

Dr. Masami Nakagawa

- Associate Professor, Mining Engineering Department, Colorado School of Mines
- Previous to CSM:
 - Tohoku University (Japan)
 - Lovelace Medical Foundation (NM)
 - Sandia National Laboratories (NM)
 - NASA Glenn Research Center (OH)
- Consulting Experience:
 - NAVY, NASA, Sandia National Laboratories, Lockheed Martin, Minera San Cristobal
- Degrees:
 - BS and MS, University of Minnesota
 - PhD, Cornell University



Masami Nakagawa: Teaching and Research

Academic Activities:

- CSM Courses (in past 5 years):
 - DCGN 241 “Statics”
 - ENGY350 “Geothermal Energy”
 - ENGY490 “Energy and Society”
 - MNGN 503 “Mining Technology for Sustainable Development”
 - MNGN 598 “Heat Mining”
- Education Innovation:
 - Minera San Cristobal in Bolivia (Sustainability)
 - Heat Mining (to connect geothermal and mining industry)
 - Integrate local communities into geothermal engineering and sustainable community development education programs --- geothermal field camp

Research Activities:

- Geothermal Energy
- Agent-Based Modeling
- Sustainability

Masami Nakagawa: Current Research Projects

- Subsurface Research in Geothermal Energy: *Technology Transfer Collaboration-Edgar Mine*
 - Funded by: DOE/NREL
 - Co-PIs: Dr. Priscilla Nelson and Dr. Bill Eustes, CSM; Chad Augustine, NREL; Doug Blankenship and Steve Bauer, Sandia National Laboratories
- Sustainable Energy Development Exchange in Indigenous Communities
 - Funded by: The US State Department
 - Co-PIs: None
- Scientific Understanding of Stakeholders' Behavior
 - Funding by:
 - Co-PIs: Kyle Bahr, CSM; Dr. Robert Boutilier, Stakeholder 360

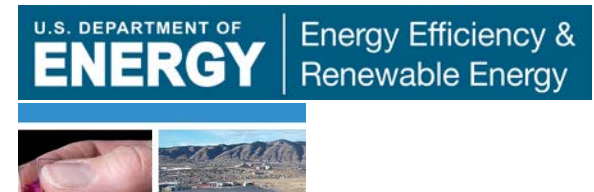
Subsurface Research in Geothermal Energy: *Technology Transfer Collaboration-Edgar Mine*

Project Objectives:

- To create a small fracture network in the Edgar Mine to study the flow of fluid through the fractures and to characterize the efficiency of heat transfer from the test rock mass.
 1. Create a fracture network by drilling into the wall of the mine and fracture the rock;
 2. Characterize the size and nature of the fracture network;
 3. Circulate fluid through the network; and
 4. Measure the efficiency of heat extraction from the reservoir by monitoring the temperature of the produced fluid.

Funded by: DOE/NREL

Funded Period: 3 years



Principal Investigators:

Dr. Masami Nakagawa

Dr. Priscilla Nelson

Dr. Bill Eustes



Sustainable Energy Development Exchange in Indigenous Communities

Project Objectives:

This is a two-part exchange program between Bolivian and American academics, U.S. Native American community decision makers, and Bolivian indigenous community leaders on the topic of sustainable energy development.

Funded by: US State Department

Funded Period: 2 years

Principal Investigators:
Dr. Masami Nakagawa



Scientific Understanding of Stakeholders' Behavior

Project Objectives:

- We attempt to understand, scientifically, how different stakeholders behave when a conflicting situation arises.
- The main purpose of our effort is to develop a framework for the scientific modeling of stakeholders' behavior using an agent-based modeling approach.
- Start with a theoretical understanding of certain social behavior, build a model, and simulate “what if” scenarios to understand its dynamics to gain a better insight of the complexity of seemingly simple social systems.

Principal Investigators:

Dr. Masami Nakagawa

Mr. Kyle Bahr

Collaborator:

Dr. Robert Boutilier, Stakeholder 360

