

## One Hundred Eighty-Fifth Commencement

Saturday, May Seventh
Two Thousand and Twenty-Two
The Monument Ice Arena

## **ORDER OF CEREMONY**

Master of CeremoniesDr. Lance RobertsProcessional (Stand)Graduation Band

Pomp and Circumstance by Elgar, arranged by Larry Clarke

Army ROTC Color Guard **Presentation of Colors** Dr. Jim Rankin President's Message **Recognition of the 50 Year Graduates** Dr. Lance Roberts Senior Class Representative's Message Mr. Jacob West Mr. Jeff Partridge Message from the Board of Regents Commencement Address Mr. Billy Mills **Presentation of Honorary Degrees** Dr. Jim Rankin **Conferral of Degrees** Dr. Jim Rankin **Presentation of Degree Candidates** Dr. Joseph Dlugos

Flourishes! by William Owens

Retirement of Colors
Recessional (Stand)

## SOUTH DAKOTA MINES GRADUATION BAND

Dr. Haley Armstrong, Director
Kaden Adrian, Trumpet
Angelina Benda, Clarinet
Kyle Bergevin, Alto Sax
James Gormley, Cello
Micah Hoylman, Trumpet
Jacob Jorgenson, Trumpet
Carolyn Kocken, Flute
Karen Ly, Oboe

Christian Olson, Trombone
Andrew Peterson, Percussion
Kole Pickner, Euphonium
Sara Ringheimer, Flute
Margaret Thompson, Flute
Noel Utecht, Euphonium
Derek Whitesides, Tuba
Cherokee Winkler, Cello
Tanner Ziwicki, Bass

Army ROTC Color Guard

Graduation Band

This program is not an official document. Due to strict requirements, it must be printed before the final list of degree candidates can be determined.

# 50-YEAR GRADUATES CLASS OF 1972

#### 300 graduates (237 BS degrees, 62 MS degrees, 1 PhD)

Only those attending today's Commencement are listed below.

Michael Alley, Geological Engineering, Nemo, SD
Robert Apa, Chemical Engineering, Boise, ID
Bruce Bad Moccasin, Civil Engineering,
Rapid City, SD
Gary Baker, Electrical Engineering, Akron, OH
Ronnie Baruth, Mining Engineering, Alpena, SD
Alan Blair, Civil Engineering, Grand Island, NE
Bonnie (Koskan) Blair, Chemistry, Grand Island, NE
Bob Buchanan, Electrical Engineering, Rapid City, SD
Jerald Byg, Civil Engineering, Ames, IA
Jim Christman, Civil Engineering, Rapid City, SD
Barbara (Johnson) Coles, Chemistry,

Gary Coles, Mechanical Engineering, Williamston, MI

Dan Daniels, Mechanical Engineering, Fort Wayne, IN

Williamston, MI

Gary Doolittle, Geological Engineering, Austin, TX

Gary Evensen, Mining Engineering, Rapid City, SD

Harald Flatøen, *Mechanical Engineering*, *Bellevue*, *NE* 

Joel Grace, Mining Engineering, Cheyenne, WY

Douglas Ham, Civil Engineering, Shadehill, SD

Ted Heidrich, Mechanical Engineering, New Underwood, SD

John Hey, Mechanical Engineering, Rapid City, SD

Don Hixson, *Chemistry, Rapid City, SD* 

Bill Klapperich, Civil Engineering, Spearfish, SD

Dale Koepp, Mathematics, Colorado Springs, CO

Greg Kronaizl, Mechanical Engineering, Elkhorn, NE

Jerry Lipovsky, Mechanical Engineering,

Sioux Falls, SD

David Nold, Chemical Engineering, Highlands Ranch, CO

Daniel Nusz, Mechanical Engineering, Cheyenne, WY

Curt Olson, Mechanical Engineering, Rock Springs, WY

Mat Peabody, Chemical Engineering, Alto, MI

Larry Pearson, Mechanical Engineering,
Bennington, NE

Steven Pirner, Civil Engineering, Pierre, SD

Jim Quinn, Civil Engineering, Rapid City, SD

Paul Schauer, Electrical Engineering, Scottsbluff, NE

Lyle Steffen, MS Geology, Nemo, SD

Larry Trautman, Metallurgical Engineering, Lemmon, SD

Leo Van Sambeek, Mining Engineering, Hermosa, SD

Allan Walters, MS Chemistry, Potomac, MD

#### SENIOR CLASS REPRESENTATIVE

#### Mr. Jacob B. West

Jacob B. West came to South Dakota Mines after graduating from Sturgis Brown High School in Sturgis, SD. His parents are Kristen and Wade Huntington, and Brad and Karine West. He has two brothers, Joshua and Adam West, and two stepsiblings, Katie and Kade Huntington.

West has been involved in various clubs and activities while at South Dakota Mines. He served on the Student Association Senate since 2018 in several committees and most recently as vice president. He is the business manager and a regent of the Theta Tau professional engineering fraternity, treasurer of the Order of Omega Greek honor society, a first-year student mentor, and an orientation leader. He served on the South Dakota State Student Council Association from 2015 to 2018, as state president for two years and Rushmore Region reporter for one year, winning the All-State Student Council award in 2018. He has worked as a videographer, graphic designer, website designer, sound technician, stagehand, database administrator, and photobooth owner. He is currently interning at Omnitech, Inc., in Sioux Falls.

After graduating with his Bachelor of Science degree in computer science, West will be working at Omnitech in Rapid City as a software engineer and outside sales representative.

## HONORARY DOCTOR OF PUBLIC SERVICE

#### Mr. Don Barnett

Don Barnett graduated from Rapid City High School in 1960 and received a bachelor's degree in political science from South Dakota State University in 1964. He served in the U.S. Army from 1967 to 1969. His military service included a tour in Vietnam as commander of a medical company, and he earned a Bronze Star for meritorious achievement as a result.

In 1971, he was elected mayor of Rapid City, becoming its youngest mayor at the age of 28. During his tenure, he led the city through four turbulent years, including the long recovery process from the Black Hills flash flood of 1972, which caused \$165 million in damage and killed 238 people; and the heightened racial tensions, violence, and resulting American Indian Movement's civil disobedience in 1973. His guidance led to the development and construction of the Rushmore Plaza Civic Center (now known as the Monument), the central fire station, and the Dahl Fine Arts Center.

He founded three cable television corporations and was responsible for preparing and managing the application process for dozens of cable television franchises in seven states. He then served as vice president and national marketing director for First Golf Corporation, a golf course development firm which led to the creation of 20 public golf facilities in 11 states. He later worked in marketing at THK Associates in Aurora, Colorado, providing financial feasibility, land planning, and landscape architecture services.

He retired in 2010. He is an author, recipient of the 2018 Monsignor William O'Connell Founders Award by Catholic Social Services, and a 2011 inductee into the South Dakota Hall of Fame.

## HONORARY DOCTOR OF PUBLIC SERVICE

#### Mr. Billy Mills

William "Billy" Mills, a member of the Oglala Sioux Tribe, was born in Pine Ridge and raised on the Pine Ridge Indian Reservation. Orphaned at age 12, he took up running, and set records in numerous track events during high school at the Haskell Institute in Lawrence, Kansas, a former residential boarding school for Native American children now known as Haskell Indian Nations University. He earned a track scholarship to the University of Kansas, where he excelled in cross country. He became a three-time NCAA All-American cross-country recipient and won the individual title at the Big Eight cross-country championship in 1960. After graduating, he served in the U.S. Marine Corps Reserve from 1962 to 1965.

Mills was largely unknown in the running world when he qualified for the 1964 Summer Olympics. His competition included Ron Clarke of Australia, the world record holder at the time. Mills became the first and remains the only gold medalist from the U.S. in the 10,000-meter run. His winning time of 28:24.4 was almost 50 seconds faster than he had run before and set a new Olympic record for the event.

Mills later set U.S. records for the 10,000-meter run and the three-mile run. He and fellow American Gerry Lindgren both broke the six-mile run world record in 1965, when they finished in a tie at the Amateur Athletic Union (AAU) National Championships.

He has been inducted into the U.S. National Track and Field Hall of Fame, the U.S. Olympic Hall of Fame, National Distance Running Hall of Fame, the Kansas Hall of Fame, the South Dakota Hall of Fame, the San Diego Hall of Fame, the National High School Hall of Fame, the American Indian Athletic Hall of Fame, and the National Native American Hall of Fame. He is an author, public speaker, and co-founder of the nonprofit organization Running Strong for American Indian Youth.

## **GRADUATE DESIGNATIONS**

† Army ROTC Cadet being commissioned as Second Lieutenant ‡ 2020 Graduate

‡‡ 2021 Graduate

‡‡‡ Summer 2022 Graduate

¥ Honors Program Graduate

## **BACHELOR OF SCIENCE DEGREE**

\*Cum Laude White Tassels 3.50 - 3.69 GPA
\*\*Magna Cum Laude Red Tassels 3.70 - 3.89 GPA
\*\*\*Summa Cum Laude Gold Tassels 3.90 - 4.00 GPA

#### DOCTOR OF PHILOSOPHY DEGREE CANDIDATES

## **Biomedical Engineering**

Zhipeng Liang Electrospun Three-Dimensional Nanofibrous Structures for Biomedical Applications and Wearable Sensors

## **Chemical and Biological Engineering**

Tanvi Govil

Green Manufacturing of Polyhydroxyalkanoate in a Single Step Consolidated Thermophilic Mini-Cell Factory

Abhilash Kumar Tripathi Applications of Omics Technology in Deciphering Microbial Mechanisms in Environmental Waste Management

## **Geology and Geological Engineering**

Brooke Lamonte Long-Fox
Environmental and Phylogenetic Controls on Shellmorphology
in the Chemosymbioti Lucinidae (Bivalvia)

## Geology, Geological Engineering, and Mining Engineering

Richard Amoako

Applied Machine Learning in Mine Safety and Short-Term Underground Mine Production Scheduling

Fleford Santos Redoloza

Investigating the Use of Convolutional Neural Networks and Generative Adversarial Networks for Hydrogeological Inverse Modeling of Channelized Aquifers

## Nanoscience & Nanoengineering

Tochukwu Michael Emeakaroha Spectrally-Resolved Multiphoton Image Scanning Microscopy of Natural Vascular Scaffolding in Porcine Arterial Walls and Other Biomaterials

Xavier Mary Jesintha Pasala Dislocation Density in GaAs Thin Films and Quantitative Determination of Order-Parameter in Ordered-AlInP/GaInP Alloys Using Transmission Electron Microscopy

> Ram Saraswat Novel Micropatterned Biphasic Platform for Maintaining Chondrocyte Phenotype

#### MASTER OF ENGINEERING DEGREE CANDIDATES

#### **Safety Management**

Samantha Elizabeth Steffeck‡‡‡

#### MASTER OF SCIENCE DEGREE CANDIDATES

#### **Atmospheric & Environmental Sciences**

Laramie Jaela Colvin Austin Joseph Jerke Joseph Map Kragness‡‡‡

#### **Biomedical Engineering**

Kyle Jacob Bergevin Brock Don Folkers‡‡‡ Zachary Isaiah Nix‡‡‡

## **Chemical Engineering**

Gorky‡‡‡ Jordan Alex Hoops Gregory Warren Opdahl‡‡‡ Dipayan Samanta

## Civil and Environmental Engineering

Anna N. Allen
Tanner Allen Jacobs
Joseph Leonard Luebbers
Joseph Bryan Mulcahey
Louis Arthur Ratcliffe
Garrett Edward Roach
Emily Elise Sande‡
Austin James Stahlke
Joshua Allen Trapp‡‡
Andrew Josiah Benjamin Undt

#### **Computer Science and Engineering**

Adam Lee Lenox

#### **Construction Engineering and Management**

Franklin Joseph Luczak Ira Michael Pace Murphey Timothy Richard Myers Cornelio Adrian Perez Connie Jean Zehms

## **Electrical Engineering**

Md Ali Azam‡
Anthony Dale Benitez
Firas Slewa Dawod
Brandon Michael DeVries
Jamison Scott Duckworth
Dalton Anthony Lund
Liam Carrington Samuelson McEuen
Skye Itza-Chu Rutan-Bedard

#### **Engineering Management**

Antonio Bano-Sanoguera Miranda Faith Berge Gerrit Tyler DeVries‡‡ Nathan D. Guymon‡‡ Kassidy Yvonne Kitzmiller¥ Maggie Ann Sebert Abigail Alana Stark Ryan Elizabeth Weiss Beau Jackson White

## **Geology and Geological Engineering**

Erica Wong Cung John Bruce Hewitt Stephanie Alicia Loose Mathew Nicholas Weinberger‡‡

## **Industrial Engineering**

**Grant Thomas Syverstad** 

## **Materials Engineering and Science**

Madilyn Rae Fesenmaier Kirstie Marie Gildemeister‡‡‡ Kal Aaron Imlay

## **Mechanical Engineering**

Hayley Mikah Benson
Elise Margaret Flachs
James Ryan Gormley
Strauss Carl Langrud
Renner McArthur Larson
Christian Louis Leckband
Thomas Mathias Machamer
Nicholas Eric Pugh
Nicholas Kolby Zell‡‡‡

### **Mining Engineering and Management**

Clint William Kling Archibald Warren Minerich

## **Paleontology**

Michael E. Cyrier Carolyn Marie Kocken Colleen Ann Sullivan

## **Physics**

Jairo Heran Rodriguez Rondon

#### **BACHELOR OF SCIENCE DEGREE CANDIDATES**

#### **Applied Biological Sciences**

Maya Isabelle Johnson

#### **Applied & Computational Mathematics**

Jordan Marie Baumeister
Anna Combalia I Pardo
Jacob Todd Harris
Peyton James Krahulik
Daniel Joseph Madden
Dustin N. Reff
Ian Matthew Shaver
Raiza Carmen Soares\*\*
Jarod Tyler Svensson\*
Benjamin Pratt Titus\*\*\*

#### **Atmospheric and Environmental Sciences**

Lexy Ezrah-Jade Elizalde Bryce Andrew McDermaid

#### **Biology**

Aubrey Corrine Gonsorowski Anna Christine Thomas Micaela Elise Zachmeier\*\*\*

## **Biomedical Engineering**

Kody Ray Hanson Andrew James Kramer Ethan Daniel Nesbit Alexandra R. Reader Adam Scott Trapp

## **Business Management in Technology**

Dylan Thomas Colt
Darik Ethan Dudley
Kyle Thomas Haddix
Jonathan Aaron Mack
Elexious Shadrach Musick
Addie Jennine Stanley
Aren Charles Wells
Allec Marc-Kristopher Williams

#### **Chemical Engineering**

Helen Ayn Babits\*\* Shyann B. Bastian\*\* Henry Jacob Brouwer Faith Marie Chambers Nathan Timothy Claver\* Timothy T. Dunham Rachel Yolanda Engel Christen Violet Gauker\* Whitney Jimngang Djeumen\*\*\* Melissa Kay Johnstone\* Spencer A. Jones\* Isabel Olivia MacLachlan\* Ryan Moen\*\* Paiton Ann Mueller Adam Jon Namyst Trigg Scott Peasley\* lessica Ann Peterson\*\* Drake Landen Schafer\*\*\* Kahlee Marie Taylor Henry M. Washnok Jacob Zoellner Wingert

## Chemistry

Tatiana Irene Beasley Audrey Elsa Dunn‡‡‡ Adam Mitchell Price Greydon Scott Shangreaux

## Civil Engineering

Dillon Andrew Batka
Devin Matthew Cheshier‡‡‡
Coleton Thomas Deitz\*\*\*
 Ashlee Jean Dikoff
Sydney Gabrielle Ferrie
 Paige Renee Gehlsen
 David James Gonzalez
 Garrett Paul Jankord\*
Cameron James Kenner
 Jae JaRyn Kloker
Samantha Marie Kunkel
 Jacob David Leone
Alexander J. Lesselyoung\*

Emelia Rose Nelson Brianna Clara Newman\*\*\* Cole Allan Peterson\*\* Alexus Drew Pierce\* Ethan Alexander Rader-Hunt Naomi Loy Scherrer Kyle David Schilling\* Isaac Kevin Schulz Cole William Seiwald **Austin Taylor Shoun** Kate Lynn Sieverding Megan Terese Stone Nicholas Joseph Sudbeck\*\* Brandon Joseph Thomas\*\* Amanda Ann Tomes\*\* Taran Lynn Tucker John Marek Vargo

## **Computer Engineering**

Joshua Wayne Crawford
Samuel Stosh Donovan
Caleb Lewis Ehrisman
Tanner Joseph Hohn
David Michael Mathews
Andrew Thomas Nelson
Graham Townsend Noble
Jarod James Osborn\*
Samantha Marie Pfeiffer\*\*
Dustin Bryan Richards\*\*
Avery Charles Schroer
Vytautas Juozas Soderholm

## **Computer Science**

Minati Preetika Alphonso\*
Dalton Scott Baker\*\*
Jordan Marie Baumeister
Trevor Scott Bormann\*\*\*
Jackson Stephen Cates\*\*\*
Makiya Sol Crochiere
Ryan Christopher Driscoll\*
Nathan Clint Fjelstad
Elijah James Flinders\*\*
Lance Robert Henne

Daniel Kollodge Peyton James Krahulik lames Matthew Leon Ira Canfield Mitchell¥ larod lames Osborn\* Andrew Glen Oveson Madeleine Rose Price\*\*\* Dustin N. Reff **Jessica Michelle Roberts** Samuel John Ryckman\*\*\* Charles Thomas Scott Shook Ranjun Arunjit Singh\*\*\* Raiza Carmen Soares\*\* lay Charles Sprackling Dana Marie Thomson\*\* Cole Iohn Titze\* William Wendell Ward Jacob Bradley West

#### **Electrical Engineering**

Christopher Daniel Belik David leffrey Bolt\*\*\* Timothy Lawrence Crittenden **Spencer Doriot** Rebecca J. Fagrey\* Spencer Daniel Gerdes Lane Hansen\* Nicholas Byron Janovy Rhys Christopher Kenny Shawn Allen Kohl Toan Duc Luc Sasha Anne Mahlen Liam Carrington Samuelson McEuen\*\*\* Christopher Jacob Mentele\*\*\* Zachary George Mettler Courtney Jack Miller\*\*\* Dillon James Muntefering Joshua Dean Powell\*\*\* Jordan Robin Reed\* Ryland James Schmitt\*\* Abdoul Aziz Sore Anders Stenstadvolden\*\*\* Abdollah Abdolvahed Tavangar

Kelsey Megan Webb\*\*
Cherokee Murie Winkler\*\*\*

#### **Geological Engineering**

Samuel Babbage Hatfield Koby J. Klassen\*\* Grace Marie Lickteig\* Richard Lim\*

#### Geology

Corrine Roe Cranor\*\*\*
Shawn Israel Enstrom
Sawyer Scott Hagen‡‡
Marissa Louise Holinka
Adam James Jaroszewski
Alice Gwen Morris
John Anthony Murzyn
Christopher James Patterson
Gabriel Stephan Poteet
Adam G. Vantellingen

## **Industrial Engineering and Engineering Management**

Tanner A. Batka Blake Andrew Benson\* Wyatt Andrew Dodge Karlee Marie Dressen Ionathan Robert Henkel Jerald Cameron Hickey Clint Nicholas Lewis lerrod leffrey Miller Anthony Vernon Nelson Jamie Michelle Pazour Douglas William Wild Scott Dessa Rae Spellman Heidi Lynn Stiklestad\* Anthony Michael Ullrich Chloe Elizabeth Wegehaupt Samuel Douglas White Sarah Marie Ziehm‡‡‡

## **Interdisciplinary Sciences**

Taran Scott Multz

#### **Mathematics**

Alysha Briana Aitchison Garrett Paul Jankord\* Lane Daniel Jensen\*\* Iohn Anthony Murzyn

#### **Mechanical Engineering**

Alex Iordan Aldes Tavis Michael Allam Garrett W. Ames\* McCoy James Bila\*\* Nickolas Darling Bock Mark Edward Boden Emma Lynn Boeke David Craig Boisjolie Chandler M. Calleio\*\* John Milo Carter John Parker Chandler Thomas Callahan Creese\* **Justin Hunter Davis** Jack Sterling Douglas\*\* Jay Joseph Dykstra Trevor Scott Elliott Adrian Taylor Epp Andrew Oliver Ferguson Quincy Cooper Ford **Emory Scott Fryberger** Madison Makay Goldsmith Shane Price Good Ryan Patrick Grant Austin Samuel Gutknecht\*\* Samuel James Hagen Kody Ray Hanson Ethan Darvl Hartmann Aaron Matthew Hoelscher Zachary Dean Hogan\* Alec Bradley Hohn David Manuel Holzberger Logan Robert Horsley\*\* Bryce J. Howard\* Chayse A. Jimenez Aren S. Jorgensen Wyatt John Gowan Kainz Ryan Rodney Kappenman Parker Tennysen Kirby Spencer Steven Kirkpatrick

Adrianna Marie Larson Renner McArthur Larson\*\*\* Michael Beniamin Linde\*\*\* Philip Andrew Litecky\* Brandon Jeffery Maag Patrick K. McDonagh Tony Curtis Monroe\* Robert Vern Munyan Frederic Henryk Muteba Darren Andrew Nissen‡\* Isaac Zackary Orozco Zeb James Parsons Willem Purcell Peters Russell Ivory Phillips\*\* Kole Samuel Pickner\* Iames Donald Plutowski Joshua Dean Powell\*\*\* Trey Daniel Powell McCabe Alexander Radzwill Alex Antoine Robin\* Daniel Scott Rohde\* Kaleb David Roth\* Samuel John Ryckman\*\*\* **Daniel David Rynders** Theodore William Scheafer Andrew Robert Scherrer\*\* **lacob Carl Schlinkert** Skyler Bradley Scott Sommer Rose Scott\*\* Maggie Ann Sebert\*\*\* lason S. Shields\* **Hunter Reed Sperling** Casey Paul Strong\*\* Curtis lames Swanson Kelvin Michael Sweetman Morgan Marie Tatge Margaret Helen Thompson\*\*\* Leif Riley Thorson\* Theresa R. Tourtillott Noel Matthew Utecht Cade Robert Venhuizen lan G. Waltz Kaelin Anthony Washington-Blair lacob C. West\*

Jarod Allen White
Derek Brennan Whitesides

Shayne Whitmyer Wyatt Ward Wiening Shon Bennett Williamson Logan James Wolbeck Collin Van Zur\*

#### **Metallurgical Engineering**

Logan Malachi Baker RyAnne Blau Nathan Marissa Abenecia Hirchert Christopher William Mathews Estee O. Medberry Tate Richmond Nickerson Tanner York O'Hara

## **Mining Engineering**

Rhett Buttleman\*
Stephen M. Dobie\*
Karli Jo Fortner
Connor Kirk Garside‡‡‡
Kyle Benjamin Hughes\*\*
Johnathan Philip Juergens\*
Jared Daniel Kennedy
Carson James McDaniel\*\*
Jordan Toler

#### **Physics**

Seth Isaiah Bendigo\*\*
Jace Oliver Dasher†
Ian Edmund Gaida
Marcus Issac Heintz†

#### **Pre-Professional Health Sciences**

Makenna Bodette Emma Elizabeth Murphy\*\* Zoe Noel Ryherd Victoria Paige Tucker

Science, Technology, and Society
Brandi Jean Monnot

### THE TRADITION OF COMMENCEMENT

Dating back to the universities of thirteenth-century Europe, the conferring of degrees signified that faculty members had attained the guild status of a master. Originally, this "master's" degree was the only one offered; the baccalaureate was simply a stage toward mastership. During the ceremony, black robes were worn in imitation of the clergy, for church and university were one at the time. When the hood was placed over the candidate's head, the ceremony was consummated, and mastership was achieved.

Over the centuries, graduation evolved to commemorate more than the end of an educational endeavor or the mastership of a craft. Instead, it became the start of a new adventure, a passage to professional status recognized by the community of scholars and the community at large.

Today, we call this ceremony commencement, a term defined as both an act of commencing and the ceremony for conferring degrees. In essence, it means a beginning within an end. A middle English term, commencement traces its roots to Anglo-French, Old French, and finally, the Latin word, *cominitiare*, a combination of the prefix *com* and *initiare*, meaning "together, begin," a fitting origin for a term that evokes a graduate's first steps taken in fellowship and a poignant reminder that in each destination lies a new dawn.

## **ACADEMIC ATTIRE**

The use of academic dress stems from costumes used in universities of the fourteenth and fifteenth centuries, particularly at Oxford and Cambridge in England. The dress has been used in the United States since colonial times and was standardized by an Intercollegiate Code in 1895.

The style of gown and hood designate the degree earned. The bachelor's gown is royal blue without a hood and the sleeves are pointed; the master's gown is black and has oblong sleeves; and the doctoral gown is trimmed with velvet, has three distinctive chevrons on each arm, and bell-shaped sleeves.

The two colors on the inside of the hood are traditionally the colors of the college granting the degree. The School of Mines' colors are blue and gold; however, the hood for the School of Mines is gold and silver, symbolic of the university's connection to these precious metals. Caps are black mortarboards with the tassel worn over the left front quadrant.

As one may observe from the procession, the faculty wear hoods and gowns of varying styles and colors. The color of the tassel on the hat and the outside velvet trim of the hood indicate the field of study.

#### THE CEREMONIAL MACE

During today's ceremony, the chair of the faculty will carry the South Dakota School of Mines & Technology's ceremonial mace. The university mace is an academic tradition that dates back to medieval times. The mace has acquired the ceremonial function of "guarding" the president in the tradition of a medieval sergeant-at-arms.

The School of Mines mace was designed to represent the university's many disciplines. The handle was crafted from a fossil and represents paleontology, while the pink quartz sphere, encased in the symbol of an atom, symbolizes both geology and physics. The silver and gold signify the institution's rich mining tradition. The laurel leaf garland crown, fashioned from Black Hills Gold, represents a mark of honor, distinction, and success.

The mace was designed by Ms. Deborah Mitchell, former director of the Apex Gallery and associate professor in the Department of Humanities. The seal was engraved by Dr. Ryan Koontz, integrated manufacturing specialist for the Center of Excellence for Advanced Multidisciplinary Projects.

## **COMMENCEMENT COMMITTEE**

Dr. Haley Armstrong
Ms. Ann Brentlinger
Dr. Joseph Dlugos
Ms. Diana Eastman
Ms. Morgan Else
Mr. Dane Finnesand
Ms. Gina Fiorello
Mr. Elijah Flinders
Dr. Jade Herman

Ms. Rachel Howard Mr. Marlin Kinzer Dr. Travis Kowalski, Chair Ms. Michaela Mader LTC Gregory Shipper Ms. Rachel Skea Dr. Vladimir Sobolev Ms. Sarah Von Eye

## SOUTH DAKOTA BOARD OF REGENTS

Ms. Pam Roberts, President Mr. Jim Thares, Vice President Mr. Tony Venhuizen, Secretary Dr. Brian Maher, Executive Director Mr. John W. Bastian Dr. Joan Wink Mr. Brock Brown Mr. Jeff Partridge Mr. Tim Rave

## PHOTOGRAPHY SERVICES

The Grad Team will be providing photography services to the graduates. Photos will be available online at TheGradTeam.com/events approximately one week after the ceremony.

