Allen Climate Dynamics Center
Department of Earth and Planetary Sciences
University of California Riverside
Riverside, CA, USA 92521
Last Update: April 29, 2021

+1 951-850-9104 ☎
mhass004@ucr.edu ✉
https://github.com/TaufiqHassan ⌗
Orchid 🌐
Google Scholar 🎓

Taufiq Hassan

Education

2016−Present: Ph.D. in Geological Sciences, University of California Riverside
Research interest: Numerical modeling, atmospheric aerosol, and climate dynamics
Advisors: Prof. Robert J. Allen

2013−2015: M.S. in Environmental Science and Engineering
Gwangju Institute of Science and Technology, South Korea
Thesis: Determining the coefficients of an analytical aerosol forcing equation using the Monte-Carlo Aerosol-Cloud Radiation (MACR) model.
Advisors: Prof. Chul 'Eddy' Chung

2007−2012: B.Sc.Engg.(chem) in Chemical Engineering
Bangladesh University of Engineering and Technology, Bangladesh

Positions

2016−Present: Graduate Student Researcher, University of California Riverside

2016−Present: Teaching Assistant, University of California Riverside

2015: Researcher, Weather Information Service Engine (WISE) institute

2013−2015: Research Assistant, Gwangju Institute of Science and Technology

Publications

Hassan, T., Allen, R. J., Liu, W., & Randles, C. (2021). Anthropogenic aerosol forcing of the Atlantic meridional overturning circulation and the associated mechanisms in CMIP6 models. *Atmospheric Chemistry and Physics Discussions*, 21(8), 5821-5846.

Allen, R. J., Amiri-Farahani, A., Lamarque, J. F., Smith, C., Shindell, D., Hassan, T., & Chung, C. E. (2019). Observationally constrained aerosol–cloud semi-direct effects. *npj Climate and Atmospheric Science*, 2(1), 1-12.

Allen, R. J., Hassan, T., Randles, C. A., & Su, H. (2019). Enhanced land–sea warming contrast elevates aerosol pollution in a warmer world. *Nature Climate Change*, 9(4), 300-305.

Hassan, T., Moosmüller, H., & Chung, C. E. (2015). Coefficients of an analytical aerosol forcing equation determined with a Monte-Carlo radiation model. *Journal of Quantitative Spectroscopy and Radiative Transfer*, 164, 129-136.

Talks & Posters

Hassan, T., Allen, R., Liu, W., & Randles, C. A. (2020, December). Anthropogenic aerosol forcing of the AMOC and the associated mechanisms in CMIP6 models. In AGU Fall Meeting 2020. AGU.

Hassan, T., Allen, R., Liu, W., & Randles, C. A. (2019). Future response of the Atlantic Meridional Overturning Circulation to anthropogenic aerosol reductions. AGUFM, 2019, A53G-01.

Hassan, T., Allen, R., Randles, C. A., & Su, H. (2019). Elevated Aerosol Pollution Pollution in a Warmer World: The Role of the Land/Sea Warming Contrast and Enhanced Continental Aridity. NASA FIELDS site visit, UCR, 2019.

Hassan, T., Allen, R., Randles, C. A., & Su, H. (2018). Elevated Aerosol Pollution in a Warmer World: The Role of the Land/Sea Warming Contrast and Enhanced Continental Aridity. AGUFM, 2018, A51J-2286.

Hassan, T., Allen, R., & Randles, C. A. (2017). An increase in aerosol burden due to the land-sea warming contrast. AGUFM, 2017, A53F-2314.

Conference Abstracts	Allen, R. J., Hassan, T., Randles, C., & Su, H. (2020, January). Enhanced land–sea warming contrast elevates aerosol pollution in a warmer world (Invited Presentation). In 100th American Meteorological Society Annual Meeting. AMS.

2. Amiri-Farahani, A., Hassan, T., & Allen, R. (2018). Observationally-constrained aerosol-cloud semi-direct effect in multiple GCMs. AGUFM, 2018, A43G-04.

Amiri-Farahani, A., Hassan, T., & Allen, R. (2017). Climate Response of Observationally-Constrained Aerosol Radiative Effect in CAM4. AGUFM, 2017, A51G-2156.

Hassan, T., Moosmüller, H., Chung, C.E. (2015). Coefficients of an Analytical Aerosol Forcing Equation Determined with a Monte-Carlo Radiation Model, 11th International Conference on Carbonaceous Particles in the Atmosphere: Berkeley, CA, August 10, 2015.

Technical skills

Programming: Python, FORTRAN, Shell scripting, MySQL, Flask

Data handling and Visualization: Python, MATLAB, GRADS, CDO, NCO, R, NCL Experience with handling different data structures (NetCDF, HDF, GRIB, ASCII and plain Binary without metadata) from different sources (observations & reanalysis).

Numerical modeling: MACR, WRF, CESM CAM, CMAQ, GFDL AM Experience with porting, compiling, and running models in different clusters and supercomputers (e.g. NCAR's Yellowstone, Cheyenne, SDSC TSCC and UCR's HPCC Cluster) along with designing and performing idealized simulations.

Packages: acccmip6, cmpdata

Awards

2016−Present: UC Riverside Dean's Distinguished Award

2017−2019: NASA MIRO Fellowships and Internships in Extremely Large Data Sets

2013−2015: GIST Scholarships for International Students

2014: GIST Scholarship for achieving outstanding academic marks

2007: Dhaka Board Scholarship