



©David Mandeville, Production head frame, American Rock Salt, NY, Construction Crew worker assisting with inspections of critical parts of the production hoist.

2022 ANNUAL REPORT



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SME'S
VISION

Building a better world through
mining, metallurgy and
underground construction.

SME'S
MISSION

SME serves the mining,
resources and underground
construction communities for
a sustainable future.

SME'S
CORE
VALUES

- Safety
- Stewardship
- Innovation
- Ethics
- Inclusion
- Collaboration

Strategic Goals

- 1. INDUSTRY INNOVATION:**
SME is the venue of first choice for disseminating research leading to innovation and encouraging its applications in mining and underground construction.
- 2. INDUSTRY WORKFORCE:**
Mining, metallurgy, exploration and underground construction are careers of choice.
- 3. ENVIRONMENTAL STEWARDSHIP:**
SME is recognized as the premier resource for information on responsible mining and underground construction.
- 4. ASSOCIATION GROWTH:**
SME leads in uniting the community to build a better world.

Contents

Report from the SME President . . . 3

Executive Director & CEO

Comments 4

SME Highlights. 5-6

SME Board of Directors 7

Strategic Committees 8

Membership 9-10

Meetings. 11

Publications 12

SME Divisions 13-14

Financials 15

SME Foundation. 16-21



President 2022
Ronald L. Parratt

SME emerged from the global pandemic with a sense of excitement for the future of our society and for its expanding role in a changing world. Our overall membership, number of local sections and student chapters all increased during 2022 as it became clear that societal changes to adapt to the new green energy environment would require increasing amounts of earth resources to be successful. SME provides the leadership and technical capability to support accomplishing this while ensuring the application of best practices in all areas of mining, underground construction, safety, and environmental stewardship. This is our vision: to be the premier community building a better world through mining, metallurgy, and underground construction.

SME started 2022 with MINEXCHANGE held in Salt Lake City, Utah. The conference was happily received by members and the enthusiasm among the attendees and exhibitors was obvious. The meeting room areas and the exhibit were filled with groups of members engaged in discussion. It was great to see that important activity back in action.

All the Strategic Committees continued their efforts throughout the past year identifying and progressing initiatives to benefit the Society. The Association Growth Strategic Committee is moving forward with an initiative to grow membership by bringing more leaders from SME's Local Sections into leadership roles within the Society. It's a logical progression and an opportunity for Section members to share and grow their leadership skills. In addition, the committee is identifying ways to build stronger relationships with corporations, other societies and with students. All of these can result in membership growth, as the value of SME is made clear.

The Industry Innovation Strategic Committee plans to speak with RAPID, a Watchdog Group who collects data relevant to SME, to explore a mutually beneficial collaboration to help leverage innovative ideas. In addition, the committee is preparing a short survey that will be distributed to mining companies to identify how SME might assist them in helping to solve problems through collaborative arrangements.

The Industry Workforce Strategic Committee has been working on several initiatives. One of these is an effort to engage with state education directors to see if their curriculum includes mining or underground construction programs. They plan to provide them with a white paper that demonstrates the needs for minerals to support the ongoing green energy transition and why mining should be included in their programs. In addition, the committee surveyed 60 related societies to see if workforce is a concern for them. Not surprisingly, all answered yes, but only 47% have staff dedicated to the issue.

The Responsible Mining and Underground Construction Strategic Committee has been in discussions with companies who have responded to a survey regarding how SME can assist them with technical information regarding sustainability and ESG. Forty-two companies have agreed to participate

in follow-up discussions. The committee is working through new ideas to provide support for companies in their ESG programs. This might include the development of an ESG framework for companies, a partnership with academia to structure an annual ESG report, and the creation of a corporate roundtable to discuss ESG issues.

Other important Committees as well that are ongoing such as Finance, Structure and Governance, Tailings and Waste Management, Resources and Reserves and more. The Structure and Governance Committee has recommended and received approval for the Council of Education to create a Mineral School Department Heads Committee. This will replace the earlier, less structured meeting format that has been previously followed. This meeting as well all others are open to all SME members.

SME's eight Divisions were all very busy during 2022. Scholarships, programming, and award selection for MINEXCHANGE dominated their activity. Collectively the divisions awarded \$668,166 in scholarships to 236 students during the 2021-2022 fiscal year. This financial support helps to keep our students academically engaged and hopefully enter our industry.

SME continues to advance our society and industry through a series of new initiatives to deal with a changing world. To attract new individuals to our workforce, SME collaborated with WorkerBee TV to produce six, 22-minute episodes of "Jobs of Tomorrow" featuring mining jobs. The programs will be available on Amazon Prime, Roku, and Tubi streaming services where there is the opportunity to promote mining to more than 250 million subscribers of these services. SME received a research grant from NIOSH/CDC titled "Eliminating Barriers to the Implementation of Automation in the Mining Industry." SME will host six workshops with 35 specialists at each who will target a different technical topic addressing the issue.

The SME Board continues to work on an effort designed to improve the public view of mining by providing factually correct information about mining and its importance to the green economy. Once ready, it will be distributed to mainstream media outlets. During the year, SME signed an MOU with the American Institute of Professional Engineers to enable collaboration between the two groups to create programming both at SME's MINEXCHANGE and at AIPG's annual meeting targeted on mineral exploration/economic geology. The new green energy economy will require a substantial increase in a variety of metals and materials and new exploration will be critical to find these needed resources.

Overall, SME remains financially strong despite the market downturns and membership is rebounding after the effects of the covid pandemic, especially internationally. SME continues to fulfill its mission of service to the mining, resources, and underground construction communities for a sustainable future and its vision to be the premier community building a better world through mining, metallurgy, and underground construction. It certainly has been and continues to be my good fortune to have been a member of SME throughout my career and to have benefited from all that SME provides. Through this past year, I have grown to appreciate even more all the things that SME does for our industry and the value of each. From the Local Sections whose members are the front-line face of our society, to the Divisions and Committees to help guide us and lastly to the SME Staff who keeps us all in order, it's an amazing honor to be a part of it all.



Secretary Ex-officio/Non-Voting
David L. Kanagy, CAE
Executive Director and CEO
Society for Mining, Metallurgy & Exploration

Dear SME Members,

SME celebrated its 65th year in 2022. However, it is more than a number to celebrate; the last year is a real testament to the members and staff of the organization whom I have had the privilege and pleasure to work with during the worst pandemic in my lifetime. In 2022, SME has recovered nicely from the challenges that presented themselves to the Society from March 2020 through the next year. Perseverance has been the theme in recent years as we continue to execute the needs of the organization albeit slightly disruptive.

Perseverance has been one of SME's enduring traits as we continue to pursue our long-term goals. Even as we have been faced with opposition or difficulties we have managed to overcome, work around and continue to serve and support the industry. We have followed Conrad Hilton's mantra, "Success seems to be connected to action. Successful people keep moving. They make mistakes but they don't quit". SME will never quit!

The following pages define the efforts of the Society during 2022. Many SME activities have returned and the Society under the direction of the SME Board continues to achieve many goals within its Strategic Plan. The most important effort lead by the Society leadership in 2022 is our commitment to advance communications with those who are outside of the industry.

The Jobs of Tomorrow television series produced for streaming services has provided SME with the opportunity to highlight jobs and opportunities within the industry. The need for workers in all types of positions and jobs is critical and perhaps this series will inspire many to come and investigate opportunities in the mining industry.

The SME Board collaborated to create a "5 Myths of Mining" document. Based on this exercise, we are now working with a PR agency to publish positive and relevant information on the industry and illuminate how mining plays a critical role in the changing

environment. The message to the general public that minerals are essential to our daily lives and we must meet that need through mining will be a prominent theme.

One of SME's core purposes is to ensure there is a linkage between universities' mining and metallurgical programs and the industry. In 2014, the SME Foundation along with the SME Board of Directors created and funded a Ph.D. Fellowship and Career Grant Program. It was designed to remain active for eight years and encourage our members to pursue Ph.D. degrees in mining and metallurgy and support young faculty to achieve tenure. I am pleased to report that SME achieved its eight-year commitment with an investment of nearly \$8 million dollars in more than 30 people. Both the SME Foundation Trustees and SME Board of Directors have now recommitted to the program for additional years beyond 2022. This is a program that is making a difference.

This year SME President Ron Parratt and I were able to get back out and visit with members and Local Sections. It was indeed a pleasure to visit again with our members face-to-face. We want to understand the current needs and issues that our members are facing and visiting with members allows us to better understand the needs. I expect that in 2023 there will be more opportunity for visits with members and I look forward to hearing from everyone.

There was a lot of change in 2022, but change and improvement is necessary for the Society to stay current and relevant. James Belasco, Professor and Ralph Stayer, former CEO Johnsonville Foods once said, "Change is hard because people overestimate the value of what they have and underestimate the value what they may gain by giving that up". SME is in a period of change to serve members better, while bringing growth and opportunity to the Society.



2022 HIGHLIGHTS AND MILESTONES



To view the
full SME
Annual Report



Best Seller

Published *Tailings Handbook*, selling over 7,000 copies globally

Now Playing

Began streaming *Jobs of Tomorrow* on SME Studios

Sparking the Next Generation

Piloted new teacher program in Denver Public High Schools

Partnering North of the Border

Hosted first SME bookstore at CIM's Annual Conference

Reconnecting Face-to-Face

Returned to in-person conferences in Salt Lake at MINEXCHANGE

Cheers!

Celebrated 6 new UCA awards at NAT

Cross-Discipline Cooperation

Entered into new partnership with AIPG to build geology relationships





2022 HIGHLIGHTS AND MILESTONES

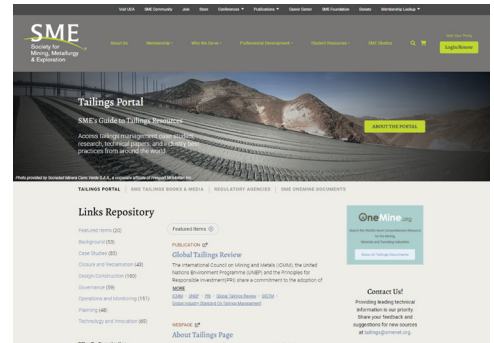


To view the
full SME
Annual Report



Access Granted

Launched the new web resource, SME Tailings Portal



Latin America

Participated in Perumin, South America's largest Mining Conference



Minding the (Generation) Gap

Embarked on landmark research to attract younger members



Building on Success

Extended the PhD Fellowship Grant program for another 3 years

Amplifying Voices

Supported industry perspectives at the DOI Interagency Working Group



Introducing the Underground

Brought students to active tunnel projects to experience a career in tunneling.

Fore!

Raised \$65,429 for the SME Foundation during their annual, sold-out Golf Tournament.

Current Officers



President 2022
Ronald L. Parratt
Principal
Parratt Geological Services, LLC



President-Elect 2022
Marc Le Vier
Consultant
K. Marc Le Vier and Associates



Past President 2022
William Edgerton, PE
Principal
McMillen Jacobs Associates



Secretary Ex-officio/Non-Voting
David L. Kanagy, CAE
Executive Director and CEO
Society for Mining, Metallurgy & Exploration

SME Board Interns (non-voting)



Term 2021–2023
Heather N. Lammers
Senior Engineer
Colorado School of Mines



Term 2022–2024
Richard Wagner, PE
Director, Bureau of Mine Safety
Pennsylvania Department of
Environmental Protection

Directors-at-Large



Term 2020–2023
John L. Uhrie, PE, PhD
Chief Operating Officer
Energy Fuels Resources



Term 2020–2023
Anne L. Williamson, MSc
Vice President, Global Sustainability
WSP USA



Term 2021–2024
Jerry Gauntt
Business Development Manager
Brooks & Nelson, LLC



Term 2021–2024
Cat Joyner, MS, PE
Owner
Scratchgravel Mining Services, PLLC



Term 2022–2025
Rick Lambert
Technical Director, US Mining Advisory
Roscoe Postle Associates Inc



Term 2022–2025
Barbara Nielsen
Manager, Remediation Projects
Freeport-McMoRan Inc

Strategic Committees 2022-2023

Association Growth

Richard Lambert	Chair
Genevieve Sutton	Member
Rusty Winn	Member
Abani Samal	Member
Leslie Watson	Member
Antonio Samaniego	Member
Seyed Hassan Amini	Member
Kathleen Tew	Young Leaders Rep (non-voting)
Sena Cicek	Young Leaders Rep (non-voting)
Laura Nelson	Staff Liaison (non-voting)

Industry Innovation

John Uhrie	Chair
Dan Rosenbach	Member
Steve Schafrik	Member
Jaye Pickarts	Member
Mick McCaslin	Member
Michael Donkor	Member
Jordon Oxborrow	Member
Amir Patel	Young Leaders Rep (non-voting)
Nestor Santa	Young Leaders Rep (non-voting)
Tara Davis	Staff Liaison (non-voting)

Industry Workforce

Cat Joyner	Chair
Robert Gow	Member
Claudio Cossio	Member
Mike Roach	Member
David Crouse	Member
Garland Davis	Member
Bradley Meyer	Member
Himesh Patel	Young Leaders Rep (non-voting)
Amir Eskanlou	Young Leaders Rep (non-voting)
Karin Harrington	Staff Liaison (non-voting)

Responsible Mining and Underground Construction

Anne Williamson	Chair
Susan Moore	Member
Bob Schafer	Member
Katherine Arnold	Member
Kwame Awuah-Offei	Member
Julie Lucas	Member
Nicole Smith	Member
Nina Astillero	Young Leaders Rep (non-voting)
Deniz Talan	Young Leaders Rep (non-voting)



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SME Sees Membership Growth Post-Pandemic



As the world returns to a semblance of “normal” post-pandemic, SME has experienced renewed interest in membership from new and past members. Members were excited about the return to in-person events through SME, Student Chapters and Local Sections in 2022, and the opportunity to reconnect face-to-face with colleagues and friends.

- SME added five new Student Chapters and one new Local Section in 2022.
- The Society conducted a member survey and planning retreat centered on attracting the next generation of SME and UCA members. Many associations are challenged with attracting younger members as a wave of long-time members begin to retire. In the coming months, SME staff and leaders will refine and implement strategies to appeal to this key group of SME members and volunteers.
- SME has an annual presence at outside trade shows to create awareness of the Society.
- Perumin returned after a two-year absence. With 50,000+ attendees, South America’s largest mining show was a great opportunity to connect with members from all over the world and showcase all that SME offers. In addition to a booth at the event, SME hosted an educational event for students, a student design competition and a gala dinner.
- Under a new partnership with the American Institute of Professional Geologists, (AIPG), SME had a booth at their annual meeting in Marquette, Michigan. AIPG will have a booth at MINEXCHANGE 2023.
- SME continued to engage members via virtual Division Coffee Breaks and quarterly New Member Orientations. These events reflect the diversity of SME’s membership, with members from all over the world attending these sessions.
- UCA added several new Corporate and Sustaining members and saw a high renewal rate for current company members. These companies are leaders in the tunneling and underground construction industry, driving advances in technology, skill and innovation.

Local Sections

A new SME section was formed in Chile, on the heels of the Ecuador Section in late 2021. SME now has 42 US sections and 6 international sections.

SME sections provide a local touchpoint for members through technical and social programming. Sections also raise money to award scholarships and conduct outreach on the importance of mining in their local communities.

The SME Section Grant Program awarded \$16,560 in 2022. The Grants provide start-up funding for Local Sections to implement professional development for members, new community, and K-12 outreach programs.

Several sections and sub-sections held local conferences in 2022, including the NV MPD Subsection, Florida Section, Pittsburgh Section, and Boise Section. SME provided materials for these events to promote global and local membership.

Student Chapters

Five new student chapters were formed in 2022, including a third UCA student chapter:

1/18/2022	University of Sohag, Cairo, Egypt
3/29/2022	Purdue University, West Lafayette, Indiana (UCA Chapter)
4/12/2022	Universidad de Huelva, Spain
5/10/2022	Universidad De Castilla La Mancha, Spain
10/11/2022	The National Institute of Technology Rourkela, Odisha, India

Finals for the 2022 SME/NSSGA and Metallic Student Design Competitions took place at MINEXCHANGE in Salt Lake City, after virtual competitions in 2021. Nine teams entered the SME/NSSGA competition, with five teams progressing to Phase 2. Twenty-three teams entered the Metallic competition. Six teams went on to phase two, including three international teams. The competitions are a great opportunity for students to apply their knowledge to a real-world mine design problem.

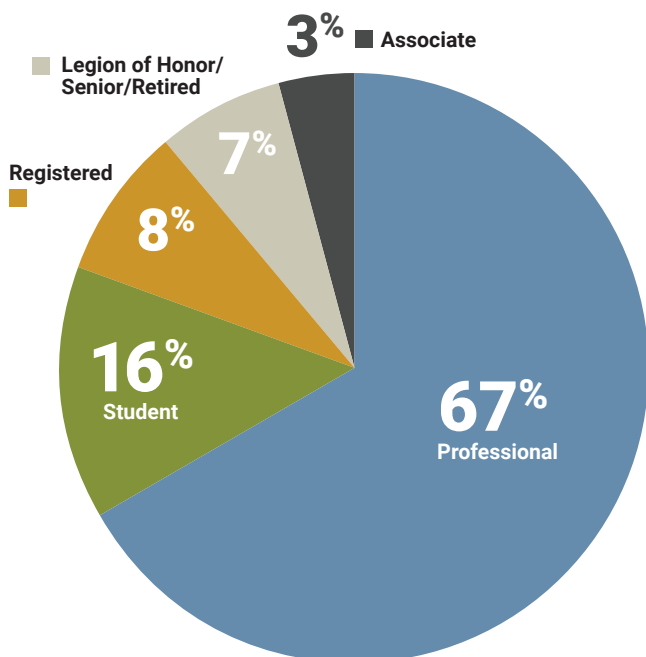
UCA’s *Down for That* initiative was implemented to create student interest in underground construction careers. The *Down for That* committee collaborated with the three UCA Student Chapters to schedule tours of nearby tunneling projects, including networking opportunities with project staff.

Number of Members

12,702

as of 12/31/2022

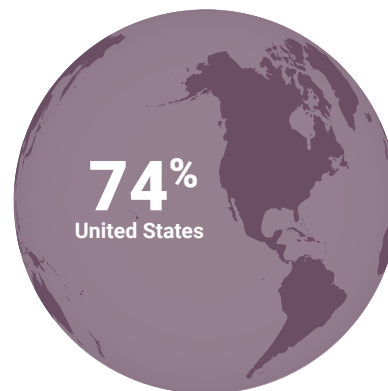
Members by Type



Members by Geography



International



United States

Members by Division

Coal & Energy Division	1,003
Environmental Division	1,014
Health & Safety Division	471
Industrial Minerals & Aggregate Division	978
Mineral & Metallurgical Processing Division	2,098
Mining & Exploration Division	3,810
Underground Construction Association	1,631
WAIMME	632

Student Chapters

Four new student chapters were formed in 2021

- 1/6/21: Universidad Nacional de Loja, Ecuador
- 1/19/21: Universidad Tecnica Federico Santa Maria, Santiago, Chile
- 4/13/21: Universidad Nacional De Cajamarca
- 8/3/21: Birsa Institute of Technology, Sindri, India

The Metallic Student Design Competition, sponsored by Rio Tinto, was launched in the fall of 2020. Phase 2 presentations for both the SME/NSSGA and the Metallic Competition were held virtually in February 2021, allowing five international teams to participate in the metallic competition. Videos of the Phase 2 team presentations were produced for both events.

A group of South American SME Student Chapters put on the **2nd Annual Latin American Virtual Congress on Technology and Innovation in Mining** in November 2021, building on the success of the first Congress in June 2020.



A Surge in Reconnection

The MINEXCHANGE 2022 SME Annual Conference & Expo returned in person to the Salt Palace Convention Center in Salt Lake City, Utah February 27 – March 2.

Key metrics included	749 Presentations	7 Short Courses
	135 Papers	75 Sponsors
	570 Exhibiting companies	

Almost 5,700 individuals were in attendance that included 550 students and 741 international attendees from 49 countries. Those from the United States hailed from 49 U.S. States plus Puerto Rico and the District of Columbia.

The 2022 Minnesota Conference moved to a new venue near the Iron Range in Northern Minnesota. It took place April 11-13 at the Iron Trail Motors Event Center in Virginia, MN.

The conference was attended by 871 individuals and featured two days of programming with a field trip to a local mining operation. With two sold-out Exhibit Halls, the conference had 122 exhibiting companies.

The 10th Rockbursts & Seismicity in Mines Conference (RaSim10) took place April 26-28 in Tucson, Arizona. The event was last held in 2017 in Santiago, Chile.

Attended by 170 participants, the event featured a site tour to the San Xavier Underground Mining Lab. The conference was supported by seven sponsoring companies.

The 2022 George A. Fox Conference originally scheduled for January 19 was postponed to May 10, due to ongoing pandemic concerns. Hosted in a new location, the New York Hilton Midtown welcomed attendees for a full day of programming that included a tribute to George A. Fox and a presentation on the history of the conference.

With 394 attendees, it was the largest George A. Fox Conference in recent years and it was supported by 34 sponsoring companies.

NAT 2022 was June 19-22 in Philadelphia, PA. The event, attended by over 1,000 individuals, was close to the attendance totals seen pre-COVID. In addition to two short courses, the technical program featured over 70 presentations. To support the event, there were 149 exhibit booths and 29 sponsoring companies.

SME presented recorded content captured at the MINEXCHANGE SME 2022 Annual Conference in a virtual format on July 19. The SME SUMMERXCHANGE also featured a new keynote session on workforce challenges. Registration was offered at no cost for those who registered for MINEXCHANGE and access was available to all MINEXCHANGE and new SUMMERXCHANGE registrants through the end of September 2022.

The 2022 International Conference on Ground Control in Mining moved to a new location in Canonsburg, PA. It was July 26-28. The Ground Control Conference featured traditions such as a golf outing and evening BBQ. It had 133 registrants.

The Professional Engineer (P.E.) Examination of Mining/Mineral Processing Engineers Review Course was September 10-14 in Denver, CO and had 35 participants.

Held in Reno, NV, the SME Midyear Meeting was September 19 – 21, followed by the THRIVE conference on September 22. The Midyear meeting featured a field trip to the Tesla Gigafactory and networking functions for the 151 attendees. The THRIVE Conference featured a full day of technical programming on Critical Minerals and had 65 registrants.

Held as a virtual event, the 58th Forum on the Geology of Industrial Minerals was held on October 6, 2022. Focused on the importance of industrial minerals, the Forum was attended by 39 professionals.

The Cutting Edge 2022 Conference attracted the highest number of attendees for the conference to date. With xx registrants and xx sponsoring companies, the event exceeded all attendance goals. Held November 14 – 16 in Long Beach, California, the conference featured xx technical presentations and a field trip to the LA Outfall Project Site.

The SME 2022 Arizona Conference returned in Tucson, Arizona December 4 – 5. With a focus on rich technical content, the conference had xx technical sessions with a total attendance of more than xx attendees. The conference was also supported by xx sponsoring companies.

EVENTS CALENDAR 2022:

MINEXCHANGE 2022 SME Annual Conference & Expo
February 27 – March 2; Salt Lake City, UT

Minnesota Conference
April 11 – 13; Virginia, MN

10th Rockbursts & Seismicity in Mines Conference (RaSim10)
April 26 – 28; Tucson, AZ

George A. Fox Conference
May 10; New York, NY

North American Tunneling Conference
June 19 – 22; Philadelphia, PA

International Conference on Ground Control in Mining
July 26 – 28; Canonsburg, PA

P.E. Review Course
September 10 – 14; Denver, CO

SME Midyear Meeting
September 19-21; Reno, NV

THRIVE Conference
September 22; Reno, NV

58th Forum on the Geology of Industrial Minerals
October 6; Virtual

Cutting Edge Conference
November 14 – 16; Long Beach, CA

SME Arizona Conference
December 4 – 5; Tucson, AZ.

Excellence in Publishing

Mining Engineering expanded its digital footprint to provide members around the world with timely technical content and news. The *Mining Engineering* website regularly publishes industry news and delivers each issue to members anywhere in the world as a pdf and flipbook formats on the first day of each month. Clients also have expanded digital advertising opportunities through ME Online, the SME website, client-provided content, the SME Drift, and *Mining Engineering* digital newsletter options.

Editorial advisory committees provided input and helped shape the editorial calendars for *Mining Engineering* and *T&UC* magazines, the official publications of SME and the Underground Construction Association, a Division of SME. The magazines continued to provide industry-leading technical information and coverage in print and online.

SME Divisions and technical committees provided valuable information for the creation of the Industry Hot Topics list that will be used to help SME's publication and content teams identify and deliver the content that is most important to SME members.



New in the Bookstore



SME continues to provide the leading technical information for the mining and underground construction industries.

Featured new titles in 2022 include:

- Developments in Ground Control in Mining: 1981-2020 (print, eBook)
- International Conference on Ground Control in Mining: 2022 Proceedings (USB)
- Project Management for Mining: Handbook for Delivering Project Success, Second Edition (Print, eBook)
- North American Tunnelling: 2022 Proceedings (Print, USB, eBook)
- Tailings Management Approach: A Life-Cycle Approach (Print, eBook)

Scope of SME Book Publishing

131
Titles in the
SME Bookstore
Catalog at
this time

76
eBooks

64
Bundles

Coal & Energy

The Coal and Energy Division strategically selected new Executive Committee members (for three-year terms) with tenures heavy in production to encourage industry support and increased participation in future SME Annual Meetings and other Coal and Energy Division endeavors.



Susan B. Bealko
2022 Division Chair

During the MINEXCHANGE 2022 SME Annual Conference & Expo, the Coal and Energy Division offered 54 presentations in 13 technical sessions. Since then, the Program Committee has been developing another year of comprehensive programming arranged into three tracks: Operations, Energy, and Research and Development. These 2023 technical sessions have been designed for practicing engineers and will include sessions on Geothermal and Uranium.

The Coal and Energy Division continued to provide strong support to students by awarding \$28,000 in scholarships in 2022. Student applicants in coal and/or energy are encouraged to apply for scholarship awards.

In addition, \$3,000 in donations were made by the Coal and Energy Division to support University Mine Rescue Teams' travel to competitions and the cost of running mine rescue apparatus. These contests develop critical skills in student engineers that will improve mine safety in the future.

Health & Safety

The SME Health and Safety Division approved the creation of a new scholarship program and developed application criteria open to undergraduate and graduate students. Any student with an interest in mine safety and health from any discipline (e.g., public health, safety science, environmental health) is welcome to apply. The first scholarships will be awarded at the MINEXCHANGE 2023 SME Annual Conference & Expo. More highlights of the year include:

- Planned six technical sessions for MINEXCHANGE 2022 SME Annual Conference & Expo
- Received approval from the SME Board of Directors to develop a Health and Safety Handbook; 24 chapters have been approved.
- Hosted monthly virtual and open executive committee meetings with an average attendance of 20-30 people
- Engaged SME Young Leaders with a virtual coffee break
- Continued to work with the International Academy of Mine Safety & Health to assist in the expansion of the Certified Mine Safety Professional (CMSP) certification



Emily Haas
2022 Division Chair

Industrial Minerals and Aggregates

The Industrial Minerals and Aggregates Division has successfully integrated the Forum on the Geology of Industrial Minerals (FGIM) into the Division. FGIM members participated in Division committees and plans are being made to hold regional events including conferences, meetings, and field trips. The Industrial Minerals and Aggregates Division held a virtual meeting in October 2022 for FGIM and other members with a focus on Industrial minerals of Nevada and other western states. Planning is already underway for the next in-person 2023 FGIM conference.



Raghav Dube
2022 Division Chair

Every year the Division supports the industry workforce through the distribution of scholarships to students and the recognition of individuals for their contribution to the mining industry with awards.

Other highlights of 2022 include:

- Forty commodity articles were published in the July 2022 special edition of the Mining Engineering magazine providing valuable information about various industrial minerals.
- Membership increased by 110 members.
- The Division Program Committee has been streamlined by reducing the chairs to one slated to start in 2023.
- For the upcoming year, a comprehensive technical program

Environmental

The Environmental Division successfully organized one of the more popular technical programs at the 2022 Annual Conference, along with awarding both an Outstanding Paper and Outstanding Presentation award. We have continued to find ways to disseminate pertinent information relative to the concepts and practices of environmental, social governance, and sustainability as well other hot topics surrounding tailings management, mine closure, and decarbonization through technical papers, workshops, or webinars by industry professionals throughout the year. The Environmental Division continues to look for ways to engage members of industry, including hosting an Afternoon Pick-Me-Up virtual networking event.

In the past couple of years, we worked closely with the Young Leaders Committee to promote engagement with the Division and have since added two young professionals in executive positions. With these additions, the Division has observed more young professional participation in division subcommittees. We strive to expand the interest in careers supporting mining and environmental stewardship with focus on international, young, and diverse populations.

- Awarded \$8,000 in Environmental Division and Veolia Water Technologies scholarships.
- Awarded \$1,500 of prize monies to the top three Student Poster session entrants out of 10 participants.
- Raised \$3,800 for scholarships in 2022 from silent auctions.



Lisa N. Gonzales
2022 Division Chair

Mineral & Metallurgical Processing

At the MINEXCHANGE 2022 SME Annual Conference & Expo, the Mineral & Metallurgical Division (MPD) offered attendees 18 technical sessions, comprising 90 technical presentations. The program featured several panel discussions, and strong engagement from membership. MPD also co-hosted several sessions with the Mining & Exploration (M&E) Division on the interdisciplinary topic of Geometallurgy.



Ronel Kappes
2022 Division Chair

- The Scotch Nightcap raised over \$69,000 for the Division – exceeding all previous event fundraising – and the MPD Calendar raised another \$20,980.
- For the fourth year, the Division provided a generous donation of \$10,600 to the Ph.D. Fellowship and Career Development Grant Program, while also awarding \$18,500 in MPD Scholarships. MPD provided a further \$6,000 as MPD Student Poster Contest cash awards.
- In a continued effort to improve engagement and volunteer participation of MPD members, a fillable online MPD volunteer interest form has been launched along with other engagement opportunities, such as a virtual coffee break.

Underground Construction Association (UCA)

The core purpose of the Underground Construction Association (UCA) is to promote the responsible development and use of underground space.



Michael Rispin
2021-2023 Division Chair

UCA Division Highlights

- Nominated and supported the campaign and election of Sanja Zlatanic, PE, SVP, Chair, HNTB National Tunnel Practice, to represent the US and UCA on the ITA Executive Committee
- Launched the UCA Government and Public Affairs Committee (GPAC), a key initiative in increasing Stakeholder Awareness, one of our three Strategic Goals
- Expanded awards offerings to share the successes of our industry; this moves forward both Stakeholder Awareness and Association Growth
- Provided three tunnels tours to support UCA Student Chapters in our quest to further Workforce Sustainability through our Down for That campaign
- Held the North American Tunneling conference (NAT) featuring 94 presentations and a sold out tradeshow, as well as the George A. Fox and Cutting Edge conferences, both with record attendance.
- Delivered four issues of *Tunneling & Underground Construction*

Mining & Exploration

The Mining and Exploration Division offered attendees 23 technical sessions at the MINEXCHANGE 2022 SME Annual Conference & Expo in Salt Lake City. One hundred and twenty seven individual presentations were included in these sessions. Preprints were submitted for 29 of these presentations.



Gregory Sutton
2022 Division Chair

The Division awarded scholarships to 11 deserving students in the United States and abroad totaling nearly \$27,575. In addition, a \$10,500 donation to the SME Foundation, Ph.D. Fellowship and Career Development Grant Program brought the Division's overall contribution to this program to \$40,500 since 2019.

The Division was raised \$39,800 for scholarships and the Ph.D. Fellowship Program through luncheon sponsorships and the ever-popular silent auction. This was a record.

The Executive Committee continued with Quarterly Online Business Meetings via Virtual Coffee Breaks. These were held on March 15, August 24, and December 14. Average attendance was around 30 per session. These sessions allow for updates to members on various M&E business as well as a chance to discuss and take action on hot topics as they arise.

The 2023 Annual Meeting Technical Program Planning has advanced to near completion with 27 sessions on the slate for Denver.

WAAIME

WAAIME was formed in 1917 as the Woman's Auxiliary to AIME to provide service to the country, to do philanthropic work in local mining communities where members lived, and to provide scholarships. In 2008, WAAIME became a division of SME where they have continued their tradition of providing scholarships and supporting humanitarian causes.



Katherine Pinochet Oviedo
2022 Division Chair

The WAAIME Division objectives are to render service to the country and to the community through all that pertains to the interest of the professions of mining, metallurgical and petroleum engineering; promote philanthropic work and the interchange of ideas amongst its members; and maintain a fund for assisting promising students to obtain a technical education in mining, metallurgical and petroleum engineering and their allied subjects.

In 2022, the WAAIME Division awarded \$519,700 in scholarships. \$459,700 went to 161 graduate and undergraduate students in the United States. \$60,000 went to five international sections to help fund their scholarship programs.

The WAAIME Executive Committee chose Patricia McWhorter as this year's recipient of the WAAIME Founders Award. Patricia served as a WAAIME Division Scholarship Chair for several years and was a member of the WAAIME West Virginia-Southern Section. Regrettably, Patricia passed away before she was able to receive her award.

WAAIME's International Sections in Chile, Peru, and Mexico continue to provide students with needed scholarships and mentoring.

SME Financial Snapshot

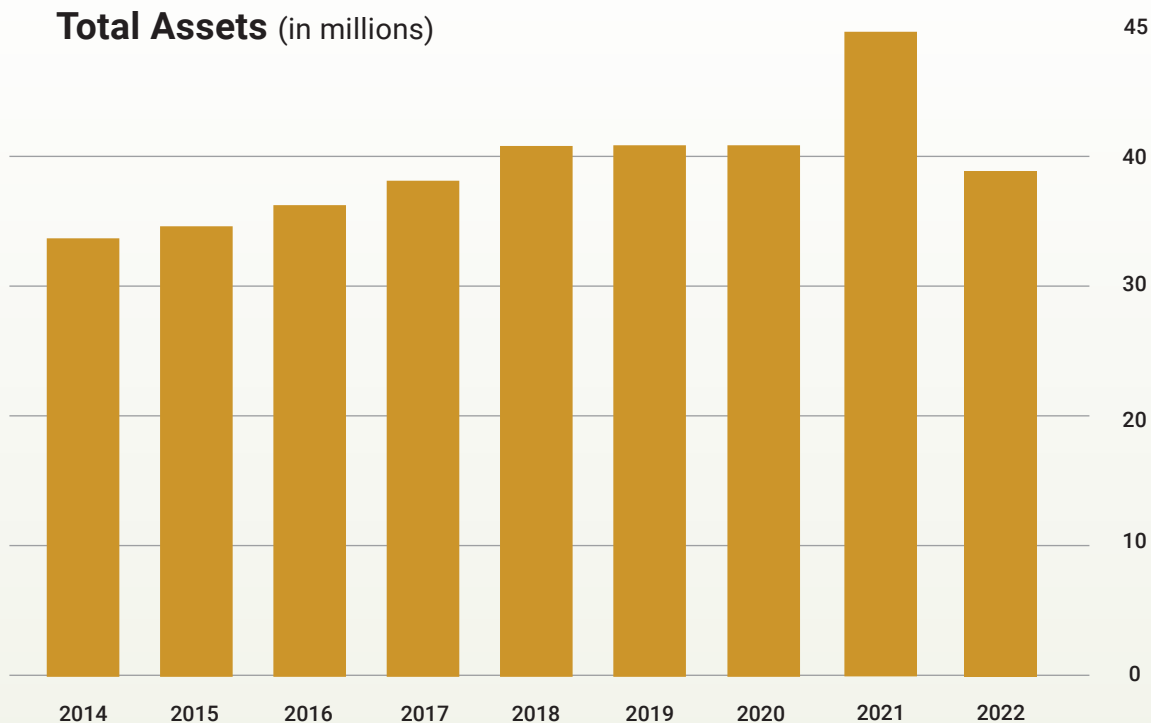
Operating Revenue

Meetings and exhibits	\$7,872,204	92%
Membership dues and fees	\$1,663,919	19%
Advertising & Sales income	\$1,604,762	19%
Contributions	\$1,164,771	14%
Paycheck Protection Program Income	\$947,547	11%
Investment income	(\$5,160,181)	-60%
Other income	\$452,874	5%

Operating Expenses

Meetings and exhibits	\$5,909,160	39%
Education	\$4,123,092	27%
Publications	\$1,868,825	12%
Member services	\$1,102,847	7%
OneMine	\$288,049	2%
Management and general	\$1,622,926	11%
Fundraising	\$ 263,263	2%

Total Assets (in millions)



SME Foundation

Attracting and leveraging resources for a sustainable mining industry through education and outreach

The SME Foundation celebrated another terrific year in 2022. Our generous donors, both individual and corporate, continued to steadfastly support the great educational and outreach programs that the Foundation funds.

At the MINEXCHANGE 2022 SME Annual Conference & Expo, the Foundation kicked things off with a fun-filled night at a Hawaiian themed Gala Dinner and Awards show in Salt Lake City, UT. The sold out event featured a social cocktail hour, photo booth, dinner and awards banquet; followed by Polynesian entertainment where audience volunteers learned the hula and haka dances. At the Gala Dinner, the SME/SMEF silent auction event, both in person and on-line, raised nearly \$23K.

During 2022, the Foundation received donations from XYZ individual donors and XX corporate sponsors, who supported the SME Foundation programs by funding over \$1 million. The Foundation's largest support program includes the PhD Fellowship and Career Development Grant program where the next generation of professors and researchers are supported by the generous donations made by our loyal patrons. This program is a critical part of the Foundation's mission of supporting mining's professional education talent pool and the mining schools vital to the success of our industry. To date this major program included 21 total participants in the PhD Fellowship program. Six have earned their PhD's and five are expecting their PhD degrees by year's end. Since this program's inception, there have been 14 Career Development Grants awarded, from which nine have achieved tenure. With your support, the Foundation is making a real difference in the strength of mining schools and the next several generations of mining professionals critical to the success of the mining industry.

The SME Foundation Trustees, supported by SME's Board of Directors, approved a proposal to continue the PhD Fellowship and Career Development Grant program, although at a slightly reduced level than the first phase of the programs. The SME Board of Directors of SME generously made a contribution of \$250,000 for the Foundation to support this extended effort.



Steven C. Holmes
President, SME Foundation

The Foundation continued to fund key programs vital to the industry including ABET accreditation, the Professional Engineering certification for mining, the Minerals Education Coalition, and the awarding of student scholarships of over \$65,000 to keep the mining industry strong and vibrant.

In addition, the SME Foundation Trustees completed an update of the Foundation's Strategic Plan. This updated plan aligns the continuing vision and mission of the Foundation with advances in digital, real-time technology, remote learning options, and other programs that support our education and outreach efforts.

To close out the year, the SME Foundation sponsored its 3rd Annual Benefit Golf Tournament at the Gold Canyon Golf Resort in Phoenix, AZ. This popular benefit tournament doubled in size to 244 golfers made up of operations, industry and consultancies who support the mining industry. This annual event raised more than \$50,000 in support of the Foundation and provided a fantastic venue for customer-client communications and relationship building prior to the Thanksgiving holiday.

All of these programs are made possible through the generous donations, large and small, from over 13,000 SME members plus 16 Corporate Roundtable Partners. Supporters donate for a variety of reasons, but most believe their support is a small way of giving back to the industry they love and work in. On behalf of the SME Foundation, and the many students, professors, and community members our programs positively affect, I extend a sincere thank you for your continued support. Your donations make an impact and a difference.

Thank for your support,

Steven C. Holmes

President, SMEF Board of Trustees

2022 SME Foundation Board of Trustees

SME Foundation Leadership:

Steven C. Holmes, SMEF President
Thomas C. Rauch, SMEF President Elect
Andrew P. Cole, SMEF Vice President of Finance
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Michael T. Myers, Individual Fundraising Officer
David L. Kanagy, Secretary
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Professional Engineers (PE)

The SME PE Committee endeavors to support the

2500+

SME PE MEMBERS

by supporting the high standards that professional licensure requires

Updates for the
SME Mining Reference Handbook

included information on ore deposits and surface mine blasting

PhD Fellowship and Career Development Grant Program

1

PROGRAM RECIPIENT
achieved tenure in 2022

1

RECIPIENT
completed his PhD

Scholarships

17

SCHOLARSHIPS
totaling **\$68,500**

were awarded to SME student members in 2022

2

NEW INDIVIDUALS
were selected to receive Career Development Grants

3

NEW INDIVIDUALS
were selected to receive PhD Fellowship Grants

ABET

17

PROGRAM EVALUATORS
were assigned for accreditation visits

3

NEW PROGRAM EVALUATORS
are approved for ABET Face-to-Face Training in the Spring of 2023

6

PEV
were assigned for Observation Visits

Miners Give Back

THE FIRST
Miners Give Back Award

was awarded to the SME Pittsburgh Section in recognition for their leadership and contributions to Phase One of the Remediation of the Westmoreland Coal Co.'s Abandoned South No. 2 Mine Portal Area

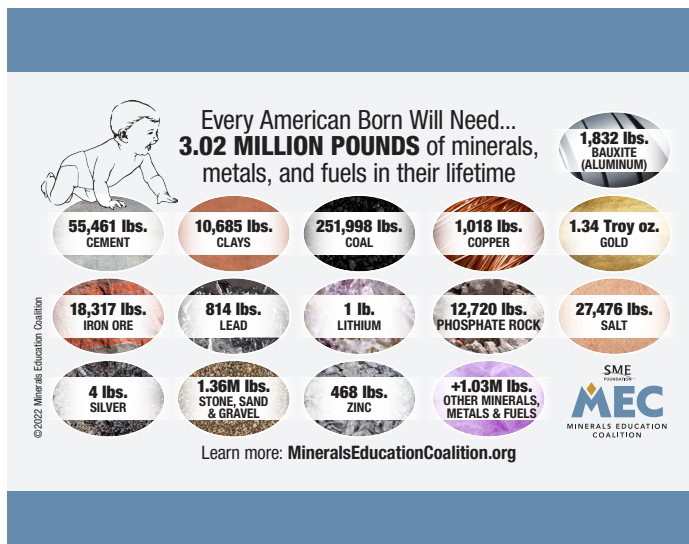
Minerals Education Coalition | Making a Difference with Education and Outreach



During the Season 6 Move Mining event, sponsored by Komatsu, five finalist teams competed in front of a live audience at the MINEXCHANGE 2022 SME Annual Conference & Expo in February. Team "TerraMovers" consisting of Jose Felix Enriquez, Raul Quispe, Lizeth Fiorela Quispe from Peru and Ingrid Benito and Cole Warnock from the U.S., won the competition with their winning concept, an interactive video game called "Goldaligger."



Move Mining Next Gen asks students in grades K-12 "Why are minerals and mining important to our lives?" During Move Mining Next Gen 2021-2022, the Best Overall Prize was awarded to "The Stop Motion Siblings" from Wisconsin for their video about pyrite. A total of \$2,250 in prizes were awarded to K-12 student winning teams for their work in demonstrating how mined materials are important in their daily life.



The MEC Mineral Baby details the estimated amount of minerals, metals and fuels that an American born this year will use in their lifetime. The companion graphic MEC Minerals Needed Every Year explains that 39,431 pounds of new minerals must be provided for every person in the U.S. each year to make the things we use daily.

MEC **Getting the Metal Out**

The valuable metal in mined ores must be separated from unwanted materials in the ore.

Learn some of the ways that metals are separated from the rest of the ore—magnetic, chemical, with gravity, and more. Conduct experiments to see how ore processing is carried out for different valuable minerals.

Teachers—find this lesson plan, and see how these materials support national and state educational standards, at:

Be sure to try the “Iron Minerals on the Moon” activity in the 2022-2023 Earth Science Week Calendar!

MineralsEducationCoalition.org/esw



MEC participated in Earth Science Week in October to provide educational resources across the globe. This year MEC produced a “Getting the Metal Out” educational unit, which includes new MEC activities in the online lesson plan, and the “Iron Minerals on the Moon” activity in the 2022-2023 ESW Calendar.

MEC participated in the 2022 NSTA National Conference on Science Education held in Houston, Texas. A team of MEC volunteers distributed more than 3,000 free materials to teachers to help educate students on the importance of minerals and mining. Teachers completed a workforce survey to identify the opportunities and barriers to students considering mining and underground construction as a career of choice.



2022 ANNUAL REPORT

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