

International Journal of *Environmental Research* and Public Health



an Open Access Journal by MDPI

Spatial Modeling of Air Pollutant Variability

Guest Editors:

Dr. Chih-Da Wu

Department of Geomatics, National Cheng Kung University, Tainan 70101, Taiwan

Dr. Yu-Cheng Chen

National Institute of Environmental Health Sciences, National Health Research Institutes, Miaoli 35053, Taiwan

Deadline for manuscript submissions: closed (15 December 2022)

Message from the Guest Editors

Exposure to air pollution is associated with respiratory and cardiovascular hospital admissions (Ren et al., 2006), aggravation of existing heart and lung disease, premature mortality (Anderson et al., 2012; Dockery et al., 1993; Jerrett et al., 2005; Pope and Dockery, 2006), and lung cancer (Lepeule et al., 2012; Turner et al., 2011). Reducing misclassification in exposure assessment is critical for epidemiological studies (Michanowicz et al., 2016a, 2016b). As personal monitoring is not generally feasible for large cohorts, methods to accurately assess within-city variability in exposure to air pollution are required (Jerrett et al., 2005; Wu et al., 2017; Alexeeff et al., 2015).

Spatial modelling of air-pollution levels is becoming widespread in air pollution epidemiology research (Alexeeff et al., 2015). Several spatial modelling methodologies have been proposed for capturing ambient air pollution gradients. For example, spatial interpolation, such as kriging interpolation (Bayraktar and Turalioglu, 2005), predicts the pollutant level in an area based on a limited number of monitoring sites and a spatial autocorrelation algorithm.







International Journal of *Environmental Research and Public Health*



an Open Access Journal by MDPI

Editor-in-Chief

Message from the Editor-in-Chief

Prof. Dr. Paul B. Tchounwou

RCMI Center for Urban Health Disparities Research and Innovation, Richard Dixon Research Center, Morgan State University, 1700 E. Cold Spring Lane, Baltimore, MD 21251, USA Addressing the environmental and public health challenges requires engagement and collaboration among clinicians and public health researchers. Discovery and advances in this research field play a critical role in providing a scientific basis for decision-making toward control and prevention of human diseases, especially the illnesses that are induced from environmental exposure to health hazards. *IJERPH* provides a forum for discussion of discoveries and knowledge in these multidisciplinary fields. Please consider publishing your research in this high quality, peer-reviewed, open access journal.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, PubMed, MEDLINE, PMC, Embase, GEOBASE, CAPlus / SciFinder, and other databases.

Journal Rank: CiteScore - Q1 (Public Health, Environmental and Occupational Health)

Contact Us

International Journal of Environmental Research and Public Health Editorial Office MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/ijerph ijerph@mdpi.com X@IJERPH_MDPI