Subject: FW: Seminar - December 13
From: Erik Vanmarcke <evm@Princeton.EDU>
Date: 11/12/2013 10:36 μμ
To: Christopoulos Dionysios <dionisi@mred.tuc.gr>

Dionisis,

The latest announcement of your talk is appended, FYI.

I will be in New York City during the day tomorrow (Thursday). I'll call you on my way back -- the plan is for us to have dinner in Princeton in the evening (Th., tomorrow).

Call me any time tomorrow -- my cellphone number, again, is 609-598-0952.

I look forward to seeing you soon.

Erik

From: Jillian L. Hoffman
Sent: Wednesday, December 11, 2013 1:04 PM
To: Jillian L. Hoffman
Subject: Seminar - December 13

Good afternoon,

There will be a seminar Friday, December 13th at 12 pm in E219. This visit is hosted by Prof. Erik Vanmarcke (CEE Department; PEI; PRISM). Please let him know if you would like to meet individually with Dr. Hristopulos on December 13. evm@princeton.edu

Please make every effort to attend as a courtesy to our speaker.
Thank you!

Civil and Environmental Engineering

Random Fields based on Local Interaction Models for Spatiotemporal Data

Dionissios T. Hristopulos
Geostatistics Research Unit, Department of Mineral Resources Engineering
Technical University of Crete - Chania 73100, Greece

Abstract

This presentation will focus on the interpolation and simulation of scattered spatial observations as well as missing data on regular grids by means of Spartan spatial random fields (SSRFs). SSRFs can be derived from a Gaussian statistical field theory that includes both gradient and curvature terms, or equivalently, from stochastic (Langevin) partial differential equations driven by Gaussian white noise. SSRF covariance models are characterized by sparse structure of the precision matrix (the inverse covariance matrix), at least for data distributed on regular grids. The sparseness derives from the locality of the operators in the respective "energy" functional and leads to an explicit spectral density given by a rational function. We present new expressions for three-parameter, isotropic covariance functions and discuss the parametric dependence of various correlation range measures, as well as the emergence of self-similarity. Applications of SSRFs to real and simulated data sets will be presented. Ongoing research efforts that extend SSRFs into the spatiotemporal domain as well as perspectives for future developments will be discussed.

Bio Item

Prof. Hristopulos received a Ph.D in Physics at Princeton, under the supervision of Nobel Prize laureate Phil Anderson.

Friday, December 13
Seminar 12:00 p.m.
E219

PRINCETON UNIVERSITY

Light refreshments will be served.

Jillian Hoffman
Department Assistant
Department of Civil and Environmental Engineering
609-258-4600

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image001.png

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Attachments:

image008.jpg	86,2 KB
image009.jpg	24,8 KB
Seminar Flyer Hristopulos 121313.pdf	196 KB
image001.png	2,0 KB
image002.png	706 bytes
image004.emz	3,3 KB
image005.emz	2,5 KB
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image007.emz	1,8 KB
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