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EDUCATION

Postdoctoral Fellow, National Institute of Environmental Health Sciences (NIEHS) and National Institute on Aging (NIA) 06/2022-Present

- Intramural Research Training Award Program
- Advised by Dr. Dale Sandler, Chief, Epidemiology Branch, NIEHS and Dr. Lenore J. Launer, Chief, Lab of Epidemiology & Pop Sciences, NIA

Ph.D. (Environmental Health Sciences, EHS), School of Public Health, State University of New York at Albany, New York, USA 08/2019-05/2022

- GPA: 4.97/5
- Full scholarship Recipient
- Dissertation: Developing High-Resolution Meteorological Datasets to Assess the Short-Term Association between Meteorological Factors and Green Space and Mental Disorders
- Mentor: Shao Lin, M.D., Ph.D.

M.D. (Medical Degree in Preventive Medicine), School of Public Health, Sun Yat-sen University, Guangzhou, China 09/2014-05/2019

- GPA: 3.8/4
- Jerry Yan Scholarship, Scholarship of Zhibin Yao and Xiao Tan for Excellent Medical Students Recipient
- The Third Prize of the Sixth Medical Knowledge & Skills Contests
- Thesis: Time series clustering analysis on the epidemiological characteristics of notifiable infectious diseases in China
- Mentor: Yingsi Lai, Ph.D.

RESEARCH INTERESTS

Spatial-temporal epidemiology, Bayesian methods, predictive models, machine learning, environmental health, air pollution, and climate change

RESEARCH EXPERIENCE

I. Development of a ‘Geron-enviro’ Exposome Index by using artificial intelligence.

Funded by the National Institute of Health (NIH)

Advised by Dr. Lenore J. Launer, Chief, Neuroepidemiology Section, Laboratory of Epidemiology and Population Sciences (LEPS), National Institute on Aging (NIA) and Dr. Dale P. Sandler, Chief, Chronic Disease Epidemiology Group, Epidemiology Branch (EB), National Institute of Environmental Health Sciences (NIEHS). 2022-present

- Responsibilities: (**Lead author**)
- Collaborating with multiple research groups from NIA and NIEHS to obtain available nation-wide cohorts.
- Developing the ‘Geron-enviro’ exposome indices for different aging outcomes by using artificial intelligence models including machine learning and advanced statistical models such as Bayesian spatial model.
- Validating these indices with multiple nation-wide cohorts and uploading these indices into web-based platforms.

II. Association between Solar Radiation and Depression in Gulf Long Term Follow-Up Study.

Advised by Dr. Lenore J. Launer, Chief, Neuroepidemiology Section, Laboratory of Epidemiology and Population Sciences (LEPS), National Institute on Aging (NIA) and Dr. Dale P. Sandler, Chief, Chronic Disease Epidemiology Group, Epidemiology Branch (EB), National Institute of Environmental Health Sciences (NIEHS). 2022-present

- Paper one: *Association between solar radiation and mood disorders among Gulf coast residents: evidence from a long-term follow-up study.* (Revision).
- Responsibilities: (**First author**)

- Linked solar radiation datasets from Daymet and National Solar Radiation Database with GuLF Long Term Follow-up Study
- Conducted statistical analysis by using cloud and parallel computing via Linux environment.
- Conducted stratified analysis by different socio-demographic factors.

III. Assess and Model the Health Effects, Population, and Infrastructural Vulnerabilities of Power Outage (PO).

Funded by the NIEHS, NIH

Advised by Prof. Shao Lin, Department of EHS, State University of New York at Albany (UAlbany). 2021-2022

- Paper one: ***The synergistic and independent impacts of power outage and flooding on hospital admissions in New York State, 2002-2018.*** (Published in *Science of the Total Environment*, **First author**).
 - Responsibilities:
 - Combined New York Department of Public Services (NYDPS) data, National Oceanic and Atmospheric Administration (NOAA) Storm Events Database, Environmental Protection Agency (EPA) Community Multiscale Air Quality (CMAQ) data, simulation data from chemical transport models, and Statewide Planning and Research Cooperative System (SPARCS) data from 2002-2018 at power-operating division and daily levels.
 - Used Distributed Lag Non-Linear Models (DLNM) to assess the synergistic and independent impacts of PO and flooding and the impact of flooding together with different scales of PO at each power-operating division.
 - Conducted random-effect meta-analyses to pool the risk estimation from all operating divisions.
- Paper two: ***The individual and synergistic impacts of windstorms and power outages on injury ED visits in New York State.*** (Published in *Science of the Total Environment*, **Co-author as a statistician**).
 - Responsibilities:
 - Combined NOAA Severe Weather Data Inventory (SWDI), NOAA Integrated Surface Database, NYDPS data, and emergency department (ED) visits data from SPARCS from 2005-2013.
 - Used DLNM to assess the synergistic and independent impacts of PO and windstorms at power-operation level
 - Conducted random-effect meta-analyses to pool the risk estimation from all operating divisions.
- Paper three: ***The impacts of infrastructure and environmental variables on power outages caused by multiple hazards in New York State: a machine learning modeling study.*** (Ongoing, **Co-author as a statistician**).
 - Responsibilities:
 - Combined NYDPS data, Energy Information Administration (EIA) data, National Center for Environmental Prediction, NOAA SWDI, Soil Survey Geographic Database, USGS national land use map, American Community Survey, EPA CMAQ at the county and monthly level from 2001-2013.
 - Built multiple machine learning models including random forest, xgboost, gradient boosting, support vector machine, and multi-layer perceptron models and assessed their performance in Python.
 - Used Morris Sensitivity analysis to select the important factors.

IV. COVID-19 Fatality by Different Demographics and Time Periods in the US.

Advised by Prof. Shao Lin, Department of EHS, UAlbany.

2021-present

- Paper one: ***COVID-19 symptoms and deaths among health care workers in the United States.*** (Published in *Emerging Infectious Diseases*, **Co-author as a statistician**).
 - Responsibilities:
 - Managing almost 30 million COVID-19 Case Surveillance Restricted Use Detailed Data from Centers for Disease Control and Prevention (CDC).
 - Generated the results including descriptive analysis and multivariate analysis.
- Paper two: ***COVID-19 symptoms, infection, and deaths among children and teenagers before vaccines, after vaccines, and during Delta Variant.*** (Ongoing, **First author**).
 - Responsibilities:
 - Extracted children and teenagers from CDC COVID-19 Case Surveillance Restricted Use Detailed Data.
 - Conducted stratified analysis for COVID-19 cases and deaths among children and teenagers before Vaccines, after Vaccines, and during Delta Variant.
 - Conducted cluster analysis for COVID-19 symptoms among children and teenagers before Vaccines, after Vaccines, and during Delta Variant.

V. Changes in PM Composition in NYS & Triggering of Acute Cardiorespiratory Events.

Funded by the New York State Energy Research and Development Authority (NYSERDA).

Advised by Prof. Shao Lin, Department of EHS, UAlbany and Prof. David Q. Rich, Department of Public Health Sciences, University of Rochester. 2021-2022

- Responsibilities:
- Geocoded 2019-2020 hospital admission data from SPARCS
- Conducted descriptive analysis for PM_{2.5} and different PM compositions including sulfate, nitrate, elemental carbon, and primary organic carbon (POC), and increased secondary organic carbon (SOC).
- Assessed the changes of the impact of PM_{2.5} and O₃ on cardiovascular admissions, respiratory admissions, respiratory infection admissions under different policy periods including BEFORE [2005-2007], DURING [2008-2013], AFTER [2014-2016], and RECENT [2017-2020].

VI. The Short-Term Association between Meteorological Factors and Emergency Department Visits for Mental Disorders (Ph.D. Dissertation).

Advised by Prof. Shao Lin, Department of EHS, UAlbany, Dr. Jerald Brotzge, New York State Mesonet, UAlbany, Dr. Melissa Tracy, Department of Epidemiology and Biostatistics, UAlbany, Dr. Xiaobo Romeiko, Department of EHS, UAlbany, and Dr. Howard Chang, Department of Biostatistics and Bioinformatics, Emory University 2020-2022

- Paper one: *High-resolution weather simulations based on weather monitor stations: a two-stage downscaling model.* (Ongoing, **First author**).
 - Responsibilities:
 - Extracted and combined Human Modification Index of Terrestrial Systems and Urban extent from Socioeconomic Data and Applications Center, NDVI, EVI, and Land Surface Temperature from NASA MODIS Terra products, Tree canopy coverage from US Forest Services, Solar radiation from National Renewable Energy Laboratory, Daily surface weather data from Daymet, Elevation from WorldClim, Population from American Community Survey, and Weather station data from Automated Surface Observation System (ASOS) and Mesonet.
 - Built machine learning model at the first stage and Bayesian Spatial-temporal model at the second stage.
 - Validated this two-stage model at testing weather station sites and generate high-resolution weather data.
- Paper two: *Identifying joint impacts of sun radiation, temperature, humidity, and rain duration on mental disorders using a high-resolution weather monitoring system.* (Presented in ISEE 2020, Published in *Environmental International*, **First author**).
 - Responsibilities:
 - Combined SPARCS data, Mesonet data, EPA CMAQ data, and simulation data from chemical transport models.
 - Transformed combined dataset to fit the case-crossover study design.
 - Used conditional logistic regression to assess the association between meteorological factors and mental disorders.
- Paper three: *The interaction effect of green space and meteorological factors on mental disorders.* (Ongoing, **First author**)
 - Responsibilities:
 - Combining NDVI, EVI, Tree canopy coverage, high-resolution weather simulations, and SPARCS data.
 - Assessing the multiplicative and additive interaction effects of green space on the association between meteorological factors on ED visits of mental disorders.

VII. Evaluating Short-/Long-term Impacts and Exposure Sources of Ultrafine Particles on Multiple Health Outcomes in New York State by Using High-Resolution Pollutant Simulations

Funded by the New York State Energy Research and Development Authority (NYSERDA).

Advised by Prof. Shao Lin, Department of EHS, UAlbany and Prof. Fangqun Yu, Department of Earth and Atmospheric Sciences, Atmospheric Sciences Research Center, UAlbany 2021-Present

- Paper one: *Assessing the short-term risk effects of exposure to ultrafine particles on emergency department visits of renal diseases in New York State, 2013-2018.* (Presented in ISEE 2021, **First author**).
 - Responsibilities:
 - Combined high-resolution pollutant simulations with SPARCS data and transformed the combined data to fit

the case-crossover study design.

- Used conditional logistic regression to assess the short-term risk effects.
- Paper two: ***Particle surface area, ultrafine particle number concentration, and cardiovascular hospitalizations.*** (Published in *Environmental Pollution*, **Co-author**).
 - Responsibilities:
 - Combined high-resolution pollutant simulations with SPARCS data and transformed the combined data to fit the case-crossover study design.
 - Used conditional logistic regression to assess the short-term risk effects.

VIII. Assess School Environmental Effects on Children's Health and Performance and Strengthen State/Community Capacity to Create A Healthy and Safe Learning Environment

Funded by the US Environmental Protection Agency (EPA)'s Science to Achieve Results (STAR) program

Advised by Prof. Shao Lin, Department of EHS, UAlbany

2020-2021

- Paper one: ***Application of data science methods to identify school and home risk factors for asthma and allergy-related symptoms among children in New York.*** (Presented in SER 2020, Published in *Science of The Total Environment*, Publish a related R package, **First author**).
 - Responsibilities:
 - Used multivariate feature imputation method to address missing values with Python.
 - Built random forest models to identify the most important risk factors for asthma and allergy-related symptoms.
 - Used decision tree for visualizing the inter-relationships among selected risk factors.
- Paper two: ***Measuring students' exposure to temperature and relative humidity in various indoor environments and across seasons using personal air monitors.*** (Published in *Hygiene and Environmental Health Advances*, **Co-author**).
 - Responsibilities:
 - Generated graphs for temporal-spatial characteristics of different air pollutants.

IX. International Cooperation Research

- Paper one: ***Using innovative machine learning methods to screen and identify predictors of congenital heart diseases in a birth cohort study.*** Advised by Prof. Shao Lin, Department of EHS, UAlbany. (Submitted one paper to *Frontiers in Cardiovascular Medicine* (**Co-first author**), developed an online predictive tool/website, and present at APHA 2021) 2020-2021
 - Responsibilities:
 - Combined and extract 1,127 predictors from self-reported questionnaires and routine clinical laboratory tests.
 - Used AllKNN to address data imbalance, built Explainable Boosting model, and select top 35 predictors.
 - Built an online predictive tool or website with this predictive model by using R Shiny.
- Paper two: ***Building a predictive model to identify clinical indicators for COVID-19 using machine learning method.*** Advised by Prof. Shao Lin, Department of EHS, UAlbany. (Published in *Medical & Biological Engineering & Computing* (**First author**), developed an online predictive tool/website) 2020-2021
 - Responsibilities:
 - Built predictive model to distinguish patients with COVID-19 from patients with CAP by Explainable Boosting model.
 - Select top contributing factors and combined these factors into groups to identify abnormal systematic body functions.
 - Built an online predictive tool or website with this predictive model by using R Shiny.
- Paper three: ***APS (Age, Platelets, 2D Shear-Wave Elastography) score predicts hepatocellular carcinoma in chronic hepatitis B.*** Advised by Dr. Ting Zhang, Departments of Medical Ultrasonics, Third Affiliated Hospital of Sun Yat-Sen University. (Published in *Radiology* (**Co-author as a statistician**)) 2020-2021
 - Responsibilities:
 - Developed the APS score by using Cox proportional hazards model and generated all results.
 - Compared the APS score with other well-known scores including CU-HCC, GAG-HCC, CAMD, LSM-HCC, and mREACH-B scores.

- Paper four: ***Development and validation of a predictive model for feeding intolerance in intensive care unit***

patients with sepsis. Advised by Dr. Kunlin Hu, The First Clinical Medical College of Jinan University. (Published in *Saudi Journal of Gastroenterology* (**Co-author as a statistician**)) 2020-2021

- Responsibilities:
 - Built predictive model for feeding intolerance in intensive care unit patients with sepsis.
 - Selected top contributing factors and generated calibration curve and decision curve.
 - Built an online predictive tool or website with this predictive model by using R Shiny.
- Paper five: ***Development of a prognostic model for predicting multiple sclerosis following optic neuritis: a secondary analysis of data from the Optic Neuritis Treatment Trial***. Advised by Dr. Wenjing Luo, Department of Ophthalmology, The First Affiliated Hospital of Guangxi Medical University. (Published in *Journal of Neuro-ophthalmology* (**Co-author as a statistician**)) 2020-2021
 - Responsibilities:
 - Built a monogram with the Cox Proportional Hazards model.
 - Generated C-index and calibration curves.
- Paper six: ***Mobile texting and lay health supporters to improve schizophrenia care in a resource-poor community in rural China (LEAN Trial): randomized controlled trial extended implementation***. Advised by Dr. Romen Xu, Acacia Lab for Health Systems Strengthening and Department of Health Management, Southern Medical University. (Published in *Journal of Medical Internet Research* (**Co-author as a statistician**)) 2019-2020
 - Responsibilities:
 - Addressed missing values with Multivariate Imputation by Chained Equations.
 - Used generalized estimating equation (GEE) model for effect estimation.
 - Conducted stratified analysis and generated the forest plot.
- Paper seven: ***Residual Effect of Texting to Promote Medication Adherence for Villagers with Schizophrenia in China: 18-Month Follow-up Survey After the Randomized Controlled Trial Discontinuation***. Advised by Dr. Romen Xu, Acacia Lab for Health Systems Strengthening and Department of Health Management, Southern Medical University. (Published in *JMIR mHealth and uHealth* (**Co-author as a statistician**)) 2019-2020
 - Responsibilities:
 - Addressed missing values with Multivariate Imputation by Chained Equations.
 - Used generalized estimating equation (GEE) model for effect estimation.
 - Conducted stratified analysis and generated the forest plot.

TEACHING EXPERIENCE

- Teaching Assistant:
 - Clinical Research Methods Remote Training Program 2021 (UAlbany)
 - **Guest lecture:** Guangdong Cardiovascular Institute, Guangdong Provincial People's Hospital (Topic: Building Predictive Model for Congenital Heart Diseases)
 - **HEHS Course 545** Global Climate Change, Extreme Weather and Public Health (Topic: Machine Learning Methods in Public Health, UAlbany Fall 2020)
 - **HEHS Course 629** Grant Writing and Protocol Preparation (Topic: Sample size and power calculation, UAlbany Fall 2021)
 - **Center for Social & Demographic Analysis Virtual Colloquium** (Topic: Identifying Joint Impacts of Sun Radiation, Temperature, Humidity, and Rain Duration on Mental Disorders in New York State Using the Mesonet Weather Monitoring System, January 2022)
 - **Seminar:** National Institute of Environmental Health Sciences and National Institute on Aging. (Topic: Development of predictive models and spatial-temporal models in epidemiology studies)
 - **Invited Speaker:** The International Conference on Environment and Human Health: Challenges and Opportunities in the 21st Century, Research Centre for Environment and Human Health, Hong Kong Baptist University (Topic: Identifying joint impacts of sun radiation, temperature, humidity, and rain duration on triggering mental disorders using a high-resolution weather monitoring system, August 2022)

COMPUTER SKILLS

- **Software:**
R, Python, ArcGIS, SAS, HTML Language, PASS, SPSS, Matlab, STATA, Graphpad, Epidata, Photoshop, SQL
- **Developed R packages:**
 - **Deng X, Zhang W, Lin S.** Package “APML” An Approach for Machine-Learning Modelling. <https://cran.r-project.org/web/packages/APML/APML.pdf>. Published online 2020.
- **Developed online tools/websites:**
 - Predictive Model for Enteral Nutrition Intolerance in ICU Patients with Sepsis: xdeng3.shinyapps.io/NIPM/
 - Predictive Model for Congenital Heart Diseases Built by a Large Birth Cohort Study: xdeng3.shinyapps.io/CHD_model/
 - Predictive Model for COVID-19 vs Community-Acquired Pneumonia (CAP): xdeng3.shinyapps.io/COVID-19/

ACADEMIC SERVICES & HONORS

- Serving as **reviewer** for **Environmental International, Environmental Pollution, Journal of Environmental Management, Health and Place, Indoor Air, The Journal of Nutrition, Frontiers in Public Health, Head and Neck, Journal of BioMed Research International, Hygiene and Environmental Health Advances, and Plos One**
- Served as **Guest Editor for Plos One**
- Served as **abstract reviewer** for 2022 APHA conference
- Served as **The Nation's Health Board Representative (Chair)** for APHA - Student Assembly 2021
- Served as **moderator** at the American Public Health Association (APHA) conference for **Big Data Analytics for Public Health Research session** 2021
- **Applied Public Health Statistics (APHS)** Student Membership Award from APHA 2021
- **Edward & Frances Gildea George Endowment** from UAlbany 2021
- **Registration Award** at ISEE conference 2021
- **Health Research, Inc. David Axelrod Award for Outstanding Presentation** in UAlbany 2021
- **Certificate in Biostatistics** from Peking University 2020
- **Student and New Researcher Network (SNRN) Award** at ISEE conference 2020
- **Outstanding Thesis Recipient** in Sun Yat-sen University 2019
- **Honorable Mention Award** in American **Mathematical Contest in Modeling** 2018
- **First prize** at the provincial level in China Contemporary Undergraduate **Mathematical Contest in Modeling** 2017

PUBLICATIONS

1. **Deng X, Brotzge J, Tracy M, Howard C, Xiaobo R, Wangjian Z, Ian R, Fangqun Y, Yanji Q, Gan L, Shao L.** Identifying joint impacts of sun radiation, temperature, humidity, and rain duration on triggering mental disorders using a high-resolution weather monitoring system. *Environment International*. 2022;167:107411. doi:10.1016/j.envint.2022.107411
2. **Deng X, Thurston G, Zhang W, Ryan I, Jiang C, Khwaja H, Romeiko X, Marks T, Ye B, Qu Y, Lin S.** Application of data science methods to identify school and home risk factors for asthma and allergy-related symptoms among children in New York. *Sci Total Environ*. 2021;770. doi:10.1016/j.scitotenv.2020.144746
3. **Deng X, Friedman S, Ryan I, Zhang W, Dong G, Rodriguez H, Yu F, Huang W, Nair A, Luo G, Lin S.** The independent and synergistic impacts of power outages and floods on hospital admissions for multiple diseases. *Sci Total Environ*. 2022;828. doi:10.1016/j.scitotenv.2022.154305
4. **Deng X*, Li H*, Liao X, Qin Z, Xu F, Friedman S, Ma G, Ye K, Lin S.** Building a predictive model to identify clinical indicators for COVID-19 using machine learning method. *Medical & Biological Engineering & Computing*. 2022; 11. doi: 10.1007/s11517-022-02568-2
5. **Qu Y*, Deng X*, Lin S, Han F, Chang H, Ou Y, Nie Z, Mai J, Wang X, Gao X, Wu Y, Chen J, Zhuang J, Ryan I, Liu X.** Using Innovative Machine Learning Methods to Screen and Identify Predictors of Congenital Heart Diseases. *Frontiers in Cardiovascular Medicine*. 2022;8. doi:10.3389/fcvm.2021.797002

6. Lin S, **Deng X**, Ryan I, Zhang K, Zhang W, Oghaghare E, Gayle DB, Shaw B. COVID-19 Symptoms and Deaths among Healthcare Workers, United States. *Emerging Infectious Diseases*. 2022;28(8):1624-1641. doi:10.3201/eid2808.212200
7. Hu K, **Deng X**, Han L, Xiang S, Xiong B, Pinhu L. Development and validation of a predictive model for feeding intolerance in intensive care unit patients with sepsis. *Saudi J Gastroenterol*. 2022 Jan-Feb;28(1):32-38. doi: 10.4103/sjg.sjg_286_21
8. Luo W, **Deng X**, Xu X, Song R, Luo M, Moss H, Du Y. Development of a Prognostic Model for Predicting Multiple Sclerosis After Optic Neuritis: A Secondary Analysis of Data From the Optic Neuritis Treatment Trial. *Journal of Neuro-ophthalmology : the Official Journal of the North American Neuro-ophthalmology Society*. 2021 Oct. DOI: 10.1097/wno.0000000000001424
9. Ryan I, **Deng X**, Thurston G, Khwaja H, Romeiko X, Zhang W, Marks T, Yu F, Lin S. Measuring students' exposure to temperature and relative humidity in various indoor environments and across seasons using personal air monitors. *Hygiene and Environmental Health Advances*. 2022;4:100029. doi:10.1016/j.heha.2022.100029
10. Ryan I, **Deng X**, Thurston G, Khwaja H, Romeiko X, Zhang W, Marks T, Ye B, Lin S. Measuring students' exposure to particulate matter (PM) pollution across microenvironments and seasons using personal air monitors. *Environmental Monitoring and Assessment*. 2022;195(1). doi: 10.1007/s10661-022-10624-5
11. Zhang W, **Deng X**, Romeiko XX, Zhang K, Sheridan SC, Brotzge J, Chang HH, Stern EK, Guo Z, Dong G, Reliene R, Hao Y, Lin S. How neighborhood environment modified the effects of power outages on multiple health outcomes in New York state? *Hygiene and Environmental Health Advances*. 2022;4:100039. doi: 10.1016/j.heha.2022.100039
12. Sheridan SC, Zhang W, **Deng X**, Lin S. The individual and synergistic impacts of windstorms and power outages on injury ED visits in New York State. *Science of The Total Environment*. 2021;797:149199. doi: 10.1016/j.scitotenv.2021.149199
13. Guo J, Wu Y, **Deng X**, Liu Z, Chen L, Huang Y. Association between social determinants of health and direct economic burden on middle-aged and elderly individuals living with diabetes in China. *PLoS One*. 2021;16(4):e0250200. doi:10.1371/journal.pone.0250200
14. Zhang T, Zhang G, **Deng X**, Zeng J, Jin J, Zeping H, Wu M, Zheng R. APS (Age, Platelets, 2D Shear-Wave Elastography) Score Predicts Hepatocellular Carcinoma in Chronic Hepatitis B. *Radiology*. 2021 Nov;301(2):350-359. doi: 10.1148/radiol.2021204700
15. Qu Y, Zhang W, Ryan I, **Deng X**, Dong G, Liu X, Lin S. Ambient extreme heat exposure in summer and transitional months and emergency department visits and hospital admissions due to pregnancy complications. *Sci Total Environ*. 2021 Jul 10;777:146134. doi: 10.1016/j.scitotenv.2021.146134
16. Lin S, Ryan I, Paul S, **Deng X**, Zhang W, Luo G, Dong GH, Nair A, Yu F. Particle surface area, ultrafine particle number concentration, and cardiovascular hospitalizations. *Environmental Pollution*. 2022;310:119795. doi:10.1016/j.envpol.2022.119795
17. Qu Y, Zhang W, Boutelle AYM, Ryan I, **Deng X**, Liu X, Lin S. Associations Between Ambient Extreme Heat Exposure and Emergency Department Visits Related to Kidney Disease. *American Journal of Kidney Diseases*. Published online October 2022. doi:10.1053/j.ajkd.2022.09.005
18. Ye B, Yucel R, Qu Y, Thurston G, **Deng X**, Ryan I, Lin S. Impact of environmental programs on student test scores mediated by school attendance rate. *Hygiene and Environmental Health Advances*. 2022;4:100028. doi:10.1016/j.heha.2022.100028
19. Yount CS, Utell MJ, Hopke PK, Thurston SW, Lin S, Ling FS, Chen Y, Chalupa D, **Deng X**, Rich DQ. Triggering of ST-elevation myocardial infarction by ultrafine particles in New York: Changes following Tier 3 vehicle introduction. *Environmental Research*. 2023;216:114445. doi:10.1016/j.envres.2022.114445
20. Cai Y, Gong W, He W, He H, Hughes JP, Simoni J, Xiao S, Gloyd S, Lin M, **Deng X**, Liang Z, Dai B, Liao J, Hao Y, Xu DR. Residual Effect of Texting to Promote Medication Adherence for Villagers with Schizophrenia in China: 18-Month Follow-up Survey After the Randomized Controlled Trial Discontinuation. *JMIR Mhealth Uhealth*. 2022 Apr 19;10(4):e33628. doi: 10.2196/33628.
21. Cai Y, Gong W, He H, Hughes J, Simoni J, Xiao S, Gloyd S, Lin M, **Deng X**, et al. Mobile texting and lay health supporters to improve schizophrenia care in a resource-poor community in rural China (LEAN Trial): Randomized controlled trial extended implementation. *J Med Internet Res*. 2020;22(12). doi:10.2196/22631
22. Wang Y, Wei J, Zhang Y, Guo T, Chen S, Wu W, Chen S, Li Z, Qu Y, Xiao J, **Deng X**, Liu Y, Du Z, Zhang W, Hao Y. Estimating causal links of long-term exposure to particulate matters with all-cause mortality in South China. *Environment International*. 2023;171:107726. doi:https://doi.org/10.1016/j.envint.2022.107726
23. Wang Y, Du Z, Zhang Y, Chen S, Lin S, Hopke PK, Rich DQ, Zhang K, Romeiko XX, **Deng X**, Qu Y, Liu Y, Lin Z, Zhu S, Zhang W, Hao Y. Long-term exposure to particulate matter and COPD mortality: Insights from causal inference methods based on a large population cohort in southern China. *Science of The Total Environment*. 2023;863:160808. doi:https://doi.org/10.1016/j.scitotenv.2022.160808

24. Wang T, Xu D, Fan Q, Rong W, Zheng J, Gao C, Li G, Zeng N, Guo T, Zeng L, Wang F, Xiao C, Cai L, Tang S, **Deng X**, Yin X, Huang M, Lu F, Hu Q, Chen W, Huang Z, Wang Q. 1,2-Dichloroethane impairs glucose and lipid homeostasis in the livers of NIH Swiss mice. *Toxicology*. 2017 Apr 1;380:38-49. doi: 10.1016/j.tox.2017.02.005.

CONFERENCES

1. **Deng X**, Sheridan S, Zhang W, Lin S. The individual and synergistic impacts of windstorms and power outages on injury ED visits in New York State. International Society of Biometeorology Virtual Conference 2021.
2. **Deng X**, Qu Y, Lin S, Han F, Chang H, Ou Y, Nie Z, Mai J, Wang X, Gao X, Wu Y, Chen J, Zhuang J, Ryan I, Liu X. Using innovative machine learning methods to screen and identify predictors of congenital heart diseases in a birth cohort study. APHA's Annual Meeting 2021.
3. **Deng X**, Zhang W, Yu F, Ryan I, Luo G, Lin S. Short-term risk effects of exposure to ultrafine particles on emergency department visits of renal diseases in New York State, 2013-2017. ISEE Conf Abstr. 2021;2021(1). doi:10.1289/ISEE.2021.O-TO-127.
4. **Deng X**, Brotzge J, Zhang W, Ye B, Ryan I, Qu Y, Lin S. Assessing the association between meteorological factors and mental disorders in summer using Mesonet, a refined weather monitoring system, in New York State. ISEE Conf Abstr. 2020;2020(1). doi:10.1289/ISEE.2020.VIRTUAL.P-0334.
5. **Deng X**, Jiang C, Thurston G, Khwaja H, Romeiko X, Ryan I, Marks T, Zhang W, Ye B, Qu Y, Lin S. Application of data science methods to identify school and home risk factors for asthma and allergy symptoms among children in New York. Society for Epidemiologic Research's Annual Meeting 2020.
6. **Deng X**, Lin S, Hopke PK, Thurston S, Utell M, Chen Y, Ito K, Yount CS, Rich DQ. Triggering of cardiovascular hospitalization by short-term increases in PM_{2.5} in New York adults: changes following Tier 3 vehicle introduction. ISEE Conf Abstr. 2022.
7. **Deng X**, Chang H, Brotzge J, Tracy M, Romeiko X, Lin S. Generating daily high-resolution gridded meteorological datasets for New York State from 2017-2018 using two-stage downscaling model. ISEE Conf Abstr. 2022.
8. Qi Q, **Deng X**, Yu F, Ryan I, Lin S. Extreme ambient temperatures modify the effects of ultrafine particles on hospital admissions for high burden diseases in New York State, 2013-2018. International Society of Biometeorology Virtual Conference 2021.
9. Ye B, Zhang W, **Deng X**, Ryan I, Qu Y, Lin S. Impacts of environmental policies on students' test scores mediating by school attendance rate. ISEE Conf Abstr. 2020;2020(1). doi:10.1289/ISEE.2020.VIRTUAL.P-1249.
10. Lin S, Qi Q, Ryan I, **Deng X**, Luo G, Nair A, Yu F. High ambient temperature or ultrafine particles – which one has the largest effect on high burden diseases in New York State (NYS)? ISEE Conf Abstr. 2022.
11. Lin S, Ryan I, Paul S, **Deng X**, Zhang W, Luo G, Dong G, Nair A, Yu F. Particle surface area, ultrafine particle number concentration, and cardiovascular hospitalizations. ISEE Conf Abstr. 2022.
12. Yount CS, Hopke PK, Utell M, Thurston SW, Ling F, Chen Y, Chalupa D, Lin S, **Deng X**, Rich DQ. Triggering of ST-elevation myocardial infarction by ultrafine particles in New York: changes following Tier 3 vehicle introduction. ISEE Conf Abstr. 2022.