty.

Their families become part of the community. The amiable relationship enjoyed by the Laboratory staff and the local community prompted the initiation of the Marshallese Outreach program, developed to enrich educational and life experiences of the Marshallese people.

Each summer, two Marshallese college students are supported as interns at a Laboratory facility. Each fall, a scholarship is awarded to a local student choosing a career path in science, technology, engineering, or math. Laboratory staff at Kwajalein contribute to the student lunch program for the local elementary school, and assist artisan residents by displaying and selling Marshallese handcrafts.

Lincoln Laboratory Community Outreach

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