Dr. Kadri Dagdelen

- Professor, Mining Engineering Department, Colorado School of Mines

- Previous to CSM: Homestake Mining Company

- Consulting and Research Experience: Newmont Mining, Barrick Gold, Freeport-McMoRan, Kennecott, Randgold, Kinross Gold, Placer Dome, Sumitomo, Caterpillar, Lafarge, Maptek, Alacer Gold, and Lidya Mining

- Degrees:
  - Colorado School of Mines: BS, 1976; MS, 1979; and PhD 1985; All in Mining Engineering
  - Paris School of Mines: ME (Equiv), 1981 in Geostatistics

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Kadri Dagdelen: Teaching and Research

Academic Activities:

- CSM Courses (in past 5 years):
    - MNGN 300 "Field Session"
    - MNGN 312 "Surface Mine Design"
    - MNGN 438 "Geostatistics"
    - MNGN 433 "Mine Systems Analysis"
    - MNGN 512 "Advanced Surface Mine Design"
    - MNGN 538 "Advanced Geostatistics"
    - PEGN 438 "Geostat for Petroleum Eng"

- Education Innovation:
    - The teaching in all of the courses involves hands-on problem solving skills using industrial software applied to real world problems.
    - Founder of Center for Innovation in Earth Resources Science and Engineering (CIERSE)
    - Lecture capture and webcasting supported teaching

Research Activities:

- Geostatistical Resource and Reserves Estimation

- Open Pit and Underground Mine Planning and Design

- Economic Evaluation and Feasibility Studies

- Strategic Mine Planning and Cutoff Grade Optimization

- Operations Research Applications in Mining

Kadri Dagdelen: Recent Research Projects

- Determining Transition Depth from Open Pit to Underground Mining
  - Funded by: Randgold Resources
  - PI: Dr. Kadri Dagdelen

- New Phase Design Algorithm for Open Pit Mines Using Lagrangian Relaxation and Network Flow Techniques
  - Funded by: CIERSE
  - PI: Dr. Kadri Dagdelen

- Multi Mine and Multi Process Production Scheduling Optimization
  - Funded by: Newmont and Freeport-McMoRan
  - PI: Dr. Kadri Dagdelen

Determining the Transition Depth from Open Pit to Underground Mining
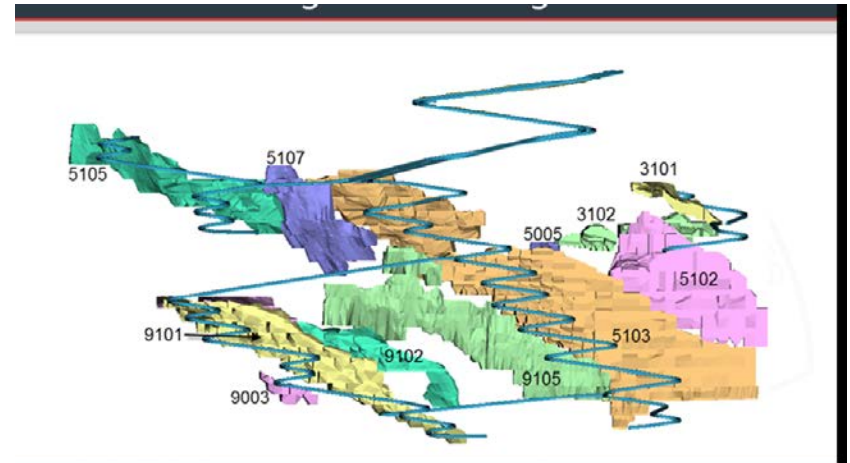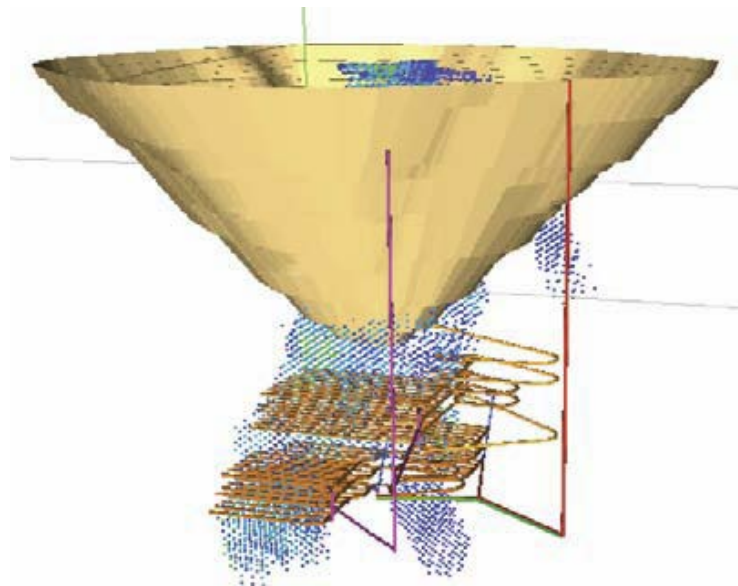
Project Objectives:

- Develop a NPV maximizing method to determine the location of the crown pillar for open pit to underground transition using global production schedule optimization based on Mixed Integer Programing.

Funded by: Randgold Resources

RANDGOLD
R E S O U R C E S

Funded Period: 2012 – 2014

Principal Investigator: Dr. Kadri Dagdelen

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New Open Pit Phase Design Algorithm Using Lagrangian Relaxation and Network Flow Techniques
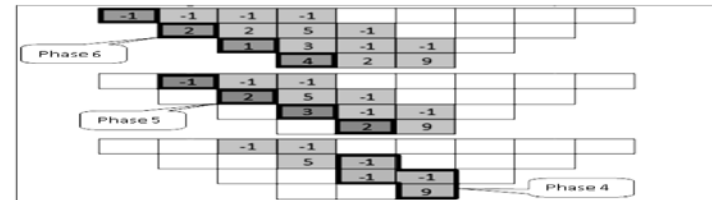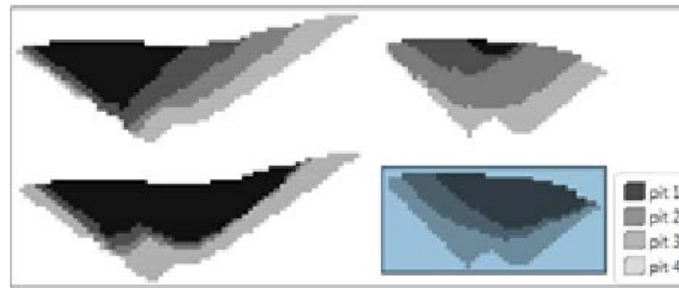
Project objectives:

- Develop a new phase design method for open pit mines that provide NPV maximizing production schedules for the design and planning of open pit mines.

Funded by: Newmont - CIERSE

Funded Period: 2010 - 2013

Principal Investigator: Dr. Kadri Dagdelen

Multi Mine and Multi Process Open Pit Mine Production Scheduling Optimization

Project Objectives:

- Develop a multi mine, multi process and multi time period production scheduling optimization software program using mixed integer linear programing method to be used in the industry.

Funded by: Newmont and Freeport-McMoRan

Funded Period: 2005 - 2013
Principal Investigator:
Dr. Kadri Dagdelen

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