



[Note: All sessions are hybrid. Every session is broadcast live via Zoom with presenters, presenting both in-person and remotely]

Wednesday October 12, 2022

[\[Registration desk in front of CALIT 2 from 8:30 to 9:30AM\]](#)

9AM-12PM: Short course with Andrew Lawson (in person and also hybrid) in CALIT 2

12PM-1:30PM: Lunch on your own

[\[Registration desk in front of CALIT 2 from 12:00 to 1:00PM\]](#)

1:30-3:10PM: Session 1 *“Geospatial perspective on environmental influences on mental health”* in CALIT 2

Session 2 *“Spatial models to infer upon cancer incidence and prognosis”* in Stat Dept (Donald Bren Hall, room 2011)

3:10-3:30PM: Coffee Break in CALIT 2 Atrium

3:30PM-5:10PM: Session 3 *“Cross-border health, one neglected global health challenge”* in CALIT 2

Session 4 *“On challenges posed by uncertainty in geospatial health research”* in Stat Dept (Donald Bren Hall, room 2011)

5:10-6PM: In-person poster session set-up in CALIT 2 Atrium

6PM-9PM: In-person poster session & reception in CALIT 2 Atrium

Thursday October 13, 2022

[Registration desk in front of CALIT 2 from 8:30 to 9:30AM]

9AM-10AM: Plenary talk 1 **[REMOTE]** - Prof. Katie Hampson, University of Glasgow, “*The importance of the spatial scale of transmission for infectious disease dynamics*” in CALIT 2

10AM-10:20AM: Coffee break in CALIT 2 Atrium

10:20AM-12PM: Session 5 “*Inferring upon epidemics spread, clusters and mutations: novel data sources and methods*” in CALIT 2

Session 6 “*Modeling spatial misaligned or multivariate disease data*” in ISEB Auditorium

Session 7 “*Advances in environmental and social epidemiology*” in ISEB Lecture room (room 1200)

12PM-1:30PM: Lunch served in CALIT 2 Atrium

1:30-2:30PM: Plenary talk 2 **[IN PERSON]** - Prof. Sudipto Banerjee, UCLA, “*Detecting spatial difference boundaries using Bayesian disease mapping*” in CALIT 2

2:30-3:00PM: Coffee break in CALIT 2 Atrium

3:00-4:40PM: Session 8 “*Advances in spatial statistical methods for clustered and disease data*” in CALIT 2

Session 9 “*Spatial modeling of opioid, drug abuse and HIV data*” in ISEB Lecture room (room 1200)

Session 10 “*Geospatial perspective in studies of environmental health*” in Stat Department (Donald Bren Hall, room 2011)

5:00-6PM: Remote poster session

6:45-9:30PM: Dinner (ticketed event; registration needed) at Lighthouse Café, Newport Beach

Friday October 14, 2022

9AM-10AM: Plenary talk 3 [REMOTE] - Prof. Becky P. Y. Loo, The University of Hong Kong, "*Human mobility, facilities, and location agglomeration: Are there regularities that inform the creation of a superspreading event?*" in ISEB Auditorium

10AM-10:20AM: Coffee break in ISEB Lobby

10:20AM-12PM: Session 11 "*Spatio and spatio-temporal models for global health*" in ISEB Auditorium

Session 12 "*Advances in urban health*" in Stat Department (Donald Bren Hall, room 2011)

12PM-1:30PM: Lunch served in ISEB Lobby

1:30PM-3:10PM: Session 13 "*Vaccination and infectious diseases transmission*" in ISEB Auditorium

Session 14 "*Advancing research on neighborhood effects using geospatial technologies and multilevel (hierarchical) models*" in ISEB 1200

Session 15 "*Accounting for spatial variation in environmental risk factors, disease prevalence and mortality*" in Stat Department (Donald Bren Hall, room 2011)

3:10-3:30PM: Coffee break in ISEB Lobby

3:30-5:10PM: Session 16 "*Infectious disease and surveillance*" in ISEB Auditorium

Session 17 "*Spatial modeling of climate and health*" in ISEB 1200

Session 18 "*Association between urban built environment and public health*" in Stat Department (Donald Bren Hall, room 2011)

5:20-5:30PM: Closing remarks in ISEB Auditorium

Listing of sessions and speakers.

Remote speakers are denoted with an (R), in-person speakers are denoted by (P).

Session 1 *“Geospatial perspective on environmental influences on mental health”*

Organized by Eunhye (Enki) Yoo, University at Buffalo, The State University of New York (SUNY)

- (P) Kai Chen, Yale University, *“Back extrapolating historical air pollution based on long-term in-situ measurements: an example from the United Kingdom”*
- (P) Eunhye Yoo, University at Buffalo, The State University of New York (SUNY), *“Community level morbidity between mental disorders and respiratory disease: multivariate spatio-temporal disease mapping”*
- (R) Xiaojiang Li, Temple University, *“The discrepancies of the urban heat metrics generated from different geospatial datasets”*
- (R) Timothy Collins, University of Utah, *“Cascading Disasters and Mental Health Inequities: Winter Storm Uri, COVID-19 and Post-Traumatic Stress in Texas”*

Session 2 *“Spatial models to infer upon cancer incidence and prognosis”*

- (P) Annelies Agten, Hasselt University, *“Measures of spatial heterogeneity in the liver tissue micro-environment as prognostic factors for fibrosis score”*
- (P) Oana Petrof, Hasselt University, *“Disease mapping comparing the spatial distribution of a disease with a control disease”*
- (P) Garazi Retegui, Public University of Navarre (UPN), *“Evaluating multivariate models for predicting cancer incidence using mortality data”* [invited speaker]
- (R) Giorgia Stoppa, University of Padova, *“Spatial distribution of mortality risk for ovarian cancer and asbestos exposure in Lombardy (Italy)”*

Session 3 “*Cross-border health, one neglected global health challenge*”

Organized by Maria de Fátima De Pina, Instituto de Comunicação and Informação Científica e Tecnológica em Saúde (Fiocruz) and Universidade do Estado do Rio de Janeiro (UERJ)

Session sponsored by the
Institut de Recherche pour le Développement (IRD)



and by the
Joint International Laboratory Sentinela (LMI)



- (R) Christovam Barcelos, Oswaldo Cruz Foundation (Fiocruz), “*Cross-border sentinel sites of the Climate and Health Observatory*”
- (R) Paulo Peiter, Oswaldo Cruz Foundation (Fiocruz), “*Access to health care between system margins: drifting populations on the border between Brazil and French Guiana*”
- (P) Esmeralda Iniguez-Stevens, California Department of Public Health, Office of binational border health, “*Building public health partnerships in the U.S.-Mexico Border Region*”
- (P) Tatiana Marrufo, National Institute of Health (Instituto Nacional de Saude) of Mozambique, “*International boundaries and internal limits of public health systems in Southern Africa: sharing the experience of Mozambique*”

Session 4 “*On challenges posed by uncertainty in geospatial health research*”

- (P) Lingzhi Chu, Yale University, “*Associations between short-term ambient temperature exposure and kidney-related diseases in New York State: The influence of exposure spatial resolution, temperature scale, and temperature metric*”
- (P) Hui Luan, University of Oregon, “*The association between geographical accessibility of pre-exposure prophylaxis (PrEP) and social determinants of health: does the choice of accessibility measure matter?*”
- (P) Shupeng Zhu, University of California Irvine, “*The inequality of air pollution-associated mortality burdens increased despite significant air quality improvement between 2002 and 2018 in the US*”

Session 5 “*Inferring upon epidemics spread, clusters and mutations: novel data sources and methods*”

- (P) Devan Becker, Wilfrid Laurier University, “*Proportions of variants of concern in space and time*”
- (R) Nelson Walker, U.S. Air Force Material Command, “*Predicting the risk of novel pathogen introductions from disease surveillance data*”
- (R) Marta Blangiardo, Imperial College London, “*A spatio-temporal framework for modelling wastewater concentration during the COVID-19 pandemic*” [invited speaker]
- (R) Joanne Kim, Medical University of South Carolina, “*A novel Bayesian metric to predict emerging high risk clusters in infectious disease outbreaks*”

Session 6 “*Modeling spatial misaligned or multivariate disease data*”

Organized by Duncan Lee, University of Glasgow

- (R) Duncan Lee, University of Glasgow, “*Identifying boundaries in spatially continuous disease risk surfaces from spatially aggregated disease count data*”
- (R) Umut Altay, The Norwegian University of Science and Technology (NTNU), “*Accounting for Jittering in Raster- and Distance-based Geostatistical Analysis of DHS Data*”
- (P) Marco Gramatica, Queen Mary University of London, “*Structure induced by a multiple membership transformation on the Conditionally Autoregressive model*”
- (P) Jonathan Bradley, Florida State University, “*Exact Bayesian inference for a class of spatial Generalized Linear Mixed Effects models*”

Session 7 “*Advances in environmental and social epidemiology*”

Organized by Marta Blangiardo, Imperial College, London

- (R) Ulf Strömberg, University of Gothenburg, Sweden, “*The Swedish geomapping system for surveillance of equity in early cancer detection*”
- (R) Monica Pirani, Imperial College London, “*Impact of climate and local environment on Dengue and Zika virus diseases in Brazil: A joint spatio-temporal model*”
- (R) Aina Roca-Barcelo, Imperial College London, “*Development of spatiotemporal high-resolution temperature data for São Paulo, Brazil; a valuable resource for epidemiologists*”
- (P) Katie Wilson, University of Washington, “*Modeling under-five mortality using multiple birth history data sources*”

Session 8 “*Advances in spatial statistical methods for clustered and disease data*”

- (P) Yu Lan, University of North Carolina at Charlotte, “*A web-based geographic framework to detect and visualize space-time clusters of infectious diseases*”
- (P) Renato Assunção, ESRI Inc. and Universidad Federale Minas Gerais, Brazil, “*Bias correction in clustered underreported data*”
- (P) Andrew Lawson, Medical University of South Carolina & University of Edinburgh, “*Space-time infectious disease modeling, nowcasting and counterfactuals*”
- (R) Chris Jewell, Lancaster University, “*Non-centred proposals for MCMC in epidemic inference: SARS-CoV-2 a case study*”

Session 9 “*Spatial modeling of opioid, drug abuse and HIV data*”

- (P) Susan Cassels and Sean Reid, University of California Santa Barbara, “*HIV risk hotspots for sexual minority men in Los Angeles, CA*”
- (P) Jeremy Mennis, Temple University, “*Integrated peer network and activity space characteristics of 1,100 young adults enrolled in a randomized controlled trial of an mHealth cannabis use disorder intervention*”
- (P) Staci Hepler, Wake Forest University, “*An integrated abundance model for estimating county-level prevalence of opioid misuse in Ohio*”
- (R) David Kline, Wake Forest University, “*A spatio-temporal factor model to describe the opioid syndemic in Ohio*”

Session 10 “*Geospatial perspective in studies of environmental health*”

Organized by Eunhye (Enki) Yoo, University at Buffalo, The State University of New York (SUNY)

- (P) Xiangyu Jiang, Georgia Environmental Protection Division, “*The impact of wildland fire-related PM_{2.5} calibration on health effect analysis*”
- (P) Kristen Hansen, University of California San Diego, “*Spatially varying estimates of mediation effects in the presence of spatial confounding and autocorrelation*”
- (R) Youngseob Eum, University at Buffalo, State University of New York, “*Evaluating mobility changes associated with Influenza-like symptoms using mobile phone-based GPS data*”

Session 11 “*Spatio and spatio-temporal models for global health*”

Organized by Monica Pirani, Imperial College London

- (R) Silvia Liverani, Queen Mary University of London, “*Bayesian modelling for spatially misaligned health areal data: A multiple membership approach*”
- (R) Gianluca Baio, University College London, “*One year of Covid-19 in 5 major European countries: a comparative analysis of excess mortality*”
- (R) Xiang Wang, Lawrence Berkeley National Laboratory, “*Using geospatial models and socioeconomic features to predict mortality rates in the United States*”
- (R) Guowen Huang, Shantou University, “*Urban/rural differences in air pollution impacts on deaths in Scotland: a comparison study on different pollution data sources*”

Session 12 “*Advances in urban health*”

- (R) Niloofar Shoari, Imperial College London, “*Spatial and temporal analysis of child pedestrian crashes in England*”
- (R) Brisa Sanchez, Drexel University, “*Heterogeneous effects of the built environment*” [invited speaker]
- (R) Yi Sun, University of California Irvine, “*Associations between urban green space and postpartum depression, and the role of physical activity*” [invited speaker]
- (R) Arrianna Marie Planey, University of North Carolina, Chapel Hill, “*Spaces of segregation and health: complex associations for Black immigrant and U.S. born-mothers in New York City*” [invited speaker]

Session 13 “*Vaccination and infectious diseases transmission*”

Organized by Veronica Berrocal, University of California Irvine

- (R) Alexandra Schmidt, McGill University, “*A Poisson-multinomial spatial model for simultaneous outbreaks with application to arboviral diseases*”
- (R) Kyunghye Rhyu, The University of Texas at Dallas, “*A spatio-temporal ecological model of COVID-19 vaccination rate disparities in Texas*”
- (P) Georges Bucyibaruta, Imperial College London, “*Community-level characteristics of COVID-19 vaccine hesitancy in England: a nationwide cross-sectional study*”
- (P) Christel Faes, Hasselt University, “*The impact of national and international travel on spatio-temporal transmission of SARS-CoV2 in Belgium*”

Session 14 “*Advancing research on neighborhood effects using geospatial technologies and multilevel (hierarchical) models*”

Organized by Sue Grady, Michigan State University

- (P) Sue Grady, Michigan State University, “*Maternal Exposures to Sulfur Dioxide Airborne Concentrations and Adverse Birth Outcomes: Detroit Metropolitan Area*”
- (P) Ana Rivera, Michigan State University, “*Environmental injustice among Hispanics in Santa Clara, California: A Human-Environment heat vulnerability assessment*”
- (P) Eric Delmelle, University of Eastern Finland and University of North Carolina at Charlotte, “*Modeling the Role of Geography in Survival Analysis: an Application to Children with Birth Defects*”
- (P) Russell Kirby, University of South Florida, “*Discussion*”

Session 15 “*Accounting for spatial variation in environmental risk factors, disease prevalence and mortality*”

- (P) Guofeng Cao, University of Colorado Boulder, “*Revisiting the estimation of PM_{2.5}-attributable mortality with advancements in PM_{2.5} mapping and mortality statistics*”
- (R) Lais Picinini Freitas, Universite de Montreal, “*Zika emergence in Colombia and related environmental and socio-demographic factors*”
- (R) Jussara Rafael Angelo, Oswaldo Cruz Foundation (Fiocruz), “*Monitoring COVID 19 in Rio's favelas: territory-based surveillance and shared production of knowledge*”
- (R) Robin Muegge, University of Glasgow, “*National lockdowns in England: the same restrictions for all, but do the impacts on COVID-19 mortality risks vary geographically?*”

Session 16 “*Infectious disease and surveillance*”

Organized by Alexandra Schmidt, McGill University

- (R) Rob Deardon, University of Calgary, “*Variable screening for spatial epidemic models*”
- (R) Cindy Feng, Dalhousie University, “*Spatial-temporal generalized additive model for modeling COVID-19 mortality risk in Toronto, Canada*”
- (R) Caitlin Ward, University of Calgary, “*Capturing dynamic behavioral change in Bayesian spatial epidemic models*”
- (R) Dirk Douwes-Schultz, McGill University, “*Coupled Markov switching count models for the detection and forecasting of COVID-19 outbreaks in Quebec hospitals*”

Session 17 “*Spatial modeling of climate and health*”

Organized by Marta Blangiardo, Imperial College London

- (P) Garyfallos Konstantinoudis, Imperial College London, “*The interplay between excess mortality and laboratory-confirmed COVID-19-related deaths in Switzerland*”
- (P) Robbie M. Parks, Columbia University, “*New frontiers in climate and health*”
- (P) Yuzi Zhang, Emory University, “*A scaler-on-quantile function approach for estimating short-term health effects of environmental exposures*”
- (P) Chigozie Edson Utazi, University of Southampton, “*Conditional probability and ratio-based approaches for mapping the coverage of multi-dose vaccines*”

Session 18 “*Association between urban built environment and public health*”

Organized by Avipsa Roy, University of California Irvine

- (P) Yanjia Cao, The University of Hong Kong, “*Comparing and validating food environments using multi-source geospatial datasets*”
- (P) Ryan Zhenqi Zhou, University at Buffalo, State University of New York, “*Deriving neighborhood-level diet and physical activity measurements from anonymized mobile phone location data for enhancing obesity estimation*”
- (P) Avipsa Roy, University of California Irvine, “*Predicting COVID 19 risk from movement patterns and sociodemographic factors*”
- (P) Maria de Fátima De Pina, Oswaldo Cruz Foundation (Fiocruz), “*Mapping urban parks in Latin America, through the classification of satellite images using collaborative web data*”