

LEHIGH UNIVERSITY, BETHLEHEM, PA, USA

AIME

150TH ANNIVERSARY



OCTOBER 2-4, 2021

AIME appreciates the work of the 150th Planning Committee, Lehigh staff, and its Member Societies to recognize this unique milestone. We hope you enjoy your time in Bethlehem, PA, site of the second meeting of the Institute on August 15, 1871. . .

BETHLEHEM MEETING,

August 15th, 1871.

THE Institute assembled in Packer Hall of the Lehigh University, the President, Mr. David Thomas, of Catasauqua in the chair.

Professor Henry Coppée, President of the Lehigh University, made an address of welcome to the Institute, and placed at its disposal a convenient hall for purposes of meeting.

Mr. Thomas tendered his resignation as President of the Institute, as advancing years prevented him from actively participating in its meetings. The Institute declined to accept the resignation, and, on the assurance that active duties would not be expected of him, Mr. Thomas was induced to withdraw it.

Invitations were received from Mr. B. C. Webster, President of the Lehigh Zinc Company, to visit the mines and works of the company; from Mr. Charles Brodhead, to visit the Chapman Slate Quarries; and from the Lehigh Coal and Navigation Company, to visit their works at Summit Hill and Mauch Chunk and the Nesquehoning Tunnel.

The Council reported the names of persons already elected in the two classes of *members* and *associates*.

The following resolutions were passed:

Resolved, That a committee of three be appointed, who shall take into consideration the printing and publishing of papers originating with the Institute, and that a uniform system as regards size and execution be adopted.

The committee appointed consisted of Messrs. R. W. Raymond, E. B. Coxe, and the Secretary.

Resolved, That the Council design and prepare a seal for the Institute at the earliest practicable time.

Resolved, That a committee of six, with power to add to its numbers, be appointed to examine into the question of the more economical production of iron in this country.

The committee appointed consisted of Messrs. G. W. Maynard,

Samuel Thomas, Thomas M. Drown, Edmund C. Pechin, Walter Crafts, and Willard P. Ward.

A communication was received from President Coppée, of the Lehigh University, offering the Institute a room in Packer Hall as a permanent repository for its collections, archives, etc.; also the use of the large hall for meetings.

The thanks of the Institute were tendered to President Coppée for the offer, but the Institute did not deem it advisable at that time to take definite action on it.

During the sessions of this meeting the following named gentlemen were elected members or associates of the Institute:

Bell, Rufus J.,	Wilkes-Barre, Pa.
Bennett, D. R.,	Jenkintown, Pa.
Bowden, J. H.,	Wilkes-Barre, Pa.
Bradford, H.,	Reading, Pa.
Bruckner, William,	El Paso, Texas.
Bryden, Andrew A.,	Pittston, Pa.
Buck, Stuart M.,	Boston, Mass.
Coryell, Miers,	Shanghai, China.
Crafts, Walter,	Columbiana, Ala.
Dinkey, James A.,	Mauch Chunk, Pa.
Fisher, Clark,	Trenton, N. J.
Geary, Jos. W.,	Pottsville, Pa.
Goodwin, H. Stanley,	Bethlehem, Pa.
Harden, J. W.,	Wilkes-Barre, Pa.
Harris, Wm. J.,	Ebervale, Pa.
Hewett, C.,	Jenkintown, Pa.
Hewitt, Abram S.,	New York.
Hunt, Joseph,	Catasauqua, Pa.
Hunt, Thomas,*	Catasauqua, Pa.
James, E. P.,	Bethlehem, Pa.
Lee, Col. Washington,*	Wilkes-Barre, Pa.
Lord, John C.,*	Morristown, N. J.
McMillan, Charles,	Bethlehem, Pa.
Newton, Henry,	New York.
Parrish, George H.,	Wilkes-Barre, Pa.
Phillips, Thomas,	Summit Hill, Pa.
Thomas, Zora B.,	Wilkes-Barre, Pa.
Torrey, H. F.,	Providence, Pa.
Vinton, Prof. F. L.,	New York.
Webster, B. C.,	Bethlehem, Pa.
West, B.,	Bethlehem, Pa.
West, John,	Bethlehem, Pa.
Whitney, A. J.,	Harrisburg, Pa.
Wright, Harrison,	Wilkes-Barre, Pa.
Yates, Alfred Curtis,	Mahanoy City, Pa.

* Since deceased.

The papers read were as follows :

Preliminary Report of the Committee on Coal Mining, by E. B. Coxe, Chairman.

On an Apparatus for Measuring the Depth of Shafts, by Prof. F. L. Vinton.

On the Works and Mines of the Lehigh Zinc Company, by H. S. Drinker.

On an Eccentric Theodolite, by Prof. F. L. Vinton.

On the Topography of the Lake Superior Copper Region, by J. F. Blandy.

On the Use and Advantages of the Prop Screw-jack, by E. Gaujot.

On Sontag's Apparatus for Giving a Free Fall to the Bit in Boring Artesian Wells, by Willard P. Ward.

Remarks on the Application of Anthracite Iron for the Production of Bessemer Steel, by G. W. Maynard.

On the Difficulties in the Identification of Coal Beds, by R. P. Rothwell.

Professional Morality, by R. P. Rothwell.

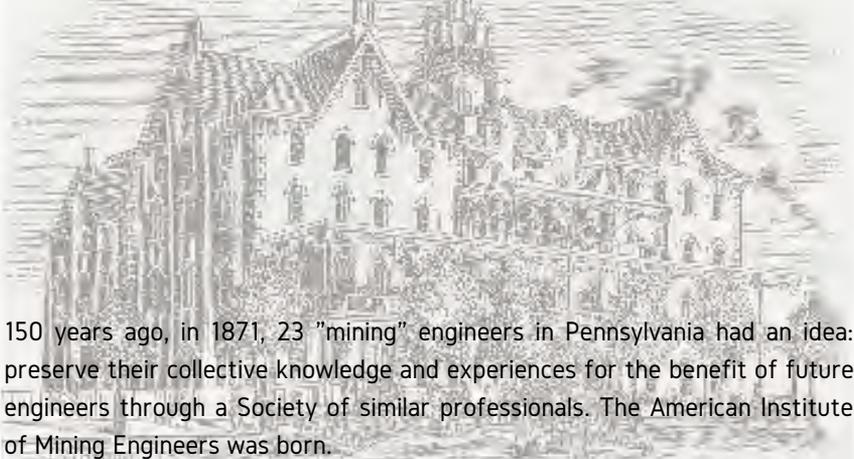
The invitation of Mr. Webster was accepted by all the members present, who enjoyed a day full of instruction and good cheer. The excursion provided by the Lehigh Coal and Navigation Company was participated in by a number of the members after the adjournment of the Institute.

The invitation of Mr. Charles Brodhead was declined for want of time.

The following resolution was passed before adjournment :

Resolved, That the cordial thanks of the Institute are hereby tendered to Mr. B. C. Webster, President of the Lehigh Zinc Company, and to the Superintendents of the different branches of the Company's works, for their attention and hospitality; to the Lehigh Coal and Navigation Company for the facilities provided for inspecting the Company's works; also to Mr. Charles Brodhead, for his invitation to visit the Chapman Slate Quarries.

A LEGACY THAT RUNS DEEP



The Athenaeum of Philadelphia

150 years ago, in 1871, 23 "mining" engineers in Pennsylvania had an idea: preserve their collective knowledge and experiences for the benefit of future engineers through a Society of similar professionals. The American Institute of Mining Engineers was born.

AIME grew with man's quest to explore and increase productivity and created a Petroleum Division in 1922, an Iron and Steel Division in 1928, and an Institute of Metals Division in 1933. And, so, in 1957, the organization changed its name to the American Institute of Mining, Metallurgical and Petroleum Engineers, and, the current Member Societies, SME (the Society for Mining, Metallurgy, and Exploration), TMS (The Minerals, Metals, and Materials Society), and SPE (the Society of Petroleum Engineers), were formed from the branches of AIME.

In 1974, a fourth Member Society, the Iron and Steel Society (ISS), was added. A further evolution occurred in 1984 when the four AIME Member Societies became separately incorporated 501(c)3 organizations, like AIME. In 2004, ISS merged with AISE (Association of Iron and Steel Engineers) to form AIST (Association for Iron & Steel Technology), which remained under the AIME umbrella.

Today, the AIME organizations include nearly 200,000 of the most influential and innovative figures in engineering and science. AIME's mission is to support its Member Societies. AIME activities are supported primarily by the return on investment of forty endowment funds. These funds provide support for forward-reaching programs including interdisciplinary projects and forums, awards of excellence, scholarships, and grants.

EVENT SCHEDULE

SATURDAY, OCTOBER 2, 2021

7-8a EDT: Breakfast buffet for Board

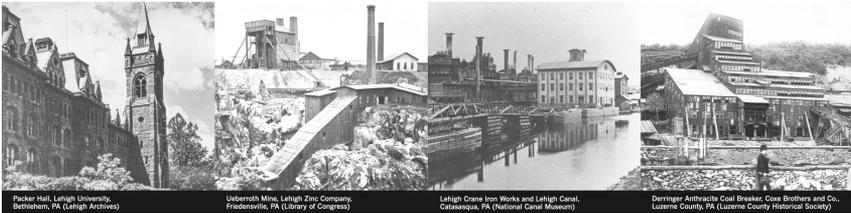
8a-Noon: AIME Meeting of the Members and Annual Board Meeting
(Open) – Lehigh Iacocca Conference Center, Governor's Suite

Lunch on own

2-3p: Lehigh plaque installation, near Packard Lab (looking up toward Packer Hall)

3-6p: On own, suggested walking or driving tours
(detail to be provided)

6-8p: Sun Inn Tavern Bethlehem (museum open prior for self-guided tours; docent to speak during dinner)



THE AMERICAN INSTITUTE OF MINING ENGINEERS

Commemorating 150 Years and Early Ties to Lehigh

On August 15, 1871, three months after its founding in Wilkes-Barre, PA, the first technical meeting of the American Institute of Mining Engineers (AIME) was held at Lehigh University. The first President of the Institute and Pennsylvania iron industry pioneer, David Thomas, presided. Lehigh President, Dr. Henry Coppée, gave the Welcoming Address and Henry Sturgis Drinker presented a paper on "The Mines and Works of the Lehigh Zinc Company." Drinker was the first mining engineering graduate and later became the fifth President of Lehigh University. The AIME members toured the zinc mines in nearby Friedensville and the zinc works located along the Lehigh River below the Lehigh campus.

1878: Eckley B. Coxe, one of the Lehigh founders and a Trustee, became AIME President. In 1910, his estate donated the Coxe Mining Laboratory Building. It became Coxe Hall.

1894: Lehigh Trustee, John Fritz, called "the father of the U. S. iron and steel industry," became the President of AIME. He designed and donated the funding for the Fritz Engineering Laboratory which opened in 1910.

1895: Thomas Messenger Drown, one of the 23 AIME founders, became the fourth President of Lehigh. He became AIME President in 1897.

2021: Now called the American Institute of Mining, Metallurgical, and Petroleum Engineers, AIME's four member societies include nearly 200,000 members worldwide. To learn more, visit aimehq.org



EVENT SCHEDULE

SUNDAY, OCTOBER 3, 2021

Breakfast on own

10a-5:00p: Historical talks – Lehigh Neville Classroom (Map 6A)

10:00-10:15a – SPE 150th Video

10:15-11:00a – Mike Korb: The Original 22 23

11:00-11:15a – Break

11:15a-Noon – Mike Kaas and Mark Connor: The Friedensville
Mining District & the Birth of the U.S. Zinc Industry

Noon-12:45p – Barbara Arnold: Ellen Swallow Richards: AIME's
First Female Member

12:45-1:45p – Lunch Buffet – Walk to STEPS Tent (Map 9A)

1:45-2:30p – Beth Price: WAAIME Then and Now

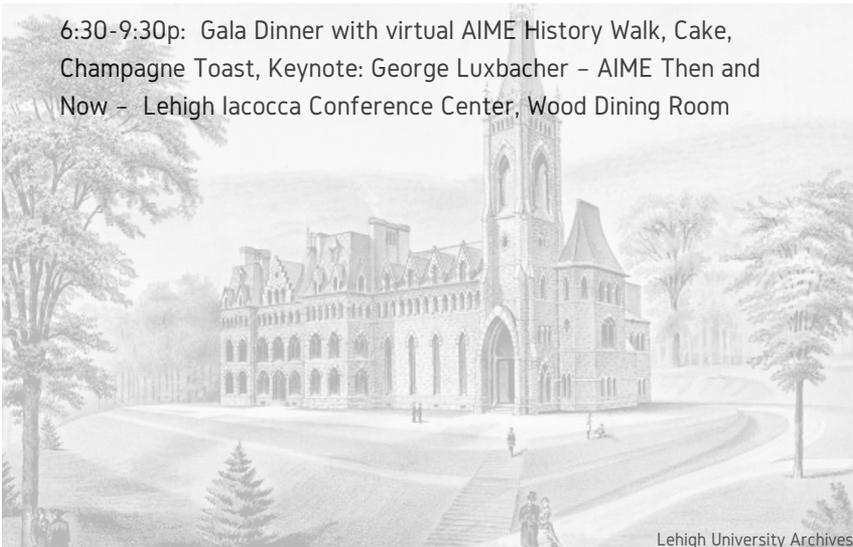
2:30-3:15p – John Speer: The Continuing Development of Modern
Steel Products

3:15-3:30p – Break

3:30-4:15p – Ellen Cerreta: Los Alamos National Lab

4:15-5:00p – Tom Blasingame: Honoring the Past and Forging Ahead

6:30-9:30p: Gala Dinner with virtual AIME History Walk, Cake,
Champagne Toast, Keynote: George Luxbacher – AIME Then and
Now – Lehigh Iacocca Conference Center, Wood Dining Room



Lehigh University Archives

EVENT SCHEDULE

MONDAY, OCTOBER 4, 2021

Breakfast on own

8a-6p: Industry-related field trips (Bus will pick up at Hyatt Place Bethlehem)

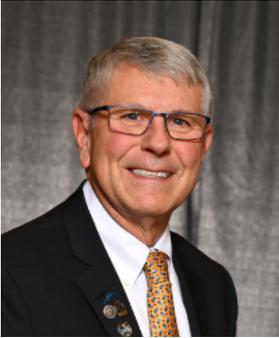
Morning: Friedensville Zinc Mining District and Atlantic Carbon anthracite mine tour (via Palmerton)

Lunch at Sand Springs Country Club in Drums, PA

Afternoon: Wilkes-Barre plaques/roadside marker and Eckley Miner's Village



SPEAKERS



AIME 2020 President, George Luxbacher

Dr. George W. Luxbacher is the Deputy Associate Director for Mining with the National Institute for Occupational Safety and Health (NIOSH), part of the Centers for Disease Control and Prevention (CDC). He earned a B.S. degree in mining engineering from the Pennsylvania State University and began his career with Pittsburgh

Coal Company, a subsidiary of Consolidation Coal Company. Returning to Penn State, he then completed his M.S. and Ph.D. degrees, also in mining engineering, and is a Centennial Fellow of the Penn State's College of Earth and Mineral Sciences. After graduation he worked for various subsidiaries of Occidental Petroleum Corporation for 35 years, Occidental Research Corporation, Island Creek Coal, and Glenn Springs Holdings, before retiring as senior vice president of operations at Glenn Springs to start his consulting firm, MELM Consulting. In 2016 he returned to his research roots and started consulting for NIOSH, joining NIOSH as a Senior Service Fellow in 2017. He manages the NIOSH mining programs extramural research contracts, including the capacity build component designed to support graduate research and faculty development in mining engineering. Dr. Luxbacher has a diverse background, having managed a bulk materials terminal on the Mississippi River, worked internationally, and is the co-inventor of a process to dredge and refine phosphorus-bearing sludge into a marketable product, developing, designing, and constructing a phosphorus recovery plant in Tennessee while at Glenn Springs. Dr. Luxbacher is a registered professional engineer and has served on innumerable committees in leadership roles within SME. He serves as a Program Evaluator (PEV) in mining engineering for ABET. He was president of SME in 2008 and president of AIME in 2012, now becoming the first person to serve a second term as AIME President since the early 1900s. He has a deep interest in the history of AIME since its founding in 1871.

SPEAKERS



SME Penn Anthracite Past Chair, Mike Korb

Michael C. “Mike” Korb, P.E., graduated as a Mining Engineer from the University of Missouri – Rolla (now Missouri University of Science and Technology) in January 1968. Mike promised his wife Pat a life of adventure, and they’ve spent more than 55 years moving to some 17 homes while he worked in mining and mining-related

technical, administrative, supervisory, management, executive, sales, professional, and consulting jobs in industries; working for Bethlehem Mines, the Commonwealth of Pennsylvania, and a Rolodex full of jobs in bituminous coal, iron ore, limestone, industrial sand, and slag as well as more than 25 years in anthracite.

He is a Society for Mining Metallurgy & Exploration (SME) Legion of Honor member, a Distinguished Member of SME, and an active member and two-time past chair of the SME Penn-Anthracite Section.

Mine reclamation has been a big part of his past career, working on abandoned mine drainage (AMD) and active surface mine reclamation for Bethlehem and other surface mining operations, managing an abandoned mine reclamation office for the Pennsylvania Department of Environmental Protection which won four national abandoned mine land (AML) awards, and working on AML and AMD projects for Tetra Tech, Inc.

The Korbs now live with their rescue-cat, Callie, in Drums, PA. Mike is working part-time with Tetra Tech in Northeastern Pennsylvania and spends most of his time working with anthracite mine heritage and environmental non-profits. Pat and Mike’s son Matthew and his wife Jessie live in Los Angeles, and their daughter Kathleen and husband Ashley live in Middletown PA.

SPEAKERS



SME Washington DC Past Chair, Mike Kaas

Michael Kaas is a retired government senior executive and mining engineer whose career included employment with the U. S. Bureau of Mines, Office of the Secretary of Interior, IBM Corporation, and several mining companies. He received a BS degree in mining engineering from The Pennsylvania State University and a MS

degree in mineral engineering from the University of Minnesota. He was an early innovator in the development of computer applications for the mining industry. During his 20 years at the Bureau of Mines, he was responsible for programs in minerals information and analysis, resource evaluation, mineral land assessment, and environmental research.

He has been a member of the Society for Mining, Metallurgy, and Exploration (SME/AIME) since his student days at Penn State, is a past SME Director, and a past Chairman of the Washington DC, Section. He performs extensive outreach in his local area and as a volunteer at the Smithsonian Institution's Museum of Natural History to share his excitement for minerals and mining with the next generation. He is also a mining history buff and a member of the Mining History Association. His historical research includes the Friedensville, PA Zinc Mining District. He is the author of several papers on technical topics and mining history.

SPEAKERS



Leader of the Friedensville Cornish Engine House preservation effort, Mark Connor

Mark Connor is a retired businessman with an AB degree in Anthropology and International Relations from Brown University. He also holds an MBA degree from Lehigh University. Before entering the business world, Mark did post graduate study in archeology at the University Museum, University of Pennsylvania. During that period, he participated in archeological surveys in the United States and the United Kingdom. He is on the Board of Trustees, Historic Bethlehem Museums and Sites. He is also a Founding Member of the National Museum of Industrial History. A Lehigh Valley native, he has a lifelong interest in the Friedensville mining area and The President engine house ruins. Consequently, he has extensively researched the subject and is currently working with Lehigh University, the property owner, and others to undertake steps to protect, stabilize and repair the surviving engine house ruins and to preserve this unique location as a heritage park or other suitable protective environment.

SPEAKERS



SME Past President, Barbara Arnold

Dr. Arnold holds a B.S. in Mining Engineering and an M.S. and Ph.D. in Mineral Processing from The Pennsylvania State University, where she specialized in coal froth flotation, fine particle processing, and coal petrology. Her research and development experience has included projects for government and industry funding agencies as well as private companies and has covered the development of a coal cleaning simulator, coal

handling, coal blending, coal cleaning characterizations, and flowsheet evaluations. Her experiences with US Steel and Electric Power Research Institute (EPRI), through their Coal Cleaning Test Facility, provided her insight into coal properties and their effect on industrial processes. Since 1997, she has been president of PrepTech, Inc., which provided engineering consulting services to coal companies and others in coal cleaning as well as equipment sales through 2020. She joined Penn State faculty as Professor of Practice, Mining Engineering, August 1, 2020.

Dr. Arnold is a registered professional engineer in the Commonwealth of PA. Her current research focuses on the recovery of rare earth and other critical minerals from the coal measures, surface chemistry of respirable dust, optimization of coal and mineral processing plants to reduce tailings generation, and the beneficial use of coal and mineral processing plant tailings.

SPEAKERS



WAAIME Past Chair, Beth Price

Beth is the section chair for the Reno, NV WAAIME section, having joined in 1990. She served in the National WAAIME organization in various positions, including National Scholarship Chair and WAAIME Executive committee chair in 2013, after WAAIME became a division of SME in 2008. Beth has also been a member of the Washington, DC WAAIME section in 1993-1994.

Beth received her MS in Chemistry from the University of California, Berkeley after also attending Bucknell University and the University of Heidelberg in Heidelberg, Germany. She has worked as a chemist and as a teacher in elementary school and in community colleges as a chemistry instructor. Beth has moved with her Economic Geologist husband, Jonathan Price, to various places including Utah, Pennsylvania, Texas, Maryland, and finally Reno, Nevada, where Jon is the Nevada State Geologist Emeritus.

SPEAKERS



AIME 2017 President, John Speer

John G. Speer is the American Bureau of Shipping Professor at Colorado School of Mines, and Director of the Advanced Steel Processing and Products Research Center (ASPPRC). He received a B.S. degree from Lehigh University in Metallurgy and Materials Engineering, in 1980 and a D.Phil. in Physical Metallurgy from the University of Oxford, UK in 1983. He served in various positions at the Homer Research Laboratories of Bethlehem Steel

Corporation from 1983-1997, where he was involved in product research, customer and operations support, and research management. He became a Professor in the Department of Metallurgical and Materials Engineering at Colorado School of Mines in 1997 and also served as Mines' Associate Vice-President for Research from 2008 until he became Director of ASPPRC in 2013.

He has received a number of awards, such as the AIST Tadeusz Sendzimir Medal and Hunt-Kelly Award, American Iron and Steel Institute Gold Medal, Institute of Materials Charles Hatchett Award, AWS William Spraragen Memorial Award, SAE/AISI Sydney H. Melbourne Award, Villares Prize of ABM (Brazil), Dean's Excellence Award for Teaching and Research-Colorado School of Mines, and the Henry Bessemer Gold Medal from IOM3 in London. John is also a Distinguished Member of AIST, a Fellow of ASM International, and a member of the US National Academy of Engineering.

SPEAKERS



TMS President, Ellen Cerreta

Ellen Cerreta, the Los Alamos National Laboratory's division leader for Materials Science and Technology, is the 2021 president of The Minerals, Metals, & Materials Society (TMS). Cerreta had previously served as vice president of TMS, and she has been on the organization's board of directors twice and a member of various

committees since joining TMS in 1997.

The Materials Science and Technology division at Los Alamos, under Cerreta's leadership, provides innovative and agile materials science and technology solutions for national security missions. By integrating the division's capabilities across materials synthesis, processing, properties, and performance, she supports research, development, and component manufacturing as well as the application of fundamental materials expertise to a range of national security needs, including nuclear energy, nonproliferation, and global threat reduction.

Cerreta has previously served as the deputy division leader for Explosive Science and Shock Physics, and as the program manager for High Explosives Safety at Los Alamos. She received her B.S. degree in aerospace engineering from the University of Virginia and her M.S. and Ph.D. degrees in materials science and engineering from Carnegie Mellon University. She has been at Los Alamos since 2001 and her own research focuses on the relationship between microstructure and dynamic materials properties. At Los Alamos, she has led a number of projects to investigate dynamic materials performance and provide insight toward advanced predictive capabilities for strength and damage in extreme environments. She has more than 100 peer-reviewed publications in this area of research and is also an adjunct faculty member in The Institute of Shock Physics at Washington State University and was inducted into the 2016 ASM Fellows Class.

SPEAKERS



SPE Past President, Tom Blasingame

Thomas A. (Tom) Blasingame is a professor of Petroleum Engineering at Texas A&M University, where he began teaching as an undergraduate teaching assistant in 1983 after becoming a student in 1980. Tom joined the full-time staff as an assistant professor in 1991 and since 1991 he has graduated 76 MS and 17 PhD students and he

has prepared over 180 technical articles.

Tom is the second SPE President to come from academia, both from Texas A&M; the first was John Calhoun in 1964. Blasingame has been active in SPE since the early 1990s, serving in a wide variety of roles —he has chaired 20 conferences, 12 Technical Workshops, three SPE Forums, and two SPE summits. Tom also served on the SPE International Board of Directors as the Technical Director for Reservoir from 2015 to 2018.

Tom has served as a Distinguished Lecturer, was named a Distinguished Member, and received SPE's highest honor, SPE Honorary Member. Other SPE honors include the Distinguished Service Award, Lester C. Uren Award, Distinguished Achievement Award for Petroleum Engineering Faculty, Anthony F. Lucas Gold Medal, DeGolyer Distinguished Service Medal, and the SPE Gulf Coast Distinguished Achievement Award for Petroleum Engineering Faculty. Tom is the immediate SPE Past-President. Tom holds BS, MS, and PhD degrees in petroleum engineering from Texas A&M University and has received several teaching and service awards from Texas A&M.



AMERICAN INSTITUTE OF MINING,
METALLURGICAL, AND PETROLEUM ENGINEERS

Supporting its Member Societies:



Society of Petroleum Engineers



The Minerals, Metals & Materials Society