CACHE | Center for Aging, Climate & Health

### Member Initiated Meeting, Population Association of America

**Date:** Thursday, April 10
**Time:** 3:00 PM – 6:00 PM
**Location:** Courtyard Marriott Hotel, Horne Room 901 L Street, NW
Washington, DC 20001
Walking Directions from Marquis

### Disaster Data for Demographic Research

This meeting sponsored by the NIA-funded virtual Center for Aging, Climate and Health (CACHE) will provide an introduction and some hands-on data experience to learn about and integrate the county-level time series SHELDUS data (Spatial Hazard Events and Losses Database for the United States) with various population and health data bases. We will showcase integration with American Community Survey micro-data and discuss issues of spatial aggregation and temporal change. This workshop will use South Carolina as a test case and be hands-on. Users will learn an application of these data in R.

## Agenda

| Topic | Presenter | Time (approx.) |
|---|---|---|
| Introduction to CACHE<br>CACHE Overview PP | Lori Hunter | 3:00 |
| Workshop Goals & tech set up<br>Workshop Goals PP | Deborah Balk | |
| What is SHELDUS and how to use it? Q & A<br>SHELDUS PP | Melanie Gall | 3:05 |
| Why ACS and data linkage decisions<br>ACS-Data Linkage PP and Video Presentation | Dylan Connor | 3:30 |
| Hands-on demonstration & work (Parts 0-1)<br>Lab Instructions and Zip folder with Code and Data | Jenna Tipaldo & Jiwon Jang | 4:00 |
| *Break* | | 4:30 |

| | | |
|---|---|---|
| Hands-on demonstration & work (Part 2) | Jenna Tipaldo & Jiwon Jang | 4:40 |
| Hands-on demonstration & work (Part 3) | | 5:00 |
| Discussion | Deborah Balk | 5:30 |
| Small group interactions (if time allows) | All | 5:40 |

**Presenters:**

**Deborah Balk;** City University of New York, Director, CUNY Institute for Demographic Research & Professor, Marxe School of Public and International Affairs at Baruch College **Dylan Connor;** Arizona State University, Associate Professor, School of Geographical Sciences and Urban Planning

**Melanie Gall;** Arizona State University, Assistant Professor and Co-Director for CEMHS, School of Public Affairs

**Lori Hunter;** University of Colorado, Professor of Sociology, Director of the Institute of Behavioral Science

**Jiwon Jang;** Arizona State University, PhD GIS, School of Geographical Sciences and Urban Planning

**Jenna Tipaldo;** City University of New York, PhD Candidate in Environmental & Planetary Health Sciences, Demography Fellow at CUNY Institute for Demographic Research (CIDR), Adjunct Lecturer, Hunter College Department of Mathematics & Statistics

**Helen Wilson Burns;** University of Colorado, Doctoral Student

**For registrants to know in advance:**

1. Bring laptop
2. Have R studio installed with the following packages:
    a. library(tidyverse) #tidyverse helps with data cleaning
    b. library(tigris) #tigris pulls census data and shapefiles (uses internet, so we will not use during workshop but it may be useful)
    c. library(sf) #sf visualizes shapefiles
    d. library(RColorBrewer) #RColorBrewer is useful for color palettes
    e. library(gganimate) #gganimate is useful for animation. gganimate cheatsheet: https://rstudio.github.io/cheatsheets/gganimate.pdf
    f. library(gifski) #gifski renders .gif files

***Note:** if you are a beginner R user, after you've downloaded and installed

RStudio **and** R, please see the code above to install these packages.

3. Training materials. **Download materials <u>in advance</u>** (there will **not be Wi-Fi** in the room):
    a. Data: https://agingclimatehealth.org/other-events/ (Click the button

*"Participant Training Materials"* to download.

    b. Code (this is integrated into the link in 3a)

    c. Lab instructions (attached)

**<u>Code to download the packages:</u>**

```
#to help install packages if you don't already have them

packages <- c('tidyverse', 'tigris','sf','RColorBrewer','gganimate','gifski')
for (pkg in packages) {
  if (!requireNamespace(pkg, quietly = TRUE)) install.packages(pkg,
  dependencies=TRUE)
}

#load them one-by-one

library(tidyverse) #tidyverse helps with data cleaning

library(tigris) #tigris pulls census data and shapefiles (uses internet, so we will not use during workshop but it may be useful)

library(sf) #sf visualizes shapefiles

library(RColorBrewer) #RColorBrewer is useful for color palettes
library(gganimate) #gganimate is useful for animation. gganimate cheatsheet: https://rstudio.github.io/cheatsheets/gganimate.pdf

library(gifski) #gifski renders .gif files
```