



Society for
Mining, Metallurgy
& Exploration®

2020 ANNUAL REPORT



**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 amalgamating the community to build a better world.

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We knew shortly after the successful closing of the February MINEXCHANGE 2020 SME Annual Conference & Expo in Phoenix, AZ that the year would not be “normal.” The SME staff and Board of Directors quickly realized that our business needed to adapt to the COVID-19 pandemic and the global health and business disruptions that caused the cancellation of face-to-face events everywhere. Energy and creative adaptability would be required to address and reformulate the SME business model.



Bob Schafer
2020 SME President

The business model of SME, and probably every other membership society, will adapt to the consequences of the unanticipated events of 2020. Many conferences and meetings will become hybrid events that combine virtual and in-person interactions going forward. Our keys to success will be finding the right recipe and pricing for dues, events and other revenue sources so that the cash flow levels can be maintained to support the growing benefits and services that SME wants to provide to the membership. I am certain that there will be some trial and error, desktop studies and pilot tests before we hit the magic formula, but SME will find a sustainable business model to maintain a successful, vibrant and valuable organization.

During 2020 some meetings and events had to be cancelled, but within about three months the means to hold virtual events was tested and acquired. Everyone climbed steep learning curves and soon virtual events like the North American Tunneling Conference, THRIVE 2020 and Cutting Edge 2020 were successfully staged. In addition, very productive outreach events to new members and SME local sections were carried out. We learned that outreach events, presentations and speeches could reach a widespread SME audience and a responsive, personal face and voice was available almost upon request. In the future, I hope that more local sections will make use of the virtual meetings technology to invite SME presidents and technical speakers to participate in their local meetings, especially for the Q&A that evolves as part of the event.

SME also adapted and improved in the way we work together and the way we present the best of mining and underground construction information to the public. The implementation of the 2020 Strategic Plan indicated that we needed to change some of our committee structures. We established strategic committees to address our goals and promote them through our Industry Innovation, Industry Workforce, Responsible Mining and Underground Construction, and Association Growth committees. SME will look at each of these strategic goals in the broadest sense so that we create opportunities for collaboration, understanding and progress. A key new Inclusion and Diversity Standing Committee was established from an ad hoc committee to make certain that SME always seeks to incorporate the best of all people and make it part of our DNA.

SME also took on a few new challenges of the mining and underground construction industry. With the mine tailings storage disasters of recent years, SME acted and assembled the expertise of its membership to address the issues of mine waste and encouraged collaboration with other members of the Global Minerals Professional Alliance (GMPA) to understand these failures and to jointly promote innovation leading to improved best practices in managing tailings and all types of mine waste, with a future of zero mine waste as the ultimate goal.

Looking ahead, SME will be finding more ways to enhance your membership as current and new services and benefits are developed that fit our evolving world. We will be finding new ways to help members enhance their careers with technical programming and publications. We are learning how to bring more opportunities for interaction with virtual and real networking events that connect you with colleagues, global technical experts and engage with thought leaders. The new SME website will be your portal to personalized access to OneMine, your division and committees, as well as the SME Community for communications with our 13,000 members.

As SME strives to fulfill its Vision to be “the premier community building a better world through mining, metallurgy and underground construction,” your SME volunteer leaders and the SME staff will be working diligently to “serve our industry and community for a sustainable future.”

Finally, I have enjoyed my year serving as your SME President for 2020. It was not the year that anyone had anticipated. However, we did many new things as adaptations to lockdowns and restrictions in travel and socializing came into play. I probably connected to more members than could have been possible in face-to-face meetings which were replaced using new, virtual communications technologies that were not widely available just 12 months ago!

I encourage you to get the most from your SME membership benefits and more importantly, maximize your membership by getting involved at the committee or division level so you can interact with your colleagues. Participate at the local section level and contribute to your community. Seek ways to get involved with SME as a volunteer and watch your career satisfaction soar!

Robert W. Schafer
SME President 2020

Dear SME Members,

In the SME Annual Report each year I normally take this space to highlight a few activities the Society has engaged in during the past year. In most cases these activities have helped the organization move forward in some manner whether to improve finances, create a new program, promote the industry or engage the membership. Needless to say, 2020 was a very DIFFERENT year and one not to be FORGOTTEN.

"It was the best of times, it was the worst of times ..." With A Tale of Two Cities, Charles Dickens asserts his belief in the possibility of resurrection and transformation, both on a personal level and on a societal level.

This year, SME has faced challenges that have tested our resolve and problem-solving abilities on both a personal level and at our Society level. While SME leaders and staff have continued to navigate rapidly changing conditions that have impacted our normal course of business and service to members, SME continued to meet members' expectations and needs. It is clear there is a lot of resilience at SME to overcome the challenges 2020 presented.

For SME, we were very fortunate with the timing of the SME Annual Conference & Expo in Phoenix, Arizona. The Society could not have held the event even two weeks later without risking a complete cancellation of the event. By March 15, the coronavirus had impacted the ability for any organization to hold a face-to-face meeting based on many governmental restrictions that city after city were enacting. SME had to become a solution-focused organization to meet our needs for the remainder of 2020. Rightfully so, the Society gave its full attention to navigating a once-in-a-century pandemic.

During this crisis SME became nimbler, more adaptive and showed tremendous perseverance. Many events became virtual, Zoom and MS Teams became the norm for committee and board meetings, and SME improved our proficiency with these tools. We were also fortunate to qualify and receive some federal assistance during the pandemic that supported several financial needs of the organization.

We also recognize that early 2021 will be impacted with continued restrictions on face-to-face meetings in most areas of the world. And for a global industry, travel will continue to be a challenge as we resume events and visits to mine operations in various parts of the world. These will affect SME in some small and large ways. As some of you know, 60% of revenues for the Society are from



David L. Kanagy, CAE
SME Executive Director and CEO

meetings. We need meetings to return, and they will, but SME will also be fundamentally reviewing and modifying our business model to comply with a post-COVID environment.

There have been some good opportunities that SME has taken advantage of during the pandemic. At the THRIVE program in October, we had many panels of speakers from all over the world. In one session, the panel included people from Australia, Europe, and North America. That would not have happened if it would have been a normal meeting year of face-to-face meetings. SME also doubled its webinar offerings during the year; created an SME CARES program for our membership to

support professional members facing their own challenges in 2020; launched a new Career Center that offers a free resume review, interviewing tips, and advice on how to professionally navigate and network in the social media world; launched a beautifully designed and highly functional new SME website; the SME Foundation received a donation of a 2020 GMC Sierra 2500 Crew Cab 4WD SLT Truck from Empire CAT which was raffled at the Annual Conference this past year; and much, much more.

The SME staff has stepped up this year to continue to function and provide services to members. Although the office has not been fully opened with all staff physically present since March, we continue to develop our programs and products that provide value to members.

During the past year SME has lived up to its strategic plan's vision to build a better world through mining, metallurgy, and underground construction. As we begin to step into 2021, I'm optimistic that this pandemic will pass and that we can begin to rebuild the activities of the Society in a manner that all SME members have come to expect from the organization.

Did someone say it's time to hold a face-to-face meeting for the Society? I'll see you there and hope that it will be sooner rather than later in 2021.

Dave Kanagy, CAE
SME Executive Director and CEO

SME 2020 HIGHLIGHTS



Four new Strategic Committees formed to **shape the future priorities and growth** of SME:

- Responsible Mining and Underground Construction
- Industry Workforce
- Industry Innovation
- Association Growth



Down for That website and underground workforce initiative launched at **undergroundcareers.org**



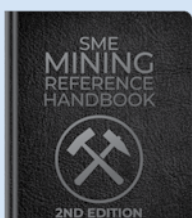
SMEF Win Your Ride Truck Raffle **raised \$81,000**; the highest amount ever raised from SMEF raffle ticket sales.



Expanded webinar content by **62%** - expanding access to professional development online.



SME became a member of the International Council on Mining & Metals (ICMM) and the **Global Mining Guidelines Group (GMG)**.



Published **SME Mining Reference Handbook, 2nd edition**, now **the only resource allowed** in the PE exam.



Fostered the "**Great Debate**" in partnership with the National Mining Museum and Hall of Fame.



Hosted **virtual conferences** for the first time – including NATWeek, THRIVE and Cutting Edge.



Expanded focus on **tailings management** through symposia, webinars and development of new working group.



Launched **new SME website** packed with customized options and enhanced user interface.



Created internship position on SME Board to **develop young talent** into future leaders.

Current Officers

President 2020



Robert W. Schafer
Chief Executive
Eagle Mines Management, LLC

President-Elect 2020



William W. Edgerton
Principal
McMillen Jacobs Associates

Past President 2020



Hugh B. Miller, Ph.D.
Associate Professor
Colorado School of Mines

Secretary Ex-officio/
Non-Voting



David L. Kanagy, CAE
Executive Director and CEO
SME

Directors-at-Large

Term 2018-2021



Rick Honaker, Ph.D.
Professor
University of Kentucky

Term 2019-2022



Robert P. Kudlawiec
Senior Project Manager
Tetra Tech Inc.

Term 2020-2023



John L. Uhrie, PE, Ph.D.
Vice President, Exploration
and Development
Doe Run Co.



Dave Rogstad
President & CEO
Frontier Kemper Constructors Inc.



Tim Swendseid
Consultant



Anne L. Williamson
Principal Scientist
Wood

Strategic Committees 2020-2021

Association Growth

- Robert P. Kudlawiec, *Chair*
- Genevieve Sutton, *Member*
- J.D. Wientjes, *Member*
- Liz Arnold, *Member*
- Russell Winn, *Member*
- Kathleen Tew, *Young Leaders Representative, Non-Voting*
- Laura Nelson, *Staff Liaison, Non-Voting*

Industry Workforce

- Dave Rogstad, *Chair*
- Claudio Cossio, *Member*
- David Bieber, *Member*
- Eric Lutz, *Member*
- Robert Gow, *Member*
- William Crawl, *Member*
- Drew Mason, *Young Leaders Representative, Non-Voting*
- Karin Harrington, *Staff Liaison, Non-Voting*

Industry Innovation

- John Uhrie, *Chair*
- Daniel Rosenbach, *Member*
- John Haynes, *Member*
- Matthew Furniss, *Member*
- Steven Schafrik, *Member*
- Jordon Oxborrow, *Young Leaders Representative, Non-Voting*
- Rachel Boothby, *Young Leaders Representative, Non-Voting*
- Tara Davis, *Staff Liaison, Non-Voting*

Responsible Mining and Underground Construction

- Anne L. Williamson, *Chair*
- Barbara Nielsen, *Member*
- Charles Beasley, *Member*
- Kimberly Morrison, *Member*
- Steven Richards, *Member*
- Susan Moore, *Member*
- Vladislav Kecojevic, *Member*
- Jackie Dorr, *Staff Liaison, Non-Voting*



Members Connect In a Virtual World

Members are the heart of SME, contributing technical knowledge, talent and volunteer resources to help the organization advance.

Like other areas of SME, Membership was all about a “pivot to virtual” in 2020 due to COVID-19. Despite the pandemic, Membership implemented some new and innovative projects in 2020 to better serve members, sections and student chapters.

- Member engagement was an increased focus of the Membership team in 2020. The team introduced quarterly new member orientations via Zoom, and worked with SME Divisions to host virtual Coffee Breaks.
- Monthly best-practice video conferences to help Sections operate more effectively and navigate in light of COVID-19 restrictions have been successful.
- A new Metallic Student Design competition was introduced, giving students another opportunity to show off their knowledge and skills to mining companies and potential employers.
- New Career Centers for SME and UCA were launched.

Membership outreach

SME continued to implement ongoing membership campaigns to recruit new members and retain existing members. SME’s member retention efforts were negatively impacted by COVID this year, with member retention between 2019 and 2020 lower than in previous years.

New Career Centers for both SME and UCA to help address the workforce needs of mining and underground construction companies were created. The new career centers feature free job seeker profiles and resources. Employers can post internships at no cost and purchase discounted job posting packages to promote their open positions to a highly targeted audience.

Sections

Monthly Best Practices sessions for Section Leaders helped Sections adapt to “the New Normal” in 2020. Several sessions on virtual meetings were instrumental in Sections starting to implement their own virtual or hybrid events in 2020. Other Best Practices sessions included Section rejuvenation, communication, outreach opportunities and membership growth.

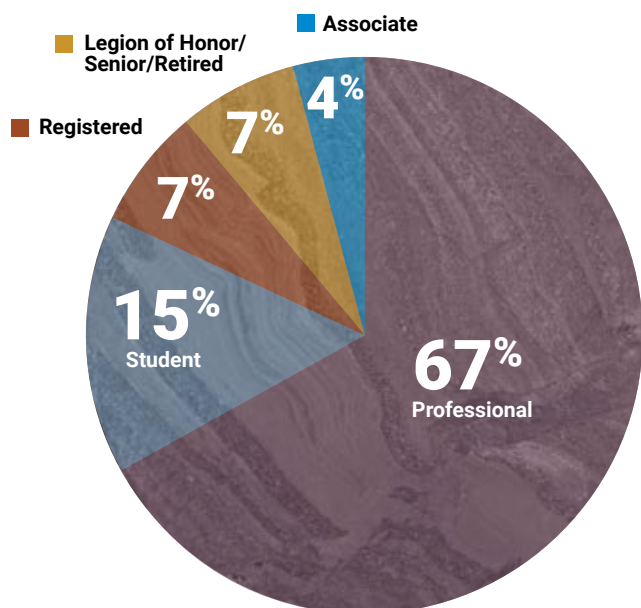


Number of Members

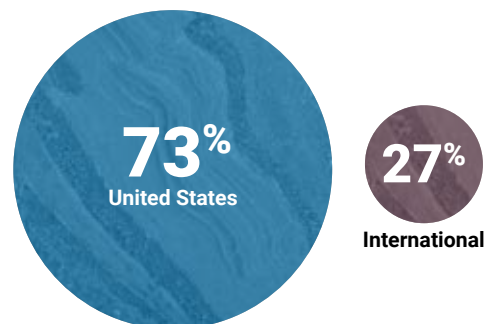
12,847

as of 12/31/2021

Members by Type



Members by Geography



Members by Division

Coal & Energy Division	1,285
Environmental Division	1,113
Health & Safety Division	476
Industrial Minerals & Aggregate Division	939
Mineral & Metallurgical Processing Division	2,100
Mining & Exploration Division	4,381
Underground Construction Association	1,238

The Krumb Lecture Series is a special program for Sections that makes outstanding speakers from the SME Annual Conference available for SME Section meetings. Many of the 2019 Krumb lecturers agreed to extend their availability, and combined with the 2020 lecturers, gave the Sections a wide array of speakers for virtual professional development programming.

Student Chapters

Seven new Student Chapters launched in 2020, including SME's second UCA Student Chapter.

1. Colorado State University – Fort Collins, CO
2. University of Illinois – Urbana, Urbana IL (the second UCA student chapter)
3. Universidad Nacional Autonoma, Mexico City, Mexico
4. Universidad De Sonora, Sonora, Mexico
5. Universidad Nacional San Luis Gonzaga, Ica, Peru
6. Universidad Privada Del Norte, Trujillo, Peru
7. Universidad Nacional de Loja, Loja, Ecuador

In addition to the NSSGA/SME Student Design Competition, SME's student chapters can now participate in the Metallic Student Design Competition, sponsored by Rio Tinto. The NSSGA/SME Competition is focused on an aggregate mining industry design problem, while the Metallic Competition is a hard-rock competition. Both events will attract teams from around the world, since teams will participate virtually this year.

The Emerging Leaders Alliance hosted a virtual event, "A Taste of ELA Week," which allowed over 100 Associate members of SME to attend virtual training on thought-provoking topics such as inclusion and diversity, managing change and managing remote teams.

The first Latin American Virtual Congress on Technology and Innovation in Mining took place July 5-12, 2020. A committee of 46 students from 26 SME Student Chapters in Colombia, Ecuador, Mexico and Peru planned and implemented the successful event.

Meetings Become a Virtual Reality

The MINEXCHANGE 2020 SME Annual Conference & Expo was held on Feb. 23 – 28, 2020, at the Phoenix Convention Center in Phoenix, AZ. COVID-19 pandemic regulations had not been issued, but there was some decline in onsite registrations, likely due to news coverage at the beginning of the pandemic. There were 5,704 attendees and 784 exhibit booths. Of the 5,704 attendees, there were 741 International attendees and 550 student attendees. MINEXCHANGE was sponsored by 60 companies.

Other events that were held in conjunction with the 2020 Annual Conference were:



- SME Foundation truck raffle drawing and tailgate party
- Move Mining Live Competition
- Women's Breakfast
- Press & Media Room with exclusive live-streamed presentations
- Young Leader Mentoring session and lunch
- New Member Orientation
- SME Foundation Dinner

MINEXCHANGE 2021 SME Annual Conference & Expo is planned for March 1-5, 2021. This upcoming event will be held virtually due to COVID-19 restrictions.

NAT 2020 was scheduled for June 7-10 in Nashville, TN. Due to COVID-19 restrictions, the in-person event was cancelled and the content was repurposed in a virtual conference, NATWeek. NATWeek was held June 8-12 and attracted 219 participants for the live event. Additionally, both the recorded content and eBook proceedings are still available for sale in the UCA of SME Store. NATWeek also featured a virtual trade show with 117 companies participating.



MINEXCHANGE
2021 SME Annual Conference & EXPO
CMA 123rd NATIONAL WESTERN MINING CONFERENCE

EVENTS CALENDAR 2020:

George A. Fox Conference:

January 28, 2020, New York, NY

MINEXCHANGE 2020 SME Annual Conference & Expo:

February 23 – 26, 2020, Phoenix, AZ

NATWeek:

June 8 – 12, 2020, Virtual

P.E. Exam Review Course:

September 12 – 16, 2020, Denver, CO and Virtual

THRIVE Conference:

October 20 – 21, 2020, Virtual

Cutting Edge Conference:

November 10 – 11, 2020, Virtual

ATTENDEES:

6,651

5 TECHNICAL SESSIONS

EXHIBITORS:

688

2 SESSIONS FOR THRIVE VIRTUAL

SPONSORING COMPANIES:

156

4 SESSIONS FOR CUTTING EDGE VIRTUAL

Industry Resources to Rely On

Mining Engineering is the official publication of SME. In 2020, *Mining Engineering* expanded its digital offerings and reach with enhanced coverage of the global mining industry in print and at its website, www.me.smenet.org.

Mining Engineering and *T&UC*, the official publication of the Underground Construction Association, a Division of SME, continued to provide industry-leading technical information and industry news updates.

In 2020, *Mining, Metallurgy & Exploration* (MME) published a total of 165 papers in print, a 50 percent increase from 110 papers in 2019, covering 1,959 pages, up from 1,252 pages in 2019. An additional 67 papers were published online. There were two special issues: (1) Critical Minerals Part II and (2) Miner Health and Safety Part I.

Mining, Metallurgy & Exploration Journal

- Launched Jan. 2019
- More than 160 papers published in 2020
- Great reviews

Mining Engineering website

- Daily news
- Archives
- Commodities ticker



The Global, online digital research library for the mining, minerals and tunneling communities

OneMine.org is the definitive global online digital research center for the entire mining, minerals and tunneling communities. The web-based document library expanded content to more than 139,000 articles, technical papers, books and other documents from industry societies worldwide.

SME members have unlimited access to OneMine.org simply by logging in with their SME member credentials.

There are currently 12 societies participating in OneMine.org. They are:

- The Society for Mining, Metallurgy and Exploration (SME)
- The Canadian Institute of Mining, Metallurgy and Petroleum (CIM)
- The Australasian Institute of Mining and Metallurgy (AusIMM)
- The Southern African Institute of Mining and Metallurgy (SAIMM)
- The Deep Foundations Institute (DFI)
- The Minerals, Metals & Materials Society (TMS)
- Instituto de Ingenieros de Minas del Peru (IIMP)
- Brazilian Association of Metallurgy, Materials and Mining (ABM)
- The Institute of Materials, Minerals & Mining (IOM3)
- The International Marine Minerals Society (IMMS)
- The International Society of Explosives Engineers (ISEE)
- The West African Institute of Mining, Metallurgy and Petroleum (WAIMM)



12
ISSUES



6
ISSUES



4
ISSUES

New Books and References

SME continues to enjoy its reputation as the premier book publisher for the mining and underground construction industries. There are now 136 titles in the SME Bookstore.

Print
123
products

eBooks
72
products

Bundles
64
products

"Central to the Vision and Mission of SME is the publication of technical books. As the premiere professional organization serving the mining and underground construction industries, the SME book program underscores the Society's commitment to disseminate technical information, promote education and life-long learning, and enhance the professional advancement of our members."

– Hugh Miller, 2019 SME President

Books Published by SME in 2020

- *In Situ Recovery & Remediation of Metals*
- *Mine Tailings: Perspectives for a Changing World*
- *North American Tunneling: 2020 Proceedings*
- *Proceedings of the 39th International Conference on Ground Control in Mining*
- *SME Mining Reference Handbook, Second Edition*

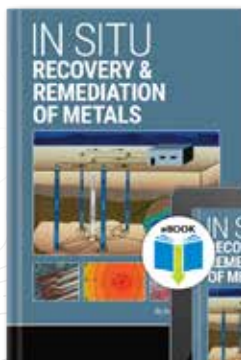
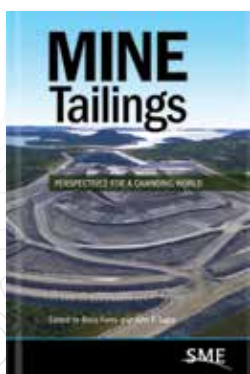


Books Acquired by SME in 2020

The Business of Mining-book series

- *Volume 1: The Business of Mining: Uncertainty, Project Variables and Risk, Royalty Agreements, Pricing and Contract Systems, and Accounting for the Extractive Industry*
- *Volume 2: The Business of Mining: Project Evaluation*
- *Volume 3: The Business of Mining: Mineral Deposits, Exploration, and Ore-Reserve Estimation*

The SME Bookstore traveled to events through early March. Attendees were able to purchase books at the SME Annual Conference & Expo and the Prospectors and Developers Association of Canada conference.



Website Redesign

Fresh Look, Improved Interface

In November, SME launched a new website geared toward creating a customized user experience. New branding, a Single sign-on interface, and enhanced technical content now greet SME website visitors.

- Integration with content-rich sites delivers meaningful technical resources.
- Single sign-on improves seamless transitions across all SME web properties.
- Increased speed for page load time.
- Mobile-friendly design upgrades the viewing experience - regardless of device.
- The revamped website took nearly a year to develop, with even more new features expected to rollout throughout 2021.



Login at smenet.org or ucaofsme.org

Stay Connected with SME

Beyond the website, SME communicates on multiple platforms. Social media, email, eNews and public relations are just some ways

Instagram

In its first full-year of activity, the @smecommunity Instagram account gained over 600 followers, reaching people in the US, Peru, India, Colombia and Mexico.



LinkedIn

Over 7,000 followers were gained in the year 2020 with an average engagement rate of 3.18% for FY 2020, up 18% from FY 2019.



Facebook

By shifting the account focus to feature member-centered content, Facebook met 20,880 followers in 2020, up 7% from 2019, and reached over 232,000 people.



Twitter

A focus on increasing interactive media allowed the @smecommunity Twitter account to garner over 415,600 impressions and increase the year-over-year engagement rate by 142%.



Emails SME

2,555,384 emails were delivered with average open rate of 27%.



News Release

22 major news releases sent to international media list.



Coal & Energy

Highlights

The Coal & Energy Division continues to be a strong supporter of undergraduate students; its our scholarship program, but the Division is seeing a decrease in applicants due to students no longer focusing on coal.

During the 2020 MINEXCHANGE SME Annual Conference, the Division held a silent auction and 50/50 raffle during its luncheon. With these proceeds and lunch sponsors, the Division realized a 12 percent increase in finances.



Heather Trexler
2020 Division Chair

Summary

- Raised \$9,800 for scholarships in 2021
- Awarded \$26,000 in C&E Division Scholarships to seven students
- Awarded \$9,200 in John Sidney Marshall Scholarships to nine students

Environmental

Highlights

- Awarded \$8,000 in Veolia Water Technologies and Environmental Division scholarships.
- Awarded \$1,500 of prize monies to the top three Student Poster session entrants.
- Raised \$4,140 for scholarships in 2020 from silent auction and received \$3,421 in contributions.
- Initiated virtual learning events to foster learning opportunities for SME members.



Leslie Watson
2020 Division Chair

Summary

The Environmental Division continued its social engagement tradition by hosting a virtual coffee break on Aug. 12, 2020. More than 30 people attended the coffee break, and James Renner's response to the coffee break was, "The Zoom coffee break yesterday was great. I enjoyed seeing colleagues and friends that I hadn't seen in several years."

During the 2020 SME Annual Conference, Jeff Gillow, Virginia (Ginger) McLemore and Barbara Nielson were presented with Division Awards. In addition, the Environmental Division also selected two outstanding technical papers and two outstanding presentations.

Health & Safety

Highlights

The SME Health & Safety Division offered 64 technical presentations in seven technical sessions and two joint sessions, one with the Mining & Exploration Division and one with the Industrial Minerals & Aggregates Division. The Health & Safety Division also supported a NORA technical session during the 2020 MINEXCHANGE SME Annual Conference & Expo.



Mick Routledge
2020 Division Chair

The 5th Annual 5K Fun Run/Walk was held at Papago Park in Phoenix, AZ with more than 100 participants and raised \$13,000 for the Division.

In December, the Health & Safety Division, in conjunction with SME's *Mining, Metallurgy & Exploration* journal, published the "Special Issue on Miner Health and Safety Part I," edited by William Rogers and Eric Lutz.

Industrial Minerals & Aggregates

Highlights

In 2020, the Division updated its bylaws following the merger with the Forum on the Geology of Industrial Minerals. The Forum merged with IMAD at the Midyear meeting, helping grow the Division the most of any SME Division.

The Forum on the Geology of Industrial Minerals meeting was held in Georgia. Because of COVID-19 restrictions, this meeting, normally heavy with field-trips, was a well-received virtual meeting over two days.

The Division conducted two virtual IMAD Happy Hours to maintain mining industry friendships.

Completed the annual industrial mineral review of 45 major commodities for *Mining Engineering* magazine. Jim Norman served as the editor of the project with the help of technical committee vice chairs.

The Division received 47 applications for its annual scholarship.



Steven Stokowski
2020 Division Chair

Mineral & Metallurgical Processing

Summary

At the MINEXCHANGE 2020 SME Annual Conference & Expo, the Division offered attendees 106 technical presentations in 17 sessions. This included a four-session focus on technical solutions that cross multiple areas of process technology, exploring a more holistic approach to applied process engineering.

The Scotch Nightcap raised over \$66,000 for the Division – the second year in a row that the event raised more than \$47,000 – and the MPD Calendar raised another \$19,500.

For a second year, the Division gave a generous \$10,001 donation to the Ph.D. Fellowship and Career Development Grant Program while also awarding \$18,500 in MPD Scholarships. Adhering to a focus on student engagement, the Division gave out \$5,625 in MPD Student Poster Contest cash awards and continued to emphasize the student-to-professional, face-to-face interaction.

The MPD Organizing Committee for the 2024 XXXII International Mineral Processing Congress (IMPC) continued to work with Society leadership and was successful in managing disruptions caused by the global Covid-19 impact, and in maintaining the Society's plans for hosting the event in Washington, D.C., in the fall of 2024.



Scott Shuey
2020 Division Chair

Mining & Exploration

Highlights

The Mining & Exploration Division offered attendees 147 technical presentations in 23 technical sessions at the 2020 MINEXCHANGE Annual Conference & Expo in Phoenix, AZ. Topical subjects ranged from emerging technologies and management to mining history and career development.

The division awarded scholarships to 13 deserving students, in the United States and abroad, totaling just more than \$30,000.

In addition to presenting the Division's annual awards at the 2020 MINEXCHANGE Annual Conference & Expo, M&E presented the new Harry M. Parker Excellence Award to the family of the late Harry M. Parker. The award is given for significant contributions to the field of geostatistics, resource & reserve estimation, reporting standards or related fields. The division received \$11,000 in donations from Wood and Mine Technical Services to establish and sustain the new award.

The division continued another year with a generous \$10,000 donation to the SME Foundation's Ph.D. Fellowship program.



Shaun Graber
2020 Division Chair

Underground Construction Association

Highlights

- Established technical working groups
- Provided complimentary webinars to members on operating during the pandemic
- Launched new job bank at tunnelingjobs.org
- Expanded student and professor resources posted at undergroudcareers.org
- Developed two new UCA Student Chapters
- Hosted a sold out George Fox Conference and delivered two successful virtual conferences
- Delivered four issues of *Tunneling & Underground Construction*



Bob Goodfellow
2020 Division Chair

Summary

The Underground Construction Association, a Division of SME (UCA) is focused on sharing technical innovations in tunneling and underground construction. As SME has elevated the importance of underground construction within its mission, the Division revised its Strategic Plan in December.

WAAIME

Highlights

WAAIME awarded \$325,000 scholarships to students the U.S. and International sections, with another \$60,000 going to our Lou Henry Hoover PhD scholarship candidates through the SME Foundation.

At MINEXCHANGE, they hosted the 2nd year of "Selfie Tag" involving students and vendors. It was a huge success, doubling in participation by both groups from last year.

The Carjamarca, Peru section, asked that their request to dissolve their section be rescinded since it had not been officially accepted by the Executive Committee.

They supported 10 students with scholarships.

A \$1,500 donation was given to Colorado Mining Association Education Foundation (CMAEF) to help with the training of teachers.

Every local WAAIME section has given scholarships on their section's behalf, with Tucson giving another \$3,000 this year.



Jean Davin
2020 Division Chair



Lydia Hull
2020 Division Chair

In reviewing the 2020 SME Foundation programs and activities, this year was one that none of us could have ever predicted with its uncertainty and many challenges. And yet the SME Foundation has many achievements to recognize as it continued to serve its mission “to be the source of funding for education and outreach to SME and the community that it serves.” These achievements were possible because of the support of our many donors and volunteers who believe in the value of the Foundation mission. The Foundation Board of Directors and the SME Foundation staff thank each of our contributors, both individual and corporate.

In FY2020, SMEF received almost \$979,000 in donations from individual donors, as well as 23 corporate donors and several fundraising events. Our 11 Corporate Roundtable Partners, who contribute \$25,000 or more annually, accounted for 38 percent of the donations.

It was extremely rewarding to receive almost 32 percent of the donations from individual SME members either through their dues statement or annual giving. This is a record amount from individuals, and we are incredibly grateful for each contribution. From these individuals, 20 donors gave \$1,000 or more and qualify as VIP contributors.



Mary B. Korpi
SME Foundation President

A FY2020 special highlight and successful fundraiser was the first Foundation Benefit Truck Raffle that raised more than \$80,000 for the Foundation at the MINEXCHANGE 2020 SME Annual Conference and Expo in Phoenix, AZ. Empire CAT generously sponsored the winning truck, and similar fundraisers are now planned to become an annual event.

Each of the SME programs – Ph.D. Fellowship and Career Development Grant Program, Minerals Education Coalition (MEC), Miners Give Back, Professional Engineer (PE) Committee, ABET (Accreditation Board of Engineering and Technology), and College Scholarships – will

highlight their achievements in the following pages. Working together and adapting as needed, the SME Foundation has stayed on course and provided value and benefit to our members and the mining industry. Thank you to every Foundation supporter who has made an important difference.

With sincere thanks and gratitude,

Mary B. Korpi
SME Foundation President

Foundation Program Highlights



Ph.D. Fellowship and Career Development Grant Program

- Funding for Class of 2020 was put on hiatus due to COVID-19 issues. No recipients were chosen. Applications are still on file should the program be reinstated in 2021.
- A total of 10 Freeport-McMoRan Career Development Grants have been awarded. Six of those recipients have achieved tenure. The other awardees appear to be on track in their professional development.
- A total of 14 Ph.D. Fellowships have been awarded, and one Lou Henry Hoover WAAIME Ph.D. Fellowship has been accepted. Three of those recipients have received their Ph.D. degrees, three dropped from the program and the remaining awardees appear to be on track for completing their programs.

Professional Engineers (PE) Committee

- The review course for the 2020 PE exam was held Sept. 12-16, 2020. Twenty-eight engineers attended the review course, both in person and virtual, compared to an 11-year average of 41.
- The SME PE Exam Committee diverged into two committees.
 - Approximately 28 licensed PE volunteers joined a newly formed NCEES (National Council for Examining Engineers and Surveyors) PE Exam Committee to develop all future Mining/Mineral Processing (MMP) exams.
 - The newest SME PE Committee will complete non-exam development work such as writing and publishing an SME Professional Engineers Study Guide that includes a practice exam.
- Fourteen SME PE Committee Members attended the PE Workshop in Clemson, SC on March 13-14, 2020 working on converting the bank of questions to electronic format and exam development.
- The 2020 exam is the last pad-and-pencil exam. The 2021 exam will be the first electronic exam, and test-takers will go to testing centers located in most U.S. cities on the same day in October.
- The PE Committee supervised the writing of the Mining Reference Handbook, 2nd Edition. This will be the only reference allowed in the PE exam beginning October 2021.



ABET

- The Visitor Selection Committee has nominated six program evaluators for geological and mining engineering degree program visits for the 2020-21 review cycle.
- ABET elected to conduct the visits virtually and will span from October 2020 – February 2021.
- The editorial revisions to the Geology and Similarly Named Degree program criteria were approved by Applied and Natural Science Accreditation Commission (ANSAC) of ABET.
- The edited versions of the Geological Engineering and Mining Engineering program criteria were approved by the Engineering Accreditation Commission (EAC).
- New program criteria for Mineral Processing Engineering and Extractive Metallurgical Engineering programs were approved by the Engineering Accreditation Commission (EAC) for the traditional publication in ABET documents and for comments from the profession and the public. These criteria now await similar consideration of the EAC Board of Delegates.



Miners Give Back

- The Miners Give Back Committee and the SME Foundation (SMEF) launched a new Miners Give Back Award. This award recognizes the outstanding efforts of an SME Section for their accomplishments in community service and humanitarian outreach.
- The SMEF will accept nominations from SME Sections that summarize their humanitarian project(s) and/or community service activities completed by the Section in the preceding year (May 1 to April 1).
- The SME Foundation Miners Give Back Award consists of a framed certificate, a \$2,000 award to the winning SME Section, one complimentary conference registration and two tickets to the SME Foundation Annual Gala Dinner with VIP seating.
- The award program has been launched and we expect to recognize the first Miners Give Back recipient at the 2022 Annual Conference!



Scholarships

- The SME Foundation has seven different scholarship funds which it manages:
 - J. H. Fletcher & Co. Engineering Scholarship
 - Ernest K. Lehmann Memorial Scholarship
 - MMSA/SMEF Presidential Scholarship
 - Stantec/McIntosh Engineering Scholarship
 - Syd S. Peng and Felicia F. Peng Ground Control in Mining Scholarship
 - George V. Weisdack Memorial Scholarship
 - *NEW for 2020* - Raja V. and Geetha V. Ramani Graduate Student Award
- In 2020, 11 scholarships totaling \$41,000 were awarded to SME student members.



MEC Highlights

- The National Mining Hall of Fame and Museum awarded the 2020 Prazen Living Legend of Mining Award to the Minerals Education Coalition in recognition of the Move Mining and Move Mining Next Gen competitions.
- More than 17,000 votes were cast for Move Mining videos, and 5,000 for Move Mining Next Gen videos.
- In collaboration with the Ohio Aggregates & Industrial Minerals Association (OAIMA), MEC produced the Sort It Out! educational unit for Earth Science Week (ESW), with 10,000 postcards included in the American Geosciences Institute's ESW Toolkit.
- Despite the COVID-19 pandemic, online learning brought Mining in Society Badge training to more than 650 Scouts nationwide through the efforts of the MEC Scouting Subcommittee and volunteers.
- The MEC Booth at the SciFest All Access virtual science festival shared MEC videos and materials with the more than 2,800 visitors to the booth.



Sort It Out!

Playing in the sand and gravel can teach you a lot!

Explore the ins and outs of mining and processing the important mineral resources called aggregates.

Aggregates are crushed rock, sand and gravel used in homes, schools, sidewalks, streets, airports and more—literally everywhere you go, there they are!

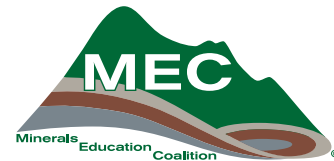
Teachers—find a video and lesson plan to use with the Minerals Education Coalition's *Sifting Stones* activity in the 2020-2021 American Geoscience Institute Earth Science Week Calendar, and see how these materials support national and state educational standards, at:

www.MineralsEducationCoalition.org/esw

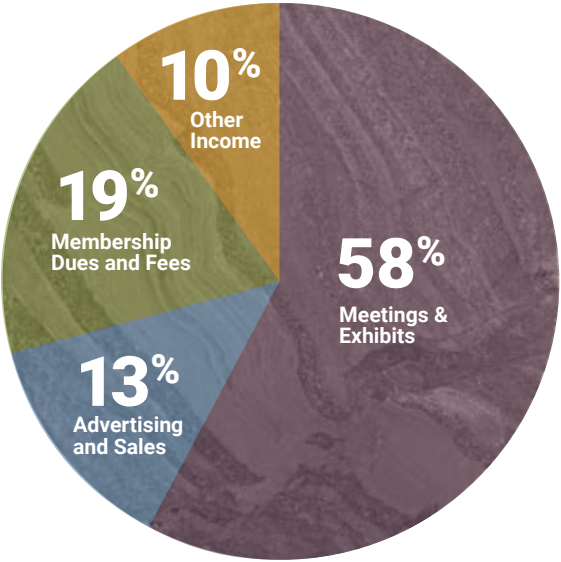
Students—sort stones with screens and compare estimated values of the piles of differently sized particles.

You will be replicating what happens to millions of tons of aggregate products made every day as you do this exercise!

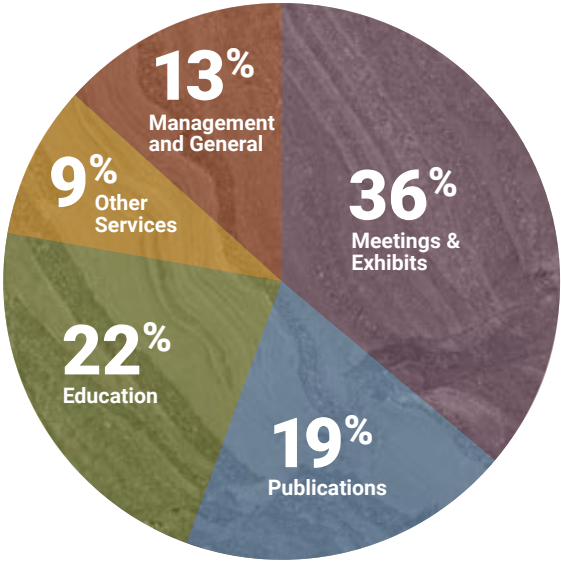




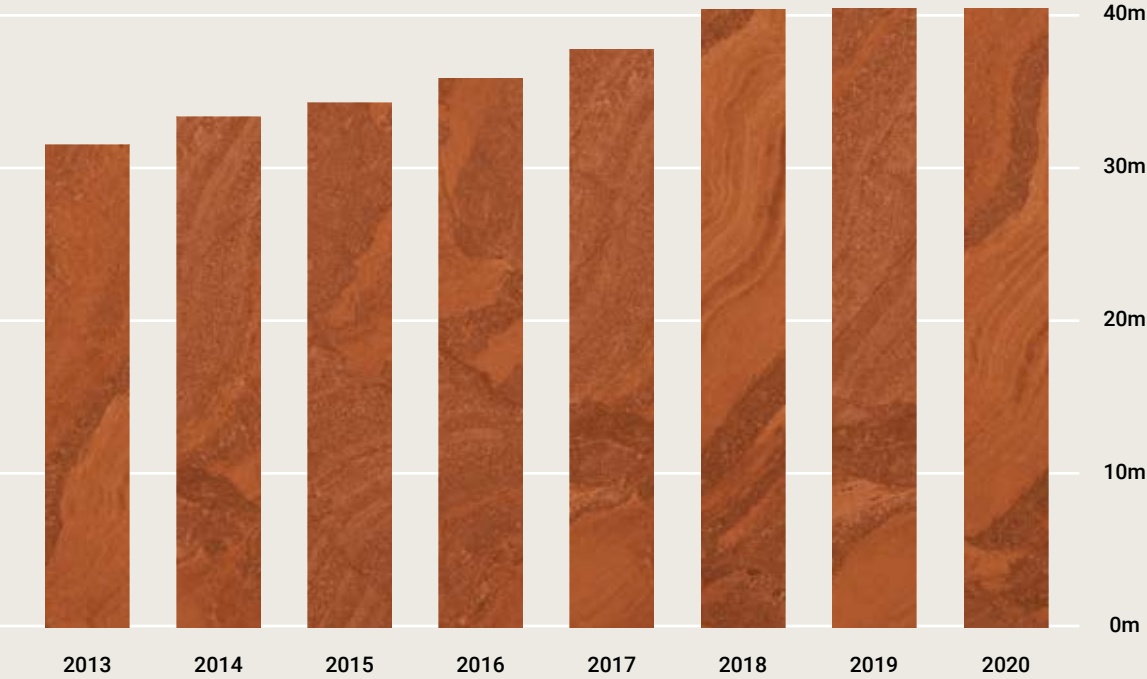
Operating Revenue (Sources)



Operating Expenses



Assets
(in millions)





SME

Society for
Mining, Metallurgy
& Exploration

2020 ANNUAL REPORT

12999 East Adam Aircraft Circle | Englewood, Colorado 80112 USA
1.800.763.3132
smenet.org | sme@smenet.org