## **HUSKY INNOVATE**

2020-2021

## ANNUAL REPORT

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## Message from the Husky Innovate Program Manager, Lisa Casper

The 2020-2021 pandemic challenged our students in unforeseeable ways.

Husky Innovate Paulis Honors College • Innovation & Commercialization • College of Business

Through it all, students showed us that their innovation and entrepreneurship goals were important to them and despite the upsets caused by Covid-19, they persevered! We saw 25 Husky Innovate students compete in three pitch competitions and win over \$32K in prizes! Hundreds more enrolled in our innovation themed workshops and yet more joined us for our inspiring and informative entrepreneurship talks.

As they say - when life gives you lemons, make lemonade! One unexpected benefit of the virtual environment is that it provided an opportunity to expand Husky Innovate programming to our Michigan Tech alumni and community; providing industry and academia a forum to exchange ideas. We plan to continue with this model for specific events throughout the year. Check for the new Husky Innovate Bridge logo for future events open to all. Our Tech students benefit from the experiences shared via alumni and from their feedback during pitch events such as the 2021 Bob Mark Business Model Pitch Competition held in January.

We offered a fresh line up of speakers this year. During November, in celebration of Women's Entrepreneurship Day, we hosted a panel of successful female entrepreneurs from the Detroit metro area who each shared their entrepreneurial journey with our students and the larger Tech Community. In January, we energized the Tech Community with Innovation Week, a celebration of Innovation that included panel discussions, such as the Private Equity Discussions with alumni, students and faculty; the Bob Mark Business Model Pitch Competition; and Speed Collaboration, a mixer hosted by the library. Innovation Week events provided an opportunity for the larger Tech Community to connect with experts both on and off campus.

As in years past, Husky Innovate held our regular schedule, which includes six innovation themed experiential learning opportunities. But in February we pulled in Michigan Tech alum, Hajj Flemings, personal branding expert, CEO and Founder of Brand Camp. Hajj's workshop taught us how to "Develop a Personal Brand that Matters," something that we all can benefit from learning!

Moving forward, Husky Innovate will continue to look for ways to pull the Michigan Tech community together through virtual and hybrid in-person/virtual offerings. We look forward to connecting with our students again in the fall and welcome alumni and the larger Tech community to our Husky Innovate Bridge events.

Juiz Carper

Lisa Casper, Husky Innovate Program Manager

### Meet the Husky Innovate team



**Lisa Casper** *Program Manager* 

Lisa Casper, MBA, is the Program Manager for Husky Innovate and a Pavlis Honors College pathway advisor for students. Lisa is a member of the faculty team for the I-Corps program, a design thinking facilitator and innovation pathway mentor. In her role as program manager, she curates and develops extracurricular student programs such as pitch competitions, innovation and entrepreneurship workshops, and guest talks; and connects individuals with innovation resources.



Jim Baker Co-Director

Jim Baker, Ph.D, represents the Office of Innovation and Commercialization under the Vice President for Research at Michigan Tech. Jim has over 20 years of experience in startup business development; early stage technology commercialization; and in negotiating agreements with private companies, public funding agencies, and others related to research, development and commercialization.



Mary Raber Co-Director

Mary Raber, Ph.D, MBA, is a Professor of Practice at Michigan Technological and enjoys her multiple roles as Assistant Dean for Academic Programs for the Pavlis Honors College, co-director of Husky Innovate, and most recently as Chief Doing Officer of IDEAhub (Michigan Tech's collaborative working group for educational innovation). Mary is a designthinking and innovation enthusiast and loves to help others embrace the tools and mindsets of innovation to effect positive change.



Jonathan Leinonen Co-Director

Jonathan Leinonen, MBA, is a senior lecturer in the College of Business at Michigan Tech, working at the intersection of business education, economic development and community health. He fosters innovation through product development, marketing and financial strategies conducted through his teaching role with studentled projects, consulting with the Small Business Development Center (SBDC), and as a board member in various organizations.

# **Program Overview**

### Who we are and what we do

Husky Innovate offers experiential learning opportunities for students whose goals are to launch a new venture or lead innovation. As Michigan Tech's innovation and entrepreneurship resource center, we connect student innovators and



faculty and staff researchers with resources to develop their innovation through our programs, mentorship and funding opportunities. Every year students have the opportunity to attend our Husky Innovate experiential workshops that each move students further along the innovation pathway.

Husky Innovate programs include: pitch competitions and workshops, panel discussions, internships, field trips such as the Silicon Valley Experience, The Alley Makerspace, Agile mentoring, University Innovation Fellows, (an international Stanford d.school program), and the I-Corps site program (a NSF program to move research into entrepreneurship).

"I have taken advantage of everything Husky Innovate has to offer. There's so many incredible people to connect with through Husky Innovate!"

-Hunter Malinowski

B.S. Computer Science and Psychology

Husky Innovate is a collaborative team that includes the Pavlis Honors College, the Office of Innovation and Commercialization and the College of Business. The design of our collaboration allows us to provide agile support to our innovators through access to a variety of resources and mentors.

For more information, visit: mtu.edu/honors/husky-innovate

This year we launched a new program, Husky Innovate Bridge. Bridge events are open to Michigan Tech alumni, faculty, staff, community members and, of course, students. Husky Innovate Bridge's mission is to grow and foster Michigan Tech's innovation and entrepreneurship community by facilitating connections between alums, faculty, and students.

Husky Innovate Bridge

We seek to drive Michigan Tech's innovation pride by creating visible and convenient ways for Michigan Tech

alums to engage with Michigan Tech students, faculty, and staff in meaningful and rewarding ways consistently throughout the academic school year. This year our first Husky Innovate Bridge event was incorporated into the annual Innovation Week. Check for the Husky Innovate Bridge logo for future events open to all. <u>Sign up for updates here</u>

For more information, visit: mtu.edu/honors/husky-innovate/bridge

# **Program Overview**

Michigan Tech continues to participate in the University Innovation Fellows (UIF) program, an international program offered through the Stanford University Hasso Plattner Institute of Design (d.school). Each year, four students are accepted to learn and



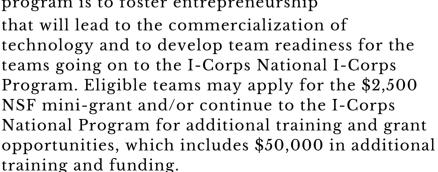
apply design thinking to address a campus challenge that they identify. Through their hands-on immersion experience, UIF students learn how to lead team innovation and tackle "wicked" challenges. At the end of the year, they share a prototype of their solution.

The Faculty Innovation Fellows program is a newly launched d.school program similar to the UIF, but focused on faculty development as change leaders for their campus. Faculty Innovation Fellows also learn how to apply design thinking methods to a challenge of their choosing. Faculty Innovation Fellows work closely with UIFs as design thinking champions and mentors.

This year, four students participated in the Stanford d.school international UIF program. Students immersed themselves in design thinking to be agents of change on the Tech campus. In addition, two Husky Innovate faculty/staff engaged in the Faculty Innovation Fellows program to lead campus innovation.

For more information, visit: mtu.edu/honors/husky-innovate/development/uif

The I-Corps Site Program at Michigan Tech is structured around the lean startup teaching principles and methods used by NSF's National I-Corps Program. The purpose of the program is to foster entrepreneurship





"I attend workshops, try to learn new things, as well as talk to people who are entrepreneurs or mentors and try to learn from them"

**-Ranit Kamakar** Doctoral Student, Computer Engineering

This year we offered three cohorts: Summer 2020, Fall 2020 and Spring 2021. In total, 28 teams and 54 individuals completed our Lean startup workshops.

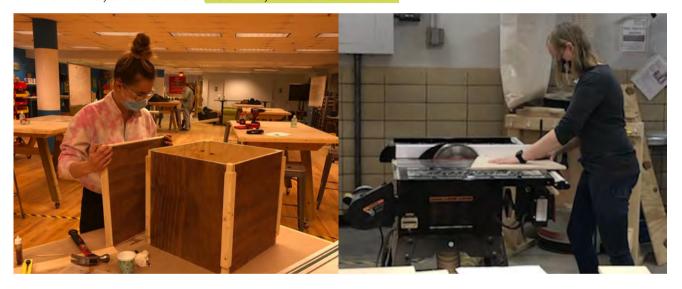
For more information, visit: mtu.edu/honors/husky-innovate/development/icorp

# **Program Overview**

The Alley Makerspace is an inclusive work space for students to meet, collaborate and create. Using open-access woodworking, crafting, 3D printing and electronics tools, members of the Michigan Tech community are welcome to visit the space to design and create



their ideas. Use of equipment is free and volunteer student maker coaches are available to train and consult with makers. The Alley itself was envisioned and designed by students. Originally Michigan Tech's bowling alley, in 2016, a group of University Innovation Fellows (UIFs) seeking to make an impact on campus, decided that Michigan Tech needed a makerspace and identified the closed bowling alley as the spot. Students shared the vision, appealed to administrators and renovations were started. Since 2016, we've seen over 17,200 check-ins.



A highlight from the past year include a receipt of a MSU Regional Economic Innovation \$2,500 grant with a local non-profit, New Power Tour. Makers selected and built prototypes to explore the potential of a local cottage industry in Keweenaw-made household products. Students who made two prototypes got to keep one. Prototypes included an ergonomic laptop desk, storage seating cubes, a cube-shaped LED light and a wooden foldable beach chair.

Access to the makerspace was limited throughout the year due to Covid-19. Despite this, we saw 114 new users visit the space and welcomed over 873 checkin-ins with 14 checkin-ins each day!

For more information, visit: makerspace.mtu.edu



### **Traverse City New Tech Virtual Pitch Competition**

In August, Michigan Tech-affiliated innovators were invited to participate in Traverse City's TCNewTech monthly pitch event. During August, the "takeover" was offered only to Michigan Tech-affiliated teams. A community of Michigan Tech enthusiasts, businesses, entrepreneurs, Michigan policy makers, investors, vendors and potential mentors all gathered to support this event. Teams were offered in-person and virtual options. The August pitch event included two venues: a five-minute pitch for mature teams and a one-minute idea pitch. Two teams competed in the "bar napkin," or 1-minute idea pitch, and three teams competed in the business model pitch.

Winners were: Ranit Karmakar in the five-minute business model category with a \$500 prize, Mitch Delong won the "bar napkin" prize with a \$250 prize.

### **Opportunity Recognition during Covid-19**



In response to local business shut-downs and concerns about the impact of reduced revenue streams for local businesses, Husky Innovate partnered with the MTEC SmartZone and the Small Business Development Center to host a workshop to help businesses identify new opportunities and value propositions in the face of customers' changing needs. We used evidence-based practices from Lean Startup, Design Thinking and Strategic Doing to plan a way forward. An example of an outcome from this type of process is the development of our new program Husky Innovate Bridge.



### **Protect your Innovation**

Michigan Technological University's own IP expert, Licensed Patent Agent and Associate Vice President for Research Administration Jim Baker, and local MTEC SmartZone CEO Dan Jamison led a conversation with compelling IP scenarios. Librarian and PTRC Representative Annelise Doll provided an overview of patents and trademarks, handson searching activities and information about Michigan Tech's Patent and Trademark Research Center (PTRC), part of the US Patent and Trademark Office's nationwide program of PTRCs.

Topics discussed were the fundamentals of intellectual property such as patents, trademarks, licensing, and trade secrets, and how to initiate a prior art discovery with Michigan Tech's freely available resources. The session provided an introduction into the practical considerations and trade-offs involved in protecting your idea and how intellectual property protections can be used as a tool to develop your innovation.

# Innovation Journey: talk with Ranit Karmakar

As one of Husky Innovate's guest speakers, Michigan Tech computer engineering Ph.D. candidate Ranit Karmakar shared his innovation journey. Through his research,



Ranit developed robust algorithms to analyze medical images. This work led him to discover an opportunity within the eye care industry.

Ranit developed his idea through Husky Innovate workshops, Houghton business incubator, the MTEC SmartZone, Superior Ideas and the NSF sponsored I-Corps Site program. He pitched his idea at the Bob Mark Business Model Competition ('20), and New Venture Competition ('20) and TC NewTech ('20) winning top prizes at all venues. Ranit shared how customer discovery led to new insights and unexpected pivots.

### **Introduction to Design Thinking**

We offered two Introduction to Design Thinking workshops for students interested in the human-centered design process developed at Stanford's d.school, design thinking. Design thinking is a way to lead team innovation, and is a methodology used to help frame life's challenges into opportunities. Following a process that starts with empathy and moves to definition, ideation, prototyping and testing, one experiences the design thinking mindsets and methodology while tackling ambiguous problems. These workshops were led by Mary Raber who is a Faculty Innovation Fellows Teach Team member at the Standford d. school.



### **Women in Entrepreneurship Panel**



On November 19th, we hosted a virtual panel discussion with three remarkable entrepreneurs, Linda Girard (CEO and Co-Founder, Pure Visibility), April Clarke (Co-Founder and Co-Owner, Xpress NEMT, Inc.), Jenny Feterovich (Co-Founder and Managing Partner, Parliament Studios; Executive Producer, Muse Production House).

Each panelist shared how their journey shaped their

perspectives on entrepreneurship, and reflected on the importance of adaptability and resilience -- and how to stay relevant during Covid-19.

"As women, we need to continue to believe in and show up for ourselves.
There are resources and many folks, especially other female entrepreneurs, who want you to win. Perseverance is key."

-April Clarke Xpress

### **Panelists**



**Jenny Feterovich** 





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**Linda Girard** 





**April Clarke** 





## 2021 Innovation Week: January 25th - 29th

Over 250 individuals participated in week-long programming that included five talks, one mixer and the Bob Mark Business Model Pitch Competition. Michigan Tech alumni served as guest speakers and competition judges. We are excited to bring in more programming to next year's Innovation Week. We extend a special thank you to our alumni presenters.

### Alumni presenters:

**John Rockwell** '79, CEO and President of Accelergy Corporation, BS in Business Administration–Michigan Tech, MBA–University of Minnesota.

Karl LaPeer '85, Partner at Peninsula Capital Partners LLC, BS in Mechanical Engineering-Michigan Tech, MBA- University of Michigan.

Jeff Helminski '97, Co-Founder and Managing Partner of Auxo Investment Partners, BS in Mechanical Engineering– Michigan Tech, MBA–Stanford University, MS in Manufacturing Engineering–Purdue University.

**Tom Nye** '03, Director with Generation Growth Capital, MS in Electrical Engineering-Michigan Tech, MS in Electrical Engineering-University of Washington, MBA-University of Wisconsin-Madison.

Hajj Flemings '96, Founder of Brand Camp University and Rebrand City, BS in Mechanical Engineering, featured on CNN's "Black in America: The New Promised Land" with Soledad O'Brien.





## 2021 Innovation Week: January 25th - 29th **Panel: Advanced Power Systems Research Center**

Jeremy Worm of Michigan Tech's Advanced Power Systems Research Center (APS LABS) provided an overview of APS LABS and discussed innovative approaches to research, education, and collaboration with industry. A panel discussion with APS LABS leadership followed the presentation.

APS LABS is focused on clean power generation and nearly all aspects of mobility with emphasis on ground vehicle systems. APS LABS is a full service organization conducting fundamental research, applied research and advanced engineering, product development, and validation testing. APS LABS supports commercial partners ranging from start-ups to Fortune 100 companies, and serves in a lead, or subrole on many government contracts with commercial partners.



**Ieremy Worm** Associate Director. APS Research Center

### **Panel: Health Research Institute**

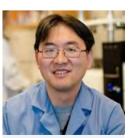
Three Michigan Tech researchers, Dr. Megan Frost (Kinesiology and Integrative Physiology), Dr. Bruce Lee (Biomedical Engineering) and Dr. Jingfeng Jiang, (Biomedical Engineering) discussed their experiences with start-ups and applying their research to relevant health problems.



Dr. Megan Frost Kinesiology and Integrative Physiology



Biomedical Engineering

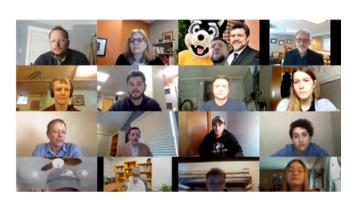


Dr. Jingfeng Jiang Biomedical Engineering



# **2021 Innovation Week: January 25th - 29th**Panel: Private Equity for Innovation

Michigan Tech alumni panel discussion with John Rockwell (Accelergy Corporation), Karl LaPeer (Peninsula Capital Partners, LLC), Tom Nye (Generation Growth Capital), and Jeff Helminski (Auxo Investment Partners). These private equity investors shared common investor goals and strategies, opportunities that investors look for and investment trends in private investing. This panel was ideal for entrepreneurs exploring financing options for their innovation, future private equity investors and equity investors.





# Innovation and Collaboration at the Van Pelt and Opie Library

The Van Pelt and Opie Library hosted a fun mixer activity where attendees saw first-hand how collaboration leads to innovative solutions. Libraries are inherently interdisciplinary spaces that can serve as a jumping, off point for active collaboration and innovation. Michigan Tech's library facilitators instruction and learning team leader Jenn Sams, and library director Erin Matas, led a speed collaboration activity designed to meet new people, see a problem through a different lens, and inspire innovation. The librarians also shared highlights on how the library supports and participates in innovative activities via a Patent and Trademark Resource Center, the 3D printers and its innovative response to Covid-19.



# **2021 Innovation Week: January 25th - 29th**IDEAhub Innovative Education Prototypes

IDEAhub leaders shared their innovative education pilot projects and approaches to address the challenges of Education in the 21st Century.



About IDEAhub: <u>IDEAhub</u> (Innovate, Design, Engage, Act) is an incubator and touchstone for

creative interdisciplinary solutions to complex problems facing Michigan Tech, the community, and the world. We engage faculty, staff, students and community members to identify and act on opportunities for innovation. Our work is concentrated in three "Hubs:" Global and Community Engagement, Husky Innovate, and Tech Forward Educational Innovation. Within the Tech Forward Educational Innovation Hub, we have three working groups each focused on one of the initiatives identified in the Education of the 21st Century final proposal: "First-Year Experience," "Next Gen Gen Ed" and "Interdisciplinary Education." The groups' membership includes faculty, staff and students from across the university.

### Journey as an Entrepreneur

A Michigan Tech alumni panel discussion with entrepreneur and author Hajj E. Flemings ('96, BS in mechanical engineering). Hajj shared his journey as an innovator and entrepreneur, setting the stage for his February workshops.





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Husky Innovate hosted the annual Bob Mark Business Model Competition on January 28th. The competition was hosted virtually via Zoom. Graduate and undergraduate students from across campus disciplines were invited to compete. Faculty, staff and students watched the energized pitch competition. While we missed meeting in person, we were excited for the opportunity to extend the invitation to the Michigan Tech community around the world. Congratulations to our participants and winners!



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### **Competition Winners**

#### **Idea Pitch Category**

- First Prize (\$125): Jordan Craven, 3D Modeling Application
- Second Prize (\$75): Ella Faulk, Infusion Filter Pad for Dry Hair
- Third Prize (\$50): Rachel May, Smart System for Excavation and Drilling
- Social Impact Award (\$100 supported by Dr. Elham Asgari, CoB): Rachel May, Smart System for Excavation and Drilling

#### **Business Model Category**

- First Prize (\$2,000): Ranit Karmakar, Focus
- Second Prize (\$1,000): Kyra Pratley, Mercy Aid
- Third Prize (\$500): Hunter Malinowski, Recirculate
- Honorable Mention (\$250): Tanner Sheahan and Marcus Lamarucciola, Clipt
- Audience Favorite (\$250): Kyra Pratley, Mercy Aid
- Social Impact Award (\$1,000 supported by Dr. Elham Asgari, CoB):
   Ranit Karmakar, Focus
- MTEC SmartZone Breakout Innovation Award (\$1,000): Hunter Malinowski, Recirculate



"Don't be scared to put yourself and your idea out there. Only good things can come from experiences like this: whether it's really productive feedback, winning, or both -- you will walk away from the competition with more knowledge and confidence."

Jordan Craven



# Business Model Boot Camp

Husky Innovate hosted the Business Model Boot Camp, a free virtual workshop that helped students develop their innovation. Using the Business Model Canvas, students worked with members of the Michigan Tech I-Corps Site Program teaching team to develop a business model for their technology or idea. Students who planned to compete in the Bob Mark Business Model Competition were strongly encouraged to register for the workshop.

## Business Model BOOT CAMP

### **Finance your Innovation**

A virtual workshop facilitated by Patrick Visser, Chief Commercial Officer at the MTEC SmartZone. Patrick brings a broad range of finance experience.



Workshop topics included fundamentals of small company finance and founder capital fundraising strategies. Students who planned to compete in the New Venture Competition were able to ask questions about their new venture's financing strategy.



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### **Present your Innovation**



A virtual workshop facilitated by Dr. Marika Seigel, Professor of Humanities. Dr. Seigel shared tips and guidelines around how to share your innovation's story with investors, customers and stakeholders who want to hear a compelling story about what motivates an individual's innovation. Dr. Seigel shared the process for developing a relatable story along with a hook for the audience. The workshop prepared students for the New Venture Competition and the those thinking ahead to the 2022 Bob Mark Business Model Pitch Competition.



### **New Venture Competition**

For the 11th year running, Central Michigan University and Michigan Tech collaborated to offer students a chance to compete at CMU's New Venture Competition. Despite the challenges of a pandemic and a virtual platform, our students persevered, honed their pitches and won top prizes. This year's NVOC Michigan Tech winners were also winners at the virtual 2021 Bob Mark Business Model Pitch Competition. Congratulations to this year's Michigan Tech winners!

### **Competition Winners**

#### **10-Minute Pitch Category**

• Best Overall Venture Prize (\$25,000): Ranit Karmakar, Focus

#### 2-Minute Pitch Category

- Honorable Mention Award (\$75)
   Hunter Malinowski, Recirculate
- Third Place (\$1,000): Jordan Craven, The Fitting Room

# Developing a Personal Brand that Matters: a workshop with Hajj Flemings

Students, faculty, staff, alumni and friends were invited to participate in a free two-part virtual workshop facilitated by Michigan Tech alum Hajj Flemings ('96), founder of Brand Camp University, and CEO and co-founder of Rebrand Cities.

Those who attended the workshop were given the opportunity to meet with Hajj 1:1 for a consultation to discuss their personal brand and answer their questions.



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Hajj Flemings has worked with clients including Cadillac, Walt Disney, Pitney Bowes, Pfizer, the Detroit Lions and the U.S. Department of Defense. Hajj has been a guest speaker at Iowa State University, University of Michigan—Ross School of Business, Davidson College, Fiat Chrysler and others. Hajj has been featured in the Wall Street Journal, TechCrunch, Mashable and CNN Tech Money on the subjects of startups, digital technology and branding.

### **Looking Ahead**

The pandemic has shown us the importance of being able to innovate solutions to challenges. Incoming students who pitched at the Husky Innovation Leaders event expressed their drive to solve big problems. Husky Innovate will continue to offer programming to prepare students to lead innovation in the 21st century. We're looking forward to launching our 2021-2022 lineup of hybrid and in-person events. Remember, our Husky Innovate Bridge events are open to our extended Michigan Tech family. If you would like to receive regular updates, <u>sign up here</u>.



### **Husky Innovate Fund**

The Husky Innovate team believes that all students have the potential to lead innovative change. Our programming offers courses for students across all disciplines. Future entrepreneurs, service leaders, change makers and innovators of all kinds prepare for the 21st Century through our programs. Support student innovators and entrepreneurs with a donation here:

mtu.edu/honors/sponsorship-giving/giving/husky-innovate

