

MSE M.ENG GREETINGS

ASSOCIATE DIRECTOR'S NOTE - DECEMBER 2021



ALEX DEYHIM—ASSOCIATE
DIRECTOR OF THE MASTER OF
ENGINEERING PROGRAM, MATERIALS
SCIENCE AND ENGINEERING

Welcome to the 3rd Edition of the MSE MEng Newsletter! Despite the challenges posed by COVID-19, this past year has been an exciting one filled with team building activities, social events, guest speakers, industry projects and two graduation ceremonies. In addition to sharing pictures and stories of these goings-on, I am delighted to provide updates from 24 of our recent alumni. As you will see, our students and alumni are achieving amazing successes. None of this would be possible without the support of the College of Engineering and our industry partners. As Dean Lynden Archer notes, “Cornell Engineering is one of a handful of institutions known to prepare students at all levels with the requisite breadth and depth to lead the way in changing our world.” The 15 Masters of Engineering Programs, known as OneMEng, are designed to give students the tools and experience they need to lead technical progress in industry. Under the leadership of Senior Associate Dean, Yong Joo, graduates of Cornell’s MEng programs are going on to work for some of the world’s most well-known organizations, such as Facebook, Google and Microsoft. In the past few years, graduates of the MSE MEng program have secured jobs with such prestigious, cutting-edge companies as Intel, Applied Material and Arkema. These remarkable outcomes are made possible by the support of our industry partners who provide amazing projects and opportunities for our students.

Warm Regards,
Alex Deyhim



Class of 2022 with Dr. Karel Hilversum, Dr. Dan Tillemans and Professor Alexander Deyhim during leadership skills training at the Cornell Hoffman Challenge Course, August 2021.

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MSE M.ENG ORIENTATION WEEK

This year's MSE M.Eng Orientation Week took place in mid-August and consisted of four primary activities: Hoffman Challenge Course, inaugural Dragon Boat Challenge, exploration of Cornell laboratories and research facilities, and the matching of students and companies for corporate-sponsored projects.

Orientation Week 2021 kicked-off with Associate Director, Prof. Alexander Deyhim, and Graduate Field Representative, Ms. Marissa Porter, introducing the new cohort to the MSE M.Eng program. Professors Shefford Baker and Lara Estroff gave welcoming presentations to the students, and then the fun began! The group participated in numerous games and activities throughout the week that emphasize critical skills related to leadership, professional development, conflict resolution, ethics, and business etiquette.



Hoffman Challenge Course

To help students bond as a group and improve communication skills, Orientation Week began with a day of outdoor leadership training and trust-building activities at Hoffman Challenge Course, which features more than 50 low and high-element challenges and is part of the Cornell Team and Leadership Center, an offering of Cornell Outdoor Education



Dragon Boat Challenge!

With the facilities and company-sponsored projects complete, it was time for more fun. The new MSE M.Eng students - many of whom had never before set foot in a boat - stepped outside of their comfort zone and joined Professor Deyhim on Cayuga Lake for Dragon Boating! Dragon boat racing has been a traditional Chinese paddled watercraft activity for over 2000 years and began as a modern international sport in Hong Kong in 1976. Dragon boats are typically made of carbon fiber, fiberglass, and other lightweight materials. The class came together as a team to control their vessel and propel their craft forward while paddling in sync. The '22 Cohort was the first MSE MEng class to experience the Dragon Boat Challenge and it was a great success!



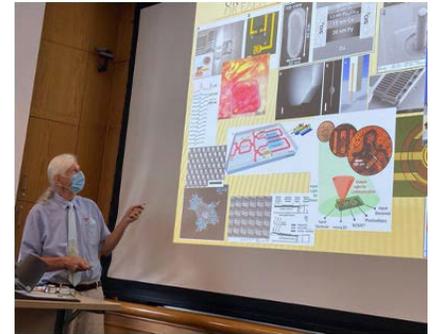
MSE M.ENG ORIENTATION

Exploring Cornell Laboratories and Research Facilities

Fully energized from a day of outdoor challenges, members of the new MSE M.Eng cohort attended presentations given by on-campus facilitators who provided an overview of the research capabilities of their respective facilities. Presenters included Dr. Michael Skvlara from Cornell Nanoscale Facility (CNF), and Prof. Joel Brock from Cornell High Energy Synchrotron Source (CHESS). Prof. Alex Deyhim provided an overview of the Cornell Center for Materials Research (CCMR). Seeing these presentations was



important because, once students are matched with their desired companies and projects, testing and research are usually conducted in one or more of these facilities. The students were excited by the prospect of working in these advanced research facilities and being trained on the use of complex scientific instruments.



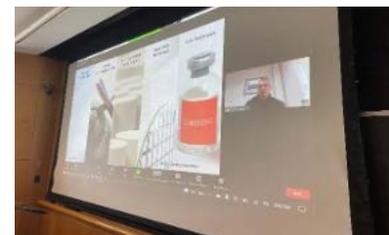
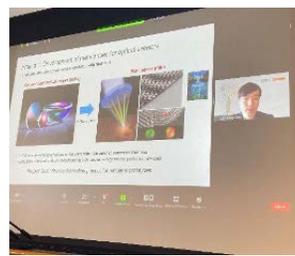
Corporate Sponsored Projects

Following the presentations on Cornell's facilities, students were ready to choose their projects. Forty-five projects from 31 companies were presented to our incoming cohort, including:



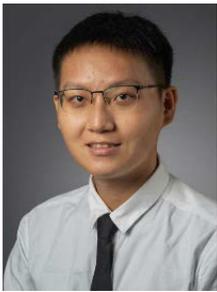
Partnering companies presented pre-scaffolded projects to the '22 cohort, offering opportunities for students to make high-impact contributions while fulfilling the research and corporate-partnership component of their MSE M.Eng degree. This year's overriding theme from most presenting companies was a message of positive environmental impact and sustainability; sustainability

within product design and product purpose, research and development using sustainable methods and materials, and sustainable practices throughout production and assembly.



MSE M.ENG GRADUATE STUDENT PROJECT SPOTLIGHTS

The 2022 cohort partnered with a number of corporations and faculty members to research, develop, and provide professional scientific analysis for projects of significant importance. The following highlights some of these projects:



Chun-Hao Wang has been working in collaboration with Dimensional Energy Inc to develop new lab-scale methods of fabricating porous ceramic catalyst supports. Catalysts are materials which are intentionally added to a substance in order to speed up chemical reactions, and ceramic supports in particular assist with improving the standardization of environmental conditions within chemical research. Once perfected, this technology could be instrumental in chemical research such as drug development within the fields of health and medicine.

“When you really want to achieve something, you shouldn’t be intimidated by how hard it seems to be. Opportunities aren’t just handed to you; you must seek proactively to discover learning opportunities or job opportunities.” — Chun-Hao Wang

Diego Prada is a sustainability researcher working in partnership with others at Cornell University, Massachusetts Institute of Technology (MIT), the Lawrence Berkeley National Laboratory in California, and AeroShield Materials Inc in order to measure, record, and analyze data associated with improving the opacity and thermal insulating properties of a silica-based aerogel material. This component is being developed as a more sustainable option in residential and commercial window insulation tech. Prada’s collaborative project is based upon the premise of securing a reduction in the amount of energy drawn by residential homes from the corporate power grid, and thus reducing unnecessary waste within the energy sector.



“I’m transferring my energy into learning different ways or possible avenues for building a more sustainable world. I want to do good work that benefits others.” — Diego Prada



Henry Harwood is using Cornell laboratories and research facilities to analyze the synthesization of perovskites for use in solar energy cells. Harwood’s goal is to reduce instability when the material is exposed to air, moisture, or heat, and to ultimately perfect sustainable solar power tech for use within developing countries.

“[As an engineer,] I’m drawn towards supporting and engaging with companies which are constructing renewable microgrids for communities within developing countries. The issue of energy is also an issue of inequality. The lives of people around the world can be so incredibly improved by access to reliable energy sources.” — Henry Harwood

Menghao Wang has been gaining experience with photoelectron spectroscopy (XPS) and electrochemical impedance spectroscopy (EIS), along with procedures and applications related to battery design. Wang has comparatively analyzed lab data for various water-to-ethylene glycol ratios based on battery performance criteria.



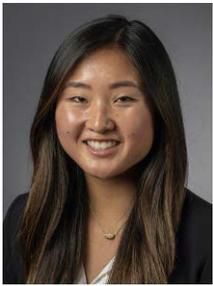
“My new personal value is that I try not to overly worry about the future, and simply ensure that all is well in my life right now. I’m convinced that if I do my current work well, then the future will fall into place.” — Menghao Wang

STUDENT PROJECTS

Faaz Mumtazia has been collaborating with SEA Lab (Sibley School of Mechanical and Aerospace Engineering) on a two-fold environmentally critical project related to the extraction of lithium and cobalt from the earth's sea water. Minerals are extracted using specially-designed absorbent rollers composed of polyethylene fiber. Lithium and cobalt are heavy metals integral to the production of electric vehicles, and removal of this material from the ocean reduces heavy metal toxicity in ocean water and in marine life, which can be passed along to consumers. Mumtazia's work has multiple far-reaching applications, including sustainable growth within the sectors of technology, the environment, food scarcity, and public health.



"I chose the Cornell MSE MEng program because I wanted an unconventional Master's degree experience: I wanted both professional and academic experience at the same time. So far, I am impressed with how much I've been able to tailor my academic plan in a personal and flexible way while also obtaining career preparation. And I have enjoyed becoming a part of the Cornell network!" — Faaz Mumtazia



Sarah Chay has partnered with AeroShield to contribute towards the development of a sustainable energy-saving insulating window material. This aerogel can be retrofitted within two pre-existing panes of window glass and is 50% more effective than previous insulation technology on the market. Chay's testing and data analysis of adjustments made to the chemical recipe and drying conditions for this material has immediate potential real-world impact for individual families struggling to afford home heating costs.

"I think one of the most powerful ways engineers can make a purposeful change in the world is through creating solutions for a sustainable future." — Sarah Chay

Shengzu Liao has collaborated with electrical engineers at Xallent LLC to research and develop contactless capacitive probing technology for use in taking conductivity measurements of delicate 2D materials such as those found within semiconductors. Semiconductors are a critical component of laptops, scanners, cell phones, and most other electronic devices.



"Since attending Cornell University, I think I am more passionate and far more willing to step out of my comfort zone. I realize that I feel incredibly strong to be surrounded by cohorts who are also breaking through their own boundaries." — Shengzu Liao



Yibei Li has been researching and developing materials in collaboration with ams AG, a designer and manufacturer of sensors and sensing solutions headquartered in Premstätten, Austria. Li's collaborative project utilizes scanning electron microscopy (SEM) and optical microscopy in order to study fluorine-based etching techniques upon silicon in optical sensors. Li's work with metasurface technologies is ground-breaking, and will change the face of technology related to optics, photonics, and augmented reality.

"The best way to face change or set-backs is to embrace all of the positive and negative impacts and to then intentionally re-focus your attention particularly on those positive aspects. This doesn't mean that you're escaping those negative results, but that you're simply not allowing yourself to be immersed in them and held back. I enjoy tackling challenges and learning from past experiences - even past failures." — Yibei Li



Yue Shi has connected with Xallent LLC to assist with the development of electroplating technology in semiconductors. This collaboration has enabled Yue Shi the opportunity to research and experiment with electroplating techniques and to collect performance data on the electrodeposition of semiconductor substrates. Her data analysis has included measurements in temperature, pH, and density of the electrodeposited barrier material. Her contribution has enabled engineers at Xallent LLC to improve the capabilities and longevity of their electronic components.

"I have participated in experimental design, data analysis and other tasks but I wanted more. I wanted a stronger education. I knew I wanted to enter into a pioneering and difficult field, and I would need a better education in materials engineering in order to do that. That's why I chose to come to Cornell." — Yue Shi

MSE M.ENG INTERNSHIP SPOTLIGHT

Three class of '22 MSE M.Eng students have enrolled in the internship program with Cornell partner corporations. Professional internships are a key component of the MSE MEng program at Cornell. Through this professional development experience, students have the opportunity to work with well-known and well-respected corporations around the globe - each with close ties to Cornell. Students quickly and efficiently develop their professional network, improve their resumes, and expand their skills and interests while simultaneously meeting program requirements through on-the-job training.



Praveen Varada collaborated with Sartomer USA in the fall of 2021 to research and test photopolymers used in 3D printing resin in an effort at reducing poor printability, under-curing, and yellowing of the material after prolonged exposure to light. DLP printing takes place within a vat containing liquid resin and is capable of generating a variety of highly complex, 3D structures in microscale architecture. Applications for this process include the manufacturing of elasticized material such as rubber seals, flexible electronics, energy absorbers, soft robotics, and smart biomedical devices which require soft and deformable material properties.

“As a multifaceted individual I always find joy and happiness in trying out new things and the same stands for my time at Cornell. I’ve always tried to take courses that have intrigued me, and which have introduced me to brand new puzzles and materials that I hadn’t had the chance to play around with yet in my life.” -- Praveen Varada



Sarah Chay has accepted an internship position at Intel Corporation within the Package Research and Development Department. Her internship will begin in January 2022 and will last 12 months.

Chay will be working with the Low Yield Analysis team, mainly performing materials characterization and defect analysis in order to improve the substrate packaging process. She will be performing various characterization techniques, including SEM, XRD, and FTIR. She will also be working closely with clients by providing consultations and adjusting project packages to suit their needs.

I am so excited to begin working with Intel this January! Thank you again to my cohort for all your support and thank you to my MEng faculty advisors for their assistance in facilitating this internship.” -- Sarah Chay



Diego Prado has accepted an internship position at Indium Corporation. His internship will begin in January 2022. Indium Corporation is a refiner, producer, and supplier of indium and indium compounds. The company also has various products based on other metals. Indium was founded in 1934, and is headquartered in Clinton, NY.

“I’ll be contributing to the research and development of alternative lead-free low-temperature solder with excellent drop-shock resistance. This solder is going to be used in smartphones, and I will likely be running tests on thermal behavior, bond shear, drop shock performance, and thermal cycling.” -- Diego Prada

MSE M.ENG CORPORATE SPONSORSHIP: BOEING COMPANY

Corporate Sponsorship: Boeing Gift of \$6,000 Advances MSE M.Eng Program

The Boeing Company recently provided a \$6,000 gift to Cornell University to support student professional development and research within the MSE MEng program.

Boeing is an American multinational aerospace corporation that designs, manufactures, and sells airplanes, rotorcraft, rockets, satellites, telecommunications equipment, and missiles worldwide.

Cornell University MSE MEng faculty, staff and students extend their gratitude to Boeing for this generous gift in support of our work and hope to continue this close partnership with the Boeing Company for a long time to come. Boeing is one of several companies that sent representatives to work with MSE MEng students this fall, providing pioneering research and development opportunities to MSE MEng program participants.

Boeing's gift was used, in part, to create the Boeing Company Project Awards. Congratulations to this year's winners:

First Place \$750

Student Name: Simon Olschansky

Company Name: Dimensional Energy

Project Title: Synthesis and Characterization of Metal-Based and Ceramic-Based Catalysts for Carbon Dioxide Reduction

Second Place \$500

Student Name: Sarah Chay

Major: Materials Science & Engineering

Company Name: AeroShield

Project Title: Characterization of Crack-Free, Ultra-Clear, and Super-Insulating Aerogels for Energy Efficient Windows

Third Place \$250

Student Name: Grace Wu

Company Name: Professor Juan Hinestroza

Project Title: Metal-Organic Frameworks as Protective Shields for Arc-Flash Events



MSE M.ENG STUDENT GATHERINGS

At least twice per academic year, MSE M.Eng students gather for social events to prioritize developing friendships and building fellowship and camaraderie within the cohort. These gatherings are centered around casual meals and fun activities and are often attended by faculty, staff and guest lecturers who contribute to the MSE M.Eng program. These social events help our students build lifelong friendships and a powerful professional network.



MSE M.Eng Spring 2021 Gathering

This spring, the cohort was invited to dine with Prof. Alex Deyhim at his home near scenic Cayuga Lake. Over a delicious casual meal, students enjoyed some downtime and team-bonding discussions, all within a beautiful and relaxed atmosphere surrounded by the famous gorges of Ithaca, NY.



STUDENT GATHERINGS

MSE M.Eng Fall 2021 Gathering

On a crisp day in autumn, students took a break from their research projects and returned to Prof. Deyhim's home to partake in hot apple cider and a savory meal while overlooking beautiful Cayuga Lake. The cohort was joined by representatives from Cornell Outdoor Education (COE) and the College of Engineering Career Office. Complimentary blankets and sweaters were provided for those who braved the elements.

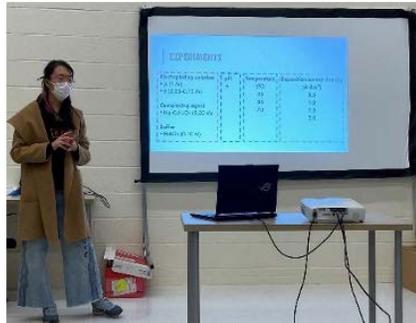


MSE M.ENG WEEKLY STUDENT MEETINGS

A core component of the MSE M.Eng program is the weekly meeting in which students share project updates and come together for formal leadership / professional development. These meet-ups provide the opportunity for targeted leadership training, to hear from exceptional guest speakers from industry, and to learn from technical project presentations given by their peers. Faculty have the opportunity to present fun and exciting puzzles / challenges that teach complex concepts related to teamwork, communication, problem-solving, and dynamic creative thinking.

Technical Project

Presentations | MSE M.Eng program participants use these weekly meetings as an opportunity to make professional presentations to their peers regarding their latest research, discuss successes and failures within their corporate projects, and share the implications of their findings with the cohort. Faculty provide technical and professional guidance as needed and facilitate professionalism and leadership training for Cornell's rising MSE MEng professionals.



STUDENT MEETINGS

Professional Development

Students develop public speaking and presentation skills before a trusted audience, help each other organize content for their corporate projects and research papers, and bond together over projects that are meaningful to themselves and to their classmates.



Leadership Training Exercises - Some of our recent fascinating and engaging leadership training exercises have included topics such as The Leadership Wheel, Communication, Conflict Resolution, Strategic Thinking, Time Management, Collaboration, Delegation, Emotional Intelligence, Motivation, Setting and Achieving Goals, and Decision-Making.



Each comprehensive lesson was followed by a debrief, giving students the opportunity for reflection and self-discovery. These engaging professional training sessions prepare MSE M.Eng students for professional management careers beyond academics and engineering.

The Leadership Wheel teaches students about the four main types of business leaders, encourages students to self-examine what type of leadership qualities they naturally possess, which qualities they wish to further cultivate in themselves, and which types of leadership may be more ideal depending upon different business settings and the needs of certain employee groups.



STUDENT MEETINGS

Strategic Goal Setting - Students were presented with the challenge of pairing up to transport and stack plastic cups using only the tension created by crisscrossing thin threads held by each partner. The task itself requires patience, cooperation, communication, and a certain degree of dexterity. This activity mimics the challenges associated with making and keeping accurate production line goals within realistic time constraints and without over-extending your crew or disappointing your client by boasting unrealistic goals. Striking a balance between setting high but achievable goals is a key component to good management.



Industry Guest Speakers | Guest speakers arrive at Cornell from a variety of well-respected institutions and companies around the world. Guest lecturers are very personable, and these company representatives engage students with anecdotes about their own experiences in the field, insights into why they pursued their own particular career path, what they've learned to do - or not to do - within the business world. These corporate professionals are often happy to answer philosophic and introspective student questions about what they might change if they could repeat their education or change their career paths. Included in our list of guest speakers were Ken Rother, Managing Director eLab and Dr. Ray Green, Manager, Display Applications Lab of Corning, Inc.



Ken Rother



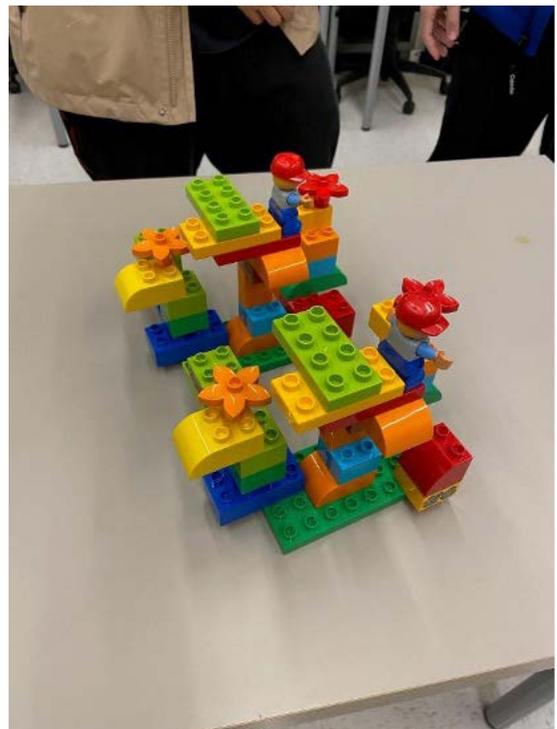
Ray Green

STUDENT MEETINGS

Corporate Communication Challenges - Through a fun yet complex activity that challenges students to reconstruct a snap-together block structure entirely from memory, the cohort learned essential communication skills. Each student had ownership of only one particular block, so communication and teamwork were essential to the accuracy of the final structure.



Instructors then introduced the element of potential corporate sabotage by explaining that one student within the group was potentially a secret saboteur - having been given the individual goal of misleading and misdirecting their peers! Students had to decide who to trust, while navigating the complexities of potential unintentional mis-instruction or poor guidance that can take place within corporate leadership.



STUDENT RECRUITMENT

MSE M.ENG STUDENT RECRUITMENT

The MSE M.Eng program is actively reaching out to undergrads from Cornell and other advanced, competitive university programs who may be interested in furthering their education and professional development by enrolling in our Master of Engineering degree program. Taking advantage of the world's shift to Zoom meetings during the COVID era, Prof. Deyhim hosted 16 virtual info sessions with university partners and their prospective students around the globe. In addition, Sarah Chay ('22) and Prof. Deyhim represented the Materials Science and Engineering Program at this year's Master of Engineering Expo, which took place on October 12th. Visitors were treated to a free boxed lunch, raffle prizes, and life-changing career opportunities which would make their mothers very proud!



STUDENT COUNCIL ANNOUNCEMENT

MSE M.ENG STUDENT COUNCIL ANNOUNCEMENTS

Our student council this year consists of Sarah Chay as Vice President, Praveen Kumar, as Treasurer, and myself, Henry Harwood, as President.

This semester started off in a whirlwind of events with our first bonding opportunity being a day at the challenge course followed by an afternoon of Dragon Boat Paddling and the marginally less fun presentations from companies to decide on our projects for the semester. Everyone was able to find projects that they were interested in by mid-September, with introductions and details being shared via presentations during our weekly meetings throughout the semester. Another big feature of our cohort meetings was leadership exercises facilitated by the Cornell Center for Outdoor Education staff. These exercises were not only fun but also gave some powerful insight into how to think as leaders and work as a group, helping us grow closer in the process.

Our first event during the semester was a Game Night where we threw down in everything from Super Smash Bros. Ultimate to trivia. Ultimately though, we were all winners for friendships we bettered. On Halloween, our game night saw a reprise at cohort member Diego Prado's house but this time with slightly more cookies and candy to fuel us. We were also hosted at Professor Deyhim's new place where we had lunch on the deck with a view over the lake. As the semester wraps up, we are looking forward to seeing the presentations from our cohort members displaying their accomplishments this semester. With the stress of finals, we are planning on hosting another Game Night during the study period to give everyone a chance to unwind and have some fun before all the tests and project deadlines.



Henry Harwood
2021-22 Student Council President
MSE M.Eng Cornell University

GRADUATION 2020 & 2021

THE “COVID” CLASS OF 2020



In September 2021, Cornell University invited the 2020 “COVID Class” to make an unprecedented en masse return to campus for a special long-overdue Commencement ceremony in their honor. Students - now professionals - returned to campus to receive delayed distinctions, recognition, honors, and heartfelt hugs!



GRADUATION CLASS OF 2021



Saturday, May 29, 2021. Martha E. Pollack, President of Cornell University, addressed the graduating students at Schoellkopf Field.



FINAL PROJECT PRESENTATIONS

MSE M.ENG FINAL PROJECT PRESENTATIONS

On Friday, December 3rd 2021, fourteen MSE M.Eng students presented their work on a wide array of technical projects to a panel of expert judges. A vital component of the Cornell University MSE M.Eng program is the completion of a project under the guidance of an industry partner and / or faculty member to deepen classroom learning while giving students real-world, hands-on experience. These projects also create value and connections for our industry partners by providing access to talented students as well as Cornell's state-of-the-art facilities, such as CCMR, CNF and CHESS, where many projects are carried out. Six industrial practitioners served on the panel of judges that included; Mr. Egan Greenstein - Senior Director, The Boeing Company - www.boeing.com, Dr. Reza Batani - Sr. Materials and Metallurgical Engineer from BorgWarner Morse TEC - www.borgwarner.com; Dr. Jim Wilcox - Universal Instruments Corporation - www.uic.com; Dr. Hongwen Zhang - Research and Development Manager - Alloy Group - Indium Corporation of America www.indium.com - Ms. Kellie Putman - Sr. Process Engineer - MT&E - CMS Facility - Corning Incorporated - www.corning.com.

Professor Deyhim rewarded the student participants with a pizza party at the conclusion of the event.



MSE M.ENG ALUMNI NEWS

Several of our recent alumni wrote to us to share where they are now, reminisce about their time at Cornell, and give advice to this year's MSE M.Eng group.



[Ajay Krishnan](#) - I currently live in Columbus, Ohio and work at EWI - the Edison Welding Institute. I'm Research Leader of the Additive Manufacturing group and drive our Technology Strategy department. My day-to-day job is a blend of Consulting, Business Development and R&D. Fun stuff! I'm really passionate about additive manufacturing, deep-tech and sustainability. I'm always down to talk and share ideas.

My fondest memories of my time at Cornell were spent hanging out in the Big Red Barn with new friends. Our group had policy majors, statisticians, public health, business school and engineering students. The rich diversity in perspectives and thought processes made every conversation exciting and - at times - rowdy after a few beers! That's the beauty of a place like Cornell.

[Zhihao Liao](#) - I'm currently working at Mangrove Capital, a venture capital firm in China. I will be promoted to Associate in the near future. I wish everyone all the best and hope one day I can travel back to the States. Working is not easy, and I miss those good old days in Ithaca, especially hanging out at the Apollo Chinese restaurant with friends. I also enjoyed those sports lessons at Cornell, like Latin dancing and bowling. I recently traveled to Northwest China to take pictures of a meteor shower.



[Karl Ashkar](#) - I currently work at Pall Corporation in Danaher as an R&D scientist in the company's Research and Development Leadership Program, and I'm working on membrane development for semiconductor & microelectronics applications. I'm also pursuing an MBA with a focus in business analytics at the University of West Florida.

My favorite memories from Ithaca were walking around campus, hiking through the gorges, as well as our gatherings and table-tennis competitions in the MEng lounge. Regarding travel, I've recently relocated from the Pall branch in Cortland, NY to the branch in Pensacola, FL. I've traded the snow for beach sand, which is nice!

[Alex Yu](#) - I work at HRL Laboratories in Malibu, CA as an Additive Manufacturing Engineer.

To the new cohort: Welcome to Cornell! Choosing to further your education here is already a huge step and a testament to your willingness to step out of your comfort zone! I chose Cornell for that reason - to grow as an engineer, a student, and as a person. I was too comfortable being in California my whole life. While there will be highs and lows, the year will pass by before you know it, so make the most of your time here! Utilize the state-of-the-art research facilities, talk to professors, take interesting classes, but most importantly connect and befriend your cohort! It can be daunting, but I can almost guarantee everyone in the cohort is feeling something similar. They've all traveled from different parts of the world to study here with you. Where else are you going to meet someone from, say Minnesota? Then talk to another person from China, and another person from Louisiana, and so on. This is a rare chance to befriend and learn from your peers who have come from places you've never seen.



My most vivid and fun memories from Cornell were with my cohort, eating at Wings Over Ithaca on Friday nights, going on Wegmans trips, studying together, and going to Niagara Falls together.

ALUMNI NEWS



[Kelvin Ye](#) - I'm working at A123 Systems at Waltham, MA as a research engineer on the cathode team. My favorite memories were with the cohort; we had several events and dinners at Professor Deyhim's house, and I always really enjoyed those activities. We should have a reunion party soon! Thank you, Alex, for all of your help and support. I've always appreciated it!

[Chenwei Zheng](#) - I hope you are all doing well! Because of the huge ATAS delay, I am studying remotely this semester as an MPhil/PhD student at UCL. As for the fun memories, I think my fondest might have been having drinks late at night with other students and joking about the huge workload at Cornell. During summer vacation, I went to Zhuhai, a coastal city on the border with Macao and took some beautiful pictures!



[Andre Luke Pertuit](#) - I'm now working at CreeLED (a Smart Global Holding Company) as a Product Development Engineer. I really enjoyed the ski trips we took with the MSE Lattice Group at Cornell. One time, we did some night skiing while 8 inches of snow fell on top of us. That was definitely the most fun I've ever had skiing!

[Yirou \(Yolo\) Wang](#) - After my graduation from Cornell in January 2021, I joined Halomine Inc., located in North Ithaca, as a Product Engineer. This was a return offer from the company where I interned. It's a start-up company developing a polymer coating that can provide prolonged anti-microbial protection on frequently touched surfaces.



There were a lot of fun memories from when I was a student at Cornell. The Hoffman Challenge Course during our orientation was such a good experience that I gained more friends than classmates on the first day. I also enjoyed the leadership training which provided me with lots of new ideas through fun games.

I recently visited Niagara Falls this past July, which had been my dream place to visit since middle school after I read an article about it in my English textbook, and it was truly amazing! Best regards to everyone from Tori and I!



[Nitika Thakral](#) - I am currently a part of a dynamic rotational program called GoGlobal Graduate Program at EMD Electronics. I work in the semiconductor materials division on various digitization initiatives ongoing within the company. I'm also in the process of applying to MBA programs. In spring I visited Arizona and met Raymond Yu, another alumni of the Cornell MSE MEng program.

While I was a student, the MSE MEng cohort organized and participated in many different activities in and around Ithaca. One of my favorite activities was getting together for a hot-pot during the Moon festival. It was a great way to learn about the cohort and eat great food.

I miss my old classmates, but see them doing amazing things in their respective careers. Keep up the good work!

[Zoe Yang](#) - I'm working at Applied Materials as a Process Engineer. AE supplies equipment, services and software for the manufacture of semiconductor chips in electronic devices. My best memories from the program were those activities we did at Professor Deyhim's house! Our cohort gathered often to bake cookies and have wine tastings. I travelled around California a bit before starting my job with AE - and I got a super cute puppy! His name is Neptune.



[Ryan Prager](#) - I'm a Systems Engineer at Applied Materials, working on Varian Semiconductor Equipment. I treasured my time as a member of the MSE M.Eng. program. Cornell MSE was a place where I was truly able to broaden myself intellectually, professionally, and as an individual. By allowing me to expand my understanding of several material science subfields, I feel that I had the ability to forge my own path towards success as an M.Eng. candidate, and even now in my professional career. I am thankful every day that I had the opportunity to connect with a brilliant cohort of fellow engineering students, learn from the faculty and staff who supported me throughout my time in the M.Eng. program, and walk the beautiful paths high above Cayuga Lake. My experience with Cornell MSE allowed me to reach new heights and granted me opportunities I would not have otherwise obtained. I will always be grateful for my time there. The best times at Cornell were Saturdays spent at the Ithaca Farmer's Market and weekends spent exploring New England! I hope everyone's doing well and best wishes to the Covid Class of 2020. Ryan Prager, MSE M.Eng. '20"

[Yanheng Li](#) - I work at Amazon as a Business Intelligence Engineer. To the new cohort: sloping day is really exciting and the homecoming light show is amazing! I haven't traveled much lately due to the pandemic, but I recently went whale watching, and that was an incredible experience!



[Mukund Ayalasomayajula](#) - I work at Intel Corporation as a Packaging R & D Engineer. I recently had the opportunity to visit San Jose on the Intel intercampus private jet! That was by far the best air travelling experience I've ever had! I also hiked a couple of 14ers in the mountains of Yellowstone - which turned out to be some of the most beautiful hikes of my life. But Ithaca still takes the cake.

I have so many fun memories from Cornell! That was the place where I really developed a taste for fine classical music. I attended several orchestras and saw the Cornell music entourage perform classics from greats like Mozart, Vivaldi, and Beethoven.

In the MEng program, the first time I presented a technical poster in front of a large audience it didn't exactly go as planned. I got nervous, stumbled over my words, and messed up a few portions of my presentation. But it was a great learning experience among good friends - which really helped me work harder and make a top tier poster and presentation for my next semester. I made great friends during this amazing experience, and I'm still in regular contact with them even today after almost 5 years!

ALUMNI NEWS



[Elton Zhong](#) - I recently moved across the country to live in the Bay Area in CA and started working as a Process Engineer at Applied Materials in the semiconductor industry. My favorite memories include meeting with the cohort for different events and catching up with each other about our projects. I also enjoyed and miss the walks around campus during the evening and witnessing the beautiful Ithaca sunsets in the gorges. I hope all is well with my old class, our leadership, and I give my best to the newest cohort!

[Liao Chen](#) - I'm pursuing a Ph.D. degree in Management Science and Engineering at Tianjian University in China, and my concentration is on data science and machine learning based on big data technology in the financial domain. I also work as an algorithm engineer in a finance company where I can apply my research outcomes to actual production.



To be honest, I really miss the snowy days and beautiful campus in Ithaca, as well as the tough but fruitful time at Cornell which taught me not only professional skills but also the way of thinking and how to face great challenges.



[Jai Karnik](#) - I just accepted a job with The Boeing company as a Materials and Process Engineer located in Everett, Washington. I was previously working as a Product Development Engineer at Brazeway for 2 years.

I've had great memories during my time at Cornell. Most memorable were the Leadership sessions where we participated in various fun activities which cultivated creative thinking, leadership skills, and teamwork. I particularly remember the day long orientation session, and the activity where we had to go through the spider web ropes course without touching the net. I also miss the cheap beer and amazing conversations I had at the Big Red Barn with fellow grad students.

[Sirui Tan](#) - I am working in Evatec, based on Shanghai, China. This is close to my family, which is the most important thing for me, so I am very happy. For my title, it changed twice in the last one and half years. I joined the company as an Application Engineer, but was then quickly promoted to Process Engineer, and just a few days ago, I was promoted again to Services Leader.

I miss everything back at Cornell. I really enjoyed the time I spent with friends from all different backgrounds, cultures and ages. We met at Cornell as strangers, but then got closer through studying, playing - and through eating and drinking for sure. I hope you are all doing well and staying healthy.

Best regards!



[Hua Jiang](#) - I am employed at Applied Materials in CA, and work on Product Marketing. For me, it is a new and different career path from what I organized at the beginning, but I really want to take a try at learning more new things.

I did my internship with Sartomer (a group of Arkema Inc.), a company providing innovative solutions to 3D printed materials. Working with Sartomer enabled me to extend my expertise in the 3D printing field and especially strengthen my troubleshooting skills.

[Jiao \(Anni\) Wu](#) - I've taken a position as an ASML Design Engineer in San Jose, CA where I'm providing hardware support for semiconductor E-beam Inspection Systems. I'm responsible for prototype integration, system development, and verification methodology. Our team at ASML is always hiring, and I'd be happy to refer Cornell MEng students if anyone is interested.

Hotpot wine parties with MEng friends in Ithaca were the best! In personal news, I have a wedding ceremony coming up soon this December!



[Tianshuo Lan](#) - I'm working as a Management Trainee at MicroPort Scientific Corporation, a global medical device developer and manufacturer headquartered in Shanghai, China.

The day which all of us made cookies together is the most memorable to me. It was in the period of several exams and all of us were so stressed, but squeezed some time in for fun and enjoyed the whole event together.

Recently I paid a visit to one statue in Shanghai which I dreamed of seeing for several years. It was worth the trip. To the new class: Just enjoy your study life in Cornell and try to learn as much as possible. Every moment will turn to a precious memory in your life and powerful tools in your work. Good luck!

[Adith Shankar](#) - I'm living in Oregon and working as a Material Failure Analysis Engineer at Intel. My happy memories from Cornell include boxing, playing ping pong, driving with Jai down to NYC, and eating all the free pizza at our weekly meetings!



[Viola Zhang](#) - I'm currently at Technical University of Munich (TUM) doing a soft-diplomacy exchange and am studying (bio)materials science, architecture, and some other interesting courses. I'll be working at an engineering | architecture | sustainability firm here in the new year, too.

I'm expanding my design skills in Living Architecture and (Bio)materiality. I'll be working in sustainability within the built environment. I'm also part of a coral reef restoration non-profit (Counting Coral) that I would love to share more about if anyone else is interested - and especially if people are interested in investing in our restoration installs! I do plan to return to New York City and continue working and expanding the intersection between materials, biology, architecture, and conservation through project work and research, collaborating internationally!

I am so grateful and appreciative of Professor Deyhim's support during and after the program. Especially with me wanting to find ways in which to incorporate a more interdisciplinary approach to my education with the program, he was so supportive and helpful balancing the courses necessary for me to get a strong MSE education and direction, but also able to incorporate the architectural research I was so interested in, to bridge the gap between fields. Big-picture thinking and the ability to see these larger connections was super helpful because he saw the potential in what I was doing. And although my interests were out of the norm for this program, he helped me expand my work and grow. I'm very, very grateful for that!



[Jungyun Lim](#) - I started my Ph.D. in Mechanical Engineering from University of California, Irvine 3 years ago and am studying Thermal Science and specifically looking into Thermal Metamaterials which can provide unique thermal properties. My life here is mostly researching every day in school. I enjoy researching a new field and contributing to the science community. I recently met with Hatie (Mengxue Bi) in Irvine, CA after she moved down to CA.

[Jeffrey Gallagher](#) - Since graduation, I had some trouble finding where I was supposed to be. The pandemic made the job market unpredictable. In the fall, my girlfriend Laura and I moved to Cincinnati to be closer to her family, and we started a new job search there. Laura got a position working for the nonprofit, Essential Ohio, and I realized that the answer to my problem was simple, and that (Prof. Deyhim) had given it to the cohort many times: start your own company!

In April, I founded Jeffrey Daniel Gallagher LLC, with the DBA of Gallagher Tutoring. I had my public launch in August, and following some recent success with marketing, I've grown my client base substantially. November is not yet over, and November's revenue is already %150 of last month's!



I hope the MEng program has remained strong and well organized during the pandemic; I cannot imagine how difficult it must have been to adapt the program for an online environment. Whenever I get a chance to, I hope to make it back home to Ithaca.

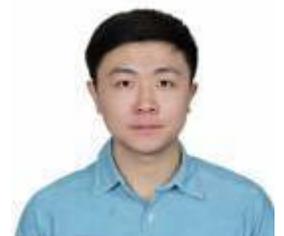


[Drishti Masand](#) - I am currently a Sustainability Manager at Adidas. Some of my favourite memories at Cornell were going to the ice hockey games and getting really into the school spirit to cheer for the team. The energy in the stands is electric and exhilarating!

A few months ago, I attended my first post-pandemic conference as a panellist in Anaheim, California. I recently decided to leave the US and relocate to Germany for my role at Adidas. The visa process for Germany will take a few months (due to Covid related delays), so in the interim I have started my role based in the Dubai office and currently have a grand view of Burj Khalifa, the world's tallest building.

Make the most of your time at Cornell, it's really short so it's important to seize every opportunity and take advantage of all the different classes, experiences and people during the program. Also, never hesitate to reach out to me or other alumni, we know what you're going through and are always here to support and help.

[Rong-Ting Liou](#) - I'm working at Globalfoundries in Malta site, as Senior Integration Engineer (get promotion this year!) in the Technology Development department. I missed the weekly meeting we had, where we gathered together for technical learning, and for fun as well! Recently, Globalfoundries launched an IPO. I'm glad to be part of this big event in the semiconductor industry. If anyone is interested in the job in Globalfoundries after graduation, our department still has headcounts, I could help pass the resume to my manager.





[Siddharth Khuteta](#) - Since graduation, I had some trouble finding where I was supposed to be. The pandemic made the job market unpredictable. In the fall, my girlfriend Laura and I moved to Cincinnati to be closer to her family, and we started a new job search there. Laura got a position working for the nonprofit, Essential Ohio, and I realized that the answer to my problem was simple, and that (Prof. Deyhim) had given it to the cohort many times: start your own company!

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UNITY. Above all else, the MSE M.Eng program emphasizes success through teamwork. As a symbol of solidarity to each other, and to display the tight bonds developed within the program, every new cohort signs "The Paddle" during Orientation Week. MSE M.Eng students pledge to pursue this highly challenging program together as a cohesive unit,

to support each other and contribute to each other's success, in order that each member makes it to graduation with the help of the entire team. The tight bonds woven among the members of the MSE M.Eng cohort last a lifetime.

"Knowledge gives us a compass. But kindness is what gets us down the road".
-- Martha E. Pollack, Cornell University President

"If you want to go fast, go alone. If you want to go far - go together." -- African proverb



MSE M.ENG - HOW TO FOLLOW US

The MSE M.Eng program has seven active accounts on social media platforms: Facebook, Instagram, Twitter, WordPress, LinkedIn, Pinterest, and YouTube. With support from the social media coordinator, all students contribute content on these platforms, so follow them to see where they end up!

