**SCOTT D. ROSENTHAL, M.S., P.E.**

Associate Professor, Department Head

Mining Engineering Department

**Education:**

**M.S. Project Engineering and Management**

 *Montana Tech of the University of Montana*, Butte, Montana (2010)

**B.S. Mining Engineering**

 *Montana College of Mineral Science & Technology*, Butte, Montana (1982)

**Work Experience:**

**August 2013 – Present: Associate Professor, Department Chair**

*Mining Engineering, Montana Tech, Butte, Montana*

Responsible for teaching undergraduate and graduate mining courses, student advising, recruiting and industry relations. As Department Head, work with four mining faculty, adjunct professors, teacher’s assistants, and contract instructors to ensure timely delivery of courses. Courses:

M.EC. 4030 Diamonds and Precious Metals

MIN 105 Introduction to Mining

MIN 140 Practical Underground Mining

MIN 215 Mining Methods

MIN 408 Valuation of Mineral Properties

MIN 425/525 Rock Fragmentation

MIN 480 Maintenance Planning & Scheduling

MIN 499W Mine Design Project

MIN 560 Mine Management II

MIN 594 Mining Engineering Seminar

MIN 597 Special Problems-Advanced Cast Blasting

ECIV 405 – Construction Project Planning & Scheduling

**Industry Experience**

|  |  |
| --- | --- |
| Newmont Mining Corporation | Senior Director, Mine Engineering (2002 – 2013)  |
| Phelps Dodge Morenci Inc. | Cost Coordinator (2001 – 2002) |
| Freegold Placer Gold Mine | Owner/Operator (2001) |
| Minera Alumbrera Limited | Mine Manager (1999 – 2000) |
| BHP Coal Indonesia / PT Arutmin | Senakin Mine Manager (1996 – 1999) |
| BHP Iron Ore | Superintendent Mining (1990 – 1996) |
| Barrick Gold | Senior Mine Foreman (1987 – 1990) |
| BHP World Minerals | Mine Engineer (1982 – 1987)  |

**Professional Registrations and Licenses:**

* **Registered Professional Engineer**, Mining, State of Nevada (1990 – Present)
* **Registered Member Society for Mining, Metallurgy & Exploration (SME)**
(2016 – Present)

**Professional Affiliations:**

* **Society for Mining, Metallurgy & Exploration (SME)**, Member (1978 – Present)
* **International Society of Explosives Engineers** **(ISEE)**, Member (1986 – Present)
* **Montana Mining Association**, Member (2008 – Present)

**Honors and Awards:**

* **Merit Award**, spring 2017
* **SME Stefanko Best Paper**, 2017
* **David L. Swift Award**, best aerosol-related paper published in 2018
* **Rose L. and Anna M. Busch Endowment Faculty Achievement Award 2019**

**Funded Grants:**

**SEED Grant** (2015/2016 $5,000. Awarded April 7, 2015), *PI:* *Scott D. Rosenthal*

Title: ***Investigation of Current Underground Mine Industry Practice***

***For Safe Design of Mobile Equipment Entries, Adits, Drifts and Haulageways***

**Industry Research Concept Proposal** (Atlas Copco Drilling Solutions, LLC. 2015/2016 $49,873. Approved October 2015.), *PI’s: Kevin Dill (Masters student) & Scott D. Rosenthal*

Title: ***Determine the Potential Drill Utilization Improvements and Rock Fragmentation Requirements Using Directional Drilling in a Coal Mining Overburden Highwall Application***

**Publications:**

Hart, Julie F.; Autenrieth, Daniel A.; Cauda, Emanuele; Chubb, Lauren; Spear, Terry M.; Wock, Siobhan; & Rosenthal, Scott. **A Comparison of Respirable Crystalline Silica Concentration Measurements Using a Direct-on-Filter Fourier Transform Infrared (FT-IR) Transmission Method Versus a Traditional Laboratory X-ray Diffraction Method**. Published in the Journal of Occupational and Environmental Hygiene. ISSN: 1545-9624 (Print) 1545-9632 (Online), 2018, pp. 743-754.

Rosenthal, S. D., **What a ride: From the mining industry to university*.*** Education section: Mining Engineering, Vol.67, No. 9, 2015, pp. 46 – 48.

Stout, C.E., P.W. Conrad, C.S. Todd, S. Rosenthal, and P. Knudsen, **Simulation of a Large Multiple Pit Mining Operation using GPSS/H**, International Journal of Mining and Mineral Engineering, Vol. 4, No. 4, 2013, pp. 278-295.

Hoover, J.L., P.W. Conrad, S. Parrow, S. Rosenthal, and J. Downey, **Forecasting Drill Bit Consumption in Surface Mine Production Drilling Operations**, Transactions 2012, Society for Mining, Metallurgy, and Exploration, Inc., Littleton, CO, 2012, pp. 414-421.

Roos, C.J., P.W. Conrad and S. Rosenthal **Estimating Excavator Teeth Consumption Rates**,

Technical Papers, Mining Engineering, Society for Mining, Metallurgy, and Exploration, Inc., Littleton, CO, August 2010, pp. 45-51.

**URP mentorships:**

Jon Szarkowski (Geological Engineering undergrad) & Scott D. Rosenthal

Title: **A Qualitative Comparison of Bio-Based Rock Saw Oil and Petroleum Based Rock Saw Oil**.

**Graduate Committees:**

**Advisor:** Kevin Dill, graduation May 2016. Thesis project

Emily Rose, graduated May 2017. Thesis project

Logan Connolly, graduated May 2018. Thesis project

Judith Buaba, graduated May 2018. Thesis project

Joel Gadikor, graduated May 2018. Thesis project

Jewel Sakyi, graduated May 2019. Thesis project

Emelina Doucette, graduating December 2020

**Member:** Asseu Yapo-graduate student (Dec 2015)

John Seifert, graduated May 2016

 Elliott M. Mazur (Geology), Graduation May 2016

 Carl Gunderson, December 2016

 Nikolas Nesladek, graduated May 2017

 Andrew Brackebusch, graduated May 2018

 Bryan Nielson, graduated May 2018

 Cosmas Opoku-Ware, graduate May 2018

 Ryan Stemple (Industrial Hygiene), graduated December 2018

 Shayla Mack (Industrial Hygiene), graduated May 2018

 Chase Billington (Industrial Hygiene), graduated May 2018

 Calvin Kammerer (Geoscience), graduated May 2018

 Francis Inkoom, graduated May 2019

 Megan Valdez (Geophysical Engineering), graduated May 2018

 Kyle Murphy, graduating December 2019

**Service:**

**Montana Tech**

* **Safety Committee**, Montana Tech (Fall 2013-present)
* **Faculty Senate,** Mining Engineering Dept. Representative (Fall 2014-Spring 2016)
* **Student Advising:** Current undergraduate student advisees 32
* **WIRE Committee**, 2018/2019
* **Faculty Liaison, Montana Tech Alumni Association** (2018-present)
* **ABET**
	+ *Fundamentals of Program Assessment* Workshop (Seattle, 9/28/2013).
	+ *Advanced Program Assessment* Workshop (Baltimore, 10/25/14)

**Society for Mining, Metallurgy & Exploration (SME),** Member (1978-present)

* ***Session Chair, Presenter*** (2015 & 2019 annual meetings)
* ***Education Sustainability Committee***, 2019 for a 3-year term
* ***Resources and Reserves Committee***, since 2015
* ***Technical review:*** Manuscript # TP-15-016 entitled "Genetic Algorithms based meta-heuristic algorithm for simultaneous optimization of ultimate pit and production scheduling" for SME (6/8/2015).
* ***Technical review:*** Manuscript # TP-14-027 entitled "Is Open Pit Production Scheduling "Easier" than its Underground Counterpart?" for SME (7/7/2014).
* ***Technical review:*** Manuscript # TP-14-003 entitled "Application of Spatial Statistical Techniques for Predicting Sulfur in the Pittsburgh No. 8 Coal Seam" for SME (3/3/2014).
* ***Technical review:*** Manuscript # MMEX-D-19-00073 entitled "Influence of Air Gap Volume on Achieving Steady State Velocity of Detonation" for SME (5/1/2019).
* ***Technical review:*** Manuscript # MMEX-D-19-00072 entitled " The Mining Perspective on Battery Raw Materials" for SME (5/2/2019).

**Community**

* **Rocky Mountain Elk Foundation,** Committee Member Southwest Montana (Butte) Chapter (2014-present), Volunteer State Chair (2017-present)
* **Butte Mineral and Gem Club**, Member (2013-present)
* **World Museum of Mining**, Underground Tour Guide (2017-present)