



One Hundred Eighty-First Commencement

Saturday, May Ninth  
Two Thousand and Twenty



# COMMENCEMENT PROGRAM

Virtual Ceremony  
9:00 a.m.  
URL COMING SOON

<b>President's Message</b>	Dr. Jim Rankin
<b>Senior Class Representative's Message</b>	Ms. Tiati Thelen
<b>Remarks by Dean of Students</b>	Dr. Patricia Mahon
<b>Recognition of ROTC Cadets</b>	LTC Elvis Coronado
<b>Remarks by Dean of Graduate Education</b>	Dr. Maribeth Price
<b>Message from the Board of Regents</b>	Dr. Joan Wink
<b>Presentation of Degree Candidates</b>	Dr. Lance Roberts
<b>Conferral of Degrees</b>	Dr. Jim Rankin
<b>Congratulatory Remarks by Department Representatives</b>	
<b>Welcome to New Alumni</b>	Mr. Lorin & Mrs. Mary Brass
<b>Closing Remarks</b>	Dr. Travis Kowalski
<b>School Song</b>	Pep 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.

## **Congratulatory Remarks by Department Representatives**

Ms. Lori Coble

Interim Head of the Department of Chemistry, Biology, & Health Sciences

Dr. Travis Kowalski

Interim Head of the Department of Mathematics

Dr. William Capehart

Atmospheric & Environmental Sciences Program Coordinator

Dr. Robb Winter

Head of the Department of Chemical & Biological Engineering

Dr. Tsvetanka Filipova

Senior Lecturer in the Department of Chemistry, Biology, & Health Sciences

Dr. Scott Kenner

Head of the Department of Civil & Environmental Engineering

Dr. Jeffrey McGough

Head of the Department of Computer Science & Engineering

Dr. Tom Montoya

Interim Head of the Department of Electrical Engineering

Dr. Laurie Anderson

Head of the Department of Geology & Geological Engineering

Dr. Jeffrey Woldstad

Head of the Department of Industrial Engineering

Dr. Allison Gilmore

Head of the Department of Humanities & Social Sciences

Dr. Pierre Larochelle

Head of the Department of Mechanical Engineering

Dr. Michael West

Head of the Department of Materials & Metallurgical Engineering

Dr. Andrea Brickey

Assistant Head of the Department of Mining Engineering

Dr. Steven Smith

Nanoscience & Nanoengineering Program Director

Dr. Richard Schnee

Head of the Department of Physics

# SENIOR CLASS REPRESENTATIVE

## **Ms. Tiati Thelen**

Tiati Thelen came to the South Dakota School of Mines & Technology after graduating from Brandon Valley High School in Brandon, SD. Her parents are Kevin and Leigh Thelen, and she has two sisters, Kianna and Melia.

Thelen has been involved in various clubs and activities while at SD Mines, including serving on the Student Association Senate as a senator, chair of the Public Relations committee, and vice president; as treasurer and vice president of the Math Club; as Greek Council secretary for Alpha Omega Epsilon; as an orientation leader, peer mentor, admissions telecounselor, and a student worker at the Wellness Center front desk; and on the Executive Board, commencement committee, library committee, Leadership Board, and Provost Search Committee. She completed the Mines Advantage program and was on the Dean's List. Outside of SD Mines, she competed on teams in the Midwest Undergraduate Data Analysis Competition and the Butterfield Coding Competition, winning third and first places, respectively. She interned at Edward Jones in Luverne, MN.

After graduating with her Bachelor of Science degree in applied and computational mathematics with a minor in computer science, Thelen will be working for Terex in Watertown, SD, as a supply chain analyst intern and plans to attend Mankato State University to obtain a master's degree in data science.

## GRADUATE DESIGNATIONS

- †Army ROTC Cadet being commissioned as Second Lieutenant  
‡Summer 2020 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

## ASSOCIATE OF ARTS DEGREE

•Honors	3.50 – 3.69 GPA
••High Honors	3.70 – 3.89 GPA
•••Highest Honors	3.90 – 4.00 GPA

# DOCTOR OF PHILOSOPHY DEGREE CANDIDATES

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## Geology, Geological Engineering, & Mining Engineering

Ankit Jha

Major Professor: Dr. Purushotham Tukkaraja

*Dissertation Title: Investigation of Ventilation Aspects and Improvement of Rescue Operation in Underground Mines*

## Nanoscience & Nanoengineering

Anahita Haghizadeh

Major Professor: Dr. Steve Smith

*Dissertation Title: Imaging Metal-Enhanced Upconversion Luminescence from NaYF<sub>4</sub>:Yb<sup>3+</sup>, Tm<sup>3+</sup> Nanoparticles on Nanostructured Substrates and Laser Patterning of Semiconductor Nanostructures*

Divya Kota

Major Professor: Dr. Steve Smith

*Dissertation Title: Intra- and Extra-cellular Force Transduction and Sensing in Single Mammalian Cells*

## Physics

Tyler Borgwardt

Major Professor: Dr. Frank Strieder

*Dissertation Title: Deep Underground Study of  $^{11}\text{B}(\alpha, n)^{14}\text{N}$  and  $^{22}\text{Ne}(\alpha, n)^{25}\text{Mg}$  at Low Energies*

Emily Dvorak

Major Professor: Dr. Xinhua Bai

*Dissertation Title: Improving Event Reconstruction for More Accurate Cosmic Ray Energy and Composition Measurements in IceCube*

Tyler Liebsch

Major Professor: Dr. Vladimir Sobolev

*Dissertation Title: Phase Coexistence, Interphase Boundaries, and Nucleation in Perovskite  
Ferroelectrics*

## **MASTER OF SCIENCE DEGREE CANDIDATES**

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### **Biomedical Engineering**

Michelle Frybarger  
Stanislaw Nikolaev

### **Chemical Engineering**

Joseph Domine  
Whytneigh Duffie  
Benjamin Hinricher  
Tristan Kenny  
Shayla Lindsey

### **Civil and Environmental Engineering**

Adewale Adegoke  
Brett Anderson  
John Costello IV  
McKinley Harm  
Joshua Knock  
Rachel Lovelace  
Michael Mansfield  
Mindy Mansfield  
Jason Phillips  
Chad Reimer  
William Smith

### **Computational Sciences and Robotics**

Andrew Stelter

### **Computer Science & Engineering**

Remington Bullis  
Austin Gill

### **Construction Engineering & Management**

Patrick Dennis  
Mark Manseau  
Sergey Nadobenko  
Ellen White Thunder

## **Electrical Engineering**

Kazi Sadman Kabir

Kevin Ptak

## **Engineering Management**

Suzanne Collins

Connor Janovy

Jibran Mahadik

Richard Northrup

Kevin Thompson

Garret Trupe

## **Geology & Geological Engineering**

Todd Anderson

Taran Bradley

Disha Gupta

Kristen Lewis

Ahmet Yilmazgoz

Imren Yilmazgoz

## **Mechanical Engineering**

Benjamin Kroon

## **Mining Engineering and Management**

Alison Brewer

Caren Goodrich

Shantanu Panwar

Jackson Roberts

## **Paleontology**

Benjamin Zalneraitis

## **Physics**

Jason Stock



# BACHELOR OF SCIENCE DEGREE CANDIDATES

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## **Applied Biological Sciences**

Olivia Briggs\*  
Brianna Crawford  
Thomas De Long  
Kacee Ehler\*\*\*  
Nayda Jones  
Holly Kendrick  
Lily Lundquist\*\*\*  
Jacey Merkle\*\*\*  
Kailey Paulson  
Megan Riel  
Lauren Utter

## **Applied and Computational Mathematics**

Rebecca Cychosz  
August Meyer  
Angel Nunez  
Matthew Phillips\*\*  
Katelyn Raposa  
Tiati Thelen

## **Atmospheric & Environmental Sciences**

Samantha Johnson  
Samuel Nesbitt  
Josef Pfau

## **Biology**

Taylor Bright\*\*  
Daniel Cerfus‡  
Kaitlyn Dickinson\*\*  
Alexia Hodgson\*†  
Elise Horkey  
Anna-Maria Meuwissen-Inskeep  
Nicholas Pedersen-Saharoff  
Trageton Thorsgard  
Sherif Zineldine\*\*

## **Chemical Engineering**

Bailey Aanenson  
Pierce Alexander  
Jacob Anastasi  
Kayla Bailly\*

Samuel Crawford  
Stephen Diede  
Hannah Dudak  
Timothy Ellison  
Joseph Hilsendeger  
Justin Hoff  
Jayla Jarnagin  
Divine Kavunga  
Vanessa Kee  
Shyanne Lambrecht\*  
Neil Leyda\*  
Josi Minor  
Hunter O'Connor\*\*\*  
Alan Olderness  
Darien Raymond\*\*  
Megan Riel  
Nicole Schrader  
Michelle Scoggins  
Eric Spilman  
Isaac Sullivan\*\*  
William Trevillyan\*\*  
Connor Weber  
Keegan Wilmes

## **Chemistry**

Bailey Aanenson  
Misti Acevedo  
Kevin Barz  
Zachery Deal  
Rachel Fenenga  
Holly Kendrick  
Jackson King  
Cora Masterlark\*  
Collier Meersman  
Sorel Nelson\*  
Sarah Steele  
William Trevillyan\*\*  
Sherif Zineldine\*\*

## **Civil Engineering**

Aimee Allcock\*  
Troy Brady\*  
Justin Broekemeier  
Justin Brown  
Jared Cogswell  
Korder Cropsey\*\*

Timothy Felker\*  
Zachary Foust  
Caleb Furse\*\*\*  
Kaleb Hedman\*\*  
Tayden Jacobson  
Savannah Jenkins  
Benjamin Johannsen  
Daulton Johnson  
Andrew Karatepeyan  
Hunter Kiewel\*\*  
Matthew Kirkwold\*\*  
Timothy Kroehler\*\*  
Brandon Kruse\*\*  
Adrienne Kusek  
Kristin Lerdal\*\*  
John Martin  
Marcus Martinez  
Estefany Mendivil Rodriguez\*\*  
Devin Mollers  
Daniel Nosbush  
Anthony Rubina  
Emily Sande\*  
Jonah Schmagel  
William Schultze  
Westley Siebrath  
Theron Singleton  
Blayne Smith  
Trey Smith  
Helen Squyer  
Hannah Stevenson\*\*\*  
Bradley Ware†

## **Computer Engineering**

Michael Ahlers  
Zachary Donnelly  
Adam Esche  
Angus Frisch  
Jayvon Jackson  
Benjamin LeBrun  
Jordan Lienau  
Spencer Riddick\*  
Seth Snyder  
Samuel Whitehead

## Computer Science

Mitchell Anderson  
Adrian Azan  
Samuel Backes  
Morgan Benninghofen  
Christina Bergevin  
Keegan Burnett  
Benjamin Campbell  
Dustin Cook  
Jay Donohue\*  
Joshua Duklet\*\*  
Isaac Egermier\*  
Jocelyne Freemyer  
Chezka Gaddi  
Caelan Klein  
Jonathan McKee  
Noah McKenzie  
Nicolas Mowen  
Carter Olson  
Sean Oolman\*  
Emily Parks\*\*\*  
Manasi Paste\*\*\*  
Nathan Saunders\*  
Joao Soares Pessoa  
Alex Tiede\*  
Garfield Tong  
Luke Videckis\*  
Jonathan Vottero\*

## Electrical Engineering

Jace Anderson  
Derek Bain  
Hanna Bankers  
Jakob Berg  
Austin Hartman  
Garrett Israel  
David Janssen\*\*  
Ashley Jasunas  
Jace Johnson  
Andrew Klingaman\*\*  
Jordan Lienau  
Samuel Pfenning  
Michael Rogers\*\*  
Eric Setka  
Mitchell Sueker\*‡  
Andrew Tobin\*\*\*

Colin Wagner  
Grace Wilson

## **Geological Engineering**

Charles Field  
Evan Gelinne  
Matthew Hedgespeth\*  
Jessica Lohrenz  
Haley Noteboom\*\*\*  
Ryan Peyton\*\*\*  
Rex Tarras  
Wyatt Tatge\*\*\*  
Dylan Thomas  
Jacob Truxal\*  
Taylor Wendt

## **Geology**

Calen Cavallaro  
Michael Cyrier  
Jessica Fabin  
Zakary Jewell  
Daniel Lucas

## **Industrial Engineering and Engineering Management**

Antonio Bano-Sanoguera  
Triston Brown  
Austin Chapman‡  
Christopher Counce  
Cooper Courtney  
Rebecca Cychosz  
Ezebuolike Egbelu  
Adam Erickson  
Abby Fenhaus  
Jacob Fitzgerald  
Quentin Galuteria Soares‡  
Andrea Gracia  
Matthew Greenfield  
Carson Hillestad  
Alexandra Kliche  
Katharine Knott  
Thanasis Kouris  
Alex Kringen  
Hans Leonhardt  
Ryan Li\*\*  
Leonardo Martinez  
Bryan Ortega

Alyssa Ottman\*  
Steven Pepke\*\*\*  
Jace Salley  
Emily Schimbeno  
Ryan Smith  
Samantha Steffek\*

## **Interdisciplinary Sciences**

Molly Becker  
Bradley Blansett†  
Emily Garcia  
MaKinze Maiden\*  
Molly McCabe  
Drew McDonald‡  
Damon Robertson-Riley  
Shelby Sires-Lemke\*  
Jermaine Williams

## **Mechanical Engineering**

Tyler Afdahl\*  
Brett Anderson\*\*  
Kendra Anderson  
Anthony Azzaro  
Cooper Baltzer  
Jacob Bertagnole  
Jacob Blotsky  
Riley Braegelmann\*\*  
Mason Campbell  
Benjamin Colvin\*  
Matthew Darnall  
Joel Erickson  
Austin Evans\*  
Tanner Farnsworth  
Jackson Fiddler\*\*  
Kayla Gagen\*\*  
Casey Gersch\*  
Cameron Hainy\*\*\*  
Joseph Heil  
John Hillard‡  
Joshua Hillard  
Kayla Huber\*  
Alexander Kalmbach\*  
Mitchell Kleven  
Daniel Krieger  
Terrence Kuca  
Strauss Langrud

Adam Lau  
Shilo Lensegrav  
Brandon Lindner  
Keenan Mahler  
Marc Mascarenhas\*\*\*  
Ezra McBride\*  
Sagan McClendon  
Aaron Meyer\*\*  
Matthew Miller  
Nicole Miller  
Jonathon Murray  
Garret Niichel  
Andrew Norman  
Dexter Nowstrup  
Noah Oehlke  
Trevor O'Hearn  
John Olson\*  
Matthew Phillips\*\*  
Jacob Pitt  
Nicholas Reynolds  
Jared Ross\*\*  
Daniel Schroder‡  
Seth Schultz  
Brandon Sharkey  
Andrew Snyder  
Daylon Spellman\*  
Alex Spies  
Brent Stahl  
Jacob Steffen  
Thomas Trautman\*\*  
Nicholas Wassilak  
Bryan Waugh\*  
Johnathon Weber  
Stephen Welsh  
Nathan Ziliak

## **Metallurgical Engineering**

William Carpenter\*\*\*  
Benjamin Chapman  
Logan Elers\*\*\*  
Daniel Freeman  
Austin Hammer\*  
Austin Holmes  
Samuel Kessinger  
Joseph Lauzon  
David Lock

Naomi Manzer  
Steven Miklos\*  
Cole Osendorf  
Seth Petra  
Shayley Priselac  
Karen Schottler\*\*  
Cameron Thompson\*\*  
Fernando Vazquez  
Peter Vik  
Tyler Wentworth

## **Mining Engineering**

Levi Bailey  
Andrew Bauman\*  
Ian Becket\*  
Michael Dickson  
Rio Johnson  
Rebekah Nelson  
Andrew Popescu  
Sarah Smith  
John Zimmerman

## **Physics**

Abbigail Elger  
Kyle Hill  
Patrick Morello  
Layne Tieszen

# **ASSOCIATE OF ARTS DEGREE CANDIDATES**

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## **General Studies**

Tyler Rihm  
Rebecca Watts ••



# 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 towards mastership. During the ceremony, black robes were worn in imitation of the clergy, for at the time church and university were one. 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. 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 word 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 mortar boards 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

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 sergent-at-arms. The ceremonial mace wielded in today’s virtual ceremony is based on the actual South Dakota School of Mines & Technology’s university mace.

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, manufacturing specialist for the Center of Excellence for Advanced Manufacturing and Production.

## COMMENCEMENT COMMITTEE

Dr. Haley Armstrong  
Ms. Ann Brentlinger  
Mr. Jeremy Bryan  
Ms. Gina Fiorello  
Ms. Jade Herman  
Ms. Rachel Howard  
Mr. Philip Hunt

Mr. Marlin Kinzer  
Dr. Travis Kowalski, Chair  
Dr. Patricia Mahon  
Ms. Molly Moore  
Mr. Bryan Schumacher  
Dr. Vladimir Sobolev  
Ms. Tiati Thelen

## SOUTH DAKOTA BOARD OF REGENTS

Mr. John Bastian, President  
Mr. Jim Morgan, Vice President  
Ms. Pam Roberts, Secretary  
Dr. Paul Beran, Executive Director

Mr. Lucas Lund  
Ms. Barb Stork  
Mr. Randy Schaefer  
Mr. Kevin Schieffer  
Mr. Jim Thares  
Dr. Joan Wink



