

2022-23 ACTIVITIES REPORT



WEAVING INDIGENOUS FUTURES



### Mission

Substantially increase the representation of Indigenous peoples of North America and the Pacific Islands in science, technology, engineering, and math (STEM) studies and careers.

### Vision

The next seven generations of Indigenous people are successful, respected, influential, and contributing members of our vast and ever-changing global community.

In 2022, when a roomful of students was asked to describe an Indigenous future, they identified six dozen words. **Resilience** was a top choice, as were **strong** and **ambitious**: Indigenous people and knowledge center a vision of **hope**.

Students see themselves as **Indigescientists** and **Indigeneers**. The future includes **biodiversity** and **traditional ecological knowledge**, as well as the practice of values like **kinship** and **empathy**.

An Indigenous future consists of people, ideas, and responsibilities—woven into a sustainable whole. Similarly, AISES weaves assets into vessels that realize STEM-based visions.

For many tribes, weaving is a tradition blending culture and science. In gathering and transforming raw materials, basketmakers are ethnobotanists, meteorologists, engineers, and mathematicians.

Weaving is a metaphor for AISES' work in blending STEM programs with culturally based approaches. **In weaving a network of people, resources, and opportunities, AISES is like no other national STEM entity.**

Thank you for joining and expanding the AISES circle!



### AISES advances Indigenous people in STEM.

**AISES is a network** of professionals, students, and allies that are increasing Indigenous representation in STEM fields. AISES provides opportunities, resources, and connections. They include student scholarships and internships; leadership and career development; and a range of culturally relevant programs in science, technology, engineering, and math.

**AISES represents a circle of support** that grows more Indigenous STEM leaders, facilitating the sharing of resources and opportunities. Together, we increase success for individuals, organizations, and communities.

At an advocacy and policy level, AISES is addressing such issues as the representation of women and girls in STEM and more equitable, inclusive educational and workplace environments.

**The circle exemplifies Indigenous values and worldview.** Core values guide relationships in the circle. These values include respect, generosity, reciprocity, and responsibility. Strong, diverse relationships unleash innovation. This relational approach drives sustainability.

While STEM requires technical approaches, AISES addresses both minds and hearts. The dynamic network seen at the AISES National Conference can give attendees chills, and partners note a special energy and spirit. Indigenous people who feel isolated at work or the classroom find one-of-a-kind community at AISES. The drum brings rhythms in synch.

**In the circle, everyone is a leader.** AISES seeks to develop Indigenous STEM leaders who are full contributors to organizations and communities. In the AISES family, everyone is welcome—students, professionals, teachers, employers, partners, and allies.

*It takes all of us to make the AISES circle strong!*



**Video story:** AISES is a circle of support for more Indigenous STEM leaders.

## AISES 2022-23 HIGHLIGHTS

**Record national conference attendance.** The AISES network continues significant growth. The 2023 National Conference had a record 3500 registrants and attracted more sponsors than ever before.

**AISES Canada.** As AISES continues the process of establishing a new nonprofit vehicle for a Canada-based network, a full house of 300 people met in Vancouver, British Columbia, in March 2023.



**President EchoHawk marks 10 years with AISES.** In 2023, Sarah EchoHawk's family were surprise participants in a ceremony to mark her decade of leadership. During that time, the annual budget has quadrupled, to more than \$12 million; and the number of staff has increased six-fold, to 50.



**With a 50<sup>th</sup> anniversary in sight, AISES launches Firekeepers capital campaign.**

To keep up with rapid programming and membership growth, AISES is undertaking a multiyear development effort to strengthen organizational capacity in both legacy and innovation. A fire serves many tribal needs, and the firekeeper's role is to ensure the flames stay bright. AISES Firekeepers will form a special, sustaining circle of support.



**RISE Fund, powered by Aristocrat Gaming, promotes STEM in gaming.**

The Resources in Indigenous STEM Education (RISE) Fund is designed to support Indigenous people and tribes with resources and programs for STEM education and careers in the gaming industry. In August 2023, Aristocrat Gaming announced a \$500,000 RISE Fund contribution.



Over **500 Indigenous Nations** are represented in the AISES membership including Native American, Native Hawaiian, Alaska Native, First Nations, Métis, and Inuit students and professionals.

**Leadership Summit back after hiatus.**

The Summit returned in 2022 after a break due to Covid-19. The Pechanga Band of Luiseno Indians played host, and hands-on STEM Day activities followed at its community center. The Muskogee (Creek) Nation was the 2023 host.



### COLLEGE STUDENT BREAKDOWN BY LEVEL



**National AISES science fair returns.** One student studied the medicinal benefit of black walnut and another designed a smart house to thwart break-ins. Oklahoma State University hosted the National American Indian Science & Engineering Fair in 2023, the first in-person fair in years. AISES member students in grades 5-12 also can participate virtually.

### MEMBERSHIP BY TYPE

- Retiree - 3%
- College Student - 51%
- Professional - 28%
- PK-12 Student - 18%

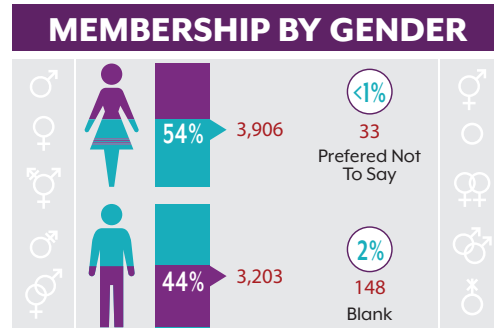
Sequoyah\* - 24%

\*Sequoyah members can be either of the four membership types. Also, number does not include the incoming Sequoyah inductees from the 2023 National Conference.



# AISES 2022-23 HIGHLIGHTS

**Communications feature redesigned website and brand.** AISES is launching a redesigned website and brand that replaces an acronym with “AISES: Advancing Indigenous People in STEM.” Dynamic posts fuel steady growth on social media, especially Instagram and LinkedIn.



**AISES adopts 2023-25 strategic plan.** In June 2022, 50 stakeholders gathered in Denver to discuss Indigenous STEM possibilities transcending barriers and borders. Participants included government, corporate, and educational partners, as well as Canada-based Indigenous representatives. (See the strategic plan on page 24.)



**Alaska hosts professional awards selection committee.** The Alaska Native Science and Engineering Program at University of Alaska Anchorage hosted the past two selection rounds for the annual AISES professional awards. AISES Corporate Advisory Committee members led the process of selecting nominees. The 2022 Indigenous Excellence awardee did groundbreaking research in Southeast Alaska. (See page 16.)

## CHAPTERS



- 249 k-12 Affiliated Schools
- 7 Regions in the U.S. and Canada
- 50 Staff Members
- \$13 Million Annual Budget for 2023
- \$1 Million in Scholoships in 2022 - 2023



WEAVING INDIGENOUS FUTURES



## Weaving STEM Education Resources, Relevance & Relationships

AISES sparks connections: a spark of learning, relating to a mentor, or just helping someone. These efforts start early—as soon as preschool—and they continue into the professional and community lives of adults and elders.

One of AISES' largest programs (by participants) is the SPRK-ing Interest in STEM and Computer Science (CS) program, where elementary school students use coding to guide Sphero robots' movements.

## Teacher Professional Development

AISES has worked to make curriculum and instruction more culturally relevant for Indigenous students. In 2022-23, AISES worked with Minneapolis Public Schools teachers on a range of activities aimed at increasing inclusivity and equity for Native students and families. (MPS has 2000 Native students.) The work addressed local tribal history, Native students' learning styles, historical tribal uses of math and science, and more.

In 2024, AISES launches two major efforts to engage Native-serving teachers. AISES will partner with Fort Lewis College to develop a graduate-level course for STEM teachers that aims to embed Indigenous ways of thinking/knowing into STEM curriculum, as opposed to conventional models that treat cultural elements as add-ons. The U.S. Department of Education Office of Indian Education grant will fund coursework and networking for two cohorts of teachers. As part of a National Institutes of Health grant, AISES will engage high school and tribal college educators around health sciences education and careers, health research, and data analysis.

Teachers are the co-stars for student entries in the National American Indian Science & Engineering Fair. In 2023, Grove (OK) Middle School teacher Donna Deason brought 17 students to NAISEF at Oklahoma State University. "Scientific research is the best tool I can give my students," she says, for the range of analytical, follow-through, and people skills she has seen research provide.

## Seeding Innovation in Culturally Contextualized Computer Science

Numbers mean a lot to Gena Kirk, especially when they're in the Cherokee language.

"In college, my professor told me that Cherokee numbers would never be used," Kirk says. "So he didn't teach them to us."

Now teaching at a high school with majority Cherokee students, Kirk is using the AISES Seeding Innovation project to prove a professor wrong. After her students created a computerized clock and calendar with Cherokee numbers, they turned to games like Yahtzee. Students renamed the game for the Cherokee word for buffalo - ᎠᎹᎩᎨ - and they designed special Cherokee dice.

"They made them in Blender 3-D modeling," teacher Jonathan Ford explains. "I just printed them. The students made them."

At Stilwell High School in Oklahoma, the project pairs Ford, a computer/technology teacher, with Kirk, a Cherokee language/culture teacher. They use technology like Arduino, C++, Python, and drones.

Seeding Innovation also promotes Advancement Placement CS courses. In 2018, only 51 Indigenous girls nationwide took the AP's Computer Science A & P exams. AISES partners with the Kapor Center, a nonprofit foundation working to increase tech diversity and equity, especially in CS education.



Red Lake H.S. teacher Sandy Ketterling has valued coaching from a project consultant.

"She came up with these ideas, how to do a trapping game," Ketterling says. "I never would've thought of that."

Ketterling's Ojibwe students in northern Minnesota have coded games around animal trapping. At Lakota Tech H.S. on the Pine Ridge Indian Reservation, teacher Caitlin Bordeaux incorporates Lakota relationship values into CS coursework.

"We have a whole unit on kinship with Sphero robots, having them conversate between each other," she says. Students also made the Spheros dance and tell a tribal story about the magpie.

Seeding Innovation is funded by the National Science Foundation. After teaching AP classes, Bordeaux approached AISES because she wanted to make CS "more real" for Lakota students.

"Teaching with the curriculum before that, I never had the freedom...(to) use my own style of teaching," she says. "It's helped me be a better teacher and provide better opportunities to our students as well."

## STEM Day

They turn household chemicals into goo, design more efficient vehicles from clay, and push paper airplane-making to greater lengths. It's all part of STEM Day, a popular program of hands-on activities for local youth that is scheduled in coordination with AISES National Conferences.



## THEORY OF CHANGE



### AISES Theory of Change

Complex challenges require complex solutions, and AISES employs multifaceted solutions.

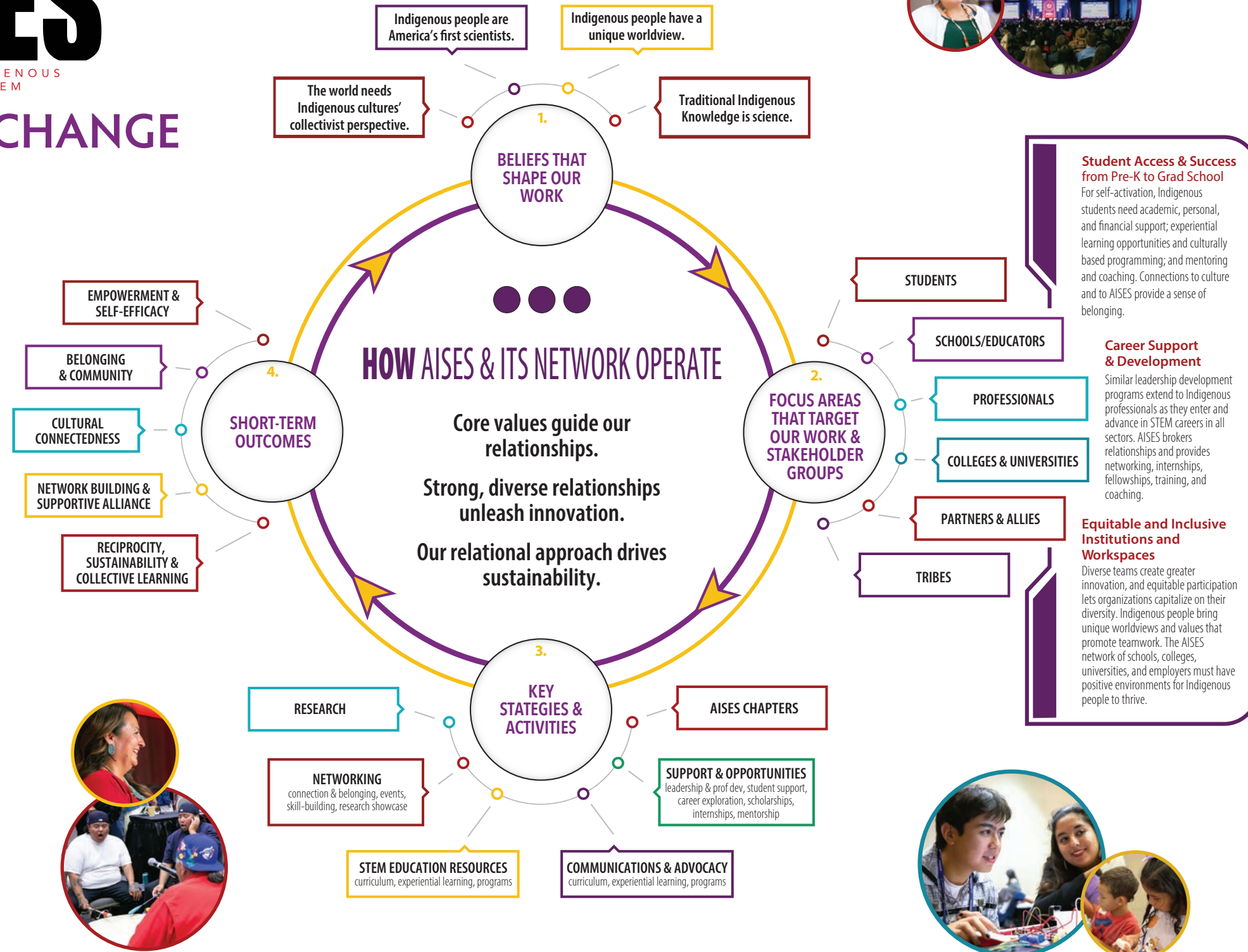
Here is a working picture of how AISES and our network operate. Start at the top and go clockwise. There are **what's**—programs and activities seen in many organizations. There are **who's**—key stakeholders. Then at the top and middle, there are **how's**—the way in which AISES operates, that sets AISES apart.

AISES facilitates connection, provides support and opportunity, and promotes voice and validation.



### IMPACT/CHANGES WE SEEK

- **INDIVIDUALS**
  - Earn credential/degree
  - Obtain/retain STEM jobs
  - Develop skills & acquire knowledge, realizing their own version of success
  - Grow with skills & a mindset to contribute to communities
- **COMMUNITIES**
  - Have unity & allyship in urgently developing Indigenous STEM capacity
  - Continue weaving the thread of Indigenous knowledge inherent in communities
  - Increase economic opportunity, prosperity & sustainability
- **INSTITUTIONS/SYSTEMS/WORLD**
  - Indigenous contributions are made to a global STEM framework
  - Equity & inclusion in institutions/workplaces
  - Indigenous worldviews & values are represented in Western spaces & embedded in institutional frameworks
- **TRIBAL NATIONS**
  - Tribal Nations have strong STEM infrastructure to support sovereignty & self-determination
- **AISES & AISES NETWORK**
  - Sustained catalyst for Indigenous STEM
  - Knowledge keeper & Advocate
  - Network unleashes new energy & innovation in a movement that benefits all people



**Student Access & Success from Pre-K to Grad School**  
For self-activation, Indigenous students need academic, personal, and financial support; experiential learning opportunities and culturally based programming; and mentoring and coaching. Connections to culture and to AISES provide a sense of belonging.

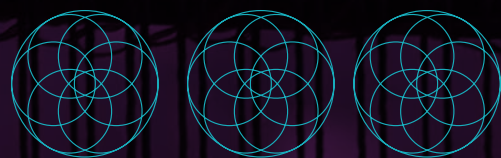
**Career Support & Development**  
Similar leadership development programs extend to Indigenous professionals as they enter and advance in STEM careers in all sectors. AISES brokers relationships and provides networking, internships, fellowships, training, and coaching.

**Equitable and Inclusive Institutions and Workspaces**  
Diverse teams create greater innovation, and equitable participation lets organizations capitalize on their diversity. Indigenous people bring unique worldviews and values that promote teamwork. The AISES network of schools, colleges, universities, and employers must have positive environments for Indigenous people to thrive.



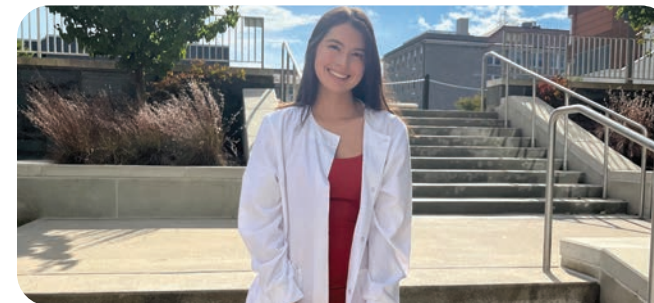


WEAVING INDIGENOUS FUTURES



## Supporting Indigenous STEM Students & Leaders

**In the Indigenous worldview, leadership is participatory:** everyone has a gift to contribute. Tribal collectivist values such as humility run counter to individualist-oriented values; and AISES provides a range of culturally grounded, leadership development support.



In 2023, AISES gave emergency scholarships for student financial shortfalls, such as help buying textbooks or paying for living expenses during an internship. Kira Alaniz (pictured above) sought a \$500 Good Relatives scholarship to help manage full-time nursing coursework with a 20-hour per week job.

Over the year, **399 students received an AISES scholarship**. So students can leverage other funding, AISES has partnered with Indigenous Education/Cobell Scholars on a common application portal. AISES also operates the Career Hub and facilitates internships, directly through partners and indirectly through National Conference recruiters.

Strong, positive relationships are crucial to students' learning and growing. **The AISES Full-Circle Mentorship program regularly touches about 1500 students annually.**

Keith Parker came to formal Western science later in life. A lifelong Klamath River fisher, Parker studied biology and took advantage of every AISES opportunity. He joined the AISES Lighting the Pathway program, which since 2014 has supported 182 Indigenous students towards graduate degrees. With Natives making up 0.35 percent of U.S. postsecondary faculty, LTP seeks to produce more Native STEM faculty.

**Video story:** An AISES elder inspired Keith Parker to pursue graduate school.



**Lighting the Pathway's support includes stipends, cohort relationship-building and networking, and mentoring with established faculty.** Keith Parker teaches for Cal Poly Humboldt University, where he earned a master's degree. In combining tribal ecological knowledge with genetics, Parker discovered new subspecies of Pacific lamprey, which, like salmon, have seen steep population declines due to climate change and other factors. With Yurok, Karuk, Hupa, and Tolowa ties, Parker is a sought-after expert on Pacific salmon fisheries.



#### STEM College & Career Guide

The AISES guide provides STEM college and career assessments, STEM career overview, college assessment tool, college application guide, resume and interview preparation, and basic financial literacy.

Pictured above, LTP participant Jesse Peltier, PhD, is set to take a tenure-track faculty chemistry and chemical biology position at Northeastern University in early 2024. The assistant professor will be affiliated with the chemical engineering department.

"We blend organic, inorganic, and materials chemistry," says Dr. Peltier, who is Turtle Mountain Ojibwe, Nakoda, and White Bear First Nation. "My group creates earth-abundant molecules, and

porous materials to address challenges related to catalysis, energy, and sustainability."

"Jesse is brilliant," says Dr. Mary Jo Ondrechen (Mohawk), an NU professor of chemistry and chemical biology who is a Lighting the Pathway mentor. "Everyone here is happy that he will be joining us."

## Supporting Womxn Leaders in Diversifying STEM Fields

After a planning phase, AISES implemented the Rematriation project, a cohort-model program centered in mentorship and community building, in combination with an employer training program grounded in Indigenous values and aimed at supporting employers to holistically understand and support their staff who identify as Indigenous womxn.

## MASON ADAMS, AISES Intern & Chapter President

Mason Adams had already won an AISES scholarship when he enrolled at Oklahoma State University in 2020. But nothing could prepare him for Covid-19 pandemic isolation. Isolating in his dorm room, Adams checked out a virtual OSU AISES Chapter meeting.

"I just instantly felt so welcomed," he says. "I had a place on campus. The people I met there I'm still friends with, even though they graduated. They made me feel like I was a part of OSU."

Through AISES, he secured an Intel scholarship and (virtual) internship in 2021. He interned at Microsoft in 2022.

"Engineering to me feels like an outlet to be creative, while at the same time, helping people," says Adams, who is Choctaw. "I say (my major is) electrical engineering because....I love hardware. It's more physics-based."

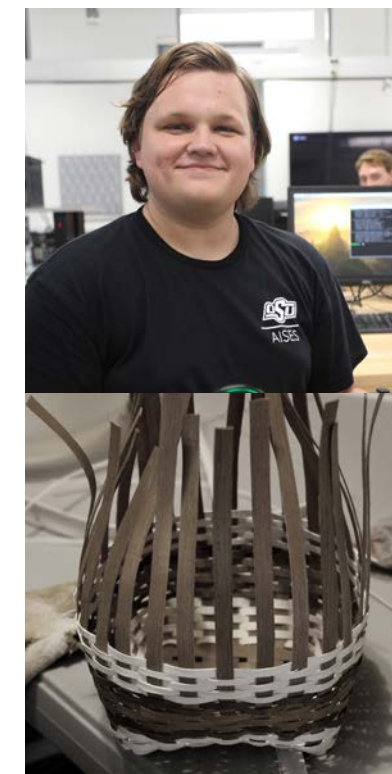
In 2023, Adams secured a third internship through AISES, working as a processor and chip design intern at IBM.

"It's really hard to know what you want to do without actually doing it," Adams advises. "Maybe I don't want to do research, maybe I want to go into industry. (Try) as many things as you can do, to narrow down what you want to do after college."

At a March 2022 chapter meeting, some students saw each other for the first time in two years. There was gratitude expressed to AISES students "for being there" for each other.

"People were actually looking for a community," said William West, then chapter vice president. "Our membership actually grew...Even though we were virtual, we got more and more people."

For his 2023-24 senior year, Mason Adams is serving as the OSU AISES Chapter president. "That's really what AISES has been for me. It really felt like I had a place here and I deserved to be here."



**Video story:** From the beginning, AISES has been part of Mason Adams' college journey in engineering.





**Weaving Across Boundaries**

AISES connects people to resources and opportunities. Within our network, change-makers like Sonia Ibarra, PhD, do the same. Her efforts exemplify the transformation AISES seeks in individuals and communities.

Confronting issues of culture, historic distrust, systemic biases, and other disparities, this is complex work for Dr. Ibarra and AISES.

**Dr. Ibarra weaves connections** among students, communities, knowledge, and culture. She has studied the impact of sea otters on tribal shellfish fisheries in four Alaska Native communities. When Dr. Ibarra first engaged the tribes, leaders asked her to involve their citizens. Dr. Ibarra responded by involving local high school students as research assistants and engaging tribal fishermen and others as project experts. Dr. Ibarra brought the students to AISES national conferences, and they pursued environmental science studies into college.

They measured the size of clams and other shellfish over time. The experts helped track fishing locations and practices, relative to the movement of sea otters. The research found that sea otters, as voracious eaters, consumed so many clams that those shellfish could not grow to a size necessary to reproduce. In many places, sea otters competed with tribes' customary and traditional harvests, pushing them to ever-distant waters. At the national level, sea otters have a protected status that limits Indigenous rights to harvest them. This research will inform Southeast Alaska tribes' advocacy to manage their own natural resources.

**Dr. Ibarra's example of tribal research partnership has been hailed as a model** for governments and universities (even as she heard consistent skepticism from faculty and peer graduate students during her doctoral studies). In addition to reporting results to Native village leaders, Dr. Ibarra gave bound transcripts of interviews to more than 40 informants and their families. An AISES Sequoyah Fellow, Dr. Ibarra received the 2022 AISES Indigenous Excellence award.

Later, a former student researcher was appointed to the sole Alaska Native seat on the North Pacific Fishery Management Council. Dr. Ibarra took a position coordinating the Tamamta Program at University of Alaska Fairbanks, which aims to help

center Indigenous graduate students and bridge Indigenous and Western science.

**To overcome distrust of outside researchers, she painstakingly built relationships**, volunteering at annual Hydaburg and Kake culture camps. On each visit, Dr. Ibarra shared home-grown food and attended community events, while staying authentic to her own Apache, Caxcan, and Mexican roots. She even uncovered her ability for weaving, which her grandmothers had practiced but not passed down. Her Haida weaving mentor, Judy Helgesen, was so impressed by Dr. Ibarra's dedication that she formally adopted her into her family clan.

**Exemplary Indigenous Excellence: Sonia Ibarra, PhD**

- Overcame research's legacy of extraction in Indigenous communities through extensive relationship- and partnership-building
- Bridged Indigenous knowledge and Western science
- Created pathways for Indigenous students: research, mentorship, and exposure to opportunities at AISES and beyond
- Empowered Indigenous communities to use research to advocate for policy change
- Shared weaving, traditional foods, and cultural practices with communities
- Worked to create a more equitable and inclusive environment in institutions



**Video story:** Weaving Across Boundaries



*I've seen it happen in full force—students becoming leaders because of AISES. They're having more of an empowerment to be an Indigenous scientist, to be an Indigenous researcher. There's so much power in that.* – Kimberlee Blevins, Sitting Bull College grad student, AISES Regional Student Representative

## Research Highlights "Systemic Exclusion" of Natives from Tech Ecosystem

An October 2023 report outlines devastating data about Native representation in computer science and technology fields. Only 20 percent of tribal reservation high schools offer CS classes. Of all bachelor's degrees in CS, 0.6 percent were conferred to Native students. Among the boards of the top 200 tech companies in 2021-22, there were no people of American Indian or Alaska Native descent. Since 2018, two of the six largest U.S.-based tech companies reported decreased Native representation. AISES collaborated with the Oakland-based Kapor Foundation on the report, as well as on the Seeding Innovation project and a third effort to develop tribe-specific, gender-responsive CS courses for Native girls.



Link to Kapor Foundation/AISES report

## Supporting AISES Chapters & Networking, Communications, Research & Advocacy

Many studies show that diversity yields greater creativity, but harnessing diversity isn't so simple. There is a balance between the individual and the collective. Native people bring collectivist cultural values that support effective teamwork and increased quality of collective thinking.

AISES skill-building and mentoring help Native leaders navigate their pathway. AISES also seeks to address more supportive environments at workplaces, educational institutions, and professional associations. The AISES advocacy agenda is supported by communications and research making the case for Indigenized approaches.



Pictured here, Aaron Yazzie, a Dine' mechanical engineer at NASA's Jet Propulsion Laboratory, says multiple AISES leadership opportunities in college provided critical skills to later lead a NASA engineering team working on the Mars Perseverance rover.

With tribal collectivist values, individuals in the spotlight often prefer to stress others' contributions. The annual AISES Professional Awards honor exemplars who are accomplished in their fields but typically find strength in a sense of belonging. An AISES award (to professionals, students, partners, and chapters) represents more culturally appropriate validation, because it is given by the AISES collective.

## AISES Strategy Seeks Equity & Inclusion

AISES is assembling an advisory group aimed at promoting more equitable, inclusive educational institutions and workspaces. As diversity supports greater innovation, equitable participation lets organizations capitalize on their diversity. Indigenous people bring unique worldviews and values that promote teamwork. The AISES network of schools, colleges, universities, and employers must have positive environments for Indigenous people to thrive.

AISES launched the Rematriation project to consider the specific situation of womxn STEM leaders. Additionally, the LEAPS project aims to gauge the impact of Indigenous representation, organizational membership, and Indigenous knowledge to drive culture change in the field of biology. With the Botanical Society of America, Entomological Society of America, and Ecological Society of America, AISES seeks to facilitate a cultural shift in how they work with Indigenous scholars and communities to promote Indigenous voices and knowledge.

# winds OF CHANGE

**Winds of Change magazine is an award-winning AISES communications vehicle** and popular outlet for stories of Indigenous science, discovery, and opportunity. Available in print and online formats, Winds of Change content annually receives recognition from the national Indigenous Journalists Association.



Link to 30th anniversary special college issue 2023-2024





## Keeping the AISES Circle Strong

In weaving a network of people, resources, and opportunities, AISES functions like no other national STEM entity. Facilitating the sharing of assets, **AISES represents a circle of support** that grows more Indigenous STEM leaders. Together, we increase success at individual, organization, and community levels.

Indigenous STEM leaders are driven to discover and design new solutions. Many are motivated to apply knowledge to address community needs. These AISES leaders feel a responsibility to give back. To leverage the power of our network's stakeholders, partners, and allies, AISES is launching new campaigns to support increased growth, capacity, and sustainability:

- **The Firekeepers Fund** seeks to raise \$30 million by the time of AISES' 50<sup>th</sup> anniversary in 2027. Building on a successful trajectory in development and partner engagement over the past decade, AISES is expanding efforts in individual giving and more.
- **The Resources in Indigenous STEM Education (RISE) Fund**, powered by Aristocrat Gaming, will support STEM education and careers relative to the gaming industry, a significant economic engine of 200 tribal nations.
- **AISES Sequoyah Fellows**, who as lifetime members have a special AISES connection, will experience intentional community-building to deepen their AISES relationship.



## AISES Advisory Councils

Eight groups of partners provide formal input and feedback to AISES: Academic Advisory Council, Academic Institution Advisory Council, Canadian Indigenous Advisory Council, Corporate Advisory Council, Council of Elders, Government Relations Council, Professional Chapter Council, and Tribal Nations Advisory Council. The Council of Elders provides advice and cultural wisdom to the AISES board of directors.

**Tribal engagement is a priority.** More tribal nations are investing in STEM enterprises. For decades, many tribes have funded scholarships for their youth. Workforce development in technology, data analysis, science, and engineering are increasing priorities.

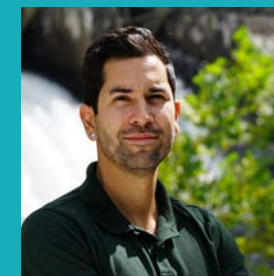
AISES has worked with three Oklahoma tribes on their community and economic development. In tribal schools nationwide, SPRK-ing Interest in STEM and Computer Science program brings Sphero robots to show young students how simple (and fun) computer coding can be. Additionally, Native Financial Cents is a curriculum and experience that addresses financial literacy of youth and young adults. AISES teamed with Wells Fargo Foundation to create the popular "AISES Adventure"—hands-on scenarios where participants see impacts of life decisions (and unforeseen circumstances) on the amount of money in their wallet or bank account.

AISES recently concluded a multi-year project with the Cheyenne River Sioux Tribe that promoted STEM with students, families, and teachers. The Native Youth Community Project worked in multiple schools on a wide range of classroom and out-of-school experiences, field trips, and family engagement activities. (Watch this video for a project example of hands-on, culturally contextualized STEM learning.)

*AISES does an excellent job in mentoring our Native students—to see them as doctors, to see them as engineers, to see them as an astronaut!* – Governor Stephen Roe Lewis, Gila River Indian Community



**Video story:** AISES at Cheyenne River



The 2023 AISES Professional of the Year is Joey Owle, the inaugural secretary of the agriculture and natural resources division of the Eastern Band of Cherokee Indians. In six years, Owle doubled the budget, championing solar power, securing the first electric school bus in the entire state, promoting locally grown food, and co-managing Smoky Mountain lands with the U.S. Forest Service. After securing tribal council support for demolishing a 100-year-old dam blocking the Cherokee reservation's main river, the 35-year-old Owle and a diverse coalition raised more than \$10 million to begin the dam removal process.



## 2023 National Conference Sponsors

### MEDALLION



### TURQUOISE



### CORAL



### LAPIS



### ONYX



### SAGE



### CEDAR



### PINON



### EAGLE



### BEAR



## Other Sponsors

### Educational Programming and Academic Competitions

Graduate Student Research Oral and Poster Competitions  
Burroughs Wellcome Fund

### Undergraduate Student Research Oral and Poster Competitions

Lawrence Livermore National Laboratory  
Pfizer  
BNSF Railway

### Educational Sessions and Workshops

Student Orientation  
Boeing

### Session Tracks

Biological Sciences – Lawrence Berkeley National Lab  
College and Career Readiness – Eastern Washington University  
Community Building - SOLV Energy  
Engineering – TC Energy  
Geosciences- NV5, Inc.

Health and Medical Sciences – National Library of Medicine and the All of Us Research Program at the National Institutes of Health  
Professional & Workforce Development – Comcast NBCUniversal  
STEM & Business – Johnson Scholarship Foundation  
STEM Education – Battelle

STEM Activities Day  
Boeing

Elders Lounge  
Benjamin A. Gilman International Scholarship Program

Event Sponsorship Opportunities  
Resume Room  
Lawrence Livermore National Laboratory  
Tepa Companies

Student Awards Luncheon  
Jack Kent Cooke Foundation  
National Security Agency

College & Career Fair Luncheon  
3M

Corporate Advisory Council and Tribal Nations Advisory Council Luncheon  
Cisco

Kick-off Event  
IBM

Graduate Student Mixer  
Exponent  
USDA Agricultural Research Service

Professional Networking Reception  
Chewy

Networking Hospitality Suites  
Amazon  
American Chemical Society (Chemistry)  
Apple  
Bechtel  
Boeing  
Chevron

Department of Energy National Labs  
Intel  
Johnson Scholarship Foundation  
National Security Agency  
U.S. Department of State  
US Forest Service  
U.S. National Science Foundation  
USDA Natural Resources Conservation Service  
Wells Fargo

Wellness Activity  
Federal Bureau of Investigation

Mobile App Sponsorship  
Peace Corps

Industry Partner Tours  
Amazon  
Eastern Washington University  
Gonzaga University  
University of Washington School of Medicine - Center for Indigenous Health  
U.S. Army Corps of Engineers

Hackathon  
Chevron

R Workshop  
National Library of Medicine and the All of Us Research Program at the National Institutes of Health

Student Study Lounge  
Chevron

Elders Lounge  
Benjamin A. Gilman International Scholarship Program

Coffee Breaks  
AAIAA  
Double Rafter  
University of California, Santa Cruz

Xbox Playroom  
Xbox

Water Bottle  
AES

Footprints  
3M

Student Travel Scholarship  
Amazon  
Berkshire Hathaway Energy Foundation  
CR Powered by Epiroc  
Department of Energy Office of Economic Impact & Diversity  
Dragonfly Consulting LLC  
Koniag Government Services  
National Institutes of Health  
Sealaska  
USDA Natural Resources Conservation Service

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NCyTE at Whatcom

Media Partners  
DiversityComm Inc  
Winds of Change Magazine

UniversityComm, Inc.  
STEAM

winds OF CHANGE



## 2023 Leadership Summit Sponsors

### MALACHITE



### TRAVEL SCHOLARSHIP



## 2023-25 AISES Strategic Plan

### FOCUS AREAS

#### 1. STUDENT ACCESS & SUCCESS from Pre-K to Grad School

For self-activation, Indigenous students need academic, personal, and financial support; experiential learning opportunities and culturally based programming; and mentoring and coaching. Connections to culture and to AISES provide a sense of belonging.

#### 2. CAREER SUPPORT & DEVELOPMENT

Similar leadership development programs extend to Indigenous professionals as they enter and advance in STEM careers in all sectors. AISES brokers relationships and provides networking, internships, fellowships, training, and coaching.

#### 3. EQUITABLE AND INCLUSIVE INSTITUTIONS & WORKPLACES

Diverse teams create greater innovation, and equitable participation lets organizations capitalize on their diversity. Indigenous people bring unique worldviews and values that promote teamwork. The AISES network of schools, colleges, universities, and employers should have positive environments for Indigenous people to thrive.

### STRATEGIES

- 1. Increase Awareness & Retention in PK-12 Education** – Start the pathway by increasing awareness among families and communities about the importance of STEM education and providing culturally responsive curriculum and programming to improve student engagement and retention.
- 2. Increase Access & Success in Higher Education** – Continue the pathway by providing financial, academic, and cultural support to college and university students in order to increase postsecondary access and success.
- 3. Increase Leadership Opportunities for Professionals throughout Their Careers** – Expand the pathway by providing professional development resources to increase the number of professional leaders in all employment sectors.
- 4. Increase Visibility & Understanding through Partnerships and Research** – Illuminate the pathway by engaging in research and cultivating strategic partnerships to increase the visibility and understanding of the challenges and solutions that are unique to Indigenous students and professionals in STEM studies and careers.

### CURRENT ORGANIZATIONAL GOALS

1. Build the organizational capacity and infrastructure of AISES.
2. Grow and sustain AISES membership and networks.
3. Increase visibility and advocacy that brands AISES as the “go-to” organization in Indigenous STEM.
4. Develop, implement, and weave culturally informed STEM programming.
5. Diversity funding sources.
6. Develop the emerging AISES Canada organization.
7. Create an AISES Theory of Change.





WEAVING INDIGENOUS FUTURES



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**Dr. Bret R. Benally Thompson** (White Earth Band of Ojibwe)

**Rose Darden** (Ute)

**Steve Darden** (Navajo, Cheyenne, Swedish)

**Norbert Hill, Jr.** (Oneida)

**Phil Lane, Jr.** (Yankton Dakota and Chickasaw)

**Cecelia Lucero** (Acoma Pueblo)

**Dr. Artley M. Skenandore** (Oneida Nation)

**Faith Spotted Eagle** (Ihanktonwan Band of the Dakota/Nakota/Lakota Nation of South Dakota)

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**Alicia Mitchell** (Cherokee Nation)

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**Kari Rasmussen**

Senior Development Officer

**Brianna Starks**

Business Development Manager

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Engagement Officer

**Lisa Paz** (Pawnee/Comanche)

Managing Director of Engagement and Advocacy

**Laura Vicenti** (Cherokee Nation)

Engagement and Advocacy Manager

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Winds of Change Magazine Editor

**Kristen Goodfriend**

Winds of Change Magazine Art Director

**Meghan Little**

Winds of Change Magazine Managing Editor

**Montoya Whiteman** (Cheyenne and Arapaho)

Managing Director of Editorial and Special Projects

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**Jeannine White**

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Administrative and Human Resources Coordinator

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Program Officer

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**Roseann McDermott**

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**Dr. Johnny Poolaw** (Delaware, Chiricahua Apache, Comanche, Kiowa)

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Student Success Program Manager

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PK-12 Program Officer

**Dr. Tiffany Smith** (Cherokee and Muscogee Nations)

Director of Research and Career Support

**Stacy Smith Ledford** (Eastern Band of Cherokee Indians)

PK-12 Program Officer

**Sky Wildcat** (Cherokee and Mvskoke)

Research and Career Support

Senior Program Officer

**Tesia Zientek** (Citizen Potawatomi Nation)

Senior Director of Programs

#### Special Events

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Managing Director of Special Events

**Michaela Henry** (Navajo)

Events Manager

## AISES Staff

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Instagram: [aises\\_hq](https://www.instagram.com/aises_hq)

X: [@AISES](https://twitter.com/AISES)

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