



MINING FOUNDATION OF THE SOUTHWEST
Thomas L. Aldrich, Executive Director
PO Box 42317, TUCSON, AZ 85733
520-577-7519 (office),

July, 2022
www.miningfoundationsw.org
admin@miningfoundationsw.org

CONCENTRATES

December Awards Banquet to Induct the 2022 Honorees

Denise C. Johnson, Group President, Resource Industries - Caterpillar Inc. 2022 Inductee



Denise C. Johnson is a group president of Caterpillar Inc. She has responsibility for Resource Industries (RI), which includes Integrated Components and Solutions Division, RI Operations and Products Division, RI Sales, Services and Technology Division, and Strategic Procurement and Planning Division.

Johnson joined Caterpillar in 2011 and initially served as the general manager of Specialty Products within Caterpillar's Reman & Components Division, where she had global responsibility for wear component products and facilities. She previously had a career with General Motors, where she built deep expertise in operations and product management.

In 2012, the Caterpillar Board of Directors named Johnson vice president of the Diversified Products Division. In 2013, Johnson was named vice president of Integrated Manufacturing Operations, and in 2014, she was named vice president of Material Handling & Underground Division. She was named group president of Resource Industries in April of 2016.

Johnson, a native of Portland, Michigan, graduated from Michigan State University in 1989 with a bachelor's degree in mechanical engineering. She earned dual master's degrees in mechanical engineering and business administration from the Massachusetts Institute of Technology (MIT) in 1997 as a Fellow of the MIT Leaders for Global Operations program.

Johnson is a member of numerous outside boards, including National Mining Association Board of Directors, National Association of Manufacturers, The Mosaic Company, MIT Leaders for Global Operations Governing Board, and the US Chamber of Commerce.

CATERPILLAR®

Steve Trussell
Executive Director, Arizona Rock Products Association &
Arizona Mining Association
Mining Advocate and Lobbyist
2022 Medal of Merit Recipient



Steve Trussell received a B.A. and Master's Degree from Arizona State University and a Post Baccalaureate Degree from Ottawa University. He began his career in mining as a consultant for the Arizona Mining Association (AMA) as an advocate of the copper mining industry and later with the Arizona Foundation for Resource Education.

Trussell joined Arizona Rock Products Association (ARPA) in 2002 as Community Relations Director and became the Executive Director in 2007. He is responsible for the promotion and preservation of the sustainability of the rock & construction materials industry through active involvement with Arizona public officials on the policy, regulatory and community relations challenges facing the rock products industry.

In 2017, Trussell added to his responsibilities by becoming the Executive Director of the Arizona Mining Association where he showcases his advocacy for the mining industry and utilizes his skills in community relations, government affairs, regulatory processes and general legislative processes at the federal, state and local level.

He serves on several boards and committees including the Technical Advisory Board for the Center of Environmentally Sustainable Mining, The Governor's Regulatory Review Council, Executive Committee for the University of Arizona's Mining School and the Board of Directors for the Arizona Chamber of Commerce and Industry to name a few.

Trussell has been nominated for two national instructor of the year awards, was inducted in the Minor League Football Hall of Fame, received the Adjutant General's Medal from the Arizona National Guard, has been recognized as Policy Leader of the Year at the Arizona State Capitol and was honored by the National Sand, Stone and Gravel Association as the State Association Executive of the Year. In addition, he has served numerous charitable organizations.

His greatest accomplishment is being married to and having the opportunity to support his amazing wife, Ashley.



Omar Smith
Senior Civil Engineer , Wood
2022 Medal of Merit Young Professional Recipient



Omar Smith holds a B.S Degree in Civil Engineering and a Minor in Mathematics from The University of Arizona. During his early years in school, Smith was convinced that structural engineering would be his career path. Through his internships during his junior and senior years, his focus switched to water resources engineering.

Upon graduating, Smith joined Castro Engineering in Tucson as a staff engineer supporting its Flood Control Section. He then moved to Knight Piésold's Tucson Office as a staff engineer, where he expanded his H&H engineering design skills and gained experience in three-dimensional CAD design, slope stability analysis, field engineering, construction quality assurance (CQA), and technical writing.

In 2012, Smith joined URS, later becoming AECOM via acquisition, as a Project Civil Engineer in their GeoCivil Department and was eventually promoted to GeoCivil Team Leader. He supported the mining, power, and flood control industries in South America and the Southwest U.S.

In 2019, Smith joined Wood as a Senior Civil Engineer in Phoenix supporting the Geotechnical Service Line. He manages the Phoenix Civil Design Team responsible for the design of mining related facilities.

Smith is an active member of SME and its Tucson Section . He is presently on the SME Environmental Division Executive Committee, is the Environmental Division's Program Chair for the 2023 SME Annual Conference & Expo and is serving a 3-year commitment on the SME Structure and Governance Standing Committee. He has been involved with the SME Tucson Section for over 11 years, serving as Webmaster, Vice Chair, and as Chairman of the Section for 3 years, providing critical leadership during COVID. He presently serves as the Immediate Past Chair and Scholarship Chair.

Born in Yuma, Arizona, he lived his first years in San Luis Rio Colorado, Sonora, Mexico. When he was 6 years old, his family moved to San Luis, Arizona. Smith attributes his success to his humble upbringing, the guidance of his mother, and the constant support he has received from his family, friends, coworkers, and mentors. In his spare time, he likes to spend time with his family, work on vintage Volkswagens, go camping, and visit a beach in Mexico on special occasions.

wood.

Ruen Drilling Incorporated

2022 Industry Partnership Award Recipient



Ruen Drilling Inc. was established in 1974 by Dorian Ruen providing core drilling services to the mining industry. Now run by Byron Ruen, the company's President, and his brother Arlan Ruen, Vice President, Ruen Drilling is still headquartered in Clark Fork, but also operates branch offices in Bozeman Mont., Modesto Calif., Lima (Peru), LaPaz (Bolivia), Sao Paulo (Brazil), Hong Kong, and San Juan, Puerto Rico.

While still active in mining, the company enjoys the reputation as a leader in geotechnical core drilling, providing defensible design data for tunnels, bridges, dams, highways and other civil projects.

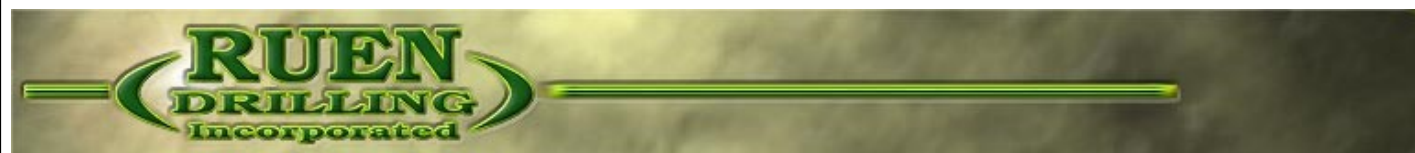
Specialty work includes horizontal and directional core drilling, reverse circulation rotary, and horizontal drain hole installations. The company has helicopter support, underground, and difficult access drill rigs.

Ruen's experience in the US, South America, and Asia includes the following industries:

- ◆ environmental
- ◆ industrial minerals
- ◆ metals mining
- ◆ geotechnical engineering
- ◆ groundwater

Ruen Drilling continues to adapt to new techniques in drilling and sampling procedures. Over the last several years, Ruen Drilling has invested heavily in specialty drill rigs and related tooling. These additions enable Ruen Drilling to be well equipped for the unique projects that it prides itself in handling for the mining and geotechnical industries. Ruen is one of the few drilling contractors with the experience and capability in drilling directionally controlled horizontal drill holes.

Ruen Drilling's crews have developed its international reputation as one of the very best in its business.



Montana Technological University

Department of Metallurgical and Materials Engineering

2022 Special Citation



In 1922, the Montana School of Mines (MSM) began offering a separate Metallurgical Engineering degree that focused on mineral processing and extractive metallurgy. In the early 1960's, the program was broadened to involve materials engineering and thereby include physical metallurgy and materials processing, particularly ceramics. Although changes to the degree offerings have since been implemented to meet the changing needs of industry, the program has retained its broad base and focus on mineral processing and extractive metallurgy. In 2000, the present name of Metallurgical & Materials Engineering (M&ME) was adopted.

Undoubtedly, the program will continue to evolve but it will always honor its heritage thereby helping fulfill Montana Tech's mission. As one of the oldest programs at Montana Tech, the Metallurgical & Materials Engineering program continues to fulfill the historical mission of The School of Mines and Engineering as well as the needs and interests of mineral- and metal-related industries while simultaneously addressing those of the materials industries. The goal is to provide students a quality education with an appropriate blend of theory and practice so they can successfully and confidently enter a career and contribute to the profession and society.

The Department strives to attract and retain the highest quality engineering students to provide resource-based industries with minerals, metals and materials process engineers while maintaining the heritage of Montana Tech. The department continues to sustain coveted programs with emphasis on learning experiences to research and provide solutions for the future needs of society.

Graduates of the program have a passion for excellence and are recognized among the world's most versatile engineers. Growth in the metallurgical and materials engineering disciplines and these related fields has been substantial and has accordingly increased the opportunities for graduates of the program. In this regard, graduate placement has been 100% for over two decades.

MONTANA

TECHNOLOGICAL UNIVERSITY



Message from the Hall of Fame Chairman Robert Tracy, Thyssen Mining



Now it actually is summer. Monsoons are in full swing in the Southwest and the heat has settled in around the country. We have made it more than halfway through 2022 now, which means that the 40th annual American Mining Hall of Fame Banquet is less than 5 months away. Sponsorship commitments have been rolling in and banquet tickets sales have been picking up. We are thankful for the individuals and companies that have contributed so far as we continue fundraising to support the Education Outreach Program. There is still a ways to go but things are looking promising for a great year. As we continue to collaborate with the JW Marriott Starr Pass staff on planning this year's banquet, it is hard to not get excited for all that is ahead for us during the rest of the year.

Diamond: **KOMATSU®**

Platinum:  **Epiroc**  **HEXAGON**



Silver: BGC Engineering, CAID, CalPortland, CEC, CTI, DeConcini McDonald Yetwin & Lacy, P.C.; E3 Strategies, John Fenn, Fennemore, First Majestic Silver, Hudbay (Rosemont Copper), Modular, Next Plan LLC, Pam & Will Wilkinson, Resolution Copper, Professional Minerals Development, Ryerson, Skyline Assayers, South32, TP McNulty & Associates, Tetra Tech, George Tsiolis LawTucson Electric Power, Valley Forge and Bolt Company and Wood

Miscellaneous: National Mining Hall of Fame and Museum



School of Mining & Mineral Resources



OUTREACH CORNER BY CHRIS EARNEST



Summer fun begins as the spring semester wraps up

As the summer sun slowly simmers Arizona, both humans and animals do their best to search for shelter from the heat. The education outreach program is happy to offer many cool opportunities for students, parents, and teachers to learn about the many ways that mining and mineral resources make our society possible.

The summer kicked off with a UArizona campus STEM visit for friends and family of staff from four different University departments: Mining and Geological Engineering (MGE), Materials Science and Engineering (MSE), Optical Sciences, and Electrical and Computer Engineering (ECE). The event was organized by Trin Riojas and included tours and activities from each department. The outreach team is happy to report that participants loved the mineral processing activity and voted it their favorite part of the event.



MGE, MSE, ECE, and Optical Sciences Friends and Family practice their copper refining skills in the Lowell Institute office

July brought both higher temperatures and the Summer Engineering Academy. This year's Mining and Geological Engineering summer camp was divided into two days, a virtual day and an in-person day. The in-person camp took place at the San Xavier Underground Mining Laboratory and the virtual day took place on Zoom but was broadcasted from the Flandrau Planetarium and Science Center.



Outreach Cont.



ON AIR! – The SEA Virtual Day broadcast kept students engaged while learning about mining and mineral resources.

Students participating in the in-person day were taken to the San Xavier Mine where they received a personalized tour of the facility from Director James Werner, mined and then smelted their own iron, learned about the history of mining in southern Arizona, discovered the amazing opportunities offered by a career in mining, and had a chance to meet and talk to MGE professors and current students. When asked about their experience at the camp, one student said “Overall I love the experience and people giving us tip (sic) about mining engineering which help a lot. And experience that they had to share was really nice.”

Students participating in the virtual camp were sent activity kits full of exciting mining and minerals activities. They opened their kits during the camp and were instructed in their use by the outreach team, graduate

student volunteers, and professors from the Mining and Geological Engineering department. The camp was made possible by donations of ore samples from Freeport-McMoRan, the broadcast studio space provided by Flandrau Planetarium and Science Center, support from the College of Engineering, and the time and effort put forth by the professors and students who helped with the camp.

Thanks to everyone’s efforts, students were able to learn about the importance of mining. As one virtual day participant commented, “It’s an up-and-coming job that will be needed for the future and will be essential for the progress of humanity.”

July 22nd brought the education outreach team to the Alfie Norville Gem and Mineral Museum to host education activities for Family Day at the Museum. Visiting families were able to refine their own



Students mine hematite sand while trying to prevent dilution of their ore

copper from copper ore, learn about the many mines in Arizona, and play Mineral Uses Bingo to discover how society uses mineral resources. It was a great collaborative effort, and the outreach team looks forward to working with the museum again. The start of the new school year is just around the corner. In the next newsletter we will introduce the outreach team for the 2022 to 2023 school year and look forward to some of the great outreach activities to come .



Education outreach interns John and Sofia help museum patrons discover how minerals make their world.



Member Corner



We welcome our newest member's

Matthew Warfield, Global Business Development Manager, Hydro Geophysics Inc.

Warfield has been in sales and business development for the last 10 years and just recently joined Hydro Geophysics. He is a skilled communicator and strategist. Working from the ground up on strategies and services to create the right workflows, efficiencies and processes is what drives him. Helping and creating success for his client's organizations is his passion. .

Mekaela Bennett, Senior Engineer, Tetra Tech

Bennett is a graduate of the University of Arizona with a BS in Mining and Mineral Engineering. She has eleven years of varied experience with Tetra Tech in engineering and environmental consulting, currently focus on remediation and environmental compliance for several historic mining properties in Arizona. Her project experience includes groundwater well installation, groundwater and soil sampling, and other site characterization activities. Her management experience includes site investigation/ environmental assessments, mine closure and remediation, air quality monitoring and sampling, soil/groundwater remediation, engineering of caps, covers, and stormwater water diversion and conveyance features, project scheduling, cost estimating, cost control, and construction management.

December 3, 2022 Hall of Fame Awards Banquet Information

SPONSORSHIP OPPORTUNITY



Sponsorships are offered at 4 levels: Diamond (\$10,000), Platinum (\$5,000), Gold (\$2,500) & Silver (\$1,000). All sponsors are recognized on the Foundation's website, press releases, banquet program and during the banquet ceremony.



TICKET SALES

Voting, Silver and Gold members in good standing are extended 2 member pricing banquet tickets at \$200 per ticket. Non-member tickets are \$250.

HOTEL RESERVATION

Attendees are extended a special room rate of \$150 + tax + a discounted Resort Fee of \$10.00 per night, discounted \$85 golf rate and a 20% spa only discount. The contracted cutoff date for reservations at the group rate is Thursday, Nov. or call 877-622-3140.

<https://book.passkey.com/gt/218428440?gtid=e292fcdf8dba577660962b0d6bb8d8>

For additional information, please go to: www.miningfoundationsw.org



Diorama Resurrected



Larry Dykers, Jan Rasmussen and other volunteers helping to put the mine model back together again



Front view of model

The reconstruction and refurbishment of the diorama at the Bullion Plaza Museum in Miami is well underway. Larry Dykers, Tom Scarticinni and Jan Rasmussen are leading the effort with help from museum staff and volunteers. So far an estimated 150 manhours has gone into the project. A \$2,000 donation was made by the MFSW to help. Many thanks to Capstone for their help in moving the model from Tempe to Miami.



Right side of model



Left side of model



Diorama Resurrected



Thanks Larry for all you do for the MFSW.

Lukas Lundin, Chairman, Lundin Group of Companies 2020 Inductee (1958—1922)



It is with great sadness that the Lundin Family announces the death of

Lukas Henrik LUNDIN

on 26th July 2022 in Geneva, Switzerland, at the age of 64, following a 2-year battle with brain cancer which he fought with tremendous courage, determination, and positivity to the end.

A much-loved brother, father, father-in-law, grand-father, nephew, uncle, cousin, companion and friend, Lukas will be missed not only by his close family and friends but by the many acquaintances he made and inspired throughout his life.

The Family wishes to thank the medical teams who have cared for Lukas these past 2 years, especially Dr. Andreas Hottinger and the neuro-oncology team at the CHUV in Lausanne, Switzerland.

Donations in Lukas' memory can be made to:
The Lukas Lundin & Family Brain Tumour
Research Center
c/o Fondation CHUV
Banque Cantonale Vaudoise
IBAN: CH14 0076 7000 T525 3600 1
BIC: 767