



## Dr Amulya Chevuturi

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Contact Address: UKCEH, Maclean Building, Benson Lane, Crowmarsh Gifford,  
Wallingford, Oxfordshire, OX10 8BB  
Profession / Specialisation: Climate Sciences and Data Analysis  
Job Title: Hydrologist Data Scientist

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### Professional and Educational Qualifications

PhD Atmospheric Sciences	Jawaharlal Nehru University	2015
MSc Environmental Studies	TERI University	2009
BSc Zoology (Hons.)	Delhi University	2007

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### Summary of Professional Expertise

Amulya Chevuturi is a Hydrological Data Scientist at UKCEH, Wallingford with expertise in understanding monsoons and its variability under current and future climate, evaluating model forecast skill and uncertainty, investigating rainfall related hazards (floods and droughts). She is currently contributing to projects on UK rainfall datasets (Hydro-Jules) and blending global hydrological products (HydroSOS). She previously worked as a PDRA at NCAS, University of Reading. At NCAS, she was involved in various projects, as a named researcher and CO-PI, with a focus on floods and drought forecasting, monsoon and its onset, tropical precipitation forecasts, spatial and temporal scales of precipitation variability, hydrological cycle and climate change. During her Ph.D., she simulated and analysed extreme precipitation events over India, including western disturbances, cloudbursts and hailstorms; events which may lead to secondary impacts like flash floods. She has 8 first-author peer-reviewed papers, 9 co-author peer-reviewed publications, 2 first-author edited book chapters and 1 co-author book publication, and has an h index of 10. She has formed strong collaborations with scientist from all over the world (e.g. ECMWF, UK, India Meteorological Department, India, Peking University, China, National Institute of Amazonian Research, Brazil). She has engaged with media to disseminate information about her research work. She has teaching experience in computing and climate sciences and has supervised Masters and Bachelors student dissertations.

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### Employment History

2021-Present	Research Associate, UKCEH
2016-2021	Post-Doctoral Research Assistant, National Centre for Atmospheric Science
2009-2010	Guest lecturer, Lady Irwin College, Delhi University
2009-2009	Environmental Consultant, Emergent Ventures India

### Work Experience

- 2022 Researcher in eFLaG project for spatial coherence of UK droughts
- 2021 Researcher in NetZero project for UK drought analysis
- 2021 Researcher in HydroSOS project for global hydrological forecasts
- 2021 Researcher in HydroJules project as data scientist
- 2021 Co-PI in CSSP Brazil project proposal - PEACFLOW 2
- 2020 Co-PI in NERC REP - Forecasting flash droughts at subseasonal timescale
- 2019 Co-PI in CSSP Brazil project proposal - PEACFLOW
- 2019 Co-PI in UROP - The "Indian Easterly Jet" and Its Effects on Weather and Climate
- 2018 Named Researcher in CSSP Brazil project proposal - DUBSTEP
- 2018 Named Researcher in CSSP China project proposal - PERCHANCE
- 2017 Researcher in CSSP China project - DREAM
- 2016 Researcher in Monsoon Mission project - Indian Monsoon Seasonal Forecasting

## Memberships of committees, boards, etc

Fellow of Royal Meteorological Society (FRMetS)

## Selected Publications

- Chevuturi A**, Klingaman NP, Rudorff CM, Coelho CAS, Schongart J (2021) Forecasting annual maximum water level for the Negro River at Manaus. *Climate Resilience and Sustainability*, <https://doi.org/10.1002/cli2.18>
- Feng X, Zhang W, Zhu Z, **Chevuturi A**, Chen W (2021) Variability and changes in Pearl River Delta water level, from the ocean and atmosphere perspectives. *Journal of Hydrometeorology*, <https://doi.org/10.1175/JHM-D-21-0037.1>.
- Chevuturi A**, Turner AG, Johnson S, Weisheimer A, Shonk J, Stockdale TN, Senan R (2021) Seasonal forecasting skill of the Indian monsoon and its onset in the ECMWF seasonal forecasting system 5 (SEAS5). *Climate Dynamics*, <http://doi.org/10.1007/s00382-020-05624-5>
- Klingaman NP, Young M, **Chevuturi A**, Guimaraes B, Guo L, Woolnough SJ, Coelho CAS, Kubota PY, Holloway CE (2021) Sub-seasonal prediction performance for austral summer South American rainfall. *Weather & Forecasting*, 36: 147-169, <http://doi.org/10.1175/WAF-D-19-0203.1>
- Cui J, Piao S, Huntingford C, Wang X, Lian X, **Chevuturi A**, Turner AG, Kooperman GJ (2020) Vegetation forcing modulates global monsoon and water resources in a CO<sub>2</sub>-enriched climate, *Nature Communications*, 11: 5184, <http://doi.org/10.1038/s41467-020-18992-7>
- Shonk J, Turner AG, **Chevuturi A**, Wilcox L, Dittus A, Hawkins E (2020) Uncertainty in aerosol radiative forcing impacts the simulated global monsoon in the 20th century, *Atmospheric Chemistry and Physics*, <http://doi.org/10.5194/acp-20-14903-2020>
- Guo L, van der Ent RJ, Klingaman NP, Demory M-E, Vidale PL, Turner AG, Stephan CC, **Chevuturi A** (2020) Effects of horizontal resolution and air-sea coupling on simulated moisture sources for regional East Asian precipitation. *Geoscientific Model Development*, <http://doi.org/10.5194/gmd-13-6011-2020>.
- Monerie P-A, **Chevuturi A**, Cook P, Klingaman NP, Holloway CE (2020) Role of atmospheric horizontal resolution in simulating tropical and subtropical South American precipitation in HadGEM3-GC31. *Geoscientific Model Development*, <http://doi.org/10.5194/gmd-13-4749-2020>.
- Guo L, van der Ent RJ, Klingaman NP, Demory M-E, Vidale PL, Turner AG, Stephan CC, **Chevuturi A** (2019) Moisture sources for East Asian precipitation: mean seasonal cycle and interannual variability, *Journal of Hydrometeorology*, 20: 657–672, <http://doi.org/10.1175/JHM-D-18-0188.1>.
- Martin GM, **Chevuturi A**, Comer RE, Dunstone N, Scaife AA, Zhang D (2019) Predictability of South China Sea Summer Monsoon onset, *Advances in Atmospheric Sciences*, 36(3): 253-260, <http://doi.org/10.1007/s00376-018-8100-z>. **AAS Esteemed Original Paper Prize 2021.**
- Chevuturi A**, Turner AG, Woolnough SJ, Martin G, MacLachlan C (2019) Indian summer monsoon onset forecast skill in the UK Met Office initialized coupled seasonal forecasting system (GloSea5-GC2). *Climate Dynamics*, 52(11): 6599-6617, <http://doi.org/10.1007/s00382-018-4536-1>.
- Chevuturi A**, Klingaman NP, Turner AG, Hannah S (2018) Projected changes in the Asian-Australian monsoon region in 1.5°C and 2.0°C global-warming scenarios. *Earth's Future*, 6: 339-358, <http://doi.org/10.1002/2017ef000734>. **Journal's top cited paper in 2018-2019**
- Chevuturi A**, Dimri AP, Thayyen RJ (2018) Climate Change over Leh (Ladakh), India. *Theoretical and Applied Climatology*, 131(1–2): 531–545, <http://doi.org/10.1007/s00704-016-1989-1>
- Dimri AP, **Chevuturi A**, Niyogi D, Thayyen RJ, Ray K, Tripathi SN, Pandey AK, Mohanty UC (2017) Cloudbursts in Indian Himalayas: A review. *Earth-Science Reviews*, 168: 1-23, <http://doi.org/10.1016/j.earscirev.2017.03.006>.
- Chevuturi A**, Dimri AP (2016) Investigation of Uttarakhand (India) disaster- 2013 using Weather Research and Forecasting model. *Natural Hazards*, 82(3): 1703–1726, <http://doi.org/10.1007/s11069-016-2264-6>
- Dimri AP, **Chevuturi A** (2016) Western Disturbances – An Indian Meteorological Perspective. Springer International Publishing, <http://doi.org/10.1007/978-3-319-26737-1>.
- Chevuturi A**, Dimri AP, Gunturu UB (2014) Numerical simulation of rare winter hailstorm event over Delhi, India on 17 Jan 2013. *Natural Hazards & Earth System Sciences*, 14: 3331-3344, <http://doi.org/10.5194/nhess-14-3331-2014>.