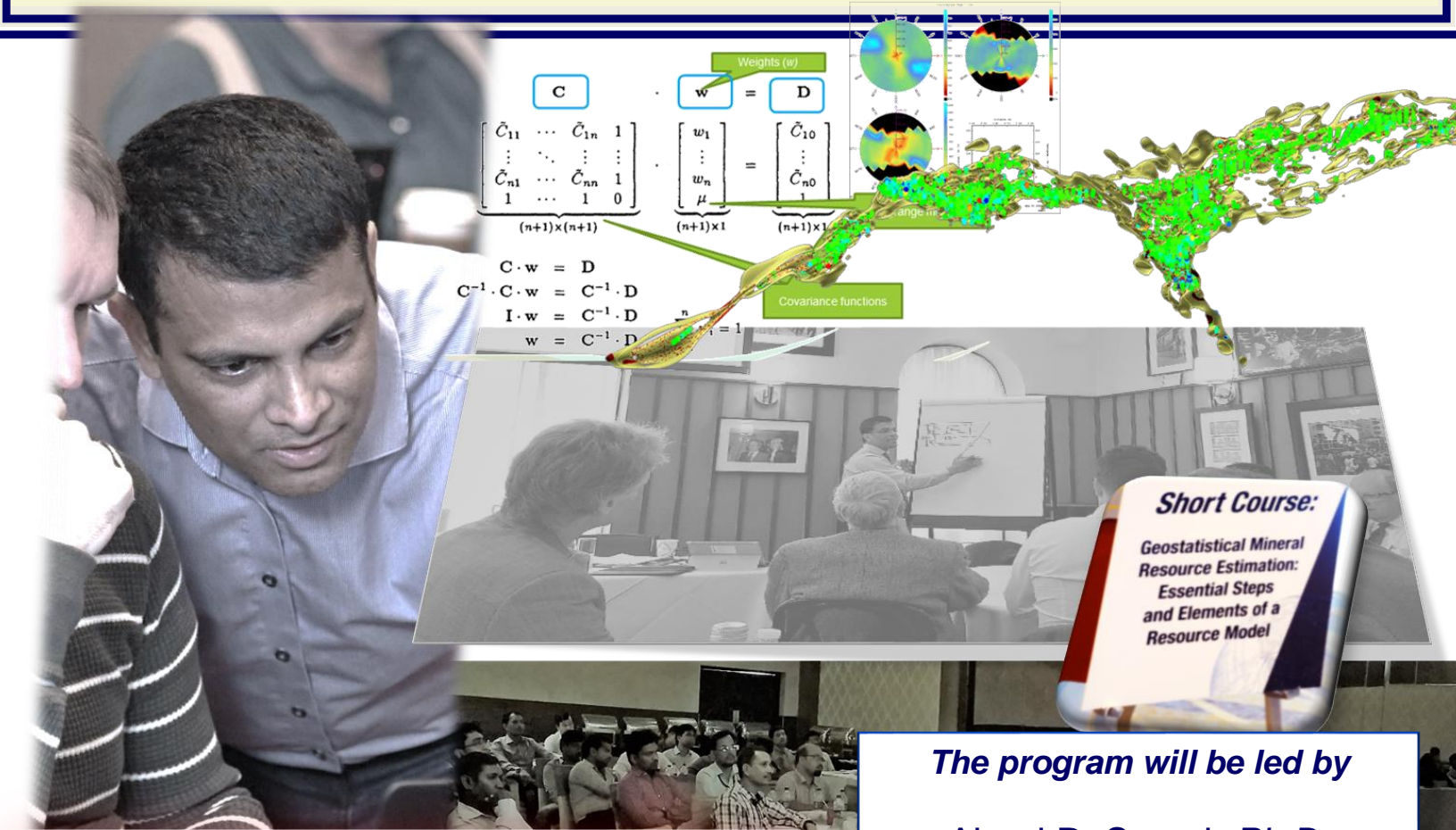


MINERAL RESOURCE ESTIMATION AND APPLIED GEOSTATISTICS

Dates: September 25 to 29, 2023

Location: Miller Corporate Partnership Centre (The Mill)
9060 South 300 West, Sandy, Utah, 84070

Register at: <https://geoglobal.co/mreag-fivedays-slc>



Short Course:

Geostatistical Mineral
Resource Estimation:
Essential Steps
and Elements of a
Resource Model

The program will be led by

Abani R. Samal, *Ph.D.*
Principal, **GeoGlobal, LLC**
Riverton, Utah- 84065

Suitable for the mining industry professionals in the industry and academia.

Full-time registered students will get a 50% discount on fees.

GeoGlobal
Expertise. Experience. Excellence.
<https://geoglobal.co>

FROM

ABANI R. SAMAL, Ph.D.

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<https://geoglobal.co>

Subject: Professional development program (short-course) on Mineral Resource Estimation and Applied Geostatistics (MREAG)

Dates: September 25 to 29, 2023 (Monday to Friday)

Registration at: <https://geoglobal.co/mreag-fivedays-slc>

Schedule: 7:30 am to 3:00 pm (MST) each day + One hour of reading/take-home exercises

Target Participants:

- Geologists in exploration and mining projects
- Mining engineers
- Project managers
- And other professionals in the mining industry

Participants are expected to have exposure to the mining industry and are willing to learn mineral resource estimation, applied geostatistics, resource classification, and reporting in detailed.

The participants are expected have a computer with loaded a geological software such as Surpac, Datamine, Vulcan or Micromine. The instructor will use Vulcan software tool on as needed basis.

Maximum number of participants: 10

Expected Outcome

The participants of this program are expected to gain knowledge and some hands-on experience on various steps followed in the resource estimation process and relevant parts of applied geostatistics.

Participants have the opportunity to clarify their doubts if any during many one-on-one instructional sessions which may be useful for improving their skills in estimating mineral resources which in turn would improve the reliability of the resource (and reserve) estimates.

Outline:

This program is designed to be delivered as an in-person program to a limited number of attendees, who have some exposure to the resource estimation process and or, willing to learn the process in details.

Quizzes and small exercises will be part of these classes.

Day 1: Fundamental concepts: Mineral Deposits, Studies, and Data types

- Introduction
- Geological controls and styles of mineralization
- Project development and studies in mining project development
- Data types and data quality
- Quiz - 1

Day 2: Exploratory data analyses (EDA) including Variogram analyses

- Drill-Hole data: Data types and Data quality
- Introduction to Exploratory Data Analyses (EDA)
- Statistical analysis of drill-hole data
- Quiz - 2

Day 3: Introduction to geostatistics and Kriging

- Introduction to Geostatistics
- Variogram analysis
- Directional variogram
- Interpolation and grade estimation
- Introduction to Kriging
- Quiz - 3

Day 4: Geostatistical Grade estimation and

- Kriging: Errors of estimation, the importance of a robust variogram model
- Grade estimation using Kriging: Discussion and homework
- Density data analyses and model

Day 5: Resource Classification and Reporting

- Resource Classification: Fundamentals, RPEEE
- Resource reporting & Role of a CP / QP
- Final question and answer session

Each session will end with a Q&A session.

Certificates of completion will be awarded to the participants.

Instructors

This program will be taught by Dr Abani Samal assisted by guest faculties.

Dr Abani R Samal – *Project Manager & Instructor*



Dr Abani Samal has a wealth of knowledge and experience in the field of economic geology and valuation of mineral resources. He has extensive training (MS and PhD) in economic geology and geostatistics. He is well recognized internationally for his expertise in advanced geostatistics and mineral resource estimation. In the areas of resource estimation and geostatistics, Dr. Samal has distinguished himself as a respected authority among peers globally.

Prior to GeoGlobal, Dr Samal worked as the lead resource-geologist with RioTinto at their corporate regional HQ based at Salt Lake City, Utah, USA, where he led and contributed to various major projects. He also worked as the lead geologists and geostatistician at an international mining consulting firm, Pincock Allen and Holt (now RPM Global), based at Denver, USA.

In the last 20 years in the industry, he has gained experience in various commodities including gold-silver, base-metals such as Cu-Mo-Au and ferrous deposits around the world. Dr Samal's gold-silver experience includes his contribution to various projects such as Jerritt Canyon (Nevada), Lone Tree (Nevada), Western Mesquitt (California), Las Brisas (Venezuela), Pascua-Lama (Chile), Chapada (Brazil) and Black-Fox (Canada). He has led / completed many other confidential projects for M&A, corporate assurance and corporate financing. He has also experience in many other commodities worldwide.

His contributions to the industry are well recognized through his publications and presentations at various national and international conferences. Dr Samal is a Registered Member of SME (RM-SME), a Certified Professional Geologist (CPG) and a Fellow of the Society for Economic Geologists (SEG). Dr Samal is a Qualified Person (QP) as per international resource reserve reporting standards such as JORC (Australia) and NI-43-101 (Canada). Dr Samal served as an honorary representative of CRIRSCO for India resulting in making India as the 14th member of the CRIRSCO.

GeoGlobal, LLC (USA)

GeoGlobal, LLC (GeoGlobal) is an international service providing company to the mineral industry based in Salt Lake City area in the state of Utah, USA. GeoGlobal provides services to mineral exploration and mining projects around the world. Dr Abani R. Samal is the Principal and owner of the company. The GeoGlobal team members work towards adding value for our business partners. The company specializes in mineral deposit evaluation for various commodities globally. The GeoGlobal retains a team of highly experienced professionals as Principal Associates with more than 20 years of experience.

The projects were conducted for various entities including Equinox Gold Corp, Nevada Copper, World Bank / Government of Nigeria, Rio Tinto, Resource Capital Funds, Orion Mining Finance and Forbes & Manhattan.

We have provided support and services to many exploration and mining projects in USA, Canada, Brazil, Mexico, Kazakhstan and most recently in Namibia and Nigeria. The types of projects include strategic project development, resource estimation, mine-mill reconciliation etc. Website: <https://geoglobal.co/>

If required, GeoGlobal LLC will work with the other associates and engineering firms on as needed basis

Fees and Payment details

- Industry professionals: **3,500 USD per person**
- Full-time faculty members: **3,500 USD per person**
- Students: 1,000 per student (University ID required)

Registration fee Includes:

- Access to the program
- Printed course materials
- Lunches, and coffee breaks for all days of the course
- One group dinner

(Local accommodation, transportation and other related expenses are not included)

Group Discounts:

For groups of 5 or more participants from the same company and further clarifications, please drop an email to arsamal@geoglobal.co

Pay directly to the bank account:

Bank: JPMorgan Chase Bank, N.A.
Account number: 857193517
Routing number: 124001545 (For direct deposits and ACH transactions)
Routing number: 021000021 (For wire transfers)
Beneficiary: GEOGLOBAL, LLC

Zelle Account: arsamal@geoglobal.co

Credit Card Payment through 

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Abani R. Samal, PhD

CPG, RM-SME, Fellow-SME, Fellow-SEG

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