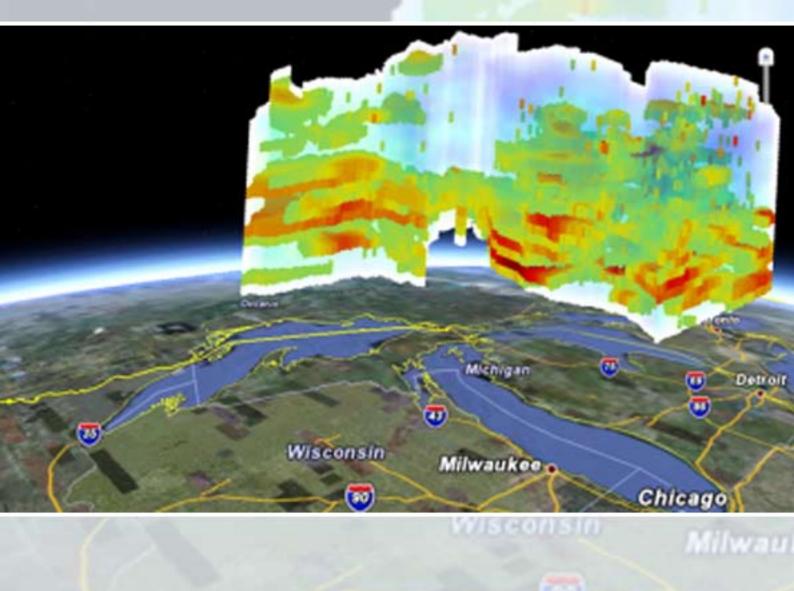
# Short Course on Geostatistical Analysis of Environmental Data

# 21-25 February 2011

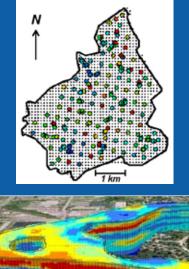
ICRISAT, Patancheru, Andhra Pradesh, India



**International Educational Center** 







#### **Course Overview:**

This course will introduce a suite of geostatistical methods for the spatial analysis of environmental data. Participants will learn how to apply geostatistics for the description of spatial patterns and identification of scales of variability, spatial interpolation and stochastic modeling of environmental attributes, creation of risk maps and their use in decision-making. After completion of this course you will be well prepared to import, visualize and analyze your own data in a space-time information system.

Lectures will alternate with analysis of environmental data using the Stanford Geostatistical Modeling Software (S-GeMS) and the TerraSeer Space-time Information System (STIS).

A Certificate of Completion will be provided upon conclusion of the course. Enrollment is limited to the first 20 registrants.

## Short Course on Geostatistical Analysis of Environmental Data

February 21 to 25, 2011 ICRISAT, Patancheru, Andhra Pradesh

#### **Course Topics**

- 1. What is Geostatistics?
- 2. Exploratory Spatial Data Analysis
- 3. Description of Spatial Patterns
- 4. Modeling the Spatial Variability
- 5. Spatial Prediction
- 6. Accounting for Secondary Information in Kriging
- 7. Risk Mapping and Incorporation in Decision-making
- 8. Stochastic Simulation
- 9. Space-time Geostatistics

#### Instructors

Dr. Pierre Goovaerts studied at the Catholic University of Louvain-la-Neuve (Belgium) and at Stanford University, where he wrote the textbook entitled Geostatistics for Natural Resources Evaluation published by Oxford University Press in 1997. After five years on the Faculty at the University of Michigan, he became



in 2002 Chief Scientist for the R&D Company, Biomedware, Inc, and he created his own consulting company, PGeostat, LLC. Dr. Goovaerts has authored more than 130 refereed papers in the field of theoretical and applied geostatistics, and he is a reviewer for 50 international journals. He has taught numerous short courses in the US, which were attended by academics, consultants and federal employees. He acts as a consultant for the Environmental Protection Agency, the Nuclear Regulatory Commission, and he is bringing his expertise to numerous projects dealing with the characterization of air, soil and water pollution and its impact on human health. Most recently, Dr. Goovaerts has been appointed a Courtesy Associate Professor at the University of Florida, Soil and Water Science Department. Since last year he is an off-site employee for the international company CSC (Computer Sciences Corporation), providing expertise on the geostatistical modeling of contaminated sediments in rivers and lakes. For more information about Dr. Goovaerts, visit his home page at: goovaerts.pierre. googlepages.com. Who Should Attend?

#### Who Should Attend?

- · Instructors and faculty members
- · Geophysicists and Geologists
- Agricultural Engineers and Scientists; Agronomists
- Environmental Consultants, Regulators, and Scientists
- Environmental Epidemiologists
- Soil and Water Scientists, students
- Others seeking training in GIS and geospatial science

### **Five Ways to Benefit**

- 1. Learn how to conduct a complete geostatistical analysis using the new software developed at Stanford University
- 2. Gain a basic understanding of state-of-the-art geostatistical methods for stochastic simulation and space-time interpolation
- 3. Receive specialized, hands-on training in geostatistics
- 4. Learn when and how to choose the interpolation technique that makes best use of the information available
- 5. Learn about exploring and visualizing local relationships between environmental variables

#### Registration

Enrollment in this course is limited to the first 20 participants, and registrations will be accepted on a first-come, first-served basis. Advance registration is required and we encourage to register early to secure a seat in this course. After the cancellation deadline, registration fees will not be refunded.

Course fee Rs. 25,000 or US \$550

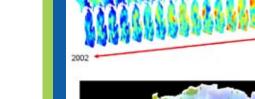
#### What does the fee include?

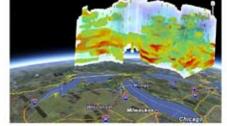
The registration fee includes one copy of a CD with lecture notes, Power Point slides (pdf) and sample datasets. The fee also includes the use of computers in the training room. Meals and refreshments during sessions are provided. The fee also covers on-campus accommodation (twin-sharing in flats or single in dormitory).

#### To register, contact the course organizer:

Learning Systems Unit (LSU) ICRISAT, Patancheru 502 324, AP, India

Email: lsu@cgiar.org Phone: +91 40 3071 3361





#### **Course Agenda**

Monday Feb. 21: 10:00 – 5.00 p.m

Tuesday – Thursday

Feb. 22-24: 9:00 – 5:00 p.m

Friday, Feb. 25: 9:00 – 3:00 p.m

#### **Timeline:**

Last date for receipt of application 31 Jan 2011

Last date for cancellation

3 Feb 2011

#### **Training Location:**

This course will be held at the ICRISAT campus, Patancheru.

#### **Course Instructors:**

Dr. Pierre Goovaerts PGeostat, LLC 710 Ridgemont Lane Ann Arbor, MI 48103

Email: goovaerts@comcast.net Phone: (734) 668-9900

#### **Course Organizer:**

Learning Systems Unit (LSU) ICRISAT, Patancheru, Andhra Pradesh, India. Email: Isu@cgiar.org Phone: +91 40 3071 3361 Fax: +91 40 30713074

For additional information on other short courses offered please visit our web site

http://www.iec.ufic.ufl.edu

Payment by demand draft (in INR or USD) favoring ICRISAT, payable at Hyderabad, must accompany the registration form.





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21-25 February 2011

**Registration Form** 

Part A: Participant's Details
Name in Full:
(As you would like it to appear in your certificate)
Affiliation:
Address:
Country:
Email:
Telephone: Fax:
Part B: Background Information
Academic Qualifications:
Current Organization/University:
Relevant areas of interest:
Part C: Please tell us why you think attending this course will be useful for you. (Use separate sheet; no more than 200 words)
Signature: Date:
Completed form along with the course fee by Demand Draft in favor of ICRISAT, payable at Hyderabad, India, must be sent to:
Learning Systems Unit (LSU) ICRISAT, Patancheru PO 502 324 Andhra Pradesh, India.
Phone: +91 40 30713361; Fax: +91 40 30713074 or 30713075 Email: <b>Isu@cgiar.org</b>
Last date for receipt of application: $31^{st}$ Jan 2011Accepted participants will be notified by7th Feb 2011Last date for cancellation: $3^{rd}$ Feb 2011