United States Environmental Protection Agency (US EPA)
Workshop on GAM-Related Statistical Issues in PM Epidemiology
November 4-6, 2002

Agenda

Day 1. Monday (11/04/02)

8:45 am Welcome and Opening Remarks: Dr. Lester Grant (US EPA)

Session One. Theoretical and Computational Foundations of GAM Analyses
Les Grant (US EPA) - Chair

9:00 am L. Neas (US EPA) - Introduction to GAM Air Pollution Modeling for Non-Statisticians and Related Statistical Issues
9:20 am F. Dominici (J. Hopkins), A. McDermott (J. Hopkins), & T. Hastie (Stanford) - Semiparametric Regression in Time Series Analyses of Air Pollution and Mortality: Generalized Additive Models and Generalized Linear Models
9:40 am M. Klein & W.D. Flanders (Emory) - Assessing GAM Variance Estimators
10:00 am J. Schwartz (Harvard) - Case Crossover and Penalized Spline Models for Air Pollution Time-Series Analyses

10:20 am Break

10:40 am R. Burnett (Health Canada) - Canadian Simulation Studies

11:00 am Panel Discussion - Above speakers and invited workshop participants
(To be followed by general discussion, including questions/brief comments from public observers, as time permits)

Noon Lunch

Session Two. Revisiting US Time-Series Studies Using GAM-Related Procedures: PM 10 Studies
Lucas Neas (US EPA) - Chair

1:30 pm F. Dominici, A. McDermott, S. Zeger, & J. Samet (J. Hopkins) - Updates on the NMMAPS Re-Analyses: PM\textsubscript{10} and Other Pollutants Analyses, Exposure-Response Relationship and Mortality Displacement\textsuperscript{1,2}

2:10 pm A. Zanobetti & J. Schwartz (Harvard) - Reanalysis of the Association Between Hospital Admissions for Heart and Lung Disease and Airborne Particles\textsuperscript{1,4}

2:40 pm J. Schwartz (Harvard) - Reanalyses of PM Studies on Confounding, Harvesting, Thresholds, and Distributed Lags for Mortality Effects\textsuperscript{3,7,8,9,10}

3:10 pm Break

3:30 pm Panel & General Discussion of US PM 10 Studies

5:30 pm Close for Day 1
Day 2. Tuesday (11/05/02)

8:00 am  Admin. Remarks - Les Grant (US EPA) & Dan Greenbaum (HEI)

Session Three. Revisiting US & Canadian Time-Series Studies: PM Fine/Coarse Mode Multicity and Source-Apportionment Studies
William E. Wilson (US EPA) - Chair

8:10 am  J. Schwartz (Harvard) - Reanalyses of Harvard Six Cities Time-Series Mortality Study\(^\text{11}\)
8:40 am  R. Klemm (Klemm Analysis Group, Inc.) - Reanalysis of Harvard Six-City Mortality Study Replication\(^\text{13}\)
9:10 am  R. Burnett (Health Canada) - Canadian Eight-City Mortality Study Reanalyses and Progress on Expanded Canadian Dataset Analyses\(^\text{22}\)
9:40 am  J. Schwartz (Harvard) - Reevaluation of Harvard Six-City Mortality Associations with Fine PM from Different Sources\(^\text{20}\)
10:10 am  T. Mar, G. Norris, J. Koenig, & T. Larson (U. Washington) - Relationship of Mortality to PM Mass and Sources in Phoenix, AZ\(^\text{21}\)
10:30 am  Break
10:45 am  Panel/General Discussion of U.S. & Canadian Fine/Coarse Mode Multicity and Source-Apportionment Studies
11:45 am  Lunch

Session Four: Revisiting US & Canadian Time-Series Analyses: PM Fine/Coarse Mode Single -City Studies
William E. Wilson (US EPA) - Chair

1:15 pm  D. Fairley (Bay Area Air Qual. Mgmt. District) - Santa Clara County, CA Mortality Study Reanalysis and Simulation Results\(^\text{15}\)
1:35 pm  B. Ostro & M. Lipsett (California EPA) - Reanalysis of the Coarse Particle Associations Reported for the Coachella Valley, California\(^\text{16}\)
1:55 pm  S. Moolgavkar (F. Hutchison Cancer Res. Ctr.) - Los Angeles ,CA Mortality Data Reanalyses\(^\text{17}\)
2:15 pm  L. Sheppard (U. Washington) - Reanalyses for Seattle, WA Non-elderly Hospital Admissions\(^\text{18}\)
2:35 pm  K. Ito (NYU) – Reanalyses for Detroit, MI Mortality/Morbidity Data\(^\text{14}\)
2:55 pm  M. Goldberg (McGill U) & R. Burnett (Health Canada) - Reanalyses of findings on Susceptible Subpopulations from Montreal Time-Series Study\(^\text{23-28}\)
3:05 pm  Break
3:30 pm  Panel/General Discussion of US & Canadian Fine/Coarse Mode Single-City Studies
5:00 pm  Close for Day 2

Day 3. Wednesday (11/06/02)

Session Five. Revisiting European Time -Series Studies of PM Mortality & Morbidity Effects
Dennis Kotchmar (US EPA) - Chair
8:00 am _A. LeTertre_ (Inst. de Veille Sanitaire) - Reanalyses of APHEA Multicity Mortality/Morbidity Data$^{29-31}$
8:30 am _G. Hoek_ (Utrecht U.) - Reanalyses of Dutch Mortality Data$^{32,33}$
8:50 am _S. Heisterkamps_ (RIVM) - Progress on Expanded Dutch Dataset Analysis
9:30 am Panel & General Discussion of European Studies
10:30 am Break

**Session Six. Future Directions for PM Epidemiology Analyses**
Les Grant (US EPA) - Chair

10:45 am _T. Lumley_ & _L. Sheppard_ (U. Washington) - Issues in Selecting and Fitting Models
11:10 am _M. Clyde_ (Duke U.) - Alternative Strategies for Model Specification & Selection
11:35 am _J. Schwartz_ - Issues in Selecting Covariate Models Controlling for Season and Weather

11:50 am Lunch

1:20 pm _K. Ito_ (NYU) - Issues in Modeling Air Pollution Health Effects
1:45 pm Panel & General Discussion on Future Directions for PM Epidemiology
Opening Comments (10 min. each) by Panel of Invited Participants (Dominici, Marcus, Moolgavkar, R. Smith); then General Discussion Among Speakers, Invited Participants, & (as time allows) Public Observers
3:45 pm Closing Remarks - Les Grant (US EPA)
4:00 pm End of Workshop

Note: See Attachment A for listing of published papers for which reanalyses are to be discussed in given presentation. Superscript number(s) at end of given presentation denote paper(s) as per numbered references in Attachment A. Names of invited participants to make designated presentation are underlined.