SCOTT KOERMER

PhD candidate in Mining and Minerals Engineering at Virginia Tech, specializing in process engineering.

EDUCATION

Ph. D. Candidate in Mining Engineering

Virginia Tech

2018 – 2022 *(Expected)*

Research in the recovery of rare earth elements from acid mine drainage.
Coursework includes data analytics, Bayesian inference, and Gaussian process modeling.

M.S. in Mining Engineering

Virginia Tech

2014 – 2015

Research in using linear circuit analysis for the optimization of scrap metal recycling systems.
Coursework includes particulate process modeling, sampling theory, environmental reclamation, engineering data analysis, and plant design.

B.S. in Mining Engineering

Virginia Tech

2009 – 2014

Minor in Business.
Coursework includes mineral processing, engineering mechanics, health and safety, and environmental sustainability.

WORK EXPERIENCE

Graduate Research Assistant

Virginia Tech Mining and Minerals Department

2018 – Present Blacksburg, VA

- Research task of modeling and optimization of the hydrometallurgical extraction of rare earth elements from acid mine drainage.
- Oversees undergraduate researcher.

Production Engineer

Schnitzer Steel

2015 – 2018 Everett, MA

- Created a sampling plan devised to increase sample accuracy. Oversaw sampling technician.
- Developed and executed a strategy to determine processes with the greatest economic losses.
- Established regular meetings and reports which maintained progress on plant action items, examined KPIs, suggested process improvements, and communicated production status to administrative, accounting, operations, and sales staff.
- Collaborated with research, administrative, and operations staff to create an economic analysis for process changes, some of which were applied on a national level.

CONTACT INFO

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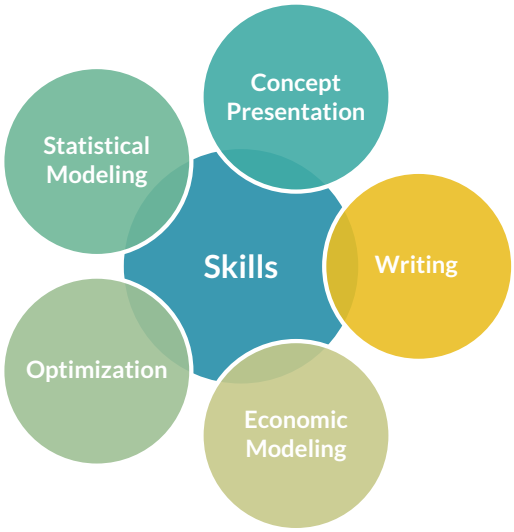

GOALS

To make a positive impact on the efficiency of recovering our finite resources, and become an expert in the process.

Graduate Research Assistant

Virginia Tech Mining and Minerals Department

2014 – 2015 | Blacksburg, VA

- Applied advanced mineral processing techniques to scrap metal recycling including new procedures for lock-cycle testing and release analysis.
- Served as Teaching Assistant for mineral processing laboratories.
- Attended international recycling conferences to present research.

Intern

Eriez Magnetics

Summer 2014 | Erie, PA

- Performed full-scale field testing of novel process for high-purity upgrading of non-ferrous metals using eddy current separators.

Intern

Consol Energy

Summer 2011 | Buchanan Mine Mine No. 1

- Assisted mine foremen and engineers in the areas of mine development, maintenance, mineral processing, mine production, mine safety, and transportation.
- Received specialized training and certification in mine safety.

TEACHING EXPERIENCE

Instructor of Record, Mineral Processing Lab

Virginia Tech

Spring 2020,2021 | VT Processing Lab

- Instruction on the applications of sampling, size analysis, grinding, flotation, and plant simulation.
- Restructured coursework for online learning during 2020 COVID-19 outbreak, ensuring educational goals were achieved.

TA, Mineral Processing Lab

Virginia Tech

Spring 2015 | VT Processing Lab

PROFESSIONAL SERVICE

Graduate Student Assembly Departmental Representative

Mining and Minerals Engineering, Virginia Tech

Spring 2018 | Virginia Tech

Department Diversity Council

Mining and Minerals Engineering

Fall 2020 | Virginia Tech

Virginia Tech Graduate Honor System Review Panel

2020 – Present

PUBLICATIONS

Magazine Article

Gauging yield and recovery

- **Magazine:** Recycling Today
- **Authors:** Scott Koermer
- Sep 2015
- Written with the purpose of further educating the recycling industry on process engineering calculations.

Masters Thesis

The Application of Mineral Processing Techniques to the Scrap Recycling Industry

- Sep 2015
- Overarching purpose was to illustrate how techniques already established in mining, can be easily adapted to a new industry.

Conference Posters/Proceedings

Profitability Clearing the Chinese 'Green Fence'

- **Authors:** Shuttleworth, T. G., Mankosa, M.J., Koermer, S., and Luttrell, G.H.
- Mar 2015
- Paper for 5th International Automobile Recycling Congress (IARC)
- Berlin, Germany

Rare Earth Element SX Systems: "Are we at steady state yet?"

- **Authors:** Koermer, S., Noble, C.A.
- Feb 2020
- Poster for SME Mineral Processing Division student poster competition.
- Phoenix, AZ

Journals

The Utility of Bayesian Data Reconciliation for Separations, (Under Revision), Minerals Engineering

- **Authors:** Koermer, S., Noble, C.A.
- Details application and advantages of Bayesian statistical methods in mass balancing separation circuits.

Software

BayesMassBal for R

- **Author:** Koermer, S.
- July 2020
- Provides easy access to Bayesian mass balance methods for students and industry professionals.