PIMS Graduate Institute on Modeling Environmental Space-Time Processes

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Douw Steyn

Jim Zidek

Learning outcomes

Understanding of

- **spatiotemporal statistics for environmental applications**
- **the types of questions they can address**
- **simplifying assumptions commonly made in geostatistics**
- **ways to overcome some of these assumptions**
- **classical and Bayesian approaches to spatial and spatiotemporal data**
- **how to combine deterministic and stochastic models**
- **approaches to designing environmental monitoring networks**

Course credit

Credit available for

    STAT 593 (4 quarter credits) at UW

    STAT 547 (2 semester credits) at UBC

Requirements:

By July 30 submit short report (≤ 6 pages) on analysis of space-time data set

Can use your own or a data set from the labs

Credit is pass/fail, not graded

Course material

Wireless network login

    UW NetID: event0213

    Password: ePoch=rapiD

Slides available at

www.nrcse.washington.edu/events/school

Software available at

http://enviro.stat.ubc.ca

Schedule

Lectures 9-10:15 10:45-12 (Raitt 121)

Lunch 12-1:30

Lab 1:30-5 (Mary Gates 030)

Envrion-mental risk	Stationary processes	Spatial prediction	Mapping mean fields	Network design
Geo-statistics	Nonstatio-nary covariance	Dynamic linear models	Model assess-ment	Case study
geoR and geo-statistics	Modeling nonstatio-nary covariance	Using DLM	Bayesian melding	Student problems

Other issues

Mixer tonight at McMahon Patio

5pm – 7pm

Munchies and drinks

Funding sources:

PIMS Environmetrics CRG

UW VIGRE grant