

**AIPG Student Chapter at Michigan Technological University**  
**Fall 2020 - Spring 2021**  
**Annual Report**

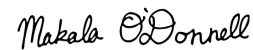
**President: Elana Barth**



**Vice President: Breeanne Heusdens**



**Secretary: Makala O'Donnell**



**Treasurer: Emilie Pray**



**April 15, 2021**

**Michigan Technological University**  
**Houghton, MI 49931**  
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### **1. Inclusive dates of the year being reported**

For the 2020-2021 academic year, the Michigan Technological University (MTU) AIPG Student Chapter aimed to reach out and provide resources to students while in quarantine. In the fall semester of 2020, the student chapter focused on improving students' professional skills by hosting resume building meetings and allowing students to gain information on opportunities at the university, such as graduate school. The student chapter wanted to provide fun, socially distanced activities to allow students to unwind during the busy school year. In the spring 2020 semester, the student chapter focused on providing fun activities for students as well as providing information on important topics worth studying for, such as field camp. The MTU Student Chapter will continue to plan similar informative activities for the 2021-2022 academic year. For this reason, the 2020-2021 annual report will include information from September 2020 through April 2021 with highlighted dates as follows:

September 4, 2020: Stargazing Trip

September 11, 2020: K-Day

September 18, 2020: Pour Paints

September 21, 2020: Resume Blitz

October 5, 2020: Grad School Presentation

October 16, 2020: Pumpkin Carving

October 26, 2020: Class Registration Round Table

December 2, 2020: Presentation Practice

January 29, 2021: Among Us Social

February 27, 2021: Eben Ice Caves

March 27, 2021: Fundraiser Planning

## 2. Membership

### 2.1 Chapter Officers

#### 2019/20 School Year

President	Elana Barth	<a href="mailto:egbarth@mtu.edu">egbarth@mtu.edu</a>
Vice President	Breeanne Heusdens	<a href="mailto:bmheusde@mtu.edu">bmheusde@mtu.edu</a>
Secretary	Makala O'Donnell	<a href="mailto:mmodonne@mtu.edu">mmodonne@mtu.edu</a>
Treasurer	Emilie Pray	<a href="mailto:empray@mtu.edu">empray@mtu.edu</a>

#### 2020/21 School Year

President	Elana Barth	<a href="mailto:egbarth@mtu.edu">egbarth@mtu.edu</a>
Vice President	Olivia Salvaggio	<a href="mailto:omsalvag@mtu.edu">omsalvag@mtu.edu</a>
Secretary	Nolan Gamet	<a href="mailto:ngamet@mtu.edu">ngamet@mtu.edu</a>
Treasurer	Emilie Pray	<a href="mailto:empray@mtu.edu">empray@mtu.edu</a>

### 2.2 Chapter Sponsor

Dave Adler, CPG - 11377 [DAdler@manniksmithgroup.com](mailto:DAdler@manniksmithgroup.com)

### 2.3 Faculty Sponsor

Dr. Chad Deering [cddeerin@mtu.edu](mailto:cddeerin@mtu.edu)

### 2.4 Section President

Bill Mitchell [mitchellvickybill@sbcglobal.net](mailto:mitchellvickybill@sbcglobal.net)

### 2.5 Section Liaison

Kalan Briggs [Kalan.Briggs@arcadis.com](mailto:Kalan.Briggs@arcadis.com)

## 2.6 Chapter Members

The MTU AIPG Student Chapter has 54 members, listed below:

Abigail Friedl	Elliz McClelland	Makala O'Donnell
Alexander Dartt	Emilie Pray	Max Stange
Allyson Hartz	Emily Street	Max Douglas
Addison Goecker	Fritz Jaeger	Melanie Zondag
Austin Riggs	Grace Ojala	Nick Potter
Andrew Cooper	Hannah Hunt	Nolan Gamet
Anthony Bashur	Ian Gannon	Olivia Salvaggio
Aritra Ghosh	Jacob Kettelhodt	Rebekka Guyon
Barbara LaTendresse	Jake Maxon	Ryan Schwiderson
Benjamin Neely	Janayna Manuel	Sentle Augustinus
Brandon Schultz	John Hagopian	Sienna Meekhof
Breeanne Heusdens	John Myaard	Sophie Mueller
Bruce Bilgreen	Joshua Bregger	Steven Shuhonen
Cade Johnson	Kolby Carpenter	Tim Hauxwell
Cory Burkwald	Korrina Young	Tyler Maiers
Dean Wozniak	Maddie Pugh	William Cornillie
Dustin Helmer	Maddy Anderla	Wyatt Bisballe
Elana Barth	Maisy Snyder	Zach Daining

### 3. Chapter Activities

#### September 4, 2020: Stargazing Trip

The student chapter started the semester with a socially distanced event at Brockway Mountain to do some stargazing as a group. The night was not good for stargazing, but it was nice to see the full moon through a telescope and in person. This event was great for seeing members after the summer break.



*Picture of the full moon during AIPG's stargazing trip.*

#### September 11, 2020: K-Day

The yearly event hosted by the Michigan Tech campus allowed for organizations to virtually host new students who may be interested in joining the student chapter. This event was coupled with a physical table at a separate time where students walking on campus may ask questions and join organizations. The student chapter provided information and gave away rocks and minerals that previous members have donated.

### September 18, 2020: Pour Paints

The pour painting event that was planned for spring 2020 was delayed to the fall. A variety of sandstone rocks were collected from a nearby beach for the event. The group mixed and matched paint colors to create designs on the rocks. Additional stencils and cutouts were available, such as the upper peninsula and the AIPG logo, to allow for a break in the paint pattern.



*Using rocks found on local beaches, AIPG students followed pour painting techniques to create designs. The rock pictured above has an outline of the upper peninsula by attaching a stencil to the surface prior to pouring the paint.*

### September 21, 2020: Resume Blitz

In order to prepare for the virtual career fair at Michigan Technological University, the student chapter hosted a resume blitz where the chapter sponsor, Dave Adler, presented on the tips and tricks of career fairs and speaking to recruiters. After the presentation, the executive board members stayed to help others on their resumes before the event.

October 5, 2020: Grad School Presentation

The student chapter organized a meeting with the grad school coordinator, Luke Bowman, for the GMES department at Michigan Technological University to talk about how to apply for graduate school and the expectations and guidance available to new graduate students. After the presentation, Luke stayed behind to answer questions any prospective graduate students might have.

October 16, 2020: Pumpkin Carving

A socially distant limited gathering was planned to enjoy the holidays in order to relieve some stress in the middle of the semester. The group brought their own pumpkins to carve and the pumpkin seeds were roasted at the end of the event.



*Carved pumpkins for a relaxing event with AIPG student members.*



October 26, 2020: Class Registration Round Table

The student chapter organized an event with the advisors for the GMES department at Michigan Technological University. This time was used for students to ask any questions about future classes and potential worries or issues they may have with their class load or meeting degree requirements in a limited time frame.

January 29, 2021: Among Us Social

The student chapter organized an event with the EMU, WSU, and CMU student chapters to create a better social environment and network with individuals who are still in university. The event allowed for everyone to enjoy their time and relax from the stresses of the ongoing semester in a socially distanced fashion. Everyone who participated enjoyed themselves and expressed interest in doing an event like this again.

February 27, 2021: Eben Ice Caves & Laughing Whitefish Falls

In collaboration with the geology club at Michigan Tech, the student chapter went to Eben Ice Caves. These ice caves are created by water dripping over sandstone ledges that are found in a forested area next to a farmer's field. As the weather becomes colder, ice accumulates to create stalactite formations in multiple locations along the trailhead. The weather was perfect for this trip and it allowed for great conversations and some exercise after a brutally cold month. After the trip to Eben Ice Caves, a small group continued to the nearby Laughing Whitefish Falls. This group hiked into the park from the road in order to see the falls covered in snow and ice.



*AIPG students posing at Eben Ice Caves after the icy hike to see the stalactites.*

### March 27, 2021: Fundraiser Planning

E-board members of the AIPG student chapter gathered together to go through all materials the group owned. Donated rocks and minerals were categorized into different sections: free, needs polishing, and sellable. Each category will be used for different purposes. The free rocks and minerals will be used for school events where they can be given away to prospective members. The rocks and minerals that need polishing will need some form of work done to them, such as polishing or cutting, in order to be sold. The plan for these rocks will be to make coasters or bookends to sell. The sellable rocks will be taken to a local mine where the owner has allowed the group to use for fundraising efforts. The money raised will be used to fund students to go to the next in-person national AIPG meeting in California as well as fund the next spring break trip when restrictions are lifted.

#### 4. Member Activities

##### Sienna Meekhof

Geotechnician Co-op, SME Shelby Township

*“My experience with SME took place mainly in the Geotechnical group, while occasionally helping both CMS and Pavements. I tackled a lot of the field work that was needed in the Geotechnical group. I assisted in running hand augers for soil sampling, floor leveling with a manometer, staking for drilling, and overseeing the drill rig soil sampling until I was able to run these tasks on my own. I was also able to assist in changing out long-term observation seismic instrumentation, running short-term observation seismic instrumentation, and running soil resistivity testing to measure the electric currents in soils. I was able to observe three horizontal directional drilling projects, which MDOT required observational reports for, throughout the summer for clients such as Consumers Energy and DTE. In the lab I classified soils to create a soil log, used a hand pen to test strength in kips, dried out soils in an oven to determine moisture contents, completed loss of ignition tests to determine organic materials, and completed tests such as Atterberg limits to determine plastic and liquid limits of soils to better identify the soils for clients. For CMS and Pavements I focused on concrete testing, breaking concrete cylinders to determine strength, nuclear density testing of soils, density testing of asphalt, and coring/observing soils conditions using a probe under failing drives or roads.”*



*Sienna Meekhof posing for the camera in appropriate PPE at her co-op with SME*



*Sienna Meekhof doing work with SME at her co-op in Detroit, MI*

### Breeanne Heusdens

*“In summer 2020, I had an internship at Nevada Gold Mines in the Leeville underground mine as an underground geology intern. The ore is microscopic gold introduced by hydrothermal fluids through sedimentary layers. These layers are heavily faulted and altered by volcanic intrusions, causing the ore to be found outside of specific layers. I assisted in core logging duties using Acquire software, where I logged: recovery, lithology, structures, alteration, metallurgy, geotechnical classifications, and samples taken. It was highly educational to see 300+ feet of core in person after learning the background in studies. I participated in ore control duties underground for a significant portion of the internship. We went to various active headings in the mine to map the structures and lithologies before the rock was shotcreted for safety. The mapping and assay data are used to determine if a heading goes to waste or not, though more weight is given to the assay data as the gold is microscopic in the Nevada mines. My project during the internship was to digitize the maps from ore control. The survey models were taken from Deswik CAD and imported to Maptek Vulcan, where I could digitally add the lithology and structures as indicated in the paper maps. Digitizing these maps help update the 3D geologic model, associate ore grades to structures, and for engineers to plan development around these structures.”*



*Breeanne Heusdens preparing to go underground for ore control in the Leeville underground mine at Nevada Gold Mines.*

### Elana Barth

September 2019-present

Geological and Mining Engineering and Sciences Department (GMES) at MTU

Department Outreach:

*“For the department I presented for MTUs exploring majors class explaining what a geology degree is and how it can be used. I went into depth about field camp and interesting electives such as natural hazards that are offered within the department. In March I participated in a department texting night, where admissions texts prospective students and we answered any questions about MTU or the department.”*

Learning Center Update:

*“Last year Breeanne Heusdens and I created the geology learning center. With Covid we were forced to move the learning center online for a semester but we were back in person for the fall. The center offers help to students with: mineralogy, petrology, geophysics, structural geology, and hydrology. We’re hoping to expand the number of courses we tutor for next year.”*

August-September 2020

Upper Peninsula Geologizing

*“In August and September 2020, I had the good fortune to make two trips to the Upper Peninsula to sightsee and geologize. Some of the geologic features visited included: Exposures of the Precambrian Copper Harbor Conglomerate and the Lake Shore Trap Basalts at Hunter’s Point Park in Copper Harbor (Keweenaw County), outcrops of the Ordovician Bill’s Creek Shale and the overlying Stonington Limestone exposed on the west side of the Stonington Peninsula along Little Bay De Noc near Rapid River (Delta County), and the gorge between Canyon Falls and the Upper Falls on the Sturgeon River near Alberta (Baraga County). Hunter’s Point Park is an elongated peninsula with beaches on two sides (on the Lake Superior side and on the Copper Harbor side) where both the Copper Harbor Conglomerate and the Lake Shore Traps are exposed. You can see interesting weathering features in the basalts, as well as cobble and boulder sized clasts and linear calcite veins in the conglomerate. The west end of the park is a great place to see the sun set over Lake Superior. The Bill’s Creek Shale and the Stonington Limestone are exposed in the cliffs and on the beaches along the west side of the Stonington Peninsula, and at Peninsula Point at the tip of the peninsula where there’s a public park and a lighthouse. The west side of the Stonington Peninsula is a fossil hunter’s paradise. The Precambrian (Huronian) Michigamme Slate is exposed along the Sturgeon River with access at the Canyon Falls Roadside Park on U.S. 41 near Alberta. The beautiful stretch of the Sturgeon river between Canyon Falls and the Upper Falls is known as the Grand Canyon of Michigan. Here you can see the combined effects of the power of the river and the near vertical slaty cleavage of the bedrock in moving large blocks of rock (the size of Volkswagens) from the canyon walls. The ¾ mile hike along the gorge between Canyon Falls and the Upper Falls is a rewarding experience filled with cascades and waterfalls.”*



Weathering effects in Lake Shore Trap Basalts at Hunter's Point Park in Copper Harbor



Copper Harbor Conglomerate outcrops at Hunter's Point Park in Copper Harbor





Bill's Creek Shale (gray) and overlying Stonington Limestone (tan) exposed on the west side of the Stonington Peninsula along Little Bay De Noc in Delta County



Fossiliferous shale and limestone on Stonington Peninsula beach along Little Bay De Noc



Relict ripple marks and vertical slaty cleavage in Michigamme Slate at Canyon Falls



Block of Michigamme Slate in the process of being detached from the canyon wall at Canyon Falls gorge in Baraga County

### **5. Secretary's Report - Makala O'Donnell, MTU AIPG Student Chapter Secretary for 2020/2021**

As the Secretary of the MTU AIPG Student Chapter, I was responsible for keeping track of all relevant information over the 2020 – 2021 academic school year. I attended all meetings and participated to the fullest of my ability. Outside of meetings, I attended school events such as K-Day to help recruit new members through bringing awareness of AIPG for new students. Halfway through the year, I reached out to AIPG members to collect summaries of activities they have participated individually in within the past year. From the meeting minutes and emails exchanged by officials throughout the year, I then developed this Annual Report to submit to the AIPG Michigan Section and AIPG National with the pictures and student experiences that have been previously provided. After writing this report, it was reviewed and approved by the Chapter Executive Committee as stated in Section 7.

### **6. Treasurer's Report - Emilie Pray, MTU AIPG Student Chapter Treasurer for 2020/2021**

In 2020, the MTU AIPG Student Chapter received \$1000 from the Michigan Section to help fund the various educational activities and events that the chapter was able to experience throughout the 2020-2021 school year. In addition, the MTU AIPG Student Chapter was also awarded \$500 from the AIPG for the 2020 Student Chapter of the Year Award. Over the course of the year, the chapter covered incidental meeting expenses for materials used during monthly meetings and events. These expenses totaled to approximately \$100. The chapter also covered the expenses to provide six AIPG graduation stoles for current and future graduating members, which totaled to about \$150. The chapter is also currently working on switching our bank account from Flagstar Bank to the Michigan Tech Employees Federal Credit Union. For the upcoming 2021-2022 academic year, the chapter plans to provide funds to offset travel costs and lodging so members will be able to attend the 2021 AIPG National Conference in California. MTU AIPG Student Chapter members do not pay dues, so fundraising will be necessary for attaining enough funds to pay for future events planned.

**7. Attest the Report has been Approved by the Chapter Executive Committee**

The Chapter Executive Committee approves this report as indicated by their signatures on the cover page.