FLC

NORTHEAST REGIONAL MEETING

October 6-7, 2020

WELCOME TO THE **2020 FLC NORTHEAST REGIONAL MEETING**

TABLE OF CONTENTS

SCHEDULE AT A GLANCE

TUESDAY, OCTOBER 6

TIME (EDT)	ACTIVITY	INFO
8:30 - 9 am	**Orientation**	Join the FLC team for a brief overview of how to use the platform and best engage with your community during the meeting.
9 - 9:15 am	**Welcome Day 1**	Northeast Region representatives welcome you to the first day of the regional meeting.
9:15 - 9:30 am	**Introduction**	The FLC Executive Director will give a brief overview of the two-day Northeast Regional Meeting and welcome you on behalf of the FLC.
9:30 - 10 am	**Choose your own break**	Choose your own path: Grab some breakfast, schedule some networking, and explore the website.
10 - 10:45 am	**Meet the Labs of the Northeast**	David Lee will moderate a session with a few regional lab representatives talking about their exciting projects and areas of research.
10:45 - 11 am	**Break**	Grab some coffee, take a break, and join us back at the top of the hour.
11 - 11:45 am	**Espionage and IP - Presented by the FBI**	Learn what federal laboratories need to know about foreign influence and economic espionage.
11:45 am - 12:30 pm	**Networking Lunch**	Spend some time this hour networking and get to know the other members of your region.
12:30 - 1 pm	**Afternoon chat with John Dement**	John Dement, current FLC Chair, will give a brief overview of happenings at the FLC and be available for questions.
1 - 1:45 pm	**IP Basics for Technology Transfer Professionals**	Learn from the best in IP. Jim and Gail Poulos will teach a high level overview of IP and take questions from the audience.
1:45 - 2 pm	**Break**	Grab some coffee, take a break, and join us back at the top of the hour.
2 - 2:45 pm	**Legislative Changes Impacting T2**	Courtney Silverthorn discusses potential changes to T2 legislation and other pertinent legislative updates and noteworthy events.
2:45 - 3 pm	**Break**	Grab some coffee, take a break, and join us back at the top of the hour.
3 - 4 pm	**Wrap up/Networking**	Round out your day with an hour of networking. Attendees will be able to choose which networking session they would like to attend.

WEDNESDAY, OCTOBER 7

TIME (EDT)	ACTIVITY	INFO
8:30 - 9 am	**Orientation**	Join the FLC team for a brief overview of how to use the platform and best engage with your community during the meeting.
9 - 9:15 am	**Welcome Day 2**	Northeast Region representatives welcome you to the second day of the regional meeting!
9:15 - 9:45 am	**Keynote**	Valerie Larkin of the Naval Undersea Warfare Center, Division Newport, will discuss how she became a success in T2 and how the FLC can assist in facilitating success.
9:45 - 10 am	**Choose your own break**	Choose your own path: Grab some breakfast, schedule some networking, and explore the website.
10 - 10:45 am	**Lab/Facility Round Table**	Building on the foundation of the Lab Rep introductions from Day 1, this in-depth discussion will focus on how labs are seeking and building collaborations, and what is hot and exciting in their respective spaces.
10:45 - 11 am	**Break**	Grab some coffee, take a break, and join us back at the top of the hour.
11 - 11:45 am	**What Can FLC Do for You**	FLC Executive Director, Paul Zielinski, will discuss the Strategic Initiative proposal process, and what made the successful proposals stand out. There will also be a roundtable discussion of the benefits of FLC involvement with the Northeast Region Coordinator team.
11:45 am - 1 pm	**Lunch/Break**	Spend some time this hour networking and get to know the other members of your region.
1 - 1:45 pm	**Awards Recognition**	Join us as we spotlight and celebrate the best of the Northeast Region.
1:45 - 2 pm	**Break**	Grab some coffee, take a break, and join us back at the top of the hour.
2 - 2:30 pm	**The Future of FLC Training**	Join FLC Educate Committee Chair Karen Presley as we explore the new FLC Training Platform and help organizers create a robust program for our members.
2:30 - 2:45 pm	**Meeting Wrap up**	The Regional Coordinators and FLC bid you adieu as we wrap up the meeting.
2:45 - 3 pm	**Mini Break**	Mini-break to grab a beverage before happy hour networking sessions!
3 - 4 pm	**End of Meeting Happy Hour Networking**	Enjoy a final round of networking by choosing which room to join.

THANK YOU TO OUR SPONSORS

tradespace

TreMonti

Wellspring

MIT LINCOLN LABORATORY

MIT LINCOLN LABORATORY AND PARTNERS
enlist analog technology for complex computing challenges

A low-cost analog computing system, developed at Massachusetts Institute of Technology Lincoln Laboratory (MIT LL) to solve problems that are too complicated for current digital computing technology, is being commercialized by a start-up founded by former MIT LL scientists.

Specifically, the new system is designed to solve combinatorial optimization problems—those involving so many variables that sifting through all the possible combinations to arrive at an optimal solution cannot be done efficiently by traditional digital computers.

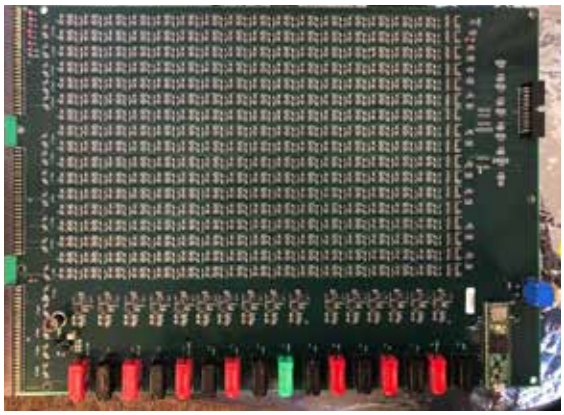
Combinatorial optimization problems span various industries. The solutions can be used, for example, to design efficient supply chain logistics, operate telecommunications systems with minimal interference, and discover new drugs.

MIT LL's Optimization Processing Unit (OPU) employs what the developers call "an algorithm in hardware form"—a free-space optical coupling scheme that transmits information between oscillators without the need for wires. Inspired by nature, the OPU has been designed to find a path to optimal energy use for each problem it encounters. That path reflects the best solution to the problem.

The technology transfer story began in January 2019, when MIT LL scientists Jeffrey Chou, Bill Herzog, Suraj Bramhavar, and Siddhartha Ghosh filed an invention disclosure for the OPU technology, titled "All-to-All Connected Ising Machines with Free-Space Optical Interconnects." A provisional patent application was subsequently filed in March 2019. Just before leaving MIT LL, Bramhavar and Chou filed another invention disclosure in October 2019 titled "All Electrical Fully Connected Coupled Oscillator Ising Machine," and a second provisional patent application was filed shortly thereafter.

Bramhavar and Chou created the start-up Sync Computing to license the relevant intellectual property. Like MIT, Sync Computing is based in Cambridge, Massachusetts. The company received venture capital support from The Engine (an MIT spinoff dedicated to commercializing "tough tech") and Underscore.vc.

A nondisclosure agreement with Sync Computing and MIT LL was signed in November 2019, immediately after the company's formation. A collaboration for engineering services for "Coupled Oscillator Computer Support" was also issued in November 2019. Sync Computing was able to further debug the board and refine the prototype for MIT LL, which was mutually beneficial.



Above: Array of connections for the fully connected 16-node system.

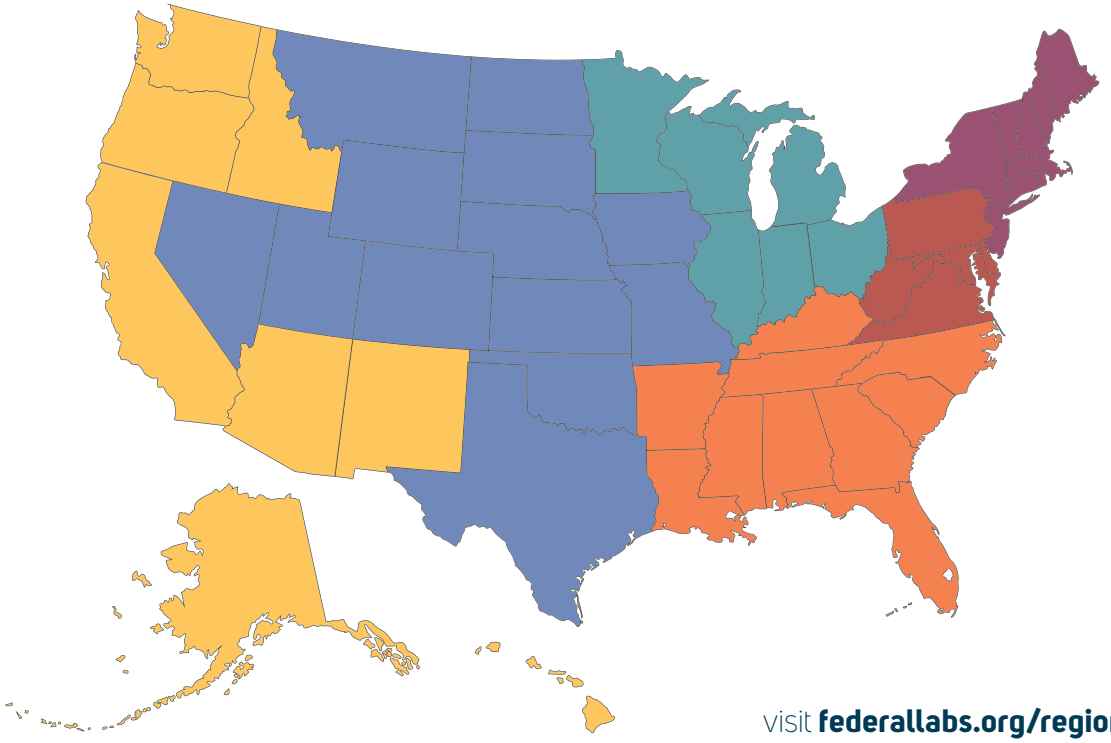
A Cooperative Research and Development Agreement (CRADA) is currently being established with Sync Computing as part of the Defense Advanced Research Projects Agency (DARPA) Activate Fellowship program. MIT LL serves as an Activate anchor partner under a CRADA where fellows embed to develop new solutions related to microelectronics, from fabrication techniques to sensor and chip architectures. Sync Computing founder Bramhavar is anticipated to begin this fellowship as a DARPA Entrepreneurial Fellow in early FY21.

The Sync Computing team is currently working on building and scaling the OPU and assessing the market verticals in which it will be most useful. MIT LL has continued work for the Department of Defense (DoD) on maturing this technology, and continues to do research on computing with coupled oscillators for government sponsors.

The transfer to Sync Computing provides a pipeline into the commercial sector. Potential commercial applications include largescale materials simulations; drug discovery; satellite, vehicle, and logistics optimization; financial portfolio optimization; accelerated deep learning; and unsupervised machine learning. A higher functioning prototype and scaled-up manufacturing are also being explored for DoD and national security applications.

SIX FLC REGIONS

ENDLESS COLLABORATIVE OPPORTUNITIES



visit **federallabs.org/regions**

FAR WEST REGION

ALASKA
ARIZONA
CALIFORNIA
HAWAII
IDAHO
NEVADA
OREGON
WASHINGTON

MIDWEST REGION

ILLINOIS
INDIANA
MICHIGAN
MINNESOTA
OHIO
WISCONSIN

MID-ATLANTIC REGION

DELAWARE
MARYLAND
PENNSYLVANIA
VIRGINIA
WASHINGTON DC
WEST VIRGINIA

NORTHEAST REGION

CONNECTICUT
NEW HAMPSHIRE
MASSACHUSETTS
NEW YORK
NEW JERSEY
PUERTO RICO
RHODE ISLAND
VERMONT
MAINE

MID-CONTINENT REGION

ARKANSAS
COLORADO
IOWA
KANSAS
MISSOURI
MONTANA
NEBRASKA
NEW MEXICO
NORTH DAKOTA
OKLAHOMA
SOUTH DAKOTA
TEXAS
UTAH
WYOMING

SOUTHEAST REGION

ALABAMA
FLORIDA
GEORGIA
KENTUCKY
LOUISIANA
MISSISSIPPI
NORTH CAROLINA
SOUTH CAROLINA
TENNESSEE

For more information, email **regions@federallabs.org**

FLC

FLC

Federal Laboratory Consortium
for Technology Transfer

FLC Management Support Office
111 West Jackson Blvd., Suite 1412
Chicago, IL 60604
Phone: 847.686.2377
federallabs.org

@federallabs #FLCNE20