

winds OF CHANGE

EXPANDING OPPORTUNITIES FOR AMERICAN INDIANS, ALASKA NATIVES, AND NATIVE HAWAIIANS

FASTER AND HIGHER

AT BOEING, MARK
ABOTOSSAWAY'S
DREAM CAREER
IS TAKING OFF

PLUS

CYBERSECURITY CAREERS

OPPORTUNITIES — AND
THREATS — ARE GROWING

GETTING ON A STEM PATH

INTERNSHIPS AND MORE

THE IMPORTANCE OF SCIENCE FAIRS

A MENTOR SHARES
HER PERSPECTIVE

THE TOP
50
WORKPLACES
FOR NATIVE STEM
PROFESSIONALS



All the companies on the *Winds of Change* Top 50 STEM Workplaces list are strong supporters of diversity. But what are these workplaces doing that sets them apart? Here, we've taken a closer look at five of these employers to highlight some of the ways they foster an inclusive climate at work and the initiatives they have put in place to support individual staff members. To get an even clearer picture of what being part of a diverse workplace can mean to an individual, we asked a Native American STEM professional at each of these organizations to describe his or her experiences.

THE BOEING COMPANY SKILLS FOR THE NEXT CENTURY

When Boeing leaders talk about diversity and inclusion, they mean business. Diversity and inclusion are part of Boeing's values at the highest level and recognized as critical to Boeing's success in the global marketplace. Having diverse employees, business partners, and community relationships is vital to creating advanced aerospace products and services for customers around the world.

Boeing is the world's largest aerospace company and a leading manufacturer of commercial jetliners and defense, space, and security systems, employing more than 160,000 people across the United States and in more than 65 countries. This represents one of the most diverse, talented, and innovative workforces anywhere.

Boeing has earned numerous awards and strong recognition as an employer. For three consecutive years and the eighth time overall, Boeing received a perfect 100 score on the Human Rights Campaign's Corporate Equality Index. Readers of *Minority Engineer* and of *Woman Engineer* both ranked Boeing No. 1 in 2015 among companies in the United States they'd most like to work for. And that's just the beginning of the list of citations the company has received.

Boeing's commitment to diversity means providing a work environment for all employees that is welcoming, respectful, and engaging, with active recruitment of new talent and opportunities for personal and professional development. That work environment increases productivity, quality, creativity, and innovation at the aerospace leader.



MARK ABOTOSSAWAY
OJIBWE FIRST NATION

STRUCTURAL ANALYSIS ENGINEER
THE BOEING COMPANY

Some days, Mark Abotossaway has to do a quick reality check. He's an aerospace engineer? Check. He's a structural analysis engineer for industry leader The Boeing Company? Check. He's working on the 777X, the largest and most efficient twin-engine jet in the world? You better believe it.

And for a very long time, he never saw it coming. But he did always have a curiosity about how things work. "My father was a heavy equipment operator, so I was always interested in seeing big machinery," says Abotossaway, who grew up on the Aundeck Omni Kaning Reserve, an Ojibwe First Nation reservation on Manitoulin Island in Ontario, Canada. In the schools of nearby Little Current, Abotossaway gravitated toward math and science and was fascinated by physics. "I was more reserved than most of my peers. But I was at the top of my class, and things just came naturally to me," he says.

He was the quiet kid who would stare at the stars. "At night on the reservation the sky's very clear so you can see satellites and stars and planes. As a little kid I always used to look up and wonder what those things were up there," he recalls. "The nearest airport was a few hours away, so I only saw airplanes as little dots in the sky. The sky was a very big thing for me."

Although Abotossaway excelled in school and his parents were extremely proud, there wasn't a guidance counselor or mentor to point him in the direction of college or financial aid. He had never even met a Native American who worked in science or engineering — "not one, in school or in our community."

Being a first-generation college student would mean making his own path. Abotossaway decided to get a job in Winnipeg and figure things out. Working as a baggage handler at the Greyhound station, he

made enough money to enroll in a class or two at the University of Winnipeg and began his pursuit of a physics degree.

The year was 2000. There were semesters he could take only one class while he worked full time; there were others he didn't have the time or money to take any classes at all. But he kept at it. Along the way people began to notice. "One professor took me under his wing and gave me research opportunities, and I gained skills, gained knowledge, gained confidence," he says. Eventually Abotossaway secured funding from his tribal community and completed his physics degree.

The year was 2010 — it had taken a decade to get that degree, but he was about to gain speed and altitude. Abotossaway learned of a dual engineering degree program between the University of Winnipeg and the University of Minnesota, and he was able to transfer credits, so »

MARK ABOTOSSAWAY

(Continued from page 23)

he took out a student loan for the first time and moved to the United States.

One of the first things Abotossaway did on the Minnesota campus was find the student cultural center. “Right away I met the AISES chapter president and she invited me to the AISES National Conference,” he recounts. “That was the 2010 conference in Albuquerque, and I fell in love with AISES right off the bat. I finally found a place where there were other American Indian students. I had completed an entire physics degree and hadn’t met even one American Indian like me. So it was time.”

By 2012, Abotossaway was the university’s chapter president, not to mention president of the NASA University Student Launch Initiative Rocketry Club. Cut to 2013: At the AISES National Conference Job Fair, he interviewed with the team from Boeing. To understate it, Abotossaway says, “That went well, and they offered me the job.”

That went so well that after a year of working on the 787, he was put on the team making the dream of the 777X a reality, revolutionary wings and all. And now he goes to the AISES conference every year as part of the Boeing crew, bringing it all full circle. At last year’s conference, Boeing gave Abotossaway a lifetime Sequoyah membership.

And like so many Sequoyah Fellows, he is happy to offer guidance to Native young people looking ahead to higher education and STEM careers. “Just don’t give up, no matter how much time goes by, no matter how hard it gets,” he advises. “There’s always a way.”

That determination is what kept him going during that decade-long pursuit of his first college degree, the first in his family. “It was getting here — believing I could contribute to something great, pushing the boundaries of science and what’s possible. That’s what we do here. That’s what I do now.”

— Susan Biemesderfer

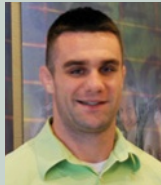
ARE YOU ONE OF THE ENGINEERS WHO WILL BUILD BOEING’S NEXT 100 YEARS?

Since July 15, 1916, Boeing has been making the impossible possible. From producing a single canvas-and-wood airplane to transforming how we fly over oceans and into the stars, The Boeing Company has become the world’s largest aerospace company. This year, Boeing will celebrate its first century of innovation and the people who live by founder Bill Boeing’s philosophy to “build something better.”

That means hiring the best, most diverse, and forward-thinking workforce — led by the engineers who will shape the future in Boeing’s second century. Boeing’s commitment to diversity and inclusion increases the productivity, quality, and innovation vital to creating advanced aerospace products and services for customers around the world.

In recent years, Boeing has recruited a number of engineering students at the AISES National Conference to launch their careers — and to build an ever stronger engineering community at Boeing.

Meet eight young Boeing engineers who are members of the AISES community.



JARED DOPP,
ENGINEERING INTERN
“I wanted to try more of a nontraditional field for a chemical engineer, and Boeing’s reputation as an aerospace leader drew me in.”



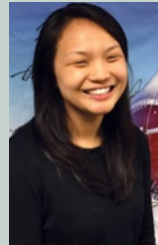
RON DUPRAU,
DESIGN ENGINEER
“I love that I get to design electrical routing for everything that uses power on the 737, from entertainment to flight control.”



AURORA GARCIA,
TEST AND EVALUATION ENGINEER
“I like working at Boeing because of the technical challenges, the learning opportunities, and the level of creativity that my job entails.”



IAN JELLISON,
STRUCTURES STRESS ENGINEER
“My childhood dream was to be an astronaut; as an engineer at Boeing, I’m able to advance technology that can help further space exploration.”



KELSEY KAWAGUCHI,
STRUCTURAL ANALYSIS ENGINEER
“I was always fascinated with planes, and during college I was given the opportunity to intern at Boeing. I enjoyed my work and fell in love with the friendly ‘working together’ culture. That summer I knew I wanted to begin my career with Boeing.”



SOPHIA MUNOZ,
MATERIALS AND PROCESSES ENGINEER
“As an engineer at Boeing, you can start in one area and discover many different career directions within the company.”



NATHAN WALSH,
STRESS LIAISON ENGINEER
“Boeing provides an exceptional opportunity to learn and achieve. Virtually any type of engineering job available throughout industry is available within Boeing.”



AARON WRIGHT,
STRESS ENGINEER
“I work above the factory floor where we make the planes I work on. As an engineer, it is very cool to see the immediate impact of your work right in front of you.”